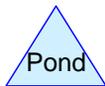
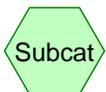


Point of Analysis 1



Routing Diagram for 3659-12003C-Existing Conditions POA 1-01
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
8.450	43	(S19)
3.360	65	(S19)
9.300	76	(S19)
41.760	98	(S19, S20, S21, S21.1, S21.2.1, S21.2.2, S22, S22.1, S22.2, S22.3, S23.1, S23.2, S24, S24.1, S25, S26, S27, S28, S29, S30, S31.1, S32, S32.1)
14.410	49	(S21, S21.1, S21.2.2, S23.1, S23.2, S24, S24.1, S24.2, S25, S26, S27, S30, S32.1, S33)
5.960	69	(S22, S22.1, S22.2, S22.3, S22.4, S28, S29, S32)
11.490	60	(S22.4, S29, S31, S31.1)
0.620	89	(S28, S31.1)
1.170	79	(S31, S31.1)
96.520	76	TOTAL AREA

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>0.66"
Tc=11.4 min CN=68 Runoff=15.48 cfs 1.409 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>2.83"
Tc=5.0 min CN=98 Runoff=8.25 cfs 0.622 af
- Subcatchment S21:** Runoff Area=5.370 ac 63.69% Impervious Runoff Depth>1.29"
Flow Length=640' Slope=0.0600 '/ Tc=12.1 min CN=80 Runoff=7.09 cfs 0.578 af
- Subcatchment S21.1:** Runoff Area=1.730 ac 26.59% Impervious Runoff Depth>0.42"
Flow Length=410' Tc=11.6 min CN=62 Runoff=0.54 cfs 0.061 af
- Subcatchment S21.2.1:** Runoff Area=0.107 ac 100.00% Impervious Runoff Depth>2.83"
Tc=5.0 min CN=98 Runoff=0.33 cfs 0.025 af
- Subcatchment S21.2.2:** Runoff Area=1.133 ac 3.80% Impervious Runoff Depth>0.12"
Flow Length=90' Slope=0.0070 '/ Tc=13.2 min CN=51 Runoff=0.04 cfs 0.011 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>2.04"
Tc=5.0 min CN=90 Runoff=8.17 cfs 0.549 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>1.87"
Tc=5.0 min CN=88 Runoff=7.02 cfs 0.470 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=91 Runoff=5.81 cfs 0.394 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=91 Runoff=3.01 cfs 0.204 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>0.36"
Tc=5.0 min CN=60 Runoff=1.42 cfs 0.147 af
- Subcatchment S23.1:** Runoff Area=2.670 ac 49.44% Impervious Runoff Depth>0.89"
Tc=19.0 min CN=73 Runoff=1.96 cfs 0.198 af
- Subcatchment S23.2:** Runoff Area=1.450 ac 38.62% Impervious Runoff Depth>0.65"
Flow Length=955' Tc=14.3 min CN=68 Runoff=0.80 cfs 0.079 af
- Subcatchment S24:** Runoff Area=2.660 ac 95.86% Impervious Runoff Depth>2.61"
Flow Length=1,232' Tc=8.4 min CN=96 Runoff=7.27 cfs 0.578 af
- Subcatchment S24.1:** Runoff Area=2.330 ac 67.38% Impervious Runoff Depth>1.42"
Flow Length=1,260' Slope=0.0040 '/ Tc=12.1 min CN=82 Runoff=3.40 cfs 0.276 af
- Subcatchment S24.2:** Runoff Area=1.300 ac 0.00% Impervious Runoff Depth>0.08"
Flow Length=1,260' Slope=0.0040 '/ Tc=9.8 min CN=49 Runoff=0.02 cfs 0.009 af

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Type III 24-hr 2-Year Rainfall=3.20"

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Subcatchment S25:	Runoff Area=2.050 ac 82.93% Impervious Runoff Depth>2.04" Flow Length=608' Tc=6.5 min CN=90 Runoff=4.98 cfs 0.348 af
Subcatchment S26:	Runoff Area=1.770 ac 41.24% Impervious Runoff Depth>0.70" Flow Length=447' Tc=7.8 min CN=69 Runoff=1.29 cfs 0.103 af
Subcatchment S27:	Runoff Area=3.680 ac 93.21% Impervious Runoff Depth>2.50" Flow Length=1,055' Tc=13.3 min CN=95 Runoff=8.51 cfs 0.768 af
Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>2.04" Tc=5.0 min CN=90 Runoff=22.38 cfs 1.504 af
Subcatchment S29:	Runoff Area=3.760 ac 2.93% Impervious Runoff Depth>0.42" Tc=7.8 min CN=62 Runoff=1.31 cfs 0.132 af
Subcatchment S30:	Runoff Area=4.820 ac 38.17% Impervious Runoff Depth>0.65" Tc=18.3 min CN=68 Runoff=2.45 cfs 0.262 af
Subcatchment S31:	Runoff Area=3.920 ac 0.00% Impervious Runoff Depth>0.49" Tc=14.4 min CN=64 Runoff=1.45 cfs 0.161 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>1.64" Tc=9.2 min CN=85 Runoff=1.67 cfs 0.125 af
Subcatchment S32:	Runoff Area=1.450 ac 50.34% Impervious Runoff Depth>1.57" Tc=5.0 min CN=84 Runoff=2.86 cfs 0.189 af
Subcatchment S32.1:	Runoff Area=2.720 ac 90.81% Impervious Runoff Depth>2.31" Tc=5.0 min CN=93 Runoff=7.60 cfs 0.524 af
Subcatchment S33:	Runoff Area=0.820 ac 0.00% Impervious Runoff Depth>0.08" Tc=5.0 min CN=49 Runoff=0.01 cfs 0.006 af
Reach 1R: Point of Analysis 1	Inflow=61.36 cfs 9.288 af Outflow=61.36 cfs 9.288 af
Reach 23R:	Avg. Flow Depth=1.58' Max Vel=5.53 fps Inflow=20.91 cfs 1.798 af 36.0" Round Pipe n=0.014 L=310.0' S=0.0038 '/' Capacity=38.21 cfs Outflow=20.57 cfs 1.796 af
Reach L150:	Avg. Flow Depth=1.45' Max Vel=3.38 fps Inflow=55.84 cfs 8.327 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=55.63 cfs 8.318 af
Reach L151:	Avg. Flow Depth=1.37' Max Vel=5.57 fps Inflow=57.06 cfs 8.479 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=56.49 cfs 8.473 af
Reach L186:	Avg. Flow Depth=2.10' Max Vel=2.74 fps Inflow=59.11 cfs 8.788 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=58.46 cfs 8.760 af
Reach L57:	Avg. Flow Depth=1.79' Max Vel=4.48 fps Inflow=19.71 cfs 4.382 af 36.0" Round Pipe n=0.014 L=446.0' S=0.0023 '/' Capacity=29.62 cfs Outflow=19.68 cfs 4.372 af
Reach L59:	Avg. Flow Depth=1.59' Max Vel=3.88 fps Inflow=56.44 cfs 8.351 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=55.84 cfs 8.327 af

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Reach L65: Avg. Flow Depth=0.59' Max Vel=19.69 fps Inflow=17.51 cfs 4.108 af
30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/ Capacity=142.22 cfs Outflow=17.52 cfs 4.108 af

Reach L67: Avg. Flow Depth=0.88' Max Vel=9.25 fps Inflow=19.09 cfs 4.305 af
48.0" Round Pipe n=0.014 L=185.0' S=0.0178 '/ Capacity=178.14 cfs Outflow=19.08 cfs 4.303 af

Reach P1: Avg. Flow Depth=0.69' Max Vel=7.47 fps Inflow=61.40 cfs 9.290 af
n=0.030 L=46.0' S=0.0435 '/ Capacity=407.83 cfs Outflow=61.36 cfs 9.288 af

Pond 19P: Peak Elev=139.31' Storage=1,830 cf Inflow=23.26 cfs 2.029 af
Primary=10.66 cfs 1.756 af Secondary=10.75 cfs 0.270 af Outflow=21.41 cfs 2.026 af

Pond 20P: Peak Elev=167.55' Storage=2,838 cf Inflow=8.25 cfs 0.622 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/ Outflow=11.03 cfs 0.620 af

Pond 22.4P: Peak Elev=74.16' Storage=39,331 cf Inflow=41.33 cfs 4.195 af
Primary=17.51 cfs 4.108 af Secondary=0.00 cfs 0.000 af Outflow=17.51 cfs 4.108 af

Total Runoff Area = 96.520 ac Runoff Volume = 9.734 af Average Runoff Depth = 1.21"
56.73% Pervious = 54.760 ac 43.27% Impervious = 41.760 ac

Summary for Subcatchment S19:

Runoff = 15.48 cfs @ 12.19 hrs, Volume= 1.409 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 8.25 cfs @ 12.07 hrs, Volume= 0.622 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 7.09 cfs @ 12.17 hrs, Volume= 0.578 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.950	49	
* 3.420	98	
5.370	80	Weighted Average
1.950		36.31% Pervious Area
3.420		63.69% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					
0.6	640	0.0600	19.11	60.03	Direct Entry, Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 0.54 cfs @ 12.22 hrs, Volume= 0.061 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.270	49	
* 0.460	98	
1.730	62	Weighted Average
1.270		73.41% Pervious Area
0.460		26.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.33 cfs @ 12.07 hrs, Volume= 0.025 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.107	98	
0.107		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.04 cfs @ 12.55 hrs, Volume= 0.011 af, Depth> 0.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.090	49	
* 0.043	98	
1.133	51	Weighted Average
1.090		96.20% Pervious Area
0.043		3.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 8.17 cfs @ 12.07 hrs, Volume= 0.549 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 7.02 cfs @ 12.08 hrs, Volume= 0.470 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 5.81 cfs @ 12.07 hrs, Volume= 0.394 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 3.01 cfs @ 12.07 hrs, Volume= 0.204 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 1.42 cfs @ 12.12 hrs, Volume= 0.147 af, Depth> 0.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23.1:

Runoff = 1.96 cfs @ 12.29 hrs, Volume= 0.198 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.350	49	
* 1.320	98	
2.670	73	Weighted Average
1.350		50.56% Pervious Area
1.320		49.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0					Direct Entry,

Summary for Subcatchment S23.2:

Runoff = 0.80 cfs @ 12.23 hrs, Volume= 0.079 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.890	49	
* 0.560	98	
1.450	68	Weighted Average
0.890		61.38% Pervious Area
0.560		38.62% Impervious Area

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Type III 24-hr 2-Year Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.1825	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
3.2	360	0.0139	1.90		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.7	390	0.0374	3.93		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
14.3	955	Total			

Summary for Subcatchment S24:

Runoff = 7.27 cfs @ 12.11 hrs, Volume= 0.578 af, Depth> 2.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.110	49	
* 2.550	98	
2.660	96	Weighted Average
0.110		4.14% Pervious Area
2.550		95.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
1.8	112	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	70	0.0050	2.98	2.34	Pipe Channel, 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.014
0.7	190	0.0030	4.25	20.86	Pipe Channel, 30" 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.014
2.7	760	0.0028	4.64	32.77	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
8.4	1,232	Total			

Summary for Subcatchment S24.1:

Runoff = 3.40 cfs @ 12.17 hrs, Volume= 0.276 af, Depth> 1.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.760	49	
* 1.570	98	
2.330	82	Weighted Average
0.760		32.62% Pervious Area
1.570		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
12.1	1,260	Total			

Summary for Subcatchment S24.2:

Runoff = 0.02 cfs @ 13.73 hrs, Volume= 0.009 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.300	49	
1.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
9.8	1,260	Total			

Summary for Subcatchment S25:

Runoff = 4.98 cfs @ 12.10 hrs, Volume= 0.348 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.350	49	
* 1.700	98	
2.050	90	Weighted Average
0.350		17.07% Pervious Area
1.700		82.93% Impervious Area

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Type III 24-hr 2-Year Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0070	0.90		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
0.1	22	0.0480	4.45		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	106	0.0160	4.70	0.92	Pipe Channel, 6" PVC 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
4.2	380	0.0003	1.52	10.73	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
6.5	608	Total			

Summary for Subcatchment S26:

Runoff = 1.29 cfs @ 12.13 hrs, Volume= 0.103 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.040	49	
* 0.730	98	
1.770	69	Weighted Average
1.040		58.76% Pervious Area
0.730		41.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	100	0.2000	0.29		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.8	142	0.0377	3.13		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.6	95	0.0200	2.55	0.89	Pipe Channel, 8" Metal 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.025
0.7	110	0.0010	2.77	19.59	Pipe Channel, 36" RCP 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
7.8	447	Total			

Summary for Subcatchment S27:

Runoff = 8.51 cfs @ 12.18 hrs, Volume= 0.768 af, Depth> 2.50"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.250	49	
* 3.430	98	
3.680	95	Weighted Average
0.250		6.79% Pervious Area
3.430		93.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
2.9	178	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.3	70	0.0050	3.46	4.24	Pipe Channel, 15" RCP 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
7.3	707	0.0007	1.62	3.89	Pipe Channel, 21" RCP 21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44' n= 0.014
13.3	1,055	Total			

Summary for Subcatchment S28:

Runoff = 22.38 cfs @ 12.07 hrs, Volume= 1.504 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 1.31 cfs @ 12.16 hrs, Volume= 0.132 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 3.360	60	
* 0.290	69	
* 0.110	98	
3.760	62	Weighted Average
3.650		97.07% Pervious Area
0.110		2.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 2.45 cfs @ 12.30 hrs, Volume= 0.262 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.980	49	
* 1.840	98	
4.820	68	Weighted Average
2.980		61.83% Pervious Area
1.840		38.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3					Direct Entry,

Summary for Subcatchment S31:

Runoff = 1.45 cfs @ 12.26 hrs, Volume= 0.161 af, Depth> 0.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 3.190	60	
* 0.730	79	
3.920	64	Weighted Average
3.920		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 1.67 cfs @ 12.13 hrs, Volume= 0.125 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 2.86 cfs @ 12.08 hrs, Volume= 0.189 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.720	69	
* 0.730	98	
1.450	84	Weighted Average
0.720		49.66% Pervious Area
0.730		50.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 7.60 cfs @ 12.07 hrs, Volume= 0.524 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.250	49	
* 2.470	98	
2.720	93	Weighted Average
0.250		9.19% Pervious Area
2.470		90.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S33:

Runoff = 0.01 cfs @ 13.65 hrs, Volume= 0.006 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.820	49	
0.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 1R: Point of Analysis 1Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 1.15" for 2-Year event
Inflow = 61.36 cfs @ 12.30 hrs, Volume= 9.288 af
Outflow = 61.36 cfs @ 12.30 hrs, Volume= 9.288 af, Atten= 0%, Lag= 0.0 min

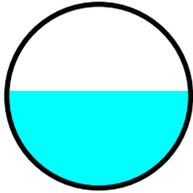
Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 23R:Inflow Area = 10.160 ac, 82.78% Impervious, Inflow Depth > 2.12" for 2-Year event
Inflow = 20.91 cfs @ 12.13 hrs, Volume= 1.798 af
Outflow = 20.57 cfs @ 12.16 hrs, Volume= 1.796 af, Atten= 2%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.53 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 2.6 minPeak Storage= 1,174 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.58'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 38.21 cfs

36.0" Round Pipe
n= 0.014
Length= 310.0' Slope= 0.0038 '/'
Inlet Invert= 47.50', Outlet Invert= 46.32'



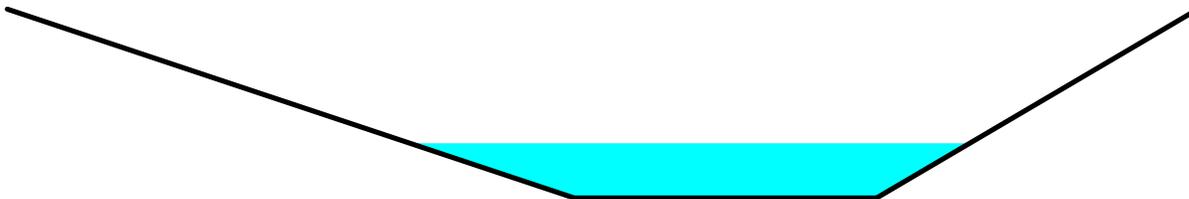
Summary for Reach L150:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 1.15" for 2-Year event
Inflow = 55.84 cfs @ 12.20 hrs, Volume= 8.327 af
Outflow = 55.63 cfs @ 12.22 hrs, Volume= 8.318 af, Atten= 0%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.38 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.23 fps, Avg. Travel Time= 1.8 min

Peak Storage= 2,248 cf @ 12.21 hrs
Average Depth at Peak Storage= 1.45'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/' Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/'
Inlet Invert= 48.58', Outlet Invert= 48.00'



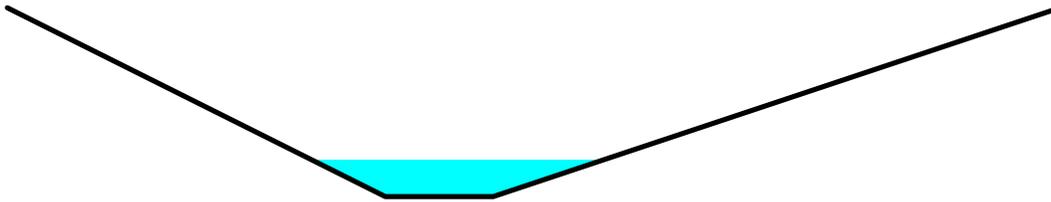
Summary for Reach L151:

Inflow Area = 90.610 ac, 42.17% Impervious, Inflow Depth > 1.12" for 2-Year event
Inflow = 57.06 cfs @ 12.22 hrs, Volume= 8.479 af
Outflow = 56.49 cfs @ 12.24 hrs, Volume= 8.473 af, Atten= 1%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.57 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.25 fps, Avg. Travel Time= 1.1 min

Peak Storage= 1,575 cf @ 12.23 hrs
Average Depth at Peak Storage= 1.37'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 92.980 ac, 42.26% Impervious, Inflow Depth > 1.13" for 2-Year event
Inflow = 59.11 cfs @ 12.23 hrs, Volume= 8.788 af
Outflow = 58.46 cfs @ 12.30 hrs, Volume= 8.760 af, Atten= 1%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.74 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 1.04 fps, Avg. Travel Time= 5.5 min

Peak Storage= 7,298 cf @ 12.26 hrs
Average Depth at Peak Storage= 2.10'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



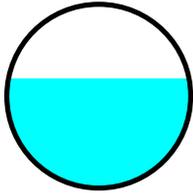
Summary for Reach L57:

Inflow Area = 55.470 ac, 36.25% Impervious, Inflow Depth > 0.95" for 2-Year event
Inflow = 19.71 cfs @ 12.39 hrs, Volume= 4.382 af
Outflow = 19.68 cfs @ 12.44 hrs, Volume= 4.372 af, Atten= 0%, Lag= 3.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.48 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 3.8 min

Peak Storage= 1,959 cf @ 12.41 hrs
Average Depth at Peak Storage= 1.79'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 29.62 cfs

36.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0023 '/'
Inlet Invert= 47.30', Outlet Invert= 46.28'



Summary for Reach L59:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 1.16" for 2-Year event
Inflow = 56.44 cfs @ 12.13 hrs, Volume= 8.351 af
Outflow = 55.84 cfs @ 12.20 hrs, Volume= 8.327 af, Atten= 1%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.88 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.41 fps, Avg. Travel Time= 5.1 min

Peak Storage= 6,253 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.59'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



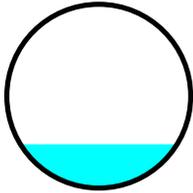
Summary for Reach L65:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 0.96" for 2-Year event
Inflow = 17.51 cfs @ 12.51 hrs, Volume= 4.108 af
Outflow = 17.52 cfs @ 12.51 hrs, Volume= 4.108 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 19.69 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.63 fps, Avg. Travel Time= 0.2 min

Peak Storage= 93 cf @ 12.51 hrs
Average Depth at Peak Storage= 0.59'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



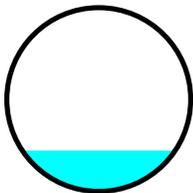
Summary for Reach L67:

Inflow Area = 54.020 ac, 36.19% Impervious, Inflow Depth > 0.96" for 2-Year event
Inflow = 19.09 cfs @ 12.40 hrs, Volume= 4.305 af
Outflow = 19.08 cfs @ 12.41 hrs, Volume= 4.303 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.25 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.98 fps, Avg. Travel Time= 0.8 min

Peak Storage= 382 cf @ 12.41 hrs
Average Depth at Peak Storage= 0.88'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 178.14 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0178 '/'
Inlet Invert= 50.70', Outlet Invert= 47.40'



Summary for Reach P1:

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 1.15" for 2-Year event
Inflow = 61.40 cfs @ 12.30 hrs, Volume= 9.290 af
Outflow = 61.36 cfs @ 12.30 hrs, Volume= 9.288 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.47 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.45 fps, Avg. Travel Time= 0.3 min

Peak Storage= 378 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.69'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

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12.00' x 2.33' deep channel, n= 0.030
 Length= 46.0' Slope= 0.0435 '/'
 Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 0.86" for 2-Year event
 Inflow = 23.26 cfs @ 12.11 hrs, Volume= 2.029 af
 Outflow = 21.41 cfs @ 12.14 hrs, Volume= 2.026 af, Atten= 8%, Lag= 1.7 min
 Primary = 10.66 cfs @ 12.14 hrs, Volume= 1.756 af
 Secondary = 10.75 cfs @ 12.14 hrs, Volume= 0.270 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 139.31' @ 12.14 hrs Surf.Area= 2,248 sf Storage= 1,830 cf

Plug-Flow detention time= 2.5 min calculated for 2.026 af (100% of inflow)
 Center-of-Mass det. time= 1.9 min (809.6 - 807.7)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=10.61 cfs @ 12.14 hrs HW=139.31' (Free Discharge)

↑1=Culvert (Inlet Controls 10.61 cfs @ 4.18 fps)

Secondary OutFlow Max=10.50 cfs @ 12.14 hrs HW=139.31' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Weir Controls 10.50 cfs @ 1.49 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 2.83" for 2-Year event
 Inflow = 8.25 cfs @ 12.07 hrs, Volume= 0.622 af
 Outflow = 11.03 cfs @ 12.10 hrs, Volume= 0.620 af, Atten= 0%, Lag= 1.7 min
 Primary = 11.03 cfs @ 12.10 hrs, Volume= 0.620 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 167.55' @ 12.10 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 13.1 min calculated for 0.618 af (99% of inflow)
 Center-of-Mass det. time= 11.3 min (739.2 - 727.9)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 1/'' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=10.97 cfs @ 12.10 hrs HW=167.54' (Free Discharge)

↑1=Culvert (Inlet Controls 10.97 cfs @ 4.23 fps)

Summary for Pond 22.4P:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 0.98" for 2-Year event
 Inflow = 41.33 cfs @ 12.10 hrs, Volume= 4.195 af
 Outflow = 17.51 cfs @ 12.51 hrs, Volume= 4.108 af, Atten= 58%, Lag= 24.5 min
 Primary = 17.51 cfs @ 12.51 hrs, Volume= 4.108 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 74.16' @ 12.51 hrs Surf.Area= 22,599 sf Storage= 39,331 cf

Plug-Flow detention time= 34.1 min calculated for 4.108 af (98% of inflow)

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Center-of-Mass det. time= 26.3 min (829.2 - 802.9)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/' Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=17.50 cfs @ 12.51 hrs HW=74.16' (Free Discharge)
 ↳ **2=Culvert** (Inlet Controls 17.50 cfs @ 7.28 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)
 ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>1.46"
 Tc=11.4 min CN=68 Runoff=38.41 cfs 3.139 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>4.16"
 Tc=5.0 min CN=98 Runoff=11.95 cfs 0.916 af
- Subcatchment S21:** Runoff Area=5.370 ac 63.69% Impervious Runoff Depth>2.37"
 Flow Length=640' Slope=0.0600 '/ Tc=12.1 min CN=80 Runoff=13.06 cfs 1.061 af
- Subcatchment S21.1:** Runoff Area=1.730 ac 26.59% Impervious Runoff Depth>1.08"
 Flow Length=410' Tc=11.6 min CN=62 Runoff=1.77 cfs 0.156 af
- Subcatchment S21.2.1:** Runoff Area=0.107 ac 100.00% Impervious Runoff Depth>4.16"
 Tc=5.0 min CN=98 Runoff=0.48 cfs 0.037 af
- Subcatchment S21.2.2:** Runoff Area=1.133 ac 3.80% Impervious Runoff Depth>0.51"
 Flow Length=90' Slope=0.0070 '/ Tc=13.2 min CN=51 Runoff=0.36 cfs 0.048 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>3.30"
 Tc=5.0 min CN=90 Runoff=12.90 cfs 0.888 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>3.10"
 Tc=5.0 min CN=88 Runoff=11.46 cfs 0.778 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>3.40"
 Tc=5.0 min CN=91 Runoff=9.06 cfs 0.629 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>3.40"
 Tc=5.0 min CN=91 Runoff=4.69 cfs 0.326 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>0.97"
 Tc=5.0 min CN=60 Runoff=5.48 cfs 0.400 af
- Subcatchment S23.1:** Runoff Area=2.670 ac 49.44% Impervious Runoff Depth>1.81"
 Tc=19.0 min CN=73 Runoff=4.17 cfs 0.403 af
- Subcatchment S23.2:** Runoff Area=1.450 ac 38.62% Impervious Runoff Depth>1.46"
 Flow Length=955' Tc=14.3 min CN=68 Runoff=1.99 cfs 0.176 af
- Subcatchment S24:** Runoff Area=2.660 ac 95.86% Impervious Runoff Depth>3.93"
 Flow Length=1,232' Tc=8.4 min CN=96 Runoff=10.69 cfs 0.872 af
- Subcatchment S24.1:** Runoff Area=2.330 ac 67.38% Impervious Runoff Depth>2.54"
 Flow Length=1,260' Slope=0.0040 '/ Tc=12.1 min CN=82 Runoff=6.06 cfs 0.494 af
- Subcatchment S24.2:** Runoff Area=1.300 ac 0.00% Impervious Runoff Depth>0.42"
 Flow Length=1,260' Slope=0.0040 '/ Tc=9.8 min CN=49 Runoff=0.31 cfs 0.046 af

Subcatchment S25:	Runoff Area=2.050 ac 82.93% Impervious Runoff Depth>3.30" Flow Length=608' Tc=6.5 min CN=90 Runoff=7.86 cfs 0.563 af
Subcatchment S26:	Runoff Area=1.770 ac 41.24% Impervious Runoff Depth>1.53" Flow Length=447' Tc=7.8 min CN=69 Runoff=3.11 cfs 0.226 af
Subcatchment S27:	Runoff Area=3.680 ac 93.21% Impervious Runoff Depth>3.82" Flow Length=1,055' Tc=13.3 min CN=95 Runoff=12.65 cfs 1.171 af
Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>3.30" Tc=5.0 min CN=90 Runoff=35.34 cfs 2.433 af
Subcatchment S29:	Runoff Area=3.760 ac 2.93% Impervious Runoff Depth>1.08" Tc=7.8 min CN=62 Runoff=4.32 cfs 0.339 af
Subcatchment S30:	Runoff Area=4.820 ac 38.17% Impervious Runoff Depth>1.46" Tc=18.3 min CN=68 Runoff=6.02 cfs 0.585 af
Subcatchment S31:	Runoff Area=3.920 ac 0.00% Impervious Runoff Depth>1.20" Tc=14.4 min CN=64 Runoff=4.27 cfs 0.392 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>2.81" Tc=9.2 min CN=85 Runoff=2.83 cfs 0.216 af
Subcatchment S32:	Runoff Area=1.450 ac 50.34% Impervious Runoff Depth>2.73" Tc=5.0 min CN=84 Runoff=4.92 cfs 0.329 af
Subcatchment S32.1:	Runoff Area=2.720 ac 90.81% Impervious Runoff Depth>3.61" Tc=5.0 min CN=93 Runoff=11.54 cfs 0.818 af
Subcatchment S33:	Runoff Area=0.820 ac 0.00% Impervious Runoff Depth>0.42" Tc=5.0 min CN=49 Runoff=0.22 cfs 0.029 af
Reach 1R: Point of Analysis 1	Inflow=104.67 cfs 16.150 af Outflow=104.67 cfs 16.150 af
Reach 23R:	Avg. Flow Depth=2.13' Max Vel=6.07 fps Inflow=32.80 cfs 2.832 af 36.0" Round Pipe n=0.014 L=310.0' S=0.0038 '/' Capacity=38.21 cfs Outflow=32.01 cfs 2.829 af
Reach L150:	Avg. Flow Depth=1.90' Max Vel=3.92 fps Inflow=93.11 cfs 14.429 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=92.70 cfs 14.416 af
Reach L151:	Avg. Flow Depth=1.78' Max Vel=6.44 fps Inflow=96.93 cfs 14.808 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=96.57 cfs 14.800 af
Reach L186:	Avg. Flow Depth=2.75' Max Vel=3.16 fps Inflow=101.36 cfs 15.345 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=99.75 cfs 15.306 af
Reach L57:	Avg. Flow Depth=2.27' Max Vel=4.75 fps Inflow=27.29 cfs 7.754 af 36.0" Round Pipe n=0.014 L=446.0' S=0.0023 '/' Capacity=29.62 cfs Outflow=27.21 cfs 7.738 af
Reach L59:	Avg. Flow Depth=2.08' Max Vel=4.49 fps Inflow=95.91 cfs 14.463 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=93.11 cfs 14.429 af

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Type III 24-hr 10-Year Rainfall=4.60"

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Reach L65: Avg. Flow Depth=0.67' Max Vel=21.15 fps Inflow=22.46 cfs 7.179 af
30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/' Capacity=142.22 cfs Outflow=22.47 cfs 7.178 af

Reach L67: Avg. Flow Depth=1.03' Max Vel=10.08 fps Inflow=25.71 cfs 7.581 af
48.0" Round Pipe n=0.014 L=185.0' S=0.0178 '/' Capacity=178.14 cfs Outflow=25.70 cfs 7.577 af

Reach P1: Avg. Flow Depth=0.96' Max Vel=9.09 fps Inflow=104.77 cfs 16.153 af
n=0.030 L=46.0' S=0.0435 '/' Capacity=407.83 cfs Outflow=104.67 cfs 16.150 af

Pond 19P: Peak Elev=139.65' Storage=2,662 cf Inflow=46.96 cfs 4.052 af
Primary=14.02 cfs 2.976 af Secondary=32.17 cfs 1.070 af Outflow=46.19 cfs 4.047 af

Pond 20P: Peak Elev=167.70' Storage=2,838 cf Inflow=11.95 cfs 0.916 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/' Outflow=12.67 cfs 0.912 af

Pond 22.4P: Peak Elev=75.64' Storage=77,366 cf Inflow=68.32 cfs 7.298 af
Primary=22.46 cfs 7.179 af Secondary=0.00 cfs 0.000 af Outflow=22.46 cfs 7.179 af

Total Runoff Area = 96.520 ac Runoff Volume = 17.467 af Average Runoff Depth = 2.17"
56.73% Pervious = 54.760 ac 43.27% Impervious = 41.760 ac

Summary for Subcatchment S19:

Runoff = 38.41 cfs @ 12.17 hrs, Volume= 3.139 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 11.95 cfs @ 12.07 hrs, Volume= 0.916 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 13.06 cfs @ 12.17 hrs, Volume= 1.061 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.950	49	
* 3.420	98	
5.370	80	Weighted Average
1.950		36.31% Pervious Area
3.420		63.69% Impervious Area

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					
0.6	640	0.0600	19.11	60.03	Direct Entry, Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 1.77 cfs @ 12.18 hrs, Volume= 0.156 af, Depth> 1.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.270	49	
* 0.460	98	
1.730	62	Weighted Average
1.270		73.41% Pervious Area
0.460		26.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.107	98	
0.107		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.36 cfs @ 12.29 hrs, Volume= 0.048 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.090	49	
* 0.043	98	
1.133	51	Weighted Average
1.090		96.20% Pervious Area
0.043		3.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel,
					12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 12.90 cfs @ 12.07 hrs, Volume= 0.888 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 11.46 cfs @ 12.07 hrs, Volume= 0.778 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 9.06 cfs @ 12.07 hrs, Volume= 0.629 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 4.69 cfs @ 12.07 hrs, Volume= 0.326 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 5.48 cfs @ 12.09 hrs, Volume= 0.400 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23.1:

Runoff = 4.17 cfs @ 12.27 hrs, Volume= 0.403 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.350	49	
* 1.320	98	
2.670	73	Weighted Average
1.350		50.56% Pervious Area
1.320		49.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0					Direct Entry,

Summary for Subcatchment S23.2:

Runoff = 1.99 cfs @ 12.21 hrs, Volume= 0.176 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.890	49	
* 0.560	98	
1.450	68	Weighted Average
0.890		61.38% Pervious Area
0.560		38.62% Impervious Area

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.1825	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
3.2	360	0.0139	1.90		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.7	390	0.0374	3.93		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
14.3	955	Total			

Summary for Subcatchment S24:

Runoff = 10.69 cfs @ 12.11 hrs, Volume= 0.872 af, Depth> 3.93"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.110	49	
* 2.550	98	
2.660	96	Weighted Average
0.110		4.14% Pervious Area
2.550		95.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
1.8	112	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	70	0.0050	2.98	2.34	Pipe Channel, 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.014
0.7	190	0.0030	4.25	20.86	Pipe Channel, 30" 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.014
2.7	760	0.0028	4.64	32.77	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
8.4	1,232	Total			

Summary for Subcatchment S24.1:

Runoff = 6.06 cfs @ 12.17 hrs, Volume= 0.494 af, Depth> 2.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 0.760	49	
* 1.570	98	
2.330	82	Weighted Average
0.760		32.62% Pervious Area
1.570		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
12.1	1,260	Total			

Summary for Subcatchment S24.2:

Runoff = 0.31 cfs @ 12.30 hrs, Volume= 0.046 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.300	49	
1.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
9.8	1,260	Total			

Summary for Subcatchment S25:

Runoff = 7.86 cfs @ 12.09 hrs, Volume= 0.563 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.350	49	
* 1.700	98	
2.050	90	Weighted Average
0.350		17.07% Pervious Area
1.700		82.93% Impervious Area

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0070	0.90		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
0.1	22	0.0480	4.45		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	106	0.0160	4.70	0.92	Pipe Channel, 6" PVC 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
4.2	380	0.0003	1.52	10.73	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
6.5	608	Total			

Summary for Subcatchment S26:

Runoff = 3.11 cfs @ 12.12 hrs, Volume= 0.226 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.040	49	
* 0.730	98	
1.770	69	Weighted Average
1.040		58.76% Pervious Area
0.730		41.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	100	0.2000	0.29		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.8	142	0.0377	3.13		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.6	95	0.0200	2.55	0.89	Pipe Channel, 8" Metal 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.025
0.7	110	0.0010	2.77	19.59	Pipe Channel, 36" RCP 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
7.8	447	Total			

Summary for Subcatchment S27:

Runoff = 12.65 cfs @ 12.18 hrs, Volume= 1.171 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 0.250	49	
* 3.430	98	
3.680	95	Weighted Average
0.250		6.79% Pervious Area
3.430		93.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
2.9	178	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.3	70	0.0050	3.46	4.24	Pipe Channel, 15" RCP 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
7.3	707	0.0007	1.62	3.89	Pipe Channel, 21" RCP 21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44' n= 0.014
13.3	1,055	Total			

Summary for Subcatchment S28:

Runoff = 35.34 cfs @ 12.07 hrs, Volume= 2.433 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 4.32 cfs @ 12.13 hrs, Volume= 0.339 af, Depth> 1.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 3.360	60	
* 0.290	69	
* 0.110	98	
3.760	62	Weighted Average
3.650		97.07% Pervious Area
0.110		2.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 6.02 cfs @ 12.27 hrs, Volume= 0.585 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.980	49	
* 1.840	98	
4.820	68	Weighted Average
2.980		61.83% Pervious Area
1.840		38.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3					Direct Entry,

Summary for Subcatchment S31:

Runoff = 4.27 cfs @ 12.22 hrs, Volume= 0.392 af, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 3.190	60	
* 0.730	79	
3.920	64	Weighted Average
3.920		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 2.83 cfs @ 12.13 hrs, Volume= 0.216 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 4.92 cfs @ 12.08 hrs, Volume= 0.329 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.720	69	
* 0.730	98	
1.450	84	Weighted Average
0.720		49.66% Pervious Area
0.730		50.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 11.54 cfs @ 12.07 hrs, Volume= 0.818 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.250	49	
* 2.470	98	
2.720	93	Weighted Average
0.250		9.19% Pervious Area
2.470		90.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S33:

Runoff = 0.22 cfs @ 12.15 hrs, Volume= 0.029 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.820	49	
0.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 2.01" for 10-Year event
Inflow = 104.67 cfs @ 12.26 hrs, Volume= 16.150 af
Outflow = 104.67 cfs @ 12.26 hrs, Volume= 16.150 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

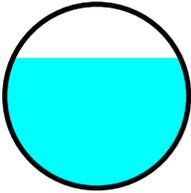
Summary for Reach 23R:

Inflow Area = 10.160 ac, 82.78% Impervious, Inflow Depth > 3.34" for 10-Year event
Inflow = 32.80 cfs @ 12.12 hrs, Volume= 2.832 af
Outflow = 32.01 cfs @ 12.15 hrs, Volume= 2.829 af, Atten= 2%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.07 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 2.27 fps, Avg. Travel Time= 2.3 min

Peak Storage= 1,661 cf @ 12.14 hrs
Average Depth at Peak Storage= 2.13'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 38.21 cfs

36.0" Round Pipe
n= 0.014
Length= 310.0' Slope= 0.0038 '/'
Inlet Invert= 47.50', Outlet Invert= 46.32'



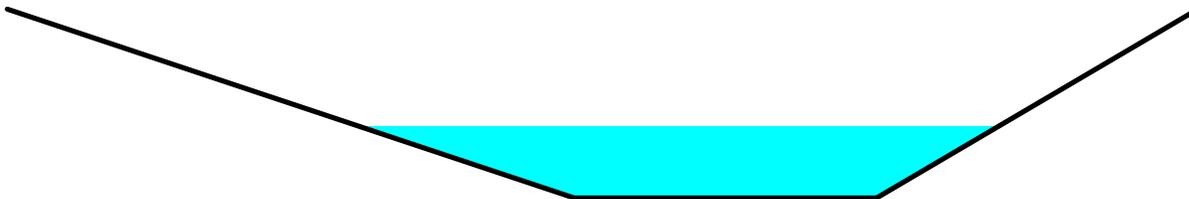
Summary for Reach L150:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 2.00" for 10-Year event
Inflow = 93.11 cfs @ 12.18 hrs, Volume= 14.429 af
Outflow = 92.70 cfs @ 12.20 hrs, Volume= 14.416 af, Atten= 0%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.92 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.48 fps, Avg. Travel Time= 1.5 min

Peak Storage= 3,231 cf @ 12.19 hrs
Average Depth at Peak Storage= 1.90'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/ Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/
Inlet Invert= 48.58', Outlet Invert= 48.00'



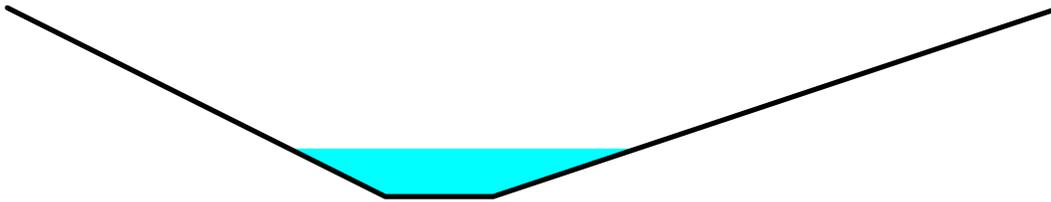
Summary for Reach L151:

Inflow Area = 90.610 ac, 42.17% Impervious, Inflow Depth > 1.96" for 10-Year event
Inflow = 96.93 cfs @ 12.20 hrs, Volume= 14.808 af
Outflow = 96.57 cfs @ 12.21 hrs, Volume= 14.800 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.44 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.64 fps, Avg. Travel Time= 1.0 min

Peak Storage= 2,336 cf @ 12.21 hrs
Average Depth at Peak Storage= 1.78'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 92.980 ac, 42.26% Impervious, Inflow Depth > 1.98" for 10-Year event
Inflow = 101.36 cfs @ 12.21 hrs, Volume= 15.345 af
Outflow = 99.75 cfs @ 12.27 hrs, Volume= 15.306 af, Atten= 2%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.16 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.24 fps, Avg. Travel Time= 4.6 min

Peak Storage= 10,760 cf @ 12.23 hrs
Average Depth at Peak Storage= 2.75'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



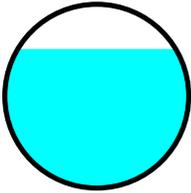
Summary for Reach L57:

Inflow Area = 55.470 ac, 36.25% Impervious, Inflow Depth > 1.68" for 10-Year event
Inflow = 27.29 cfs @ 12.32 hrs, Volume= 7.754 af
Outflow = 27.21 cfs @ 12.38 hrs, Volume= 7.738 af, Atten= 0%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.75 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 2.33 fps, Avg. Travel Time= 3.2 min

Peak Storage= 2,556 cf @ 12.35 hrs
Average Depth at Peak Storage= 2.27'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 29.62 cfs

36.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0023 '/'
Inlet Invert= 47.30', Outlet Invert= 46.28'



Summary for Reach L59:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 2.00" for 10-Year event
Inflow = 95.91 cfs @ 12.12 hrs, Volume= 14.463 af
Outflow = 93.11 cfs @ 12.18 hrs, Volume= 14.429 af, Atten= 3%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.49 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 4.2 min

Peak Storage= 9,067 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.08'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



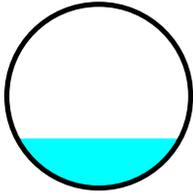
Summary for Reach L65:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 1.68" for 10-Year event
Inflow = 22.46 cfs @ 12.56 hrs, Volume= 7.179 af
Outflow = 22.47 cfs @ 12.56 hrs, Volume= 7.178 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 21.15 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 10.25 fps, Avg. Travel Time= 0.2 min

Peak Storage= 110 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



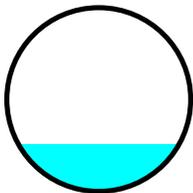
Summary for Reach L67:

Inflow Area = 54.020 ac, 36.19% Impervious, Inflow Depth > 1.68" for 10-Year event
Inflow = 25.71 cfs @ 12.36 hrs, Volume= 7.581 af
Outflow = 25.70 cfs @ 12.36 hrs, Volume= 7.577 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.08 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 4.74 fps, Avg. Travel Time= 0.7 min

Peak Storage= 472 cf @ 12.36 hrs
Average Depth at Peak Storage= 1.03'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 178.14 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0178 '/'
Inlet Invert= 50.70', Outlet Invert= 47.40'



Summary for Reach P1:

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 2.01" for 10-Year event
Inflow = 104.77 cfs @ 12.26 hrs, Volume= 16.153 af
Outflow = 104.67 cfs @ 12.26 hrs, Volume= 16.150 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.09 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 0.3 min

Peak Storage= 530 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.96'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
 Length= 46.0' Slope= 0.0435 '/'
 Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 1.71" for 10-Year event
 Inflow = 46.96 cfs @ 12.15 hrs, Volume= 4.052 af
 Outflow = 46.19 cfs @ 12.16 hrs, Volume= 4.047 af, Atten= 2%, Lag= 0.6 min
 Primary = 14.02 cfs @ 12.16 hrs, Volume= 2.976 af
 Secondary = 32.17 cfs @ 12.16 hrs, Volume= 1.070 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 139.65' @ 12.16 hrs Surf.Area= 2,709 sf Storage= 2,662 cf

Plug-Flow detention time= 2.1 min calculated for 4.047 af (100% of inflow)
 Center-of-Mass det. time= 1.6 min (801.1 - 799.4)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=13.96 cfs @ 12.16 hrs HW=139.64' (Free Discharge)

↑1=Culvert (Inlet Controls 13.96 cfs @ 4.62 fps)

Secondary OutFlow Max=31.65 cfs @ 12.16 hrs HW=139.64' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Weir Controls 31.65 cfs @ 2.15 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 4.16" for 10-Year event
 Inflow = 11.95 cfs @ 12.07 hrs, Volume= 0.916 af
 Outflow = 12.67 cfs @ 12.06 hrs, Volume= 0.912 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.67 cfs @ 12.06 hrs, Volume= 0.912 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 167.70' @ 12.06 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 12.0 min calculated for 0.912 af (100% of inflow)
 Center-of-Mass det. time= 10.3 min (731.5 - 721.2)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 1/ S Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=12.10 cfs @ 12.06 hrs HW=167.65' (Free Discharge)

↑1=Culvert (Inlet Controls 12.10 cfs @ 4.37 fps)

Summary for Pond 22.4P:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 1.71" for 10-Year event
 Inflow = 68.32 cfs @ 12.09 hrs, Volume= 7.298 af
 Outflow = 22.46 cfs @ 12.56 hrs, Volume= 7.179 af, Atten= 67%, Lag= 28.2 min
 Primary = 22.46 cfs @ 12.56 hrs, Volume= 7.179 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 75.64' @ 12.56 hrs Surf.Area= 28,932 sf Storage= 77,366 cf

Plug-Flow detention time= 40.1 min calculated for 7.161 af (98% of inflow)

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Type III 24-hr 10-Year Rainfall=4.60"

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Center-of-Mass det. time= 33.8 min (832.3 - 798.4)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/8" Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=22.46 cfs @ 12.56 hrs HW=75.63' (Free Discharge)
 ↳ **2=Culvert** (Inlet Controls 22.46 cfs @ 9.34 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)
 ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>2.06"
 Tc=11.4 min CN=68 Runoff=55.19 cfs 4.430 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>5.02"
 Tc=5.0 min CN=98 Runoff=14.31 cfs 1.105 af
- Subcatchment S21:** Runoff Area=5.370 ac 63.69% Impervious Runoff Depth>3.11"
 Flow Length=640' Slope=0.0600 '/ Tc=12.1 min CN=80 Runoff=17.07 cfs 1.393 af
- Subcatchment S21.1:** Runoff Area=1.730 ac 26.59% Impervious Runoff Depth>1.60"
 Flow Length=410' Tc=11.6 min CN=62 Runoff=2.76 cfs 0.230 af
- Subcatchment S21.2.1:** Runoff Area=0.107 ac 100.00% Impervious Runoff Depth>5.02"
 Tc=5.0 min CN=98 Runoff=0.58 cfs 0.045 af
- Subcatchment S21.2.2:** Runoff Area=1.133 ac 3.80% Impervious Runoff Depth>0.86"
 Flow Length=90' Slope=0.0070 '/ Tc=13.2 min CN=51 Runoff=0.75 cfs 0.081 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>4.13"
 Tc=5.0 min CN=90 Runoff=15.92 cfs 1.111 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>3.92"
 Tc=5.0 min CN=88 Runoff=14.29 cfs 0.982 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>4.23"
 Tc=5.0 min CN=91 Runoff=11.13 cfs 0.783 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>4.23"
 Tc=5.0 min CN=91 Runoff=5.77 cfs 0.406 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>1.46"
 Tc=5.0 min CN=60 Runoff=8.71 cfs 0.603 af
- Subcatchment S23.1:** Runoff Area=2.670 ac 49.44% Impervious Runoff Depth>2.47"
 Tc=19.0 min CN=73 Runoff=5.73 cfs 0.550 af
- Subcatchment S23.2:** Runoff Area=1.450 ac 38.62% Impervious Runoff Depth>2.06"
 Flow Length=955' Tc=14.3 min CN=68 Runoff=2.86 cfs 0.249 af
- Subcatchment S24:** Runoff Area=2.660 ac 95.86% Impervious Runoff Depth>4.79"
 Flow Length=1,232' Tc=8.4 min CN=96 Runoff=12.88 cfs 1.061 af
- Subcatchment S24.1:** Runoff Area=2.330 ac 67.38% Impervious Runoff Depth>3.31"
 Flow Length=1,260' Slope=0.0040 '/ Tc=12.1 min CN=82 Runoff=7.82 cfs 0.642 af
- Subcatchment S24.2:** Runoff Area=1.300 ac 0.00% Impervious Runoff Depth>0.74"
 Flow Length=1,260' Slope=0.0040 '/ Tc=9.8 min CN=49 Runoff=0.75 cfs 0.080 af

Subcatchment S25:	Runoff Area=2.050 ac 82.93% Impervious Runoff Depth>4.13" Flow Length=608' Tc=6.5 min CN=90 Runoff=9.71 cfs 0.705 af
Subcatchment S26:	Runoff Area=1.770 ac 41.24% Impervious Runoff Depth>2.15" Flow Length=447' Tc=7.8 min CN=69 Runoff=4.41 cfs 0.317 af
Subcatchment S27:	Runoff Area=3.680 ac 93.21% Impervious Runoff Depth>4.67" Flow Length=1,055' Tc=13.3 min CN=95 Runoff=15.28 cfs 1.431 af
Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>4.13" Tc=5.0 min CN=90 Runoff=43.63 cfs 3.044 af
Subcatchment S29:	Runoff Area=3.760 ac 2.93% Impervious Runoff Depth>1.60" Tc=7.8 min CN=62 Runoff=6.76 cfs 0.501 af
Subcatchment S30:	Runoff Area=4.820 ac 38.17% Impervious Runoff Depth>2.06" Tc=18.3 min CN=68 Runoff=8.64 cfs 0.826 af
Subcatchment S31:	Runoff Area=3.920 ac 0.00% Impervious Runoff Depth>1.74" Tc=14.4 min CN=64 Runoff=6.43 cfs 0.570 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>3.60" Tc=9.2 min CN=85 Runoff=3.59 cfs 0.276 af
Subcatchment S32:	Runoff Area=1.450 ac 50.34% Impervious Runoff Depth>3.51" Tc=5.0 min CN=84 Runoff=6.31 cfs 0.424 af
Subcatchment S32.1:	Runoff Area=2.720 ac 90.81% Impervious Runoff Depth>4.45" Tc=5.0 min CN=93 Runoff=14.05 cfs 1.009 af
Subcatchment S33:	Runoff Area=0.820 ac 0.00% Impervious Runoff Depth>0.74" Tc=5.0 min CN=49 Runoff=0.57 cfs 0.051 af
Reach 1R: Point of Analysis 1	Inflow=132.62 cfs 20.840 af Outflow=132.62 cfs 20.840 af
Reach 23R:	Avg. Flow Depth=2.60' Max Vel=6.16 fps Inflow=40.44 cfs 3.514 af 36.0" Round Pipe n=0.014 L=310.0' S=0.0038 '/' Capacity=38.21 cfs Outflow=39.34 cfs 3.511 af
Reach L150:	Avg. Flow Depth=2.14' Max Vel=4.18 fps Inflow=117.58 cfs 18.583 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=116.12 cfs 18.568 af
Reach L151:	Avg. Flow Depth=1.99' Max Vel=6.85 fps Inflow=122.48 cfs 19.138 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=122.09 cfs 19.128 af
Reach L186:	Avg. Flow Depth=3.10' Max Vel=3.37 fps Inflow=128.30 cfs 19.829 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=126.31 cfs 19.783 af
Reach L57:	Avg. Flow Depth=2.73' Max Vel=4.78 fps Inflow=31.85 cfs 10.038 af 36.0" Round Pipe n=0.014 L=446.0' S=0.0023 '/' Capacity=29.62 cfs Outflow=31.65 cfs 10.019 af
Reach L59:	Avg. Flow Depth=2.33' Max Vel=4.77 fps Inflow=120.15 cfs 18.622 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=117.58 cfs 18.583 af

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Type III 24-hr 25-Year Rainfall=5.50"

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Reach L65: Avg. Flow Depth=0.71' Max Vel=21.81 fps Inflow=25.01 cfs 9.244 af
30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/' Capacity=142.22 cfs Outflow=25.01 cfs 9.243 af

Reach L67: Avg. Flow Depth=1.10' Max Vel=10.49 fps Inflow=29.51 cfs 9.793 af
48.0" Round Pipe n=0.014 L=185.0' S=0.0178 '/' Capacity=178.14 cfs Outflow=29.50 cfs 9.789 af

Reach P1: Avg. Flow Depth=1.12' Max Vel=9.92 fps Inflow=132.72 cfs 20.843 af
n=0.030 L=46.0' S=0.0435 '/' Capacity=407.83 cfs Outflow=132.62 cfs 20.840 af

Pond 19P: Peak Elev=139.87' Storage=3,287 cf Inflow=64.53 cfs 5.531 af
Primary=15.61 cfs 3.749 af Secondary=48.88 cfs 1.776 af Outflow=64.49 cfs 5.525 af

Pond 20P: Peak Elev=167.88' Storage=2,838 cf Inflow=14.31 cfs 1.105 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/' Outflow=14.34 cfs 1.101 af

Pond 22.4P: Peak Elev=76.54' Storage=105,210 cf Inflow=86.42 cfs 9.383 af
Primary=25.01 cfs 9.244 af Secondary=0.00 cfs 0.000 af Outflow=25.01 cfs 9.244 af

Total Runoff Area = 96.520 ac Runoff Volume = 22.906 af Average Runoff Depth = 2.85"
56.73% Pervious = 54.760 ac 43.27% Impervious = 41.760 ac

Summary for Subcatchment S19:

Runoff = 55.19 cfs @ 12.17 hrs, Volume= 4.430 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 14.31 cfs @ 12.07 hrs, Volume= 1.105 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 17.07 cfs @ 12.17 hrs, Volume= 1.393 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.950	49	
* 3.420	98	
5.370	80	Weighted Average
1.950		36.31% Pervious Area
3.420		63.69% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					
0.6	640	0.0600	19.11	60.03	Direct Entry, Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 2.76 cfs @ 12.17 hrs, Volume= 0.230 af, Depth> 1.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.270	49	
* 0.460	98	
1.730	62	Weighted Average
1.270		73.41% Pervious Area
0.460		26.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.58 cfs @ 12.07 hrs, Volume= 0.045 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.107	98	
0.107		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.75 cfs @ 12.23 hrs, Volume= 0.081 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.090	49	
* 0.043	98	
1.133	51	Weighted Average
1.090		96.20% Pervious Area
0.043		3.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel,
					12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 15.92 cfs @ 12.07 hrs, Volume= 1.111 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 14.29 cfs @ 12.07 hrs, Volume= 0.982 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 11.13 cfs @ 12.07 hrs, Volume= 0.783 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 5.77 cfs @ 12.07 hrs, Volume= 0.406 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 8.71 cfs @ 12.09 hrs, Volume= 0.603 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23.1:

Runoff = 5.73 cfs @ 12.27 hrs, Volume= 0.550 af, Depth> 2.47"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.350	49	
* 1.320	98	
2.670	73	Weighted Average
1.350		50.56% Pervious Area
1.320		49.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0					Direct Entry,

Summary for Subcatchment S23.2:

Runoff = 2.86 cfs @ 12.21 hrs, Volume= 0.249 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.890	49	
* 0.560	98	
1.450	68	Weighted Average
0.890		61.38% Pervious Area
0.560		38.62% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.1825	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
3.2	360	0.0139	1.90		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.7	390	0.0374	3.93		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
14.3	955	Total			

Summary for Subcatchment S24:

Runoff = 12.88 cfs @ 12.11 hrs, Volume= 1.061 af, Depth> 4.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.110	49	
* 2.550	98	
2.660	96	Weighted Average
0.110		4.14% Pervious Area
2.550		95.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
1.8	112	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	70	0.0050	2.98	2.34	Pipe Channel, 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.014
0.7	190	0.0030	4.25	20.86	Pipe Channel, 30" 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.014
2.7	760	0.0028	4.64	32.77	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
8.4	1,232	Total			

Summary for Subcatchment S24.1:

Runoff = 7.82 cfs @ 12.17 hrs, Volume= 0.642 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 0.760	49	
* 1.570	98	
2.330	82	Weighted Average
0.760		32.62% Pervious Area
1.570		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
12.1	1,260	Total			

Summary for Subcatchment S24.2:

Runoff = 0.75 cfs @ 12.19 hrs, Volume= 0.080 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.300	49	
1.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
9.8	1,260	Total			

Summary for Subcatchment S25:

Runoff = 9.71 cfs @ 12.09 hrs, Volume= 0.705 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.350	49	
* 1.700	98	
2.050	90	Weighted Average
0.350		17.07% Pervious Area
1.700		82.93% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0070	0.90		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
0.1	22	0.0480	4.45		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	106	0.0160	4.70	0.92	Pipe Channel, 6" PVC 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
4.2	380	0.0003	1.52	10.73	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
6.5	608	Total			

Summary for Subcatchment S26:

Runoff = 4.41 cfs @ 12.12 hrs, Volume= 0.317 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.040	49	
* 0.730	98	
1.770	69	Weighted Average
1.040		58.76% Pervious Area
0.730		41.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	100	0.2000	0.29		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.8	142	0.0377	3.13		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.6	95	0.0200	2.55	0.89	Pipe Channel, 8" Metal 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.025
0.7	110	0.0010	2.77	19.59	Pipe Channel, 36" RCP 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
7.8	447	Total			

Summary for Subcatchment S27:

Runoff = 15.28 cfs @ 12.18 hrs, Volume= 1.431 af, Depth> 4.67"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 0.250	49	
* 3.430	98	
3.680	95	Weighted Average
0.250		6.79% Pervious Area
3.430		93.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
2.9	178	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.3	70	0.0050	3.46	4.24	Pipe Channel, 15" RCP 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
7.3	707	0.0007	1.62	3.89	Pipe Channel, 21" RCP 21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44' n= 0.014
13.3	1,055	Total			

Summary for Subcatchment S28:

Runoff = 43.63 cfs @ 12.07 hrs, Volume= 3.044 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 6.76 cfs @ 12.12 hrs, Volume= 0.501 af, Depth> 1.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 3.360	60	
* 0.290	69	
* 0.110	98	
3.760	62	Weighted Average
3.650		97.07% Pervious Area
0.110		2.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 8.64 cfs @ 12.27 hrs, Volume= 0.826 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.980	49	
* 1.840	98	
4.820	68	Weighted Average
2.980		61.83% Pervious Area
1.840		38.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3					Direct Entry,

Summary for Subcatchment S31:

Runoff = 6.43 cfs @ 12.21 hrs, Volume= 0.570 af, Depth> 1.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 3.190	60	
* 0.730	79	
3.920	64	Weighted Average
3.920		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 3.59 cfs @ 12.13 hrs, Volume= 0.276 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 6.31 cfs @ 12.07 hrs, Volume= 0.424 af, Depth> 3.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.720	69	
* 0.730	98	
1.450	84	Weighted Average
0.720		49.66% Pervious Area
0.730		50.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 14.05 cfs @ 12.07 hrs, Volume= 1.009 af, Depth> 4.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 0.250	49	
* 2.470	98	
2.720	93	Weighted Average
0.250		9.19% Pervious Area
2.470		90.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S33:

Runoff = 0.57 cfs @ 12.11 hrs, Volume= 0.051 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.820	49	
0.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 2.59" for 25-Year event
Inflow = 132.62 cfs @ 12.25 hrs, Volume= 20.840 af
Outflow = 132.62 cfs @ 12.25 hrs, Volume= 20.840 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

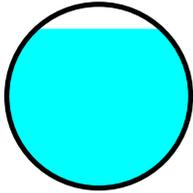
Summary for Reach 23R:

Inflow Area = 10.160 ac, 82.78% Impervious, Inflow Depth > 4.15" for 25-Year event
Inflow = 40.44 cfs @ 12.12 hrs, Volume= 3.514 af
Outflow = 39.34 cfs @ 12.16 hrs, Volume= 3.511 af, Atten= 3%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.16 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 2.42 fps, Avg. Travel Time= 2.1 min

Peak Storage= 2,017 cf @ 12.14 hrs
Average Depth at Peak Storage= 2.60'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 38.21 cfs

36.0" Round Pipe
n= 0.014
Length= 310.0' Slope= 0.0038 '/'
Inlet Invert= 47.50', Outlet Invert= 46.32'



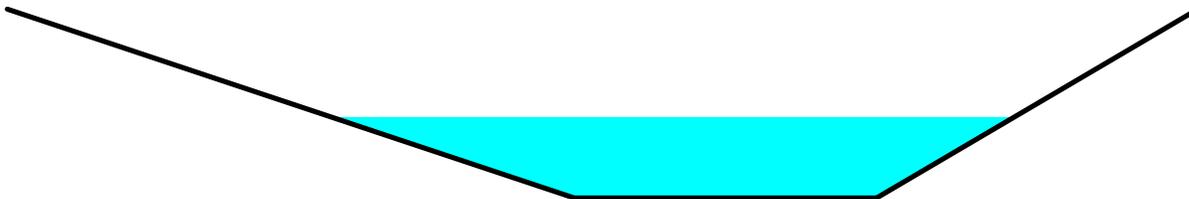
Summary for Reach L150:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 2.57" for 25-Year event
Inflow = 117.58 cfs @ 12.17 hrs, Volume= 18.583 af
Outflow = 116.12 cfs @ 12.19 hrs, Volume= 18.568 af, Atten= 1%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.18 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 1.4 min

Peak Storage= 3,798 cf @ 12.18 hrs
Average Depth at Peak Storage= 2.14'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/' Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/'
Inlet Invert= 48.58', Outlet Invert= 48.00'



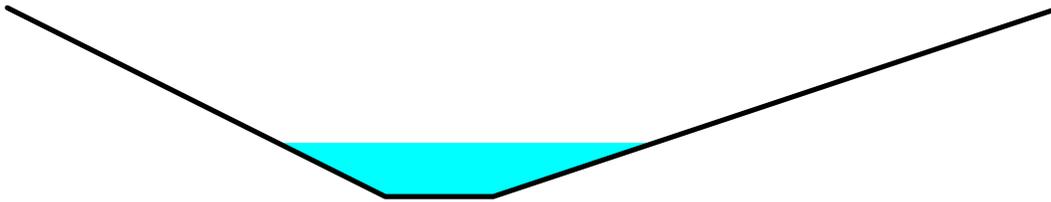
Summary for Reach L151:

Inflow Area = 90.610 ac, 42.17% Impervious, Inflow Depth > 2.53" for 25-Year event
Inflow = 122.48 cfs @ 12.20 hrs, Volume= 19.138 af
Outflow = 122.09 cfs @ 12.21 hrs, Volume= 19.128 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.85 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.9 min

Peak Storage= 2,775 cf @ 12.20 hrs
Average Depth at Peak Storage= 1.99'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 92.980 ac, 42.26% Impervious, Inflow Depth > 2.56" for 25-Year event
Inflow = 128.30 cfs @ 12.20 hrs, Volume= 19.829 af
Outflow = 126.31 cfs @ 12.26 hrs, Volume= 19.783 af, Atten= 2%, Lag= 3.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.37 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.35 fps, Avg. Travel Time= 4.2 min

Peak Storage= 12,854 cf @ 12.22 hrs
Average Depth at Peak Storage= 3.10'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



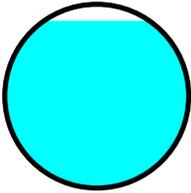
Summary for Reach L57:

Inflow Area = 55.470 ac, 36.25% Impervious, Inflow Depth > 2.17" for 25-Year event
Inflow = 31.85 cfs @ 12.31 hrs, Volume= 10.038 af
Outflow = 31.65 cfs @ 12.38 hrs, Volume= 10.019 af, Atten= 1%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.78 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 2.52 fps, Avg. Travel Time= 2.9 min

Peak Storage= 3,011 cf @ 12.35 hrs
Average Depth at Peak Storage= 2.73'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 29.62 cfs

36.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0023 '/'
Inlet Invert= 47.30', Outlet Invert= 46.28'



Summary for Reach L59:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 2.58" for 25-Year event
Inflow = 120.15 cfs @ 12.12 hrs, Volume= 18.622 af
Outflow = 117.58 cfs @ 12.17 hrs, Volume= 18.583 af, Atten= 2%, Lag= 3.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.77 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 1.86 fps, Avg. Travel Time= 3.9 min

Peak Storage= 10,682 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.33'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



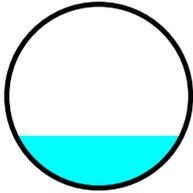
Summary for Reach L65:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 2.16" for 25-Year event
Inflow = 25.01 cfs @ 12.60 hrs, Volume= 9.244 af
Outflow = 25.01 cfs @ 12.60 hrs, Volume= 9.243 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 21.81 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 11.14 fps, Avg. Travel Time= 0.2 min

Peak Storage= 119 cf @ 12.60 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



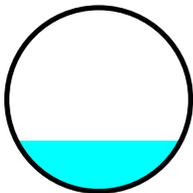
Summary for Reach L67:

Inflow Area = 54.020 ac, 36.19% Impervious, Inflow Depth > 2.18" for 25-Year event
Inflow = 29.51 cfs @ 12.33 hrs, Volume= 9.793 af
Outflow = 29.50 cfs @ 12.35 hrs, Volume= 9.789 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.49 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.16 fps, Avg. Travel Time= 0.6 min

Peak Storage= 520 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.10'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 178.14 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0178 '/'
Inlet Invert= 50.70', Outlet Invert= 47.40'



Summary for Reach P1:

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 2.59" for 25-Year event
Inflow = 132.72 cfs @ 12.25 hrs, Volume= 20.843 af
Outflow = 132.62 cfs @ 12.25 hrs, Volume= 20.840 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.92 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.31 fps, Avg. Travel Time= 0.2 min

Peak Storage= 616 cf @ 12.25 hrs
Average Depth at Peak Storage= 1.12'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
 Length= 46.0' Slope= 0.0435 '/'
 Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 2.33" for 25-Year event
 Inflow = 64.53 cfs @ 12.15 hrs, Volume= 5.531 af
 Outflow = 64.49 cfs @ 12.16 hrs, Volume= 5.525 af, Atten= 0%, Lag= 0.6 min
 Primary = 15.61 cfs @ 12.16 hrs, Volume= 3.749 af
 Secondary = 48.88 cfs @ 12.16 hrs, Volume= 1.776 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 139.87' @ 12.16 hrs Surf.Area= 3,009 sf Storage= 3,287 cf

Plug-Flow detention time= 1.9 min calculated for 5.511 af (100% of inflow)
 Center-of-Mass det. time= 1.5 min (796.4 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=15.55 cfs @ 12.16 hrs HW=139.86' (Free Discharge)

↑1=Culvert (Inlet Controls 15.55 cfs @ 4.95 fps)

Secondary OutFlow Max=48.13 cfs @ 12.16 hrs HW=139.86' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Weir Controls 48.13 cfs @ 2.44 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 5.02" for 25-Year event
 Inflow = 14.31 cfs @ 12.07 hrs, Volume= 1.105 af
 Outflow = 14.34 cfs @ 12.07 hrs, Volume= 1.101 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.34 cfs @ 12.07 hrs, Volume= 1.101 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 167.88' @ 12.07 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 11.5 min calculated for 1.098 af (99% of inflow)
 Center-of-Mass det. time= 9.8 min (728.1 - 718.4)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 1/'' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=13.81 cfs @ 12.07 hrs HW=167.82' (Free Discharge)

↑1=Culvert (Inlet Controls 13.81 cfs @ 4.60 fps)

Summary for Pond 22.4P:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 2.19" for 25-Year event
 Inflow = 86.42 cfs @ 12.09 hrs, Volume= 9.383 af
 Outflow = 25.01 cfs @ 12.60 hrs, Volume= 9.244 af, Atten= 71%, Lag= 30.1 min
 Primary = 25.01 cfs @ 12.60 hrs, Volume= 9.244 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 76.54' @ 12.60 hrs Surf.Area= 32,621 sf Storage= 105,210 cf

Plug-Flow detention time= 45.8 min calculated for 9.244 af (99% of inflow)

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Type III 24-hr 25-Year Rainfall=5.50"

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Center-of-Mass det. time= 40.1 min (835.6 - 795.5)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/8" Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=25.01 cfs @ 12.60 hrs HW=76.54' (Free Discharge)
 ↳ **2=Culvert** (Inlet Controls 25.01 cfs @ 10.40 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)
 ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>2.89"
 Tc=11.4 min CN=68 Runoff=78.10 cfs 6.218 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>6.12"
 Tc=5.0 min CN=98 Runoff=17.33 cfs 1.347 af
- Subcatchment S21:** Runoff Area=5.370 ac 63.69% Impervious Runoff Depth>4.10"
 Flow Length=640' Slope=0.0600 '/ Tc=12.1 min CN=80 Runoff=22.29 cfs 1.834 af
- Subcatchment S21.1:** Runoff Area=1.730 ac 26.59% Impervious Runoff Depth>2.33"
 Flow Length=410' Tc=11.6 min CN=62 Runoff=4.14 cfs 0.336 af
- Subcatchment S21.2.1:** Runoff Area=0.107 ac 100.00% Impervious Runoff Depth>6.12"
 Tc=5.0 min CN=98 Runoff=0.70 cfs 0.055 af
- Subcatchment S21.2.2:** Runoff Area=1.133 ac 3.80% Impervious Runoff Depth>1.40"
 Flow Length=90' Slope=0.0070 '/ Tc=13.2 min CN=51 Runoff=1.40 cfs 0.132 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>5.20"
 Tc=5.0 min CN=90 Runoff=19.76 cfs 1.399 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>4.97"
 Tc=5.0 min CN=88 Runoff=17.90 cfs 1.247 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>5.31"
 Tc=5.0 min CN=91 Runoff=13.76 cfs 0.982 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>5.31"
 Tc=5.0 min CN=91 Runoff=7.13 cfs 0.509 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>2.16"
 Tc=5.0 min CN=60 Runoff=13.31 cfs 0.895 af
- Subcatchment S23.1:** Runoff Area=2.670 ac 49.44% Impervious Runoff Depth>3.37"
 Tc=19.0 min CN=73 Runoff=7.82 cfs 0.751 af
- Subcatchment S23.2:** Runoff Area=1.450 ac 38.62% Impervious Runoff Depth>2.89"
 Flow Length=955' Tc=14.3 min CN=68 Runoff=4.05 cfs 0.349 af
- Subcatchment S24:** Runoff Area=2.660 ac 95.86% Impervious Runoff Depth>5.88"
 Flow Length=1,232' Tc=8.4 min CN=96 Runoff=15.66 cfs 1.304 af
- Subcatchment S24.1:** Runoff Area=2.330 ac 67.38% Impervious Runoff Depth>4.31"
 Flow Length=1,260' Slope=0.0040 '/ Tc=12.1 min CN=82 Runoff=10.10 cfs 0.837 af
- Subcatchment S24.2:** Runoff Area=1.300 ac 0.00% Impervious Runoff Depth>1.24"
 Flow Length=1,260' Slope=0.0040 '/ Tc=9.8 min CN=49 Runoff=1.52 cfs 0.135 af

Subcatchment S25:	Runoff Area=2.050 ac 82.93% Impervious Runoff Depth>5.19" Flow Length=608' Tc=6.5 min CN=90 Runoff=12.04 cfs 0.887 af
Subcatchment S26:	Runoff Area=1.770 ac 41.24% Impervious Runoff Depth>2.99" Flow Length=447' Tc=7.8 min CN=69 Runoff=6.19 cfs 0.441 af
Subcatchment S27:	Runoff Area=3.680 ac 93.21% Impervious Runoff Depth>5.76" Flow Length=1,055' Tc=13.3 min CN=95 Runoff=18.63 cfs 1.766 af
Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>5.20" Tc=5.0 min CN=90 Runoff=54.15 cfs 3.832 af
Subcatchment S29:	Runoff Area=3.760 ac 2.93% Impervious Runoff Depth>2.34" Tc=7.8 min CN=62 Runoff=10.13 cfs 0.732 af
Subcatchment S30:	Runoff Area=4.820 ac 38.17% Impervious Runoff Depth>2.89" Tc=18.3 min CN=68 Runoff=12.24 cfs 1.159 af
Subcatchment S31:	Runoff Area=3.920 ac 0.00% Impervious Runoff Depth>2.51" Tc=14.4 min CN=64 Runoff=9.43 cfs 0.821 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>4.64" Tc=9.2 min CN=85 Runoff=4.56 cfs 0.356 af
Subcatchment S32:	Runoff Area=1.450 ac 50.34% Impervious Runoff Depth>4.53" Tc=5.0 min CN=84 Runoff=8.05 cfs 0.548 af
Subcatchment S32.1:	Runoff Area=2.720 ac 90.81% Impervious Runoff Depth>5.54" Tc=5.0 min CN=93 Runoff=17.24 cfs 1.255 af
Subcatchment S33:	Runoff Area=0.820 ac 0.00% Impervious Runoff Depth>1.25" Tc=5.0 min CN=49 Runoff=1.12 cfs 0.085 af
Reach 1R: Point of Analysis 1	Inflow=161.58 cfs 27.000 af Outflow=161.58 cfs 27.000 af
Reach 23R:	Avg. Flow Depth=3.00' Max Vel=6.16 fps Inflow=50.27 cfs 4.398 af 36.0" Round Pipe n=0.014 L=310.0' S=0.0038 '/' Capacity=38.21 cfs Outflow=40.75 cfs 4.394 af
Reach L150:	Avg. Flow Depth=2.36' Max Vel=4.40 fps Inflow=140.54 cfs 24.021 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=139.48 cfs 24.004 af
Reach L151:	Avg. Flow Depth=2.18' Max Vel=7.18 fps Inflow=148.59 cfs 24.825 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=146.98 cfs 24.813 af
Reach L186:	Avg. Flow Depth=3.41' Max Vel=3.55 fps Inflow=155.51 cfs 25.717 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=153.11 cfs 25.662 af
Reach L57:	Avg. Flow Depth=3.00' Max Vel=4.77 fps Inflow=37.47 cfs 13.001 af 36.0" Round Pipe n=0.014 L=446.0' S=0.0023 '/' Capacity=29.62 cfs Outflow=30.64 cfs 12.978 af
Reach L59:	Avg. Flow Depth=2.56' Max Vel=5.00 fps Inflow=143.79 cfs 24.067 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=140.54 cfs 24.021 af

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Reach L65: Avg. Flow Depth=0.75' Max Vel=22.48 fps Inflow=27.83 cfs 11.907 af
30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/' Capacity=142.22 cfs Outflow=27.83 cfs 11.906 af

Reach L67: Avg. Flow Depth=1.19' Max Vel=10.93 fps Inflow=34.11 cfs 12.657 af
48.0" Round Pipe n=0.014 L=185.0' S=0.0178 '/' Capacity=178.14 cfs Outflow=34.10 cfs 12.652 af

Reach P1: Avg. Flow Depth=1.27' Max Vel=10.62 fps Inflow=161.69 cfs 27.003 af
n=0.030 L=46.0' S=0.0435 '/' Capacity=407.83 cfs Outflow=161.58 cfs 27.000 af

Pond 19P: Peak Elev=140.12' Storage=4,100 cf Inflow=87.93 cfs 7.559 af
Primary=17.38 cfs 4.683 af Secondary=71.99 cfs 2.868 af Outflow=89.38 cfs 7.551 af

Pond 20P: Peak Elev=168.43' Storage=2,838 cf Inflow=17.33 cfs 1.347 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/' Outflow=18.24 cfs 1.342 af

Pond 22.4P: Peak Elev=77.65' Storage=143,762 cf Inflow=109.91 cfs 12.072 af
Primary=27.83 cfs 11.907 af Secondary=0.00 cfs 0.000 af Outflow=27.83 cfs 11.907 af

Total Runoff Area = 96.520 ac Runoff Volume = 30.211 af Average Runoff Depth = 3.76"
56.73% Pervious = 54.760 ac 43.27% Impervious = 41.760 ac

Summary for Subcatchment S19:

Runoff = 78.10 cfs @ 12.16 hrs, Volume= 6.218 af, Depth> 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 17.33 cfs @ 12.07 hrs, Volume= 1.347 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 22.29 cfs @ 12.17 hrs, Volume= 1.834 af, Depth> 4.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.950	49	
* 3.420	98	
5.370	80	Weighted Average
1.950		36.31% Pervious Area
3.420		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					
0.6	640	0.0600	19.11	60.03	Direct Entry, Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 4.14 cfs @ 12.17 hrs, Volume= 0.336 af, Depth> 2.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.270	49	
* 0.460	98	
1.730	62	Weighted Average
1.270		73.41% Pervious Area
0.460		26.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.70 cfs @ 12.07 hrs, Volume= 0.055 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.107	98	
0.107		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 1.40 cfs @ 12.21 hrs, Volume= 0.132 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.090	49	
* 0.043	98	
1.133	51	Weighted Average
1.090		96.20% Pervious Area
0.043		3.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 19.76 cfs @ 12.07 hrs, Volume= 1.399 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 17.90 cfs @ 12.07 hrs, Volume= 1.247 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 13.76 cfs @ 12.07 hrs, Volume= 0.982 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 7.13 cfs @ 12.07 hrs, Volume= 0.509 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 13.31 cfs @ 12.09 hrs, Volume= 0.895 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23.1:

Runoff = 7.82 cfs @ 12.26 hrs, Volume= 0.751 af, Depth> 3.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.350	49	
* 1.320	98	
2.670	73	Weighted Average
1.350		50.56% Pervious Area
1.320		49.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0					Direct Entry,

Summary for Subcatchment S23.2:

Runoff = 4.05 cfs @ 12.20 hrs, Volume= 0.349 af, Depth> 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.890	49	
* 0.560	98	
1.450	68	Weighted Average
0.890		61.38% Pervious Area
0.560		38.62% Impervious Area

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Type III 24-hr 100-Year Rainfall=6.65"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.1825	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
3.2	360	0.0139	1.90		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.7	390	0.0374	3.93		Shallow Concentrated Flow, Paved Kv= 20.3 fps
0.5	105	0.0050	3.47	2.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
14.3	955	Total			

Summary for Subcatchment S24:

Runoff = 15.66 cfs @ 12.11 hrs, Volume= 1.304 af, Depth> 5.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.110	49	
* 2.550	98	
2.660	96	Weighted Average
0.110		4.14% Pervious Area
2.550		95.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
1.8	112	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	70	0.0050	2.98	2.34	Pipe Channel, 12" 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.014
0.7	190	0.0030	4.25	20.86	Pipe Channel, 30" 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.014
2.7	760	0.0028	4.64	32.77	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
8.4	1,232	Total			

Summary for Subcatchment S24.1:

Runoff = 10.10 cfs @ 12.17 hrs, Volume= 0.837 af, Depth> 4.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 0.760	49	
* 1.570	98	
2.330	82	Weighted Average
0.760		32.62% Pervious Area
1.570		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
12.1	1,260	Total			

Summary for Subcatchment S24.2:

Runoff = 1.52 cfs @ 12.16 hrs, Volume= 0.135 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.300	49	
1.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1					Direct Entry,
3.7	1,260	0.0040	5.73	28.10	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
9.8	1,260	Total			

Summary for Subcatchment S25:

Runoff = 12.04 cfs @ 12.09 hrs, Volume= 0.887 af, Depth> 5.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.350	49	
* 1.700	98	
2.050	90	Weighted Average
0.350		17.07% Pervious Area
1.700		82.93% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0070	0.90		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
0.1	22	0.0480	4.45		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.4	106	0.0160	4.70	0.92	Pipe Channel, 6" PVC 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.010 PVC, smooth interior
4.2	380	0.0003	1.52	10.73	Pipe Channel, 36" 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
6.5	608	Total			

Summary for Subcatchment S26:

Runoff = 6.19 cfs @ 12.12 hrs, Volume= 0.441 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.040	49	
* 0.730	98	
1.770	69	Weighted Average
1.040		58.76% Pervious Area
0.730		41.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	100	0.2000	0.29		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.8	142	0.0377	3.13		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.6	95	0.0200	2.55	0.89	Pipe Channel, 8" Metal 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.025
0.7	110	0.0010	2.77	19.59	Pipe Channel, 36" RCP 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014
7.8	447	Total			

Summary for Subcatchment S27:

Runoff = 18.63 cfs @ 12.18 hrs, Volume= 1.766 af, Depth> 5.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 0.250	49	
* 3.430	98	
3.680	95	Weighted Average
0.250		6.79% Pervious Area
3.430		93.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	100	0.0025	0.60		Sheet Flow, Sheet Smooth surfaces n= 0.011 P2= 3.20"
2.9	178	0.0025	1.02		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.3	70	0.0050	3.46	4.24	Pipe Channel, 15" RCP 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
7.3	707	0.0007	1.62	3.89	Pipe Channel, 21" RCP 21.0" Round Area= 2.4 sf Perim= 5.5' r= 0.44' n= 0.014
13.3	1,055	Total			

Summary for Subcatchment S28:

Runoff = 54.15 cfs @ 12.07 hrs, Volume= 3.832 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 10.13 cfs @ 12.12 hrs, Volume= 0.732 af, Depth> 2.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 3.360	60	
* 0.290	69	
* 0.110	98	
3.760	62	Weighted Average
3.650		97.07% Pervious Area
0.110		2.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 12.24 cfs @ 12.26 hrs, Volume= 1.159 af, Depth> 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.980	49	
* 1.840	98	
4.820	68	Weighted Average
2.980		61.83% Pervious Area
1.840		38.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3					Direct Entry,

Summary for Subcatchment S31:

Runoff = 9.43 cfs @ 12.21 hrs, Volume= 0.821 af, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 3.190	60	
* 0.730	79	
3.920	64	Weighted Average
3.920		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 4.56 cfs @ 12.13 hrs, Volume= 0.356 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 8.05 cfs @ 12.07 hrs, Volume= 0.548 af, Depth> 4.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.720	69	
* 0.730	98	
1.450	84	Weighted Average
0.720		49.66% Pervious Area
0.730		50.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 17.24 cfs @ 12.07 hrs, Volume= 1.255 af, Depth> 5.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.250	49	
* 2.470	98	
2.720	93	Weighted Average
0.250		9.19% Pervious Area
2.470		90.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S33:

Runoff = 1.12 cfs @ 12.10 hrs, Volume= 0.085 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.820	49	
0.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 3.36" for 100-Year event
Inflow = 161.58 cfs @ 12.23 hrs, Volume= 27.000 af
Outflow = 161.58 cfs @ 12.23 hrs, Volume= 27.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

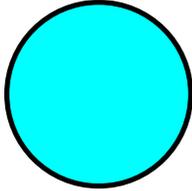
Summary for Reach 23R:

Inflow Area = 10.160 ac, 82.78% Impervious, Inflow Depth > 5.19" for 100-Year event
Inflow = 50.27 cfs @ 12.12 hrs, Volume= 4.398 af
Outflow = 40.75 cfs @ 12.34 hrs, Volume= 4.394 af, Atten= 19%, Lag= 12.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.16 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 2.56 fps, Avg. Travel Time= 2.0 min

Peak Storage= 2,191 cf @ 12.10 hrs
Average Depth at Peak Storage= 3.00'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 38.21 cfs

36.0" Round Pipe
n= 0.014
Length= 310.0' Slope= 0.0038 '/'
Inlet Invert= 47.50', Outlet Invert= 46.32'



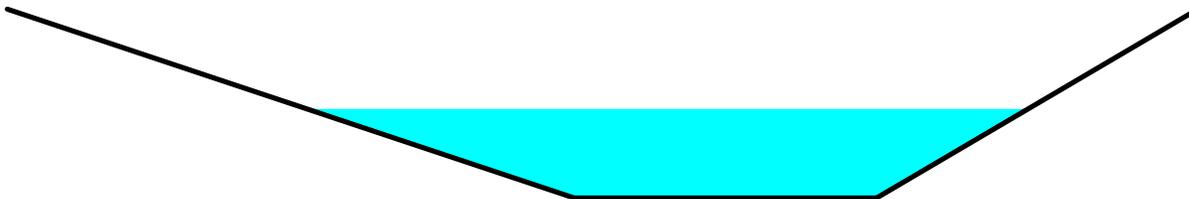
Summary for Reach L150:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 3.33" for 100-Year event
Inflow = 140.54 cfs @ 12.16 hrs, Volume= 24.021 af
Outflow = 139.48 cfs @ 12.17 hrs, Volume= 24.004 af, Atten= 1%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.40 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.78 fps, Avg. Travel Time= 1.3 min

Peak Storage= 4,346 cf @ 12.16 hrs
Average Depth at Peak Storage= 2.36'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/ Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/
Inlet Invert= 48.58', Outlet Invert= 48.00'



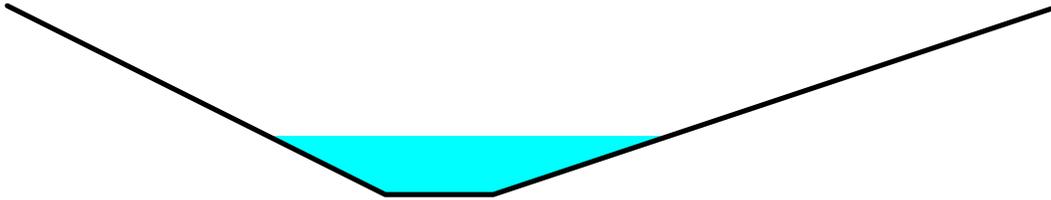
Summary for Reach L151:

Inflow Area = 90.610 ac, 42.17% Impervious, Inflow Depth > 3.29" for 100-Year event
Inflow = 148.59 cfs @ 12.17 hrs, Volume= 24.825 af
Outflow = 146.98 cfs @ 12.19 hrs, Volume= 24.813 af, Atten= 1%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.18 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.11 fps, Avg. Travel Time= 0.8 min

Peak Storage= 3,183 cf @ 12.18 hrs
Average Depth at Peak Storage= 2.18'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 92.980 ac, 42.26% Impervious, Inflow Depth > 3.32" for 100-Year event
Inflow = 155.51 cfs @ 12.18 hrs, Volume= 25.717 af
Outflow = 153.11 cfs @ 12.24 hrs, Volume= 25.662 af, Atten= 2%, Lag= 3.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.55 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 1.48 fps, Avg. Travel Time= 3.8 min

Peak Storage= 14,842 cf @ 12.21 hrs
Average Depth at Peak Storage= 3.41'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



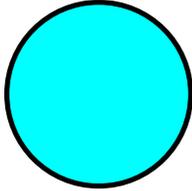
Summary for Reach L57:

Inflow Area = 55.470 ac, 36.25% Impervious, Inflow Depth > 2.81" for 100-Year event
Inflow = 37.47 cfs @ 12.29 hrs, Volume= 13.001 af
Outflow = 30.64 cfs @ 12.20 hrs, Volume= 12.978 af, Atten= 18%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.77 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 2.67 fps, Avg. Travel Time= 2.8 min

Peak Storage= 3,153 cf @ 12.20 hrs
Average Depth at Peak Storage= 3.00'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 29.62 cfs

36.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0023 '/'
Inlet Invert= 47.30', Outlet Invert= 46.28'



Summary for Reach L59:

Inflow Area = 86.690 ac, 44.08% Impervious, Inflow Depth > 3.33" for 100-Year event
Inflow = 143.79 cfs @ 12.11 hrs, Volume= 24.067 af
Outflow = 140.54 cfs @ 12.16 hrs, Volume= 24.021 af, Atten= 2%, Lag= 3.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.00 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 2.04 fps, Avg. Travel Time= 3.5 min

Peak Storage= 12,259 cf @ 12.12 hrs
Average Depth at Peak Storage= 2.56'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



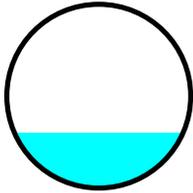
Summary for Reach L65:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 2.78" for 100-Year event
Inflow = 27.83 cfs @ 12.63 hrs, Volume= 11.907 af
Outflow = 27.83 cfs @ 12.64 hrs, Volume= 11.906 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 22.48 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 12.16 fps, Avg. Travel Time= 0.1 min

Peak Storage= 129 cf @ 12.63 hrs
Average Depth at Peak Storage= 0.75'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



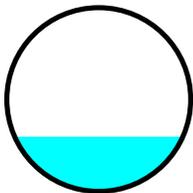
Summary for Reach L67:

Inflow Area = 54.020 ac, 36.19% Impervious, Inflow Depth > 2.81" for 100-Year event
Inflow = 34.11 cfs @ 12.32 hrs, Volume= 12.657 af
Outflow = 34.10 cfs @ 12.32 hrs, Volume= 12.652 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.93 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.64 fps, Avg. Travel Time= 0.5 min

Peak Storage= 577 cf @ 12.32 hrs
Average Depth at Peak Storage= 1.19'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 178.14 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0178 '/'
Inlet Invert= 50.70', Outlet Invert= 47.40'



Summary for Reach P1:

Inflow Area = 96.520 ac, 43.27% Impervious, Inflow Depth > 3.36" for 100-Year event
Inflow = 161.69 cfs @ 12.23 hrs, Volume= 27.003 af
Outflow = 161.58 cfs @ 12.23 hrs, Volume= 27.000 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.62 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.68 fps, Avg. Travel Time= 0.2 min

Peak Storage= 699 cf @ 12.23 hrs
Average Depth at Peak Storage= 1.27'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
 Length= 46.0' Slope= 0.0435 '/'
 Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 3.19" for 100-Year event
 Inflow = 87.93 cfs @ 12.15 hrs, Volume= 7.559 af
 Outflow = 89.38 cfs @ 12.16 hrs, Volume= 7.551 af, Atten= 0%, Lag= 0.5 min
 Primary = 17.38 cfs @ 12.16 hrs, Volume= 4.683 af
 Secondary = 71.99 cfs @ 12.16 hrs, Volume= 2.868 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 140.12' @ 12.16 hrs Surf.Area= 3,359 sf Storage= 4,100 cf

Plug-Flow detention time= 1.8 min calculated for 7.532 af (100% of inflow)
 Center-of-Mass det. time= 1.4 min (791.3 - 790.0)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=17.32 cfs @ 12.16 hrs HW=140.11' (Free Discharge)

↑1=Culvert (Inlet Controls 17.32 cfs @ 5.51 fps)

Secondary OutFlow Max=71.01 cfs @ 12.16 hrs HW=140.11' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Weir Controls 71.01 cfs @ 2.78 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 6.12" for 100-Year event
 Inflow = 17.33 cfs @ 12.07 hrs, Volume= 1.347 af
 Outflow = 18.24 cfs @ 12.09 hrs, Volume= 1.342 af, Atten= 0%, Lag= 1.0 min
 Primary = 18.24 cfs @ 12.09 hrs, Volume= 1.342 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 168.43' @ 12.09 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 10.9 min calculated for 1.338 af (99% of inflow)
 Center-of-Mass det. time= 9.2 min (724.8 - 715.6)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=17.34 cfs @ 12.09 hrs HW=168.31' (Free Discharge)

↑1=Culvert (Inlet Controls 17.34 cfs @ 5.52 fps)

Summary for Pond 22.4P:

Inflow Area = 51.350 ac, 35.50% Impervious, Inflow Depth > 2.82" for 100-Year event
 Inflow = 109.91 cfs @ 12.09 hrs, Volume= 12.072 af
 Outflow = 27.83 cfs @ 12.63 hrs, Volume= 11.907 af, Atten= 75%, Lag= 32.3 min
 Primary = 27.83 cfs @ 12.63 hrs, Volume= 11.907 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 77.65' @ 12.63 hrs Surf.Area= 36,988 sf Storage= 143,762 cf

Plug-Flow detention time= 54.1 min calculated for 11.878 af (98% of inflow)

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Type III 24-hr 100-Year Rainfall=6.65"

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Center-of-Mass det. time= 48.7 min (840.3 - 791.6)

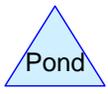
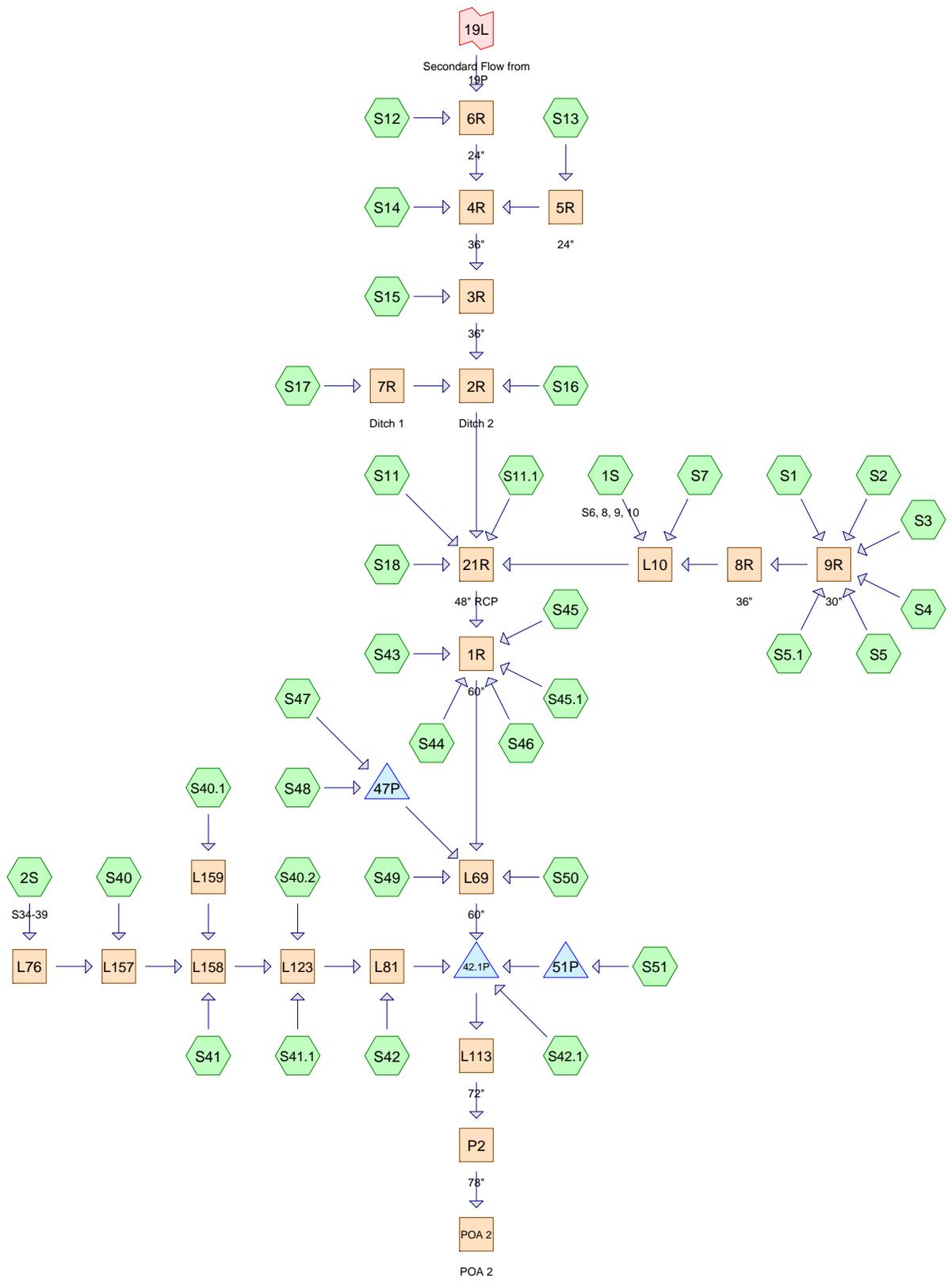
Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/ S= 0.0100 1/ Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=27.82 cfs @ 12.63 hrs HW=77.65' (Free Discharge)
 ↳ **2=Culvert** (Inlet Controls 27.82 cfs @ 11.57 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)
 ↳ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



Routing Diagram for 3659-12003C-Existing Conditions POA 2-01
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
34.578	49	(1S, 2S, S11, S11.1, S13, S14, S15, S16, S17, S18, S4, S40, S40.1, S41, S41.1, S42, S43, S44, S45, S45.1, S46, S48, S49, S5, S50, S51)
68.450	98	(1S, 2S, S1, S11, S12, S13, S14, S15, S16, S17, S18, S2, S3, S4, S40, S40.1, S40.2, S41, S41.1, S42, S43, S44, S45, S45.1, S46, S48, S49, S5, S5.1, S50, S51, S7)
4.800	69	(1S, S3, S4, S5.1, S7)
15.260	43	(S1, S12, S2, S42.1)
1.220	65	(S1, S2, S7)
2.870	36	(S41, S41.1, S47)
0.710	60	(S5.1)
0.910	98	Paved Surfaces and Wetlands (S42.1)
0.310	98	Water Surface, HSG A (S47)
129.108	75	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	127.888	127.888		1S, 2S, S1, S11, S11. 1, S12, S13, S14, S15, S16, S17, S18, S2, S3, S4, S40, S40. 1, S40. 2, S41, S41. 1, S42, S42. 1, S43, S44, S45, S45. 1, S46, S47, S48, S49, S5, S5.1, S50, S51, S7

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Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.910	0.910	Paved Surfaces and Wetlands	S42. 1
0.310	0.000	0.000	0.000	0.000	0.310	Water Surface	S47
0.310	0.000	0.000	0.000	128.798	129.108	TOTAL AREA	

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 2-Year Rainfall=3.20"

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Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: S6, 8, 9, 10	Runoff Area=5.450 ac 75.78% Impervious Runoff Depth>1.79" Tc=5.0 min CN=87 Runoff=12.22 cfs 0.814 af
Subcatchment 2S: S34-39	Runoff Area=13.110 ac 74.29% Impervious Runoff Depth>1.64" Tc=5.0 min CN=85 Runoff=27.04 cfs 1.791 af
Subcatchment S1:	Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>0.04" Tc=30.2 min CN=46 Runoff=0.07 cfs 0.029 af
Subcatchment S11:	Runoff Area=3.560 ac 92.70% Impervious Runoff Depth>2.41" Tc=5.0 min CN=94 Runoff=10.23 cfs 0.714 af
Subcatchment S11.1:	Runoff Area=24,742 sf 0.00% Impervious Runoff Depth>0.08" Flow Length=952' Tc=11.1 min CN=49 Runoff=0.01 cfs 0.004 af
Subcatchment S12:	Runoff Area=5.060 ac 8.10% Impervious Runoff Depth>0.05" Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=47 Runoff=0.05 cfs 0.022 af
Subcatchment S13:	Runoff Area=2.930 ac 98.63% Impervious Runoff Depth>2.72" Tc=5.0 min CN=97 Runoff=9.02 cfs 0.664 af
Subcatchment S14:	Runoff Area=3.760 ac 48.40% Impervious Runoff Depth>0.89" Tc=7.9 min CN=73 Runoff=3.74 cfs 0.280 af
Subcatchment S15:	Runoff Area=2.850 ac 77.19% Impervious Runoff Depth>1.79" Tc=5.0 min CN=87 Runoff=6.39 cfs 0.426 af
Subcatchment S16:	Runoff Area=3.550 ac 90.99% Impervious Runoff Depth>2.41" Tc=5.0 min CN=94 Runoff=10.20 cfs 0.712 af
Subcatchment S17:	Runoff Area=3.400 ac 66.47% Impervious Runoff Depth>1.43" Tc=6.5 min CN=82 Runoff=5.92 cfs 0.404 af
Subcatchment S18:	Runoff Area=2.630 ac 70.72% Impervious Runoff Depth>1.57" Tc=5.0 min CN=84 Runoff=5.19 cfs 0.343 af
Subcatchment S2:	Runoff Area=5.040 ac 66.07% Impervious Runoff Depth>1.23" Tc=14.8 min CN=79 Runoff=5.87 cfs 0.516 af
Subcatchment S3:	Runoff Area=3.380 ac 75.74% Impervious Runoff Depth>2.13" Tc=5.0 min CN=91 Runoff=8.85 cfs 0.599 af
Subcatchment S4:	Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>0.29" Tc=25.6 min CN=58 Runoff=1.92 cfs 0.335 af
Subcatchment S40:	Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>1.43" Tc=5.0 min CN=82 Runoff=4.81 cfs 0.317 af

Subcatchment S40.1:	Runoff Area=2.310 ac 45.89% Impervious Runoff Depth>0.77" Tc=63.2 min CN=71 Runoff=0.82 cfs 0.149 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>2.83" Tc=5.0 min CN=98 Runoff=10.00 cfs 0.754 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>1.06" Tc=5.0 min CN=76 Runoff=1.42 cfs 0.095 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>0.21" Tc=16.7 min CN=55 Runoff=0.19 cfs 0.035 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>1.64" Tc=5.0 min CN=85 Runoff=2.97 cfs 0.197 af
Subcatchment S42.1:	Runoff Area=1.660 ac 54.82% Impervious Runoff Depth>0.89" Tc=5.0 min CN=73 Runoff=1.81 cfs 0.124 af
Subcatchment S43:	Runoff Area=2.700 ac 93.70% Impervious Runoff Depth>2.51" Tc=5.0 min CN=95 Runoff=7.97 cfs 0.564 af
Subcatchment S44:	Runoff Area=1.430 ac 98.60% Impervious Runoff Depth>2.72" Tc=5.0 min CN=97 Runoff=4.40 cfs 0.324 af
Subcatchment S45:	Runoff Area=1.450 ac 55.17% Impervious Runoff Depth>1.06" Tc=5.0 min CN=76 Runoff=1.90 cfs 0.128 af
Subcatchment S45.1:	Runoff Area=0.740 ac 71.62% Impervious Runoff Depth>1.57" Tc=5.0 min CN=84 Runoff=1.46 cfs 0.097 af
Subcatchment S46:	Runoff Area=1.800 ac 62.78% Impervious Runoff Depth>1.30" Tc=5.0 min CN=80 Runoff=2.94 cfs 0.194 af
Subcatchment S47:	Runoff Area=2.940 ac 10.54% Impervious Runoff Depth>0.01" Tc=18.7 min CN=43 Runoff=0.01 cfs 0.003 af
Subcatchment S48:	Runoff Area=1.170 ac 83.76% Impervious Runoff Depth>2.04" Tc=5.0 min CN=90 Runoff=2.96 cfs 0.199 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>1.79" Tc=5.0 min CN=87 Runoff=7.00 cfs 0.466 af
Subcatchment S5:	Runoff Area=3.400 ac 78.24% Impervious Runoff Depth>1.79" Tc=5.0 min CN=87 Runoff=7.62 cfs 0.508 af
Subcatchment S5.1:	Runoff Area=3.550 ac 72.39% Impervious Runoff Depth>1.86" Tc=16.7 min CN=88 Runoff=5.98 cfs 0.552 af
Subcatchment S50:	Runoff Area=3.890 ac 73.52% Impervious Runoff Depth>1.64" Tc=5.0 min CN=85 Runoff=8.02 cfs 0.531 af
Subcatchment S51:	Runoff Area=6.230 ac 5.62% Impervious Runoff Depth>0.14" Tc=26.2 min CN=52 Runoff=0.23 cfs 0.072 af

Subcatchment S7:	Runoff Area=4.060 ac 65.52% Impervious Runoff Depth>1.78" Flow Length=150' Slope=0.0253 '/' Tc=20.9 min CN=87 Runoff=6.01 cfs 0.603 af
Reach 1R: 60"	Avg. Flow Depth=2.44' Max Vel=9.88 fps Inflow=94.02 cfs 9.074 af 60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/' Capacity=196.22 cfs Outflow=92.97 cfs 9.064 af
Reach 2R: Ditch 2	Avg. Flow Depth=1.64' Max Vel=3.71 fps Inflow=37.85 cfs 2.774 af n=0.030 L=370.0' S=0.0062 '/' Capacity=150.34 cfs Outflow=36.35 cfs 2.768 af
Reach 3R: 36"	Avg. Flow Depth=0.92' Max Vel=14.02 fps Inflow=25.60 cfs 1.660 af 36.0" Round Pipe n=0.014 L=355.0' S=0.0417 '/' Capacity=126.46 cfs Outflow=25.19 cfs 1.659 af
Reach 4R: 36"	Avg. Flow Depth=1.28' Max Vel=7.36 fps Inflow=21.13 cfs 1.235 af 36.0" Round Pipe n=0.014 L=123.0' S=0.0081 '/' Capacity=55.84 cfs Outflow=20.91 cfs 1.234 af
Reach 5R: 24"	Avg. Flow Depth=0.67' Max Vel=9.60 fps Inflow=9.02 cfs 0.664 af 24.0" Round Pipe n=0.014 L=238.0' S=0.0307 '/' Capacity=36.79 cfs Outflow=8.82 cfs 0.663 af
Reach 6R: 24"	Avg. Flow Depth=0.71' Max Vel=11.63 fps Inflow=10.75 cfs 0.292 af 24.0" Round Pipe n=0.014 L=450.0' S=0.0420 '/' Capacity=43.05 cfs Outflow=10.90 cfs 0.292 af
Reach 7R: Ditch 1	Avg. Flow Depth=0.66' Max Vel=2.29 fps Inflow=5.92 cfs 0.404 af n=0.030 L=305.0' S=0.0066 '/' Capacity=154.41 cfs Outflow=5.49 cfs 0.402 af
Reach 8R: 36"	Avg. Flow Depth=0.98' Max Vel=12.03 fps Inflow=24.07 cfs 2.537 af 36.0" Round Pipe n=0.014 L=390.0' S=0.0290 '/' Capacity=105.42 cfs Outflow=23.44 cfs 2.535 af
Reach 9R: 30"	Avg. Flow Depth=0.93' Max Vel=14.74 fps Inflow=24.25 cfs 2.539 af 30.0" Round Pipe n=0.014 L=400.0' S=0.0480 '/' Capacity=83.45 cfs Outflow=24.07 cfs 2.537 af
Reach 21R: 48" RCP	Avg. Flow Depth=1.53' Max Vel=18.59 fps Inflow=81.98 cfs 7.768 af 48.0" Round Pipe n=0.014 L=68.0' S=0.0397 '/' Capacity=265.78 cfs Outflow=81.91 cfs 7.767 af
Reach L10:	Avg. Flow Depth=2.53' Max Vel=4.44 fps Inflow=38.58 cfs 3.952 af 48.0" Round Pipe n=0.014 L=612.0' S=0.0015 '/' Capacity=51.15 cfs Outflow=36.84 cfs 3.938 af
Reach L113: 72"	Avg. Flow Depth=2.14' Max Vel=14.99 fps Inflow=136.18 cfs 13.501 af 72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/' Capacity=498.08 cfs Outflow=136.04 cfs 13.499 af
Reach L123:	Avg. Flow Depth=2.11' Max Vel=5.51 fps Inflow=38.16 cfs 3.134 af 48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/' Capacity=67.64 cfs Outflow=36.35 cfs 3.124 af
Reach L157:	Avg. Flow Depth=2.40' Max Vel=3.87 fps Inflow=30.66 cfs 2.105 af 48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/' Capacity=45.42 cfs Outflow=29.69 cfs 2.103 af
Reach L158:	Avg. Flow Depth=1.68' Max Vel=6.13 fps Inflow=31.07 cfs 2.347 af 48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/' Capacity=83.69 cfs Outflow=30.21 cfs 2.344 af
Reach L159:	Avg. Flow Depth=0.36' Max Vel=2.08 fps Inflow=0.82 cfs 0.149 af 24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/' Capacity=11.23 cfs Outflow=0.81 cfs 0.148 af

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Type III 24-hr 2-Year Rainfall=3.20"

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Reach L69: 60" Avg. Flow Depth=2.57' Max Vel=10.12 fps Inflow=102.90 cfs 10.061 af
60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=102.71 cfs 10.058 af

Reach L76: Avg. Flow Depth=1.55' Max Vel=6.00 fps Inflow=27.04 cfs 1.791 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/' Capacity=84.95 cfs Outflow=26.03 cfs 1.788 af

Reach L81: Avg. Flow Depth=1.45' Max Vel=8.04 fps Inflow=38.08 cfs 3.321 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/' Capacity=207.41 cfs Outflow=37.89 cfs 3.320 af

Reach P2: 78" Avg. Flow Depth=2.68' Max Vel=10.51 fps Inflow=136.04 cfs 13.499 af
78.0" Round Pipe n=0.024 L=25.0' S=0.0180 '/' Capacity=381.00 cfs Outflow=135.99 cfs 13.498 af

Reach POA 2: POA 2 Inflow=135.99 cfs 13.498 af
Outflow=135.99 cfs 13.498 af

Pond 42.1P: Peak Elev=41.10' Storage=11,705 cf Inflow=140.98 cfs 13.501 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/' Outflow=136.18 cfs 13.501 af

Pond 47P: Peak Elev=44.44' Storage=8,779 cf Inflow=2.96 cfs 0.202 af
Outflow=0.00 cfs 0.000 af

Pond 51P: Peak Elev=45.25' Storage=3,114 cf Inflow=0.23 cfs 0.072 af
Outflow=0.00 cfs 0.000 af

Year Second Inflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce Inflow=10.75 cfs 0.270 af
Primary=10.75 cfs 0.270 af

Total Runoff Area = 129.108 ac Runoff Volume = 13.564 af Average Runoff Depth = 1.26"
46.04% Pervious = 59.438 ac 53.96% Impervious = 69.670 ac

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 2-Year Rainfall=3.20"

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Summary for Subcatchment 1S: S6, 8, 9, 10

Runoff = 12.22 cfs @ 12.08 hrs, Volume= 0.814 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.680	49	
* 1.060	98	
* 0.110	69	
* 1.150	98	
* 0.260	49	
* 1.200	98	
* 0.270	49	
* 0.720	98	
5.450	87	Weighted Average
1.320		24.22% Pervious Area
4.130		75.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 2S: S34-39

Runoff = 27.04 cfs @ 12.08 hrs, Volume= 1.791 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.300	49	
* 1.970	98	
* 0.840	49	
* 0.100	98	
* 0.160	49	
* 1.290	98	
* 0.330	49	
* 0.380	98	
* 0.620	49	
* 3.250	98	
* 0.440	49	
* 2.270	98	
* 0.680	49	
* 0.480	98	
13.110	85	Weighted Average
3.370		25.71% Pervious Area
9.740		74.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S1:

Runoff = 0.07 cfs @ 15.42 hrs, Volume= 0.029 af, Depth> 0.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S11:

Runoff = 10.23 cfs @ 12.07 hrs, Volume= 0.714 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.260	49	
* 3.300	98	
3.560	94	Weighted Average
0.260		7.30% Pervious Area
3.300		92.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1:

Runoff = 0.01 cfs @ 13.75 hrs, Volume= 0.004 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (sf)	CN	Description
* 24,742	49	
24,742		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	40	0.3750	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
6.4	460	0.0055	1.19		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	390	0.0107	5.06	6.20	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
0.2	62	0.0065	5.39	16.94	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.014
11.1	952	Total			

Summary for Subcatchment S12:

Runoff = 0.05 cfs @ 15.00 hrs, Volume= 0.022 af, Depth> 0.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 4.650	43	
* 0.410	98	
5.060	47	Weighted Average
4.650		91.90% Pervious Area
0.410		8.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
18.6	260	Total			

Summary for Subcatchment S13:

Runoff = 9.02 cfs @ 12.07 hrs, Volume= 0.664 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.040	49	
* 2.890	98	
2.930	97	Weighted Average
0.040		1.37% Pervious Area
2.890		98.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14:

Runoff = 3.74 cfs @ 12.12 hrs, Volume= 0.280 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.940	49	
* 1.820	98	
3.760	73	Weighted Average
1.940		51.60% Pervious Area
1.820		48.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9					Direct Entry,

Summary for Subcatchment S15:

Runoff = 6.39 cfs @ 12.08 hrs, Volume= 0.426 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.650	49	
* 2.200	98	
2.850	87	Weighted Average
0.650		22.81% Pervious Area
2.200		77.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S16:

Runoff = 10.20 cfs @ 12.07 hrs, Volume= 0.712 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.320	49	
* 3.230	98	
3.550	94	Weighted Average
0.320		9.01% Pervious Area
3.230		90.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S17:

Runoff = 5.92 cfs @ 12.10 hrs, Volume= 0.404 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.140	49	
* 2.260	98	
3.400	82	Weighted Average
1.140		33.53% Pervious Area
2.260		66.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5					Direct Entry,

Summary for Subcatchment S18:

Runoff = 5.19 cfs @ 12.08 hrs, Volume= 0.343 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.770	49	
* 1.860	98	
2.630	84	Weighted Average
0.770		29.28% Pervious Area
1.860		70.72% Impervious Area

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Type III 24-hr 2-Year Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S2:

Runoff = 5.87 cfs @ 12.21 hrs, Volume= 0.516 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.690	43	
* 0.020	65	
* 3.330	98	
5.040	79	Weighted Average
1.710		33.93% Pervious Area
3.330		66.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 8.85 cfs @ 12.07 hrs, Volume= 0.599 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.820	69	
* 2.560	98	
3.380	91	Weighted Average
0.820		24.26% Pervious Area
2.560		75.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 1.92 cfs @ 12.56 hrs, Volume= 0.335 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S40:

Runoff = 4.81 cfs @ 12.08 hrs, Volume= 0.317 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 0.82 cfs @ 12.94 hrs, Volume= 0.149 af, Depth> 0.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.250	49	
* 1.060	98	
2.310	71	Weighted Average
1.250		54.11% Pervious Area
1.060		45.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 10.00 cfs @ 12.07 hrs, Volume= 0.754 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 1.42 cfs @ 12.08 hrs, Volume= 0.095 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 0.19 cfs @ 12.50 hrs, Volume= 0.035 af, Depth> 0.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 2.97 cfs @ 12.08 hrs, Volume= 0.197 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 1.81 cfs @ 12.09 hrs, Volume= 0.124 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.750	43	
* 0.910	98	Paved Surfaces and Wetlands
1.660	73	Weighted Average
0.750		45.18% Pervious Area
0.910		54.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S43:

Runoff = 7.97 cfs @ 12.07 hrs, Volume= 0.564 af, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.170	49	
* 2.530	98	
2.700	95	Weighted Average
0.170		6.30% Pervious Area
2.530		93.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S44:

Runoff = 4.40 cfs @ 12.07 hrs, Volume= 0.324 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.020	49	
* 1.410	98	
1.430	97	Weighted Average
0.020		1.40% Pervious Area
1.410		98.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45:

Runoff = 1.90 cfs @ 12.08 hrs, Volume= 0.128 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.650	49	
* 0.800	98	
1.450	76	Weighted Average
0.650		44.83% Pervious Area
0.800		55.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45.1:

Runoff = 1.46 cfs @ 12.08 hrs, Volume= 0.097 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.210	49	
* 0.530	98	
0.740	84	Weighted Average
0.210		28.38% Pervious Area
0.530		71.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S46:

Runoff = 2.94 cfs @ 12.08 hrs, Volume= 0.194 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.670	49	
* 1.130	98	
1.800	80	Weighted Average
0.670		37.22% Pervious Area
1.130		62.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47:

Runoff = 0.01 cfs @ 17.38 hrs, Volume= 0.003 af, Depth> 0.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.630	36	
0.310	98	Water Surface, HSG A
2.940	43	Weighted Average
2.630		89.46% Pervious Area
0.310		10.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S48:

Runoff = 2.96 cfs @ 12.07 hrs, Volume= 0.199 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.190	49	
* 0.980	98	
1.170	90	Weighted Average
0.190		16.24% Pervious Area
0.980		83.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S49:

Runoff = 7.00 cfs @ 12.08 hrs, Volume= 0.466 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5:

Runoff = 7.62 cfs @ 12.08 hrs, Volume= 0.508 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.740	49	
* 2.660	98	
3.400	87	Weighted Average
0.740		21.76% Pervious Area
2.660		78.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 5.98 cfs @ 12.23 hrs, Volume= 0.552 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.570	98	
3.550	88	Weighted Average
0.980		27.61% Pervious Area
2.570		72.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S50:

Runoff = 8.02 cfs @ 12.08 hrs, Volume= 0.531 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.030	49	
* 2.860	98	
3.890	85	Weighted Average
1.030		26.48% Pervious Area
2.860		73.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S51:

Runoff = 0.23 cfs @ 12.73 hrs, Volume= 0.072 af, Depth> 0.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 5.880	49	
* 0.350	98	
6.230	52	Weighted Average
5.880		94.38% Pervious Area
0.350		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.2					Direct Entry,

Summary for Subcatchment S7:

Runoff = 6.01 cfs @ 12.29 hrs, Volume= 0.603 af, Depth> 1.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.730	69	
* 0.670	65	
* 2.660	98	
4.060	87	Weighted Average
1.400		34.48% Pervious Area
2.660		65.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7					Direct Entry,
0.2	150	0.0253	13.94	98.51	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014

20.9 150 Total

Summary for Reach 1R: 60"

Inflow Area = 84.258 ac, 52.35% Impervious, Inflow Depth > 1.29" for 2-Year event
Inflow = 94.02 cfs @ 12.16 hrs, Volume= 9.074 af
Outflow = 92.97 cfs @ 12.18 hrs, Volume= 9.064 af, Atten= 1%, Lag= 1.5 min

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Type III 24-hr 2-Year Rainfall=3.20"

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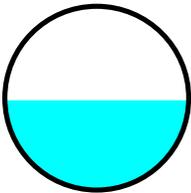
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Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.88 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 3.45 fps, Avg. Travel Time= 2.3 min

Peak Storage= 4,566 cf @ 12.17 hrs
Average Depth at Peak Storage= 2.44'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
n= 0.014
Length= 480.0' Slope= 0.0066 '/'
Inlet Invert= 42.00', Outlet Invert= 38.84'



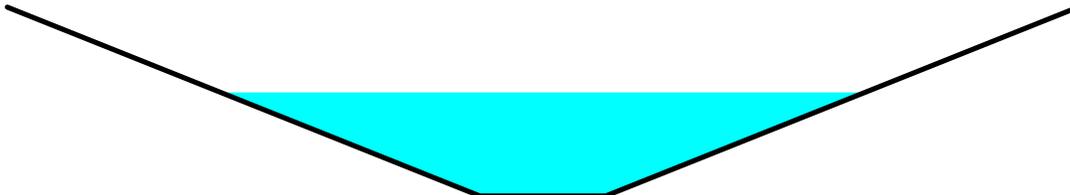
Summary for Reach 2R: Ditch 2

Inflow Area = 21.550 ac, 59.44% Impervious, Inflow Depth > 1.54" for 2-Year event
Inflow = 37.85 cfs @ 12.14 hrs, Volume= 2.774 af
Outflow = 36.35 cfs @ 12.19 hrs, Volume= 2.768 af, Atten= 4%, Lag= 3.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.71 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.26 fps, Avg. Travel Time= 4.9 min

Peak Storage= 3,718 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.64'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 150.34 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 370.0' Slope= 0.0062 '/'
Inlet Invert= 48.90', Outlet Invert= 46.60'



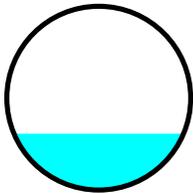
Summary for Reach 3R: 36"

Inflow Area = 14.600 ac, 50.14% Impervious, Inflow Depth > 1.36" for 2-Year event
Inflow = 25.60 cfs @ 12.14 hrs, Volume= 1.660 af
Outflow = 25.19 cfs @ 12.15 hrs, Volume= 1.659 af, Atten= 2%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.02 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 4.30 fps, Avg. Travel Time= 1.4 min

Peak Storage= 648 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.92'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 126.46 cfs

36.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0417 '/'
Inlet Invert= 63.70', Outlet Invert= 48.90'



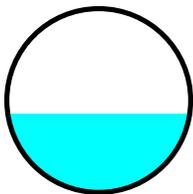
Summary for Reach 4R: 36"

Inflow Area = 11.750 ac, 43.57% Impervious, Inflow Depth > 1.26" for 2-Year event
Inflow = 21.13 cfs @ 12.15 hrs, Volume= 1.235 af
Outflow = 20.91 cfs @ 12.15 hrs, Volume= 1.234 af, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.36 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.22 fps, Avg. Travel Time= 0.9 min

Peak Storage= 355 cf @ 12.15 hrs
Average Depth at Peak Storage= 1.28'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 55.84 cfs

36.0" Round Pipe
n= 0.014
Length= 123.0' Slope= 0.0081 '/'
Inlet Invert= 68.80', Outlet Invert= 67.80'



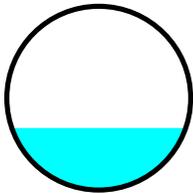
Summary for Reach 5R: 24"

Inflow Area = 2.930 ac, 98.63% Impervious, Inflow Depth > 2.72" for 2-Year event
Inflow = 9.02 cfs @ 12.07 hrs, Volume= 0.664 af
Outflow = 8.82 cfs @ 12.09 hrs, Volume= 0.663 af, Atten= 2%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.60 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.32 fps, Avg. Travel Time= 1.2 min

Peak Storage= 221 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 36.79 cfs

24.0" Round Pipe
n= 0.014
Length= 238.0' Slope= 0.0307 '/'
Inlet Invert= 79.70', Outlet Invert= 72.40'



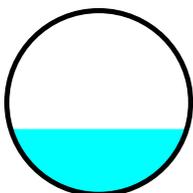
Summary for Reach 6R: 24"

Inflow Area = 5.060 ac, 8.10% Impervious, Inflow Depth > 0.69" for 2-Year event
Inflow = 10.75 cfs @ 12.14 hrs, Volume= 0.292 af
Outflow = 10.90 cfs @ 12.16 hrs, Volume= 0.292 af, Atten= 0%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.63 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.60 fps, Avg. Travel Time= 2.9 min

Peak Storage= 449 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 43.05 cfs

24.0" Round Pipe
n= 0.014
Length= 450.0' Slope= 0.0420 '/'
Inlet Invert= 91.30', Outlet Invert= 72.40'



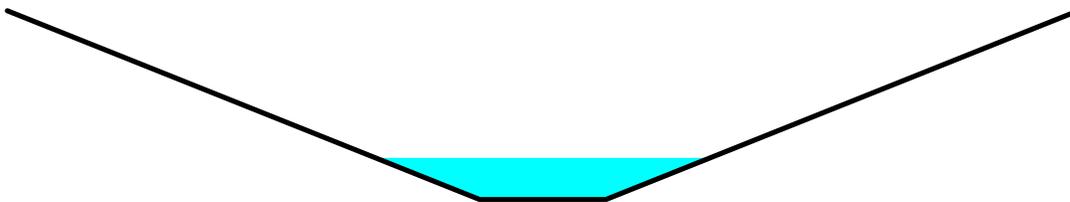
Summary for Reach 7R: Ditch 1

Inflow Area = 3.400 ac, 66.47% Impervious, Inflow Depth > 1.43" for 2-Year event
Inflow = 5.92 cfs @ 12.10 hrs, Volume= 0.404 af
Outflow = 5.49 cfs @ 12.17 hrs, Volume= 0.402 af, Atten= 7%, Lag= 4.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.29 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 5.6 min

Peak Storage= 739 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.66'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 154.41 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 305.0' Slope= 0.0066 '/'
Inlet Invert= 50.90', Outlet Invert= 48.90'



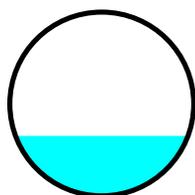
Summary for Reach 8R: 36"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 0.79" for 2-Year event
Inflow = 24.07 cfs @ 12.12 hrs, Volume= 2.537 af
Outflow = 23.44 cfs @ 12.14 hrs, Volume= 2.535 af, Atten= 3%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.03 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 4.81 fps, Avg. Travel Time= 1.4 min

Peak Storage= 777 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.98'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 105.42 cfs

36.0" Round Pipe
n= 0.014
Length= 390.0' Slope= 0.0290 '/'
Inlet Invert= 59.80', Outlet Invert= 48.50'



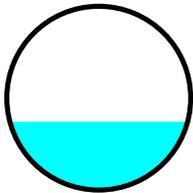
Summary for Reach 9R: 30"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 0.80" for 2-Year event
Inflow = 24.25 cfs @ 12.10 hrs, Volume= 2.539 af
Outflow = 24.07 cfs @ 12.12 hrs, Volume= 2.537 af, Atten= 1%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.74 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 5.87 fps, Avg. Travel Time= 1.1 min

Peak Storage= 661 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 83.45 cfs

30.0" Round Pipe
n= 0.014
Length= 400.0' Slope= 0.0480 '/'
Inlet Invert= 79.60', Outlet Invert= 60.40'



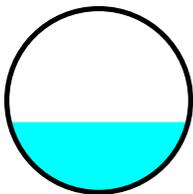
Summary for Reach 21R: 48" RCP

Inflow Area = 76.138 ac, 49.53% Impervious, Inflow Depth > 1.22" for 2-Year event
Inflow = 81.98 cfs @ 12.18 hrs, Volume= 7.768 af
Outflow = 81.91 cfs @ 12.18 hrs, Volume= 7.767 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 18.59 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 6.38 fps, Avg. Travel Time= 0.2 min

Peak Storage= 299 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.53'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 265.78 cfs

48.0" Round Pipe
n= 0.014
Length= 68.0' Slope= 0.0397 '/'
Inlet Invert= 46.60', Outlet Invert= 43.90'



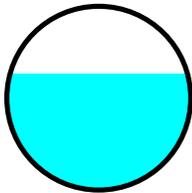
Summary for Reach L10:

Inflow Area = 47.830 ac, 41.27% Impervious, Inflow Depth > 0.99" for 2-Year event
Inflow = 38.58 cfs @ 12.11 hrs, Volume= 3.952 af
Outflow = 36.84 cfs @ 12.20 hrs, Volume= 3.938 af, Atten= 4%, Lag= 5.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.44 fps, Min. Travel Time= 2.3 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 5.6 min

Peak Storage= 5,136 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.53'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 51.15 cfs

48.0" Round Pipe
n= 0.014
Length= 612.0' Slope= 0.0015 '/'
Inlet Invert= 47.50', Outlet Invert= 46.60'



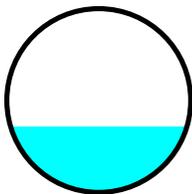
Summary for Reach L113: 72"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 1.25" for 2-Year event
Inflow = 136.18 cfs @ 12.23 hrs, Volume= 13.501 af
Outflow = 136.04 cfs @ 12.23 hrs, Volume= 13.499 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.99 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.09 fps, Avg. Travel Time= 0.3 min

Peak Storage= 871 cf @ 12.23 hrs
Average Depth at Peak Storage= 2.14'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



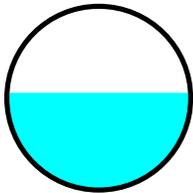
Summary for Reach L123:

Inflow Area = 24.400 ac, 68.44% Impervious, Inflow Depth > 1.54" for 2-Year event
Inflow = 38.16 cfs @ 12.12 hrs, Volume= 3.134 af
Outflow = 36.35 cfs @ 12.19 hrs, Volume= 3.124 af, Atten= 5%, Lag= 4.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.51 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 1.84 fps, Avg. Travel Time= 6.3 min

Peak Storage= 4,716 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.11'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



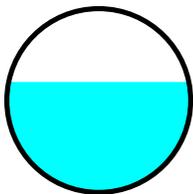
Summary for Reach L157:

Inflow Area = 15.780 ac, 73.13% Impervious, Inflow Depth > 1.60" for 2-Year event
Inflow = 30.66 cfs @ 12.10 hrs, Volume= 2.105 af
Outflow = 29.69 cfs @ 12.12 hrs, Volume= 2.103 af, Atten= 3%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.87 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 1.5 min

Peak Storage= 1,086 cf @ 12.11 hrs
Average Depth at Peak Storage= 2.40'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



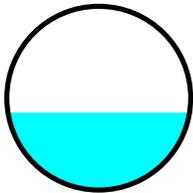
Summary for Reach L158:

Inflow Area = 19.170 ac, 68.86% Impervious, Inflow Depth > 1.47" for 2-Year event
Inflow = 31.07 cfs @ 12.12 hrs, Volume= 2.347 af
Outflow = 30.21 cfs @ 12.14 hrs, Volume= 2.344 af, Atten= 3%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.47 fps, Avg. Travel Time= 1.7 min

Peak Storage= 1,271 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.68'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



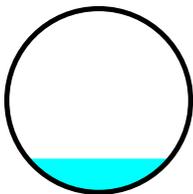
Summary for Reach L159:

Inflow Area = 2.310 ac, 45.89% Impervious, Inflow Depth > 0.77" for 2-Year event
Inflow = 0.82 cfs @ 12.94 hrs, Volume= 0.149 af
Outflow = 0.81 cfs @ 12.95 hrs, Volume= 0.148 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.08 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.25 fps, Avg. Travel Time= 0.9 min

Peak Storage= 27 cf @ 12.94 hrs
Average Depth at Peak Storage= 0.36'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/'
Inlet Invert= 41.90', Outlet Invert= 41.70'



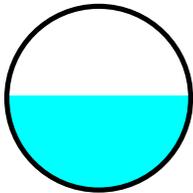
Summary for Reach L69: 60"

Inflow Area = 95.378 ac, 53.10% Impervious, Inflow Depth > 1.27" for 2-Year event
Inflow = 102.90 cfs @ 12.16 hrs, Volume= 10.061 af
Outflow = 102.71 cfs @ 12.17 hrs, Volume= 10.058 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.12 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.54 fps, Avg. Travel Time= 0.6 min

Peak Storage= 1,291 cf @ 12.17 hrs
Average Depth at Peak Storage= 2.57'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/'
Inlet Invert= 38.84', Outlet Invert= 38.00'



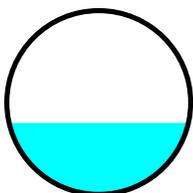
Summary for Reach L76:

Inflow Area = 13.110 ac, 74.29% Impervious, Inflow Depth > 1.64" for 2-Year event
Inflow = 27.04 cfs @ 12.08 hrs, Volume= 1.791 af
Outflow = 26.03 cfs @ 12.11 hrs, Volume= 1.788 af, Atten= 4%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.00 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 2.30 fps, Avg. Travel Time= 2.6 min

Peak Storage= 1,599 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.55'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



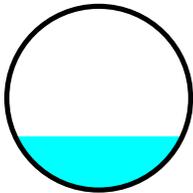
Summary for Reach L81:

Inflow Area = 25.840 ac, 68.73% Impervious, Inflow Depth > 1.54" for 2-Year event
Inflow = 38.08 cfs @ 12.19 hrs, Volume= 3.321 af
Outflow = 37.89 cfs @ 12.19 hrs, Volume= 3.320 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.04 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.65 fps, Avg. Travel Time= 0.8 min

Peak Storage= 573 cf @ 12.19 hrs
Average Depth at Peak Storage= 1.45'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/
Inlet Invert= 38.80', Outlet Invert= 37.91'



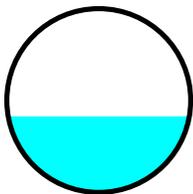
Summary for Reach P2: 78"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 1.25" for 2-Year event
Inflow = 136.04 cfs @ 12.23 hrs, Volume= 13.499 af
Outflow = 135.99 cfs @ 12.23 hrs, Volume= 13.498 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.51 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.58 fps, Avg. Travel Time= 0.1 min

Peak Storage= 323 cf @ 12.23 hrs
Average Depth at Peak Storage= 2.68'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 381.00 cfs

78.0" Round Pipe
n= 0.024
Length= 25.0' Slope= 0.0180 '/
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 1.25" for 2-Year event
 Inflow = 135.99 cfs @ 12.23 hrs, Volume= 13.498 af
 Outflow = 135.99 cfs @ 12.23 hrs, Volume= 13.498 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 42.1P:

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 1.25" for 2-Year event
 Inflow = 140.98 cfs @ 12.18 hrs, Volume= 13.501 af
 Outflow = 136.18 cfs @ 12.23 hrs, Volume= 13.501 af, Atten= 3%, Lag= 2.8 min
 Primary = 136.18 cfs @ 12.23 hrs, Volume= 13.501 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 41.10' @ 12.23 hrs Surf.Area= 8,726 sf Storage= 11,705 cf

Plug-Flow detention time= 0.6 min calculated for 13.501 af (100% of inflow)
 Center-of-Mass det. time= 0.6 min (788.9 - 788.4)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=135.19 cfs @ 12.23 hrs HW=41.08' (Free Discharge)

↑1=Culvert (Barrel Controls 135.19 cfs @ 7.33 fps)

Summary for Pond 47P:

Inflow Area = 4.110 ac, 31.39% Impervious, Inflow Depth > 0.59" for 2-Year event
 Inflow = 2.96 cfs @ 12.07 hrs, Volume= 0.202 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 44.44' @ 20.00 hrs Surf.Area= 21,812 sf Storage= 8,779 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	44.00'	277,477 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.00	17,860	0	0
44.50	22,325	10,046	10,046
45.00	26,789	12,279	22,325
45.50	31,254	14,511	36,836
46.00	35,719	16,743	53,579
46.50	42,471	19,548	73,126
47.00	49,223	22,924	96,050
47.50	55,975	26,300	122,349
48.00	62,726	29,675	152,025
50.00	62,726	125,452	277,477

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P:

Inflow Area = 6.230 ac, 5.62% Impervious, Inflow Depth > 0.14" for 2-Year event
 Inflow = 0.23 cfs @ 12.73 hrs, Volume= 0.072 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 2-Year Rainfall=3.20"

Prepared by {enter your company name here}

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Peak Elev= 45.25' @ 20.00 hrs Surf.Area= 19,494 sf Storage= 3,114 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	513,572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	5,227	0	0
45.50	33,541	9,692	9,692
46.00	61,855	23,849	33,541
46.50	81,239	35,774	69,315
47.00	100,624	45,466	114,780
47.50	120,008	55,158	169,938
48.00	139,392	64,850	234,788
50.00	139,392	278,784	513,572

Device	Routing	Invert	Outlet Devices
#1	Primary	48.50'	75.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)

↑1=**Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 19L: Secondard Flow from 19P

Inflow = 10.75 cfs @ 12.14 hrs, Volume= 0.270 af
 Primary = 10.75 cfs @ 12.14 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

2-Year Secondary Outflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 10-Year Rainfall=4.60"

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Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: S6, 8, 9, 10	Runoff Area=5.450 ac 75.78% Impervious Runoff Depth>3.01" Tc=5.0 min CN=87 Runoff=20.22 cfs 1.365 af
Subcatchment 2S: S34-39	Runoff Area=13.110 ac 74.29% Impervious Runoff Depth>2.82" Tc=5.0 min CN=85 Runoff=46.05 cfs 3.078 af
Subcatchment S1:	Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>0.30" Tc=30.2 min CN=46 Runoff=0.98 cfs 0.224 af
Subcatchment S11:	Runoff Area=3.560 ac 92.70% Impervious Runoff Depth>3.72" Tc=5.0 min CN=94 Runoff=15.37 cfs 1.102 af
Subcatchment S11.1:	Runoff Area=24,742 sf 0.00% Impervious Runoff Depth>0.42" Flow Length=952' Tc=11.1 min CN=49 Runoff=0.14 cfs 0.020 af
Subcatchment S12:	Runoff Area=5.060 ac 8.10% Impervious Runoff Depth>0.34" Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=47 Runoff=0.79 cfs 0.143 af
Subcatchment S13:	Runoff Area=2.930 ac 98.63% Impervious Runoff Depth>4.05" Tc=5.0 min CN=97 Runoff=13.15 cfs 0.989 af
Subcatchment S14:	Runoff Area=3.760 ac 48.40% Impervious Runoff Depth>1.82" Tc=7.9 min CN=73 Runoff=7.92 cfs 0.570 af
Subcatchment S15:	Runoff Area=2.850 ac 77.19% Impervious Runoff Depth>3.01" Tc=5.0 min CN=87 Runoff=10.58 cfs 0.714 af
Subcatchment S16:	Runoff Area=3.550 ac 90.99% Impervious Runoff Depth>3.72" Tc=5.0 min CN=94 Runoff=15.32 cfs 1.099 af
Subcatchment S17:	Runoff Area=3.400 ac 66.47% Impervious Runoff Depth>2.55" Tc=6.5 min CN=82 Runoff=10.50 cfs 0.722 af
Subcatchment S18:	Runoff Area=2.630 ac 70.72% Impervious Runoff Depth>2.73" Tc=5.0 min CN=84 Runoff=8.92 cfs 0.597 af
Subcatchment S2:	Runoff Area=5.040 ac 66.07% Impervious Runoff Depth>2.28" Tc=14.8 min CN=79 Runoff=11.01 cfs 0.959 af
Subcatchment S3:	Runoff Area=3.380 ac 75.74% Impervious Runoff Depth>3.40" Tc=5.0 min CN=91 Runoff=13.79 cfs 0.958 af
Subcatchment S4:	Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>0.84" Tc=25.6 min CN=58 Runoff=7.81 cfs 0.980 af
Subcatchment S40:	Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>2.55" Tc=5.0 min CN=82 Runoff=8.52 cfs 0.567 af

Subcatchment S40.1:	Runoff Area=2.310 ac 45.89% Impervious Runoff Depth>1.63" Tc=63.2 min CN=71 Runoff=1.82 cfs 0.314 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=98 Runoff=14.48 cfs 1.110 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>2.05" Tc=5.0 min CN=76 Runoff=2.79 cfs 0.184 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>0.69" Tc=16.7 min CN=55 Runoff=1.00 cfs 0.117 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>2.82" Tc=5.0 min CN=85 Runoff=5.06 cfs 0.338 af
Subcatchment S42.1:	Runoff Area=1.660 ac 54.82% Impervious Runoff Depth>1.82" Tc=5.0 min CN=73 Runoff=3.80 cfs 0.252 af
Subcatchment S43:	Runoff Area=2.700 ac 93.70% Impervious Runoff Depth>3.82" Tc=5.0 min CN=95 Runoff=11.83 cfs 0.861 af
Subcatchment S44:	Runoff Area=1.430 ac 98.60% Impervious Runoff Depth>4.05" Tc=5.0 min CN=97 Runoff=6.42 cfs 0.482 af
Subcatchment S45:	Runoff Area=1.450 ac 55.17% Impervious Runoff Depth>2.05" Tc=5.0 min CN=76 Runoff=3.75 cfs 0.248 af
Subcatchment S45.1:	Runoff Area=0.740 ac 71.62% Impervious Runoff Depth>2.73" Tc=5.0 min CN=84 Runoff=2.51 cfs 0.168 af
Subcatchment S46:	Runoff Area=1.800 ac 62.78% Impervious Runoff Depth>2.38" Tc=5.0 min CN=80 Runoff=5.38 cfs 0.356 af
Subcatchment S47:	Runoff Area=2.940 ac 10.54% Impervious Runoff Depth>0.20" Tc=18.7 min CN=43 Runoff=0.18 cfs 0.049 af
Subcatchment S48:	Runoff Area=1.170 ac 83.76% Impervious Runoff Depth>3.30" Tc=5.0 min CN=90 Runoff=4.67 cfs 0.322 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>3.01" Tc=5.0 min CN=87 Runoff=11.58 cfs 0.781 af
Subcatchment S5:	Runoff Area=3.400 ac 78.24% Impervious Runoff Depth>3.01" Tc=5.0 min CN=87 Runoff=12.62 cfs 0.851 af
Subcatchment S5.1:	Runoff Area=3.550 ac 72.39% Impervious Runoff Depth>3.09" Tc=16.7 min CN=88 Runoff=9.76 cfs 0.914 af
Subcatchment S50:	Runoff Area=3.890 ac 73.52% Impervious Runoff Depth>2.82" Tc=5.0 min CN=85 Runoff=13.66 cfs 0.913 af
Subcatchment S51:	Runoff Area=6.230 ac 5.62% Impervious Runoff Depth>0.55" Tc=26.2 min CN=52 Runoff=1.86 cfs 0.283 af

Subcatchment S7: Runoff Area=4.060 ac 65.52% Impervious Runoff Depth>2.99"
Flow Length=150' Slope=0.0253 '/' Tc=20.9 min CN=87 Runoff=9.92 cfs 1.012 af

Reach 1R: 60" Avg. Flow Depth=3.50' Max Vel=11.19 fps Inflow=163.80 cfs 16.365 af
60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/' Capacity=196.22 cfs Outflow=163.21 cfs 16.350 af

Reach 2R: Ditch 2 Avg. Flow Depth=2.26' Max Vel=4.46 fps Inflow=76.85 cfs 5.301 af
n=0.030 L=370.0' S=0.0062 '/' Capacity=150.34 cfs Outflow=74.82 cfs 5.293 af

Reach 3R: 36" Avg. Flow Depth=1.40' Max Vel=17.34 fps Inflow=55.94 cfs 3.483 af
36.0" Round Pipe n=0.014 L=355.0' S=0.0417 '/' Capacity=126.46 cfs Outflow=55.68 cfs 3.482 af

Reach 4R: 36" Avg. Flow Depth=2.15' Max Vel=8.89 fps Inflow=48.26 cfs 2.770 af
36.0" Round Pipe n=0.014 L=123.0' S=0.0081 '/' Capacity=55.84 cfs Outflow=48.08 cfs 2.770 af

Reach 5R: 24" Avg. Flow Depth=0.82' Max Vel=10.64 fps Inflow=13.15 cfs 0.989 af
24.0" Round Pipe n=0.014 L=238.0' S=0.0307 '/' Capacity=36.79 cfs Outflow=12.87 cfs 0.988 af

Reach 6R: 24" Avg. Flow Depth=1.29' Max Vel=14.98 fps Inflow=32.28 cfs 1.213 af
24.0" Round Pipe n=0.014 L=450.0' S=0.0420 '/' Capacity=43.05 cfs Outflow=31.54 cfs 1.213 af

Reach 7R: Ditch 1 Avg. Flow Depth=0.89' Max Vel=2.68 fps Inflow=10.50 cfs 0.722 af
n=0.030 L=305.0' S=0.0066 '/' Capacity=154.41 cfs Outflow=9.80 cfs 0.719 af

Reach 8R: 36" Avg. Flow Depth=1.32' Max Vel=14.00 fps Inflow=41.99 cfs 4.885 af
36.0" Round Pipe n=0.014 L=390.0' S=0.0290 '/' Capacity=105.42 cfs Outflow=41.11 cfs 4.882 af

Reach 9R: 30" Avg. Flow Depth=1.26' Max Vel=17.04 fps Inflow=42.24 cfs 4.888 af
30.0" Round Pipe n=0.014 L=400.0' S=0.0480 '/' Capacity=83.45 cfs Outflow=41.99 cfs 4.885 af

Reach 21R: 48" RCP Avg. Flow Depth=2.08' Max Vel=21.51 fps Inflow=142.37 cfs 14.251 af
48.0" Round Pipe n=0.014 L=68.0' S=0.0397 '/' Capacity=265.78 cfs Outflow=142.33 cfs 14.250 af

Reach L10: Avg. Flow Depth=4.00' Max Vel=4.62 fps Inflow=65.99 cfs 7.259 af
48.0" Round Pipe n=0.014 L=612.0' S=0.0015 '/' Capacity=51.15 cfs Outflow=51.81 cfs 7.238 af

Reach L113: 72" Avg. Flow Depth=2.83' Max Vel=17.17 fps Inflow=225.14 cfs 23.976 af
72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/' Capacity=498.08 cfs Outflow=225.00 cfs 23.973 af

Reach L123: Avg. Flow Depth=2.91' Max Vel=6.07 fps Inflow=61.14 cfs 5.361 af
48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/' Capacity=67.64 cfs Outflow=58.65 cfs 5.348 af

Reach L157: Avg. Flow Depth=4.00' Max Vel=4.11 fps Inflow=52.61 cfs 3.641 af
48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/' Capacity=45.42 cfs Outflow=45.55 cfs 3.638 af

Reach L158: Avg. Flow Depth=2.20' Max Vel=6.89 fps Inflow=48.48 cfs 4.137 af
48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/' Capacity=83.69 cfs Outflow=47.83 cfs 4.133 af

Reach L159: Avg. Flow Depth=0.55' Max Vel=2.63 fps Inflow=1.82 cfs 0.314 af
24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/' Capacity=11.23 cfs Outflow=1.82 cfs 0.314 af

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Reach L69: 60" Avg. Flow Depth=3.78' Max Vel=11.36 fps Inflow=180.70 cfs 18.045 af
60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=180.45 cfs 18.041 af

Reach L76: Avg. Flow Depth=2.09' Max Vel=6.88 fps Inflow=46.05 cfs 3.078 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/' Capacity=84.95 cfs Outflow=44.34 cfs 3.074 af

Reach L81: Avg. Flow Depth=1.87' Max Vel=9.19 fps Inflow=61.65 cfs 5.686 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/' Capacity=207.41 cfs Outflow=61.46 cfs 5.684 af

Reach P2: 78" Avg. Flow Depth=3.59' Max Vel=11.95 fps Inflow=225.00 cfs 23.973 af
78.0" Round Pipe n=0.024 L=25.0' S=0.0180 '/' Capacity=381.00 cfs Outflow=224.95 cfs 23.972 af

Reach POA 2: POA 2 Inflow=224.95 cfs 23.972 af
Outflow=224.95 cfs 23.972 af

Pond 42.1P: Peak Elev=43.05' Storage=33,462 cf Inflow=244.00 cfs 23.976 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/' Outflow=225.14 cfs 23.976 af

Pond 47P: Peak Elev=44.76' Storage=16,142 cf Inflow=4.67 cfs 0.371 af
Outflow=0.00 cfs 0.000 af

Pond 51P: Peak Elev=45.57' Storage=12,301 cf Inflow=1.86 cfs 0.283 af
Outflow=0.00 cfs 0.000 af

Year Second Inflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce Inflow=32.17 cfs 1.070 af
Primary=32.17 cfs 1.070 af

Total Runoff Area = 129.108 ac Runoff Volume = 23.644 af Average Runoff Depth = 2.20"
46.04% Pervious = 59.438 ac 53.96% Impervious = 69.670 ac

Summary for Subcatchment 1S: S6, 8, 9, 10

Runoff = 20.22 cfs @ 12.07 hrs, Volume= 1.365 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.680	49	
* 1.060	98	
* 0.110	69	
* 1.150	98	
* 0.260	49	
* 1.200	98	
* 0.270	49	
* 0.720	98	
5.450	87	Weighted Average
1.320		24.22% Pervious Area
4.130		75.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 2S: S34-39

Runoff = 46.05 cfs @ 12.07 hrs, Volume= 3.078 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.300	49	
* 1.970	98	
* 0.840	49	
* 0.100	98	
* 0.160	49	
* 1.290	98	
* 0.330	49	
* 0.380	98	
* 0.620	49	
* 3.250	98	
* 0.440	49	
* 2.270	98	
* 0.680	49	
* 0.480	98	
13.110	85	Weighted Average
3.370		25.71% Pervious Area
9.740		74.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S1:

Runoff = 0.98 cfs @ 12.69 hrs, Volume= 0.224 af, Depth> 0.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S11:

Runoff = 15.37 cfs @ 12.07 hrs, Volume= 1.102 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.260	49	
* 3.300	98	
3.560	94	Weighted Average
0.260		7.30% Pervious Area
3.300		92.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1:

Runoff = 0.14 cfs @ 12.33 hrs, Volume= 0.020 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (sf)	CN	Description
* 24,742	49	
24,742		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	40	0.3750	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
6.4	460	0.0055	1.19		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	390	0.0107	5.06	6.20	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
0.2	62	0.0065	5.39	16.94	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.014
11.1	952	Total			

Summary for Subcatchment S12:

Runoff = 0.79 cfs @ 12.50 hrs, Volume= 0.143 af, Depth> 0.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 4.650	43	
* 0.410	98	
5.060	47	Weighted Average
4.650		91.90% Pervious Area
0.410		8.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
18.6	260	Total			

Summary for Subcatchment S13:

Runoff = 13.15 cfs @ 12.07 hrs, Volume= 0.989 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 0.040	49	
* 2.890	98	
2.930	97	Weighted Average
0.040		1.37% Pervious Area
2.890		98.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14:

Runoff = 7.92 cfs @ 12.12 hrs, Volume= 0.570 af, Depth> 1.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.940	49	
* 1.820	98	
3.760	73	Weighted Average
1.940		51.60% Pervious Area
1.820		48.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9					Direct Entry,

Summary for Subcatchment S15:

Runoff = 10.58 cfs @ 12.07 hrs, Volume= 0.714 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.650	49	
* 2.200	98	
2.850	87	Weighted Average
0.650		22.81% Pervious Area
2.200		77.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S16:

Runoff = 15.32 cfs @ 12.07 hrs, Volume= 1.099 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.320	49	
* 3.230	98	
3.550	94	Weighted Average
0.320		9.01% Pervious Area
3.230		90.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S17:

Runoff = 10.50 cfs @ 12.10 hrs, Volume= 0.722 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.140	49	
* 2.260	98	
3.400	82	Weighted Average
1.140		33.53% Pervious Area
2.260		66.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5					Direct Entry,

Summary for Subcatchment S18:

Runoff = 8.92 cfs @ 12.08 hrs, Volume= 0.597 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.770	49	
* 1.860	98	
2.630	84	Weighted Average
0.770		29.28% Pervious Area
1.860		70.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S2:

Runoff = 11.01 cfs @ 12.21 hrs, Volume= 0.959 af, Depth> 2.28"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.690	43	
* 0.020	65	
* 3.330	98	
5.040	79	Weighted Average
1.710		33.93% Pervious Area
3.330		66.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 13.79 cfs @ 12.07 hrs, Volume= 0.958 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.820	69	
* 2.560	98	
3.380	91	Weighted Average
0.820		24.26% Pervious Area
2.560		75.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 7.81 cfs @ 12.43 hrs, Volume= 0.980 af, Depth> 0.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S40:

Runoff = 8.52 cfs @ 12.08 hrs, Volume= 0.567 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 1.82 cfs @ 12.88 hrs, Volume= 0.314 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.250	49	
* 1.060	98	
2.310	71	Weighted Average
1.250		54.11% Pervious Area
1.060		45.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 14.48 cfs @ 12.07 hrs, Volume= 1.110 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 2.79 cfs @ 12.08 hrs, Volume= 0.184 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 1.00 cfs @ 12.30 hrs, Volume= 0.117 af, Depth> 0.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 5.06 cfs @ 12.07 hrs, Volume= 0.338 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 3.80 cfs @ 12.08 hrs, Volume= 0.252 af, Depth> 1.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.750	43	
* 0.910	98	Paved Surfaces and Wetlands
1.660	73	Weighted Average
0.750		45.18% Pervious Area
0.910		54.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S43:

Runoff = 11.83 cfs @ 12.07 hrs, Volume= 0.861 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 0.170	49	
* 2.530	98	
2.700	95	Weighted Average
0.170		6.30% Pervious Area
2.530		93.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S44:

Runoff = 6.42 cfs @ 12.07 hrs, Volume= 0.482 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.020	49	
* 1.410	98	
1.430	97	Weighted Average
0.020		1.40% Pervious Area
1.410		98.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45:

Runoff = 3.75 cfs @ 12.08 hrs, Volume= 0.248 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.650	49	
* 0.800	98	
1.450	76	Weighted Average
0.650		44.83% Pervious Area
0.800		55.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45.1:

Runoff = 2.51 cfs @ 12.08 hrs, Volume= 0.168 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.210	49	
* 0.530	98	
0.740	84	Weighted Average
0.210		28.38% Pervious Area
0.530		71.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S46:

Runoff = 5.38 cfs @ 12.08 hrs, Volume= 0.356 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.670	49	
* 1.130	98	
1.800	80	Weighted Average
0.670		37.22% Pervious Area
1.130		62.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47:

Runoff = 0.18 cfs @ 12.60 hrs, Volume= 0.049 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.630	36	
0.310	98	Water Surface, HSG A
2.940	43	Weighted Average
2.630		89.46% Pervious Area
0.310		10.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S48:

Runoff = 4.67 cfs @ 12.07 hrs, Volume= 0.322 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.190	49	
* 0.980	98	
1.170	90	Weighted Average
0.190		16.24% Pervious Area
0.980		83.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S49:

Runoff = 11.58 cfs @ 12.07 hrs, Volume= 0.781 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5:

Runoff = 12.62 cfs @ 12.07 hrs, Volume= 0.851 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 0.740	49	
* 2.660	98	
3.400	87	Weighted Average
0.740		21.76% Pervious Area
2.660		78.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 9.76 cfs @ 12.22 hrs, Volume= 0.914 af, Depth> 3.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.570	98	
3.550	88	Weighted Average
0.980		27.61% Pervious Area
2.570		72.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S50:

Runoff = 13.66 cfs @ 12.07 hrs, Volume= 0.913 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.030	49	
* 2.860	98	
3.890	85	Weighted Average
1.030		26.48% Pervious Area
2.860		73.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S51:

Runoff = 1.86 cfs @ 12.51 hrs, Volume= 0.283 af, Depth> 0.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 5.880	49	
* 0.350	98	
6.230	52	Weighted Average
5.880		94.38% Pervious Area
0.350		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.2					Direct Entry,

Summary for Subcatchment S7:

Runoff = 9.92 cfs @ 12.28 hrs, Volume= 1.012 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.730	69	
* 0.670	65	
* 2.660	98	
4.060	87	Weighted Average
1.400		34.48% Pervious Area
2.660		65.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7					Direct Entry,
0.2	150	0.0253	13.94	98.51	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014

20.9 150 Total

Summary for Reach 1R: 60"

Inflow Area = 84.258 ac, 52.35% Impervious, Inflow Depth > 2.33" for 10-Year event
Inflow = 163.80 cfs @ 12.13 hrs, Volume= 16.365 af
Outflow = 163.21 cfs @ 12.16 hrs, Volume= 16.350 af, Atten= 0%, Lag= 1.7 min

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Type III 24-hr 10-Year Rainfall=4.60"

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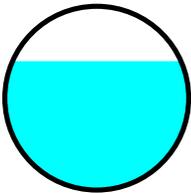
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Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.19 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 4.05 fps, Avg. Travel Time= 2.0 min

Peak Storage= 7,055 cf @ 12.15 hrs
Average Depth at Peak Storage= 3.50'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
n= 0.014
Length= 480.0' Slope= 0.0066 '/'
Inlet Invert= 42.00', Outlet Invert= 38.84'



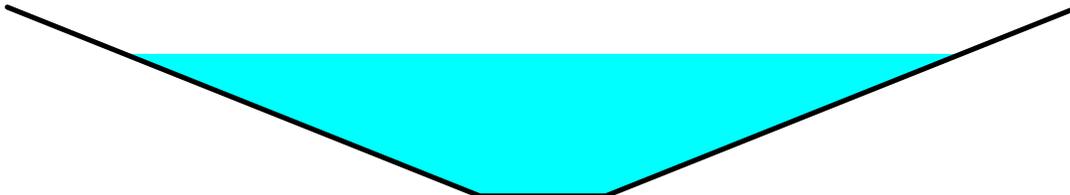
Summary for Reach 2R: Ditch 2

Inflow Area = 21.550 ac, 59.44% Impervious, Inflow Depth > 2.95" for 10-Year event
Inflow = 76.85 cfs @ 12.13 hrs, Volume= 5.301 af
Outflow = 74.82 cfs @ 12.18 hrs, Volume= 5.293 af, Atten= 3%, Lag= 2.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.46 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 1.47 fps, Avg. Travel Time= 4.2 min

Peak Storage= 6,380 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.26'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 150.34 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 370.0' Slope= 0.0062 '/'
Inlet Invert= 48.90', Outlet Invert= 46.60'



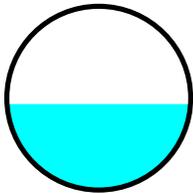
Summary for Reach 3R: 36"

Inflow Area = 14.600 ac, 50.14% Impervious, Inflow Depth > 2.86" for 10-Year event
Inflow = 55.94 cfs @ 12.13 hrs, Volume= 3.483 af
Outflow = 55.68 cfs @ 12.15 hrs, Volume= 3.482 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.34 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.06 fps, Avg. Travel Time= 1.2 min

Peak Storage= 1,146 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.40'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 126.46 cfs

36.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0417 '/'
Inlet Invert= 63.70', Outlet Invert= 48.90'



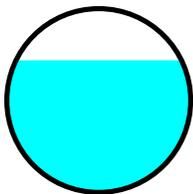
Summary for Reach 4R: 36"

Inflow Area = 11.750 ac, 43.57% Impervious, Inflow Depth > 2.83" for 10-Year event
Inflow = 48.26 cfs @ 12.14 hrs, Volume= 2.770 af
Outflow = 48.08 cfs @ 12.15 hrs, Volume= 2.770 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.89 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.63 fps, Avg. Travel Time= 0.8 min

Peak Storage= 668 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.15'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 55.84 cfs

36.0" Round Pipe
n= 0.014
Length= 123.0' Slope= 0.0081 '/'
Inlet Invert= 68.80', Outlet Invert= 67.80'



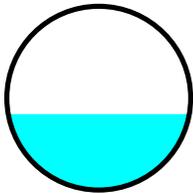
Summary for Reach 5R: 24"

Inflow Area = 2.930 ac, 98.63% Impervious, Inflow Depth > 4.05" for 10-Year event
Inflow = 13.15 cfs @ 12.07 hrs, Volume= 0.989 af
Outflow = 12.87 cfs @ 12.08 hrs, Volume= 0.988 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.64 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.73 fps, Avg. Travel Time= 1.1 min

Peak Storage= 290 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.82'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 36.79 cfs

24.0" Round Pipe
n= 0.014
Length= 238.0' Slope= 0.0307 '/'
Inlet Invert= 79.70', Outlet Invert= 72.40'



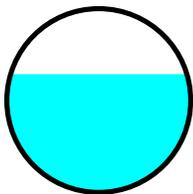
Summary for Reach 6R: 24"

Inflow Area = 5.060 ac, 8.10% Impervious, Inflow Depth > 2.88" for 10-Year event
Inflow = 32.28 cfs @ 12.16 hrs, Volume= 1.213 af
Outflow = 31.54 cfs @ 12.18 hrs, Volume= 1.213 af, Atten= 2%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.98 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 4.31 fps, Avg. Travel Time= 1.7 min

Peak Storage= 960 cf @ 12.17 hrs
Average Depth at Peak Storage= 1.29'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 43.05 cfs

24.0" Round Pipe
n= 0.014
Length= 450.0' Slope= 0.0420 '/'
Inlet Invert= 91.30', Outlet Invert= 72.40'



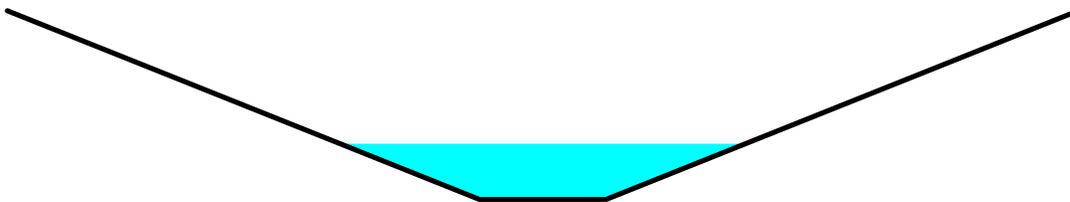
Summary for Reach 7R: Ditch 1

Inflow Area = 3.400 ac, 66.47% Impervious, Inflow Depth > 2.55" for 10-Year event
Inflow = 10.50 cfs @ 12.10 hrs, Volume= 0.722 af
Outflow = 9.80 cfs @ 12.16 hrs, Volume= 0.719 af, Atten= 7%, Lag= 3.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 4.9 min

Peak Storage= 1,140 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.89'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 154.41 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 305.0' Slope= 0.0066 '/'
Inlet Invert= 50.90', Outlet Invert= 48.90'



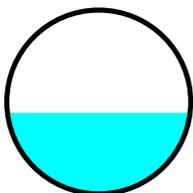
Summary for Reach 8R: 36"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 1.53" for 10-Year event
Inflow = 41.99 cfs @ 12.12 hrs, Volume= 4.885 af
Outflow = 41.11 cfs @ 12.14 hrs, Volume= 4.882 af, Atten= 2%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.00 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 5.60 fps, Avg. Travel Time= 1.2 min

Peak Storage= 1,165 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.32'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 105.42 cfs

36.0" Round Pipe
n= 0.014
Length= 390.0' Slope= 0.0290 '/'
Inlet Invert= 59.80', Outlet Invert= 48.50'



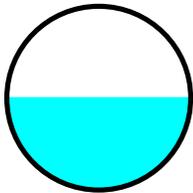
Summary for Reach 9R: 30"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 1.53" for 10-Year event
Inflow = 42.24 cfs @ 12.11 hrs, Volume= 4.888 af
Outflow = 41.99 cfs @ 12.12 hrs, Volume= 4.885 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.04 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 6.83 fps, Avg. Travel Time= 1.0 min

Peak Storage= 994 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.26'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 83.45 cfs

30.0" Round Pipe
n= 0.014
Length= 400.0' Slope= 0.0480 '/'
Inlet Invert= 79.60', Outlet Invert= 60.40'



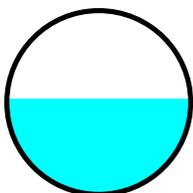
Summary for Reach 21R: 48" RCP

Inflow Area = 76.138 ac, 49.53% Impervious, Inflow Depth > 2.25" for 10-Year event
Inflow = 142.37 cfs @ 12.16 hrs, Volume= 14.251 af
Outflow = 142.33 cfs @ 12.16 hrs, Volume= 14.250 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 21.51 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 7.53 fps, Avg. Travel Time= 0.2 min

Peak Storage= 450 cf @ 12.16 hrs
Average Depth at Peak Storage= 2.08'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 265.78 cfs

48.0" Round Pipe
n= 0.014
Length= 68.0' Slope= 0.0397 '/'
Inlet Invert= 46.60', Outlet Invert= 43.90'



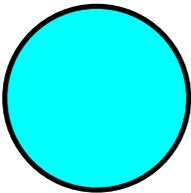
Summary for Reach L10:

Inflow Area = 47.830 ac, 41.27% Impervious, Inflow Depth > 1.82" for 10-Year event
Inflow = 65.99 cfs @ 12.11 hrs, Volume= 7.259 af
Outflow = 51.81 cfs @ 12.55 hrs, Volume= 7.238 af, Atten= 21%, Lag= 26.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.62 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 2.08 fps, Avg. Travel Time= 4.9 min

Peak Storage= 7,691 cf @ 12.10 hrs
Average Depth at Peak Storage= 4.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 51.15 cfs

48.0" Round Pipe
n= 0.014
Length= 612.0' Slope= 0.0015 '/'
Inlet Invert= 47.50', Outlet Invert= 46.60'



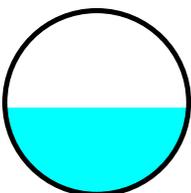
Summary for Reach L113: 72"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.23" for 10-Year event
Inflow = 225.14 cfs @ 12.24 hrs, Volume= 23.976 af
Outflow = 225.00 cfs @ 12.24 hrs, Volume= 23.973 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.17 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 6.01 fps, Avg. Travel Time= 0.3 min

Peak Storage= 1,259 cf @ 12.24 hrs
Average Depth at Peak Storage= 2.83'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



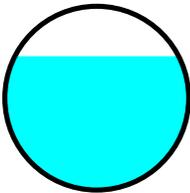
Summary for Reach L123:

Inflow Area = 24.400 ac, 68.44% Impervious, Inflow Depth > 2.64" for 10-Year event
Inflow = 61.14 cfs @ 12.11 hrs, Volume= 5.361 af
Outflow = 58.65 cfs @ 12.18 hrs, Volume= 5.348 af, Atten= 4%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.07 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 2.15 fps, Avg. Travel Time= 5.4 min

Peak Storage= 6,851 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.91'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



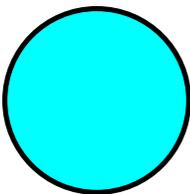
Summary for Reach L157:

Inflow Area = 15.780 ac, 73.13% Impervious, Inflow Depth > 2.77" for 10-Year event
Inflow = 52.61 cfs @ 12.10 hrs, Volume= 3.641 af
Outflow = 45.55 cfs @ 12.13 hrs, Volume= 3.638 af, Atten= 13%, Lag= 2.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.11 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 1.3 min

Peak Storage= 1,771 cf @ 12.13 hrs
Average Depth at Peak Storage= 4.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



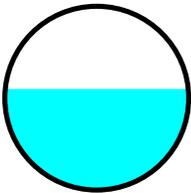
Summary for Reach L158:

Inflow Area = 19.170 ac, 68.86% Impervious, Inflow Depth > 2.59" for 10-Year event
Inflow = 48.48 cfs @ 12.12 hrs, Volume= 4.137 af
Outflow = 47.83 cfs @ 12.15 hrs, Volume= 4.133 af, Atten= 1%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.89 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.77 fps, Avg. Travel Time= 1.5 min

Peak Storage= 1,797 cf @ 12.12 hrs
Average Depth at Peak Storage= 2.20'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



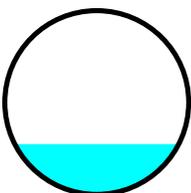
Summary for Reach L159:

Inflow Area = 2.310 ac, 45.89% Impervious, Inflow Depth > 1.63" for 10-Year event
Inflow = 1.82 cfs @ 12.88 hrs, Volume= 0.314 af
Outflow = 1.82 cfs @ 12.90 hrs, Volume= 0.314 af, Atten= 0%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.63 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.44 fps, Avg. Travel Time= 0.8 min

Peak Storage= 49 cf @ 12.89 hrs
Average Depth at Peak Storage= 0.55'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/'
Inlet Invert= 41.90', Outlet Invert= 41.70'



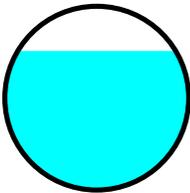
Summary for Reach L69: 60"

Inflow Area = 95.378 ac, 53.10% Impervious, Inflow Depth > 2.27" for 10-Year event
Inflow = 180.70 cfs @ 12.15 hrs, Volume= 18.045 af
Outflow = 180.45 cfs @ 12.15 hrs, Volume= 18.041 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.36 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.16 fps, Avg. Travel Time= 0.5 min

Peak Storage= 2,022 cf @ 12.15 hrs
Average Depth at Peak Storage= 3.78'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/'
Inlet Invert= 38.84', Outlet Invert= 38.00'



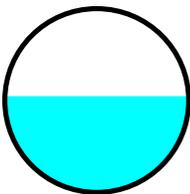
Summary for Reach L76:

Inflow Area = 13.110 ac, 74.29% Impervious, Inflow Depth > 2.82" for 10-Year event
Inflow = 46.05 cfs @ 12.07 hrs, Volume= 3.078 af
Outflow = 44.34 cfs @ 12.10 hrs, Volume= 3.074 af, Atten= 4%, Lag= 1.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.88 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 2.56 fps, Avg. Travel Time= 2.3 min

Peak Storage= 2,361 cf @ 12.09 hrs
Average Depth at Peak Storage= 2.09'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



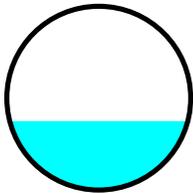
Summary for Reach L81:

Inflow Area = 25.840 ac, 68.73% Impervious, Inflow Depth > 2.64" for 10-Year event
Inflow = 61.65 cfs @ 12.18 hrs, Volume= 5.686 af
Outflow = 61.46 cfs @ 12.18 hrs, Volume= 5.684 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.19 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.09 fps, Avg. Travel Time= 0.7 min

Peak Storage= 810 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.87'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



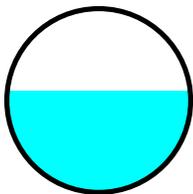
Summary for Reach P2: 78"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.23" for 10-Year event
Inflow = 225.00 cfs @ 12.24 hrs, Volume= 23.973 af
Outflow = 224.95 cfs @ 12.24 hrs, Volume= 23.972 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.95 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.23 fps, Avg. Travel Time= 0.1 min

Peak Storage= 470 cf @ 12.24 hrs
Average Depth at Peak Storage= 3.59'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 381.00 cfs

78.0" Round Pipe
n= 0.024
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.23" for 10-Year event
 Inflow = 224.95 cfs @ 12.24 hrs, Volume= 23.972 af
 Outflow = 224.95 cfs @ 12.24 hrs, Volume= 23.972 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 42.1P:

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.23" for 10-Year event
 Inflow = 244.00 cfs @ 12.16 hrs, Volume= 23.976 af
 Outflow = 225.14 cfs @ 12.24 hrs, Volume= 23.976 af, Atten= 8%, Lag= 4.6 min
 Primary = 225.14 cfs @ 12.24 hrs, Volume= 23.976 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 43.05' @ 12.24 hrs Surf.Area= 13,409 sf Storage= 33,462 cf

Plug-Flow detention time= 1.0 min calculated for 23.916 af (100% of inflow)
 Center-of-Mass det. time= 1.0 min (780.7 - 779.7)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=224.22 cfs @ 12.24 hrs HW=43.02' (Free Discharge)

↑1=Culvert (Barrel Controls 224.22 cfs @ 8.63 fps)

Summary for Pond 47P:

Inflow Area = 4.110 ac, 31.39% Impervious, Inflow Depth > 1.08" for 10-Year event
 Inflow = 4.67 cfs @ 12.07 hrs, Volume= 0.371 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 44.76' @ 20.00 hrs Surf.Area= 24,642 sf Storage= 16,142 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	44.00'	277,477 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.00	17,860	0	0
44.50	22,325	10,046	10,046
45.00	26,789	12,279	22,325
45.50	31,254	14,511	36,836
46.00	35,719	16,743	53,579
46.50	42,471	19,548	73,126
47.00	49,223	22,924	96,050
47.50	55,975	26,300	122,349
48.00	62,726	29,675	152,025
50.00	62,726	125,452	277,477

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P:

Inflow Area = 6.230 ac, 5.62% Impervious, Inflow Depth > 0.55" for 10-Year event
 Inflow = 1.86 cfs @ 12.51 hrs, Volume= 0.283 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by {enter your company name here}

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Peak Elev= 45.57' @ 20.00 hrs Surf.Area= 37,689 sf Storage= 12,301 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	513,572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	5,227	0	0
45.50	33,541	9,692	9,692
46.00	61,855	23,849	33,541
46.50	81,239	35,774	69,315
47.00	100,624	45,466	114,780
47.50	120,008	55,158	169,938
48.00	139,392	64,850	234,788
50.00	139,392	278,784	513,572

Device	Routing	Invert	Outlet Devices
#1	Primary	48.50'	75.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)

↑1=**Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 19L: Secondard Flow from 19P

Inflow = 32.17 cfs @ 12.16 hrs, Volume= 1.070 af
Primary = 32.17 cfs @ 12.16 hrs, Volume= 1.070 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

10-Year Secondary Outflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment 1S: S6, 8, 9, 10** Runoff Area=5.450 ac 75.78% Impervious Runoff Depth>3.81"
Tc=5.0 min CN=87 Runoff=25.36 cfs 1.732 af
- Subcatchment 2S: S34-39** Runoff Area=13.110 ac 74.29% Impervious Runoff Depth>3.61"
Tc=5.0 min CN=85 Runoff=58.38 cfs 3.943 af
- Subcatchment S1:** Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>0.57"
Tc=30.2 min CN=46 Runoff=2.49 cfs 0.427 af
- Subcatchment S11:** Runoff Area=3.560 ac 92.70% Impervious Runoff Depth>4.56"
Tc=5.0 min CN=94 Runoff=18.63 cfs 1.354 af
- Subcatchment S11.1:** Runoff Area=24,742 sf 0.00% Impervious Runoff Depth>0.74"
Flow Length=952' Tc=11.1 min CN=49 Runoff=0.32 cfs 0.035 af
- Subcatchment S12:** Runoff Area=5.060 ac 8.10% Impervious Runoff Depth>0.63"
Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=47 Runoff=1.87 cfs 0.264 af
- Subcatchment S13:** Runoff Area=2.930 ac 98.63% Impervious Runoff Depth>4.91"
Tc=5.0 min CN=97 Runoff=15.79 cfs 1.198 af
- Subcatchment S14:** Runoff Area=3.760 ac 48.40% Impervious Runoff Depth>2.48"
Tc=7.9 min CN=73 Runoff=10.88 cfs 0.778 af
- Subcatchment S15:** Runoff Area=2.850 ac 77.19% Impervious Runoff Depth>3.81"
Tc=5.0 min CN=87 Runoff=13.26 cfs 0.905 af
- Subcatchment S16:** Runoff Area=3.550 ac 90.99% Impervious Runoff Depth>4.56"
Tc=5.0 min CN=94 Runoff=18.58 cfs 1.350 af
- Subcatchment S17:** Runoff Area=3.400 ac 66.47% Impervious Runoff Depth>3.31"
Tc=6.5 min CN=82 Runoff=13.53 cfs 0.938 af
- Subcatchment S18:** Runoff Area=2.630 ac 70.72% Impervious Runoff Depth>3.51"
Tc=5.0 min CN=84 Runoff=11.44 cfs 0.769 af
- Subcatchment S2:** Runoff Area=5.040 ac 66.07% Impervious Runoff Depth>3.02"
Tc=14.8 min CN=79 Runoff=14.48 cfs 1.267 af
- Subcatchment S3:** Runoff Area=3.380 ac 75.74% Impervious Runoff Depth>4.23"
Tc=5.0 min CN=91 Runoff=16.95 cfs 1.193 af
- Subcatchment S4:** Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>1.30"
Tc=25.6 min CN=58 Runoff=12.91 cfs 1.510 af
- Subcatchment S40:** Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>3.31"
Tc=5.0 min CN=82 Runoff=10.98 cfs 0.737 af

Subcatchment S40.1:	Runoff Area=2.310 ac 45.89% Impervious Runoff Depth>2.26" Tc=63.2 min CN=71 Runoff=2.55 cfs 0.435 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>5.02" Tc=5.0 min CN=98 Runoff=17.35 cfs 1.339 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>2.75" Tc=5.0 min CN=76 Runoff=3.74 cfs 0.248 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>1.11" Tc=16.7 min CN=55 Runoff=1.80 cfs 0.187 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>3.61" Tc=5.0 min CN=85 Runoff=6.41 cfs 0.433 af
Subcatchment S42.1:	Runoff Area=1.660 ac 54.82% Impervious Runoff Depth>2.49" Tc=5.0 min CN=73 Runoff=5.21 cfs 0.344 af
Subcatchment S43:	Runoff Area=2.700 ac 93.70% Impervious Runoff Depth>4.68" Tc=5.0 min CN=95 Runoff=14.29 cfs 1.052 af
Subcatchment S44:	Runoff Area=1.430 ac 98.60% Impervious Runoff Depth>4.91" Tc=5.0 min CN=97 Runoff=7.71 cfs 0.585 af
Subcatchment S45:	Runoff Area=1.450 ac 55.17% Impervious Runoff Depth>2.75" Tc=5.0 min CN=76 Runoff=5.02 cfs 0.332 af
Subcatchment S45.1:	Runoff Area=0.740 ac 71.62% Impervious Runoff Depth>3.51" Tc=5.0 min CN=84 Runoff=3.22 cfs 0.216 af
Subcatchment S46:	Runoff Area=1.800 ac 62.78% Impervious Runoff Depth>3.12" Tc=5.0 min CN=80 Runoff=7.02 cfs 0.468 af
Subcatchment S47:	Runoff Area=2.940 ac 10.54% Impervious Runoff Depth>0.42" Tc=18.7 min CN=43 Runoff=0.59 cfs 0.104 af
Subcatchment S48:	Runoff Area=1.170 ac 83.76% Impervious Runoff Depth>4.13" Tc=5.0 min CN=90 Runoff=5.77 cfs 0.402 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>3.81" Tc=5.0 min CN=87 Runoff=14.52 cfs 0.991 af
Subcatchment S5:	Runoff Area=3.400 ac 78.24% Impervious Runoff Depth>3.81" Tc=5.0 min CN=87 Runoff=15.82 cfs 1.080 af
Subcatchment S5.1:	Runoff Area=3.550 ac 72.39% Impervious Runoff Depth>3.90" Tc=16.7 min CN=88 Runoff=12.19 cfs 1.155 af
Subcatchment S50:	Runoff Area=3.890 ac 73.52% Impervious Runoff Depth>3.61" Tc=5.0 min CN=85 Runoff=17.32 cfs 1.170 af
Subcatchment S51:	Runoff Area=6.230 ac 5.62% Impervious Runoff Depth>0.91" Tc=26.2 min CN=52 Runoff=3.60 cfs 0.473 af

Subcatchment S7: Runoff Area=4.060 ac 65.52% Impervious Runoff Depth>3.80"
Flow Length=150' Slope=0.0253 '/ S=0.0066 '/ Tc=20.9 min CN=87 Runoff=12.46 cfs 1.284 af

Reach 1R: 60" Avg. Flow Depth=4.11' Max Vel=11.39 fps Inflow=199.89 cfs 21.621 af
60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/ Capacity=196.22 cfs Outflow=195.34 cfs 21.604 af

Reach 2R: Ditch 2 Avg. Flow Depth=2.46' Max Vel=4.69 fps Inflow=96.42 cfs 7.204 af
n=0.030 L=370.0' S=0.0062 '/ Capacity=150.34 cfs Outflow=93.49 cfs 7.195 af

Reach 3R: 36" Avg. Flow Depth=1.58' Max Vel=18.23 fps Inflow=68.27 cfs 4.920 af
36.0" Round Pipe n=0.014 L=355.0' S=0.0417 '/ Capacity=126.46 cfs Outflow=68.04 cfs 4.918 af

Reach 4R: 36" Avg. Flow Depth=3.00' Max Vel=8.90 fps Inflow=66.86 cfs 4.015 af
36.0" Round Pipe n=0.014 L=123.0' S=0.0081 '/ Capacity=55.84 cfs Outflow=55.84 cfs 4.014 af

Reach 5R: 24" Avg. Flow Depth=0.91' Max Vel=11.16 fps Inflow=15.79 cfs 1.198 af
24.0" Round Pipe n=0.014 L=238.0' S=0.0307 '/ Capacity=36.79 cfs Outflow=15.46 cfs 1.197 af

Reach 6R: 24" Avg. Flow Depth=2.00' Max Vel=15.61 fps Inflow=49.65 cfs 2.040 af
24.0" Round Pipe n=0.014 L=450.0' S=0.0420 '/ Capacity=43.05 cfs Outflow=43.66 cfs 2.039 af

Reach 7R: Ditch 1 Avg. Flow Depth=1.00' Max Vel=2.87 fps Inflow=13.53 cfs 0.938 af
n=0.030 L=305.0' S=0.0066 '/ Capacity=154.41 cfs Outflow=12.66 cfs 0.936 af

Reach 8R: 36" Avg. Flow Depth=1.53' Max Vel=15.02 fps Inflow=55.08 cfs 6.629 af
36.0" Round Pipe n=0.014 L=390.0' S=0.0290 '/ Capacity=105.42 cfs Outflow=54.12 cfs 6.625 af

Reach 9R: 30" Avg. Flow Depth=1.49' Max Vel=18.16 fps Inflow=55.37 cfs 6.632 af
30.0" Round Pipe n=0.014 L=400.0' S=0.0480 '/ Capacity=83.45 cfs Outflow=55.08 cfs 6.629 af

Reach 21R: 48" RCP Avg. Flow Depth=2.29' Max Vel=22.30 fps Inflow=166.10 cfs 18.969 af
48.0" Round Pipe n=0.014 L=68.0' S=0.0397 '/ Capacity=265.78 cfs Outflow=166.01 cfs 18.967 af

Reach L10: Avg. Flow Depth=4.00' Max Vel=4.64 fps Inflow=85.16 cfs 9.641 af
48.0" Round Pipe n=0.014 L=612.0' S=0.0015 '/ Capacity=51.15 cfs Outflow=51.15 cfs 9.616 af

Reach L113: 72" Avg. Flow Depth=3.06' Max Vel=17.76 fps Inflow=257.26 cfs 31.395 af
72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/ Capacity=498.08 cfs Outflow=257.12 cfs 31.392 af

Reach L123: Avg. Flow Depth=3.13' Max Vel=6.13 fps Inflow=66.46 cfs 6.877 af
48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/ Capacity=67.64 cfs Outflow=64.47 cfs 6.862 af

Reach L157: Avg. Flow Depth=4.00' Max Vel=4.09 fps Inflow=66.95 cfs 4.675 af
48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/ Capacity=45.42 cfs Outflow=45.42 cfs 4.672 af

Reach L158: Avg. Flow Depth=2.22' Max Vel=6.95 fps Inflow=49.52 cfs 5.355 af
48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/ Capacity=83.69 cfs Outflow=49.62 cfs 5.351 af

Reach L159: Avg. Flow Depth=0.65' Max Vel=2.89 fps Inflow=2.55 cfs 0.435 af
24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/ Capacity=11.23 cfs Outflow=2.55 cfs 0.435 af

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Type III 24-hr 25-Year Rainfall=5.50"

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Reach L69: 60" Avg. Flow Depth=5.00' Max Vel=11.37 fps Inflow=222.30 cfs 23.765 af
60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=206.99 cfs 23.760 af

Reach L76: Avg. Flow Depth=2.43' Max Vel=7.26 fps Inflow=58.38 cfs 3.943 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/' Capacity=84.95 cfs Outflow=56.28 cfs 3.938 af

Reach L81: Avg. Flow Depth=1.98' Max Vel=9.48 fps Inflow=68.67 cfs 7.295 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/' Capacity=207.41 cfs Outflow=68.49 cfs 7.293 af

Reach P2: 78" Avg. Flow Depth=3.91' Max Vel=12.32 fps Inflow=257.12 cfs 31.392 af
78.0" Round Pipe n=0.024 L=25.0' S=0.0180 '/' Capacity=381.00 cfs Outflow=257.07 cfs 31.391 af

Reach POA 2: POA 2 Inflow=257.07 cfs 31.391 af
Outflow=257.07 cfs 31.391 af

Pond 42.1P: Peak Elev=43.91' Storage=45,983 cf Inflow=268.87 cfs 31.397 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/' Outflow=257.26 cfs 31.395 af

Pond 47P: Peak Elev=44.99' Storage=22,042 cf Inflow=5.78 cfs 0.506 af
Outflow=0.00 cfs 0.000 af

Pond 51P: Peak Elev=45.76' Storage=20,552 cf Inflow=3.60 cfs 0.473 af
Outflow=0.00 cfs 0.000 af

Year Second Inflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce Inflow=48.88 cfs 1.776 af
Primary=48.88 cfs 1.776 af

Total Runoff Area = 129.108 ac Runoff Volume = 30.700 af Average Runoff Depth = 2.85"
46.04% Pervious = 59.438 ac 53.96% Impervious = 69.670 ac

Summary for Subcatchment 1S: S6, 8, 9, 10

Runoff = 25.36 cfs @ 12.07 hrs, Volume= 1.732 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.680	49	
* 1.060	98	
* 0.110	69	
* 1.150	98	
* 0.260	49	
* 1.200	98	
* 0.270	49	
* 0.720	98	
5.450	87	Weighted Average
1.320		24.22% Pervious Area
4.130		75.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 2S: S34-39

Runoff = 58.38 cfs @ 12.07 hrs, Volume= 3.943 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.300	49	
* 1.970	98	
* 0.840	49	
* 0.100	98	
* 0.160	49	
* 1.290	98	
* 0.330	49	
* 0.380	98	
* 0.620	49	
* 3.250	98	
* 0.440	49	
* 2.270	98	
* 0.680	49	
* 0.480	98	
13.110	85	Weighted Average
3.370		25.71% Pervious Area
9.740		74.29% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S1:

Runoff = 2.49 cfs @ 12.59 hrs, Volume= 0.427 af, Depth> 0.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S11:

Runoff = 18.63 cfs @ 12.07 hrs, Volume= 1.354 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.260	49	
* 3.300	98	
3.560	94	Weighted Average
0.260		7.30% Pervious Area
3.300		92.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1:

Runoff = 0.32 cfs @ 12.21 hrs, Volume= 0.035 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (sf)	CN	Description
* 24,742	49	
24,742		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	40	0.3750	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
6.4	460	0.0055	1.19		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	390	0.0107	5.06	6.20	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
0.2	62	0.0065	5.39	16.94	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.014
11.1	952	Total			

Summary for Subcatchment S12:

Runoff = 1.87 cfs @ 12.39 hrs, Volume= 0.264 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 4.650	43	
* 0.410	98	
5.060	47	Weighted Average
4.650		91.90% Pervious Area
0.410		8.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
18.6	260	Total			

Summary for Subcatchment S13:

Runoff = 15.79 cfs @ 12.07 hrs, Volume= 1.198 af, Depth> 4.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 0.040	49	
* 2.890	98	
2.930	97	Weighted Average
0.040		1.37% Pervious Area
2.890		98.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14:

Runoff = 10.88 cfs @ 12.12 hrs, Volume= 0.778 af, Depth> 2.48"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.940	49	
* 1.820	98	
3.760	73	Weighted Average
1.940		51.60% Pervious Area
1.820		48.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9					Direct Entry,

Summary for Subcatchment S15:

Runoff = 13.26 cfs @ 12.07 hrs, Volume= 0.905 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.650	49	
* 2.200	98	
2.850	87	Weighted Average
0.650		22.81% Pervious Area
2.200		77.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S16:

Runoff = 18.58 cfs @ 12.07 hrs, Volume= 1.350 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.320	49	
* 3.230	98	
3.550	94	Weighted Average
0.320		9.01% Pervious Area
3.230		90.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S17:

Runoff = 13.53 cfs @ 12.10 hrs, Volume= 0.938 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.140	49	
* 2.260	98	
3.400	82	Weighted Average
1.140		33.53% Pervious Area
2.260		66.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5					Direct Entry,

Summary for Subcatchment S18:

Runoff = 11.44 cfs @ 12.07 hrs, Volume= 0.769 af, Depth> 3.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.770	49	
* 1.860	98	
2.630	84	Weighted Average
0.770		29.28% Pervious Area
1.860		70.72% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S2:

Runoff = 14.48 cfs @ 12.21 hrs, Volume= 1.267 af, Depth> 3.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.690	43	
* 0.020	65	
* 3.330	98	
5.040	79	Weighted Average
1.710		33.93% Pervious Area
3.330		66.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 16.95 cfs @ 12.07 hrs, Volume= 1.193 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.820	69	
* 2.560	98	
3.380	91	Weighted Average
0.820		24.26% Pervious Area
2.560		75.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 12.91 cfs @ 12.41 hrs, Volume= 1.510 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S40:

Runoff = 10.98 cfs @ 12.08 hrs, Volume= 0.737 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 2.55 cfs @ 12.87 hrs, Volume= 0.435 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.250	49	
* 1.060	98	
2.310	71	Weighted Average
1.250		54.11% Pervious Area
1.060		45.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 17.35 cfs @ 12.07 hrs, Volume= 1.339 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 3.74 cfs @ 12.08 hrs, Volume= 0.248 af, Depth> 2.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 1.80 cfs @ 12.27 hrs, Volume= 0.187 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 6.41 cfs @ 12.07 hrs, Volume= 0.433 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 5.21 cfs @ 12.08 hrs, Volume= 0.344 af, Depth> 2.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.750	43	
* 0.910	98	Paved Surfaces and Wetlands
1.660	73	Weighted Average
0.750		45.18% Pervious Area
0.910		54.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S43:

Runoff = 14.29 cfs @ 12.07 hrs, Volume= 1.052 af, Depth> 4.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 0.170	49	
* 2.530	98	
2.700	95	Weighted Average
0.170		6.30% Pervious Area
2.530		93.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S44:

Runoff = 7.71 cfs @ 12.07 hrs, Volume= 0.585 af, Depth> 4.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.020	49	
* 1.410	98	
1.430	97	Weighted Average
0.020		1.40% Pervious Area
1.410		98.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45:

Runoff = 5.02 cfs @ 12.08 hrs, Volume= 0.332 af, Depth> 2.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.650	49	
* 0.800	98	
1.450	76	Weighted Average
0.650		44.83% Pervious Area
0.800		55.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45.1:

Runoff = 3.22 cfs @ 12.07 hrs, Volume= 0.216 af, Depth> 3.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.210	49	
* 0.530	98	
0.740	84	Weighted Average
0.210		28.38% Pervious Area
0.530		71.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S46:

Runoff = 7.02 cfs @ 12.08 hrs, Volume= 0.468 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.670	49	
* 1.130	98	
1.800	80	Weighted Average
0.670		37.22% Pervious Area
1.130		62.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47:

Runoff = 0.59 cfs @ 12.49 hrs, Volume= 0.104 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.630	36	
0.310	98	Water Surface, HSG A
2.940	43	Weighted Average
2.630		89.46% Pervious Area
0.310		10.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S48:

Runoff = 5.77 cfs @ 12.07 hrs, Volume= 0.402 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.190	49	
* 0.980	98	
1.170	90	Weighted Average
0.190		16.24% Pervious Area
0.980		83.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S49:

Runoff = 14.52 cfs @ 12.07 hrs, Volume= 0.991 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5:

Runoff = 15.82 cfs @ 12.07 hrs, Volume= 1.080 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.740	49	
* 2.660	98	
3.400	87	Weighted Average
0.740		21.76% Pervious Area
2.660		78.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 12.19 cfs @ 12.22 hrs, Volume= 1.155 af, Depth> 3.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.570	98	
3.550	88	Weighted Average
0.980		27.61% Pervious Area
2.570		72.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S50:

Runoff = 17.32 cfs @ 12.07 hrs, Volume= 1.170 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.030	49	
* 2.860	98	
3.890	85	Weighted Average
1.030		26.48% Pervious Area
2.860		73.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S51:

Runoff = 3.60 cfs @ 12.45 hrs, Volume= 0.473 af, Depth> 0.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 5.880	49	
* 0.350	98	
6.230	52	Weighted Average
5.880		94.38% Pervious Area
0.350		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.2					Direct Entry,

Summary for Subcatchment S7:

Runoff = 12.46 cfs @ 12.28 hrs, Volume= 1.284 af, Depth> 3.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.730	69	
* 0.670	65	
* 2.660	98	
4.060	87	Weighted Average
1.400		34.48% Pervious Area
2.660		65.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7					Direct Entry,
0.2	150	0.0253	13.94	98.51	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014

20.9 150 Total

Summary for Reach 1R: 60"

Inflow Area = 84.258 ac, 52.35% Impervious, Inflow Depth > 3.08" for 25-Year event
Inflow = 199.89 cfs @ 12.11 hrs, Volume= 21.621 af
Outflow = 195.34 cfs @ 12.14 hrs, Volume= 21.604 af, Atten= 2%, Lag= 1.8 min

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 25-Year Rainfall=5.50"

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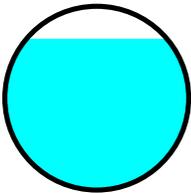
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Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.39 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 4.39 fps, Avg. Travel Time= 1.8 min

Peak Storage= 8,300 cf @ 12.13 hrs
Average Depth at Peak Storage= 4.11'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
n= 0.014
Length= 480.0' Slope= 0.0066 '/'
Inlet Invert= 42.00', Outlet Invert= 38.84'



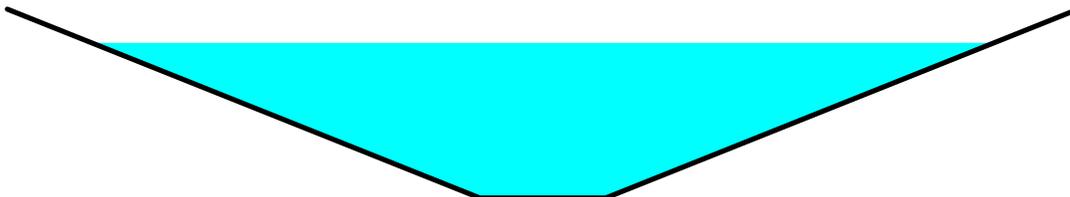
Summary for Reach 2R: Ditch 2

Inflow Area = 21.550 ac, 59.44% Impervious, Inflow Depth > 4.01" for 25-Year event
Inflow = 96.42 cfs @ 12.11 hrs, Volume= 7.204 af
Outflow = 93.49 cfs @ 12.16 hrs, Volume= 7.195 af, Atten= 3%, Lag= 3.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.69 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 3.9 min

Peak Storage= 7,437 cf @ 12.13 hrs
Average Depth at Peak Storage= 2.46'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 150.34 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 370.0' Slope= 0.0062 '/'
Inlet Invert= 48.90', Outlet Invert= 46.60'



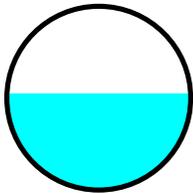
Summary for Reach 3R: 36"

Inflow Area = 14.600 ac, 50.14% Impervious, Inflow Depth > 4.04" for 25-Year event
Inflow = 68.27 cfs @ 12.11 hrs, Volume= 4.920 af
Outflow = 68.04 cfs @ 12.12 hrs, Volume= 4.918 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 18.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.50 fps, Avg. Travel Time= 1.1 min

Peak Storage= 1,336 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.58'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 126.46 cfs

36.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0417 '/'
Inlet Invert= 63.70', Outlet Invert= 48.90'



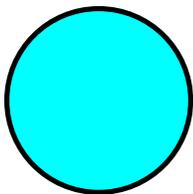
Summary for Reach 4R: 36"

Inflow Area = 11.750 ac, 43.57% Impervious, Inflow Depth > 4.10" for 25-Year event
Inflow = 66.86 cfs @ 12.12 hrs, Volume= 4.015 af
Outflow = 55.84 cfs @ 12.15 hrs, Volume= 4.014 af, Atten= 16%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.90 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.83 fps, Avg. Travel Time= 0.7 min

Peak Storage= 869 cf @ 12.10 hrs
Average Depth at Peak Storage= 3.00'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 55.84 cfs

36.0" Round Pipe
n= 0.014
Length= 123.0' Slope= 0.0081 '/'
Inlet Invert= 68.80', Outlet Invert= 67.80'



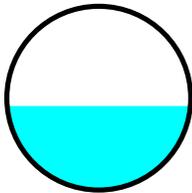
Summary for Reach 5R: 24"

Inflow Area = 2.930 ac, 98.63% Impervious, Inflow Depth > 4.91" for 25-Year event
Inflow = 15.79 cfs @ 12.07 hrs, Volume= 1.198 af
Outflow = 15.46 cfs @ 12.08 hrs, Volume= 1.197 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.16 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.94 fps, Avg. Travel Time= 1.0 min

Peak Storage= 332 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.91'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 36.79 cfs

24.0" Round Pipe
n= 0.014
Length= 238.0' Slope= 0.0307 '/'
Inlet Invert= 79.70', Outlet Invert= 72.40'



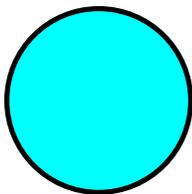
Summary for Reach 6R: 24"

Inflow Area = 5.060 ac, 8.10% Impervious, Inflow Depth > 4.84" for 25-Year event
Inflow = 49.65 cfs @ 12.16 hrs, Volume= 2.040 af
Outflow = 43.66 cfs @ 12.30 hrs, Volume= 2.039 af, Atten= 12%, Lag= 8.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 15.61 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 5.04 fps, Avg. Travel Time= 1.5 min

Peak Storage= 1,414 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 43.05 cfs

24.0" Round Pipe
n= 0.014
Length= 450.0' Slope= 0.0420 '/'
Inlet Invert= 91.30', Outlet Invert= 72.40'



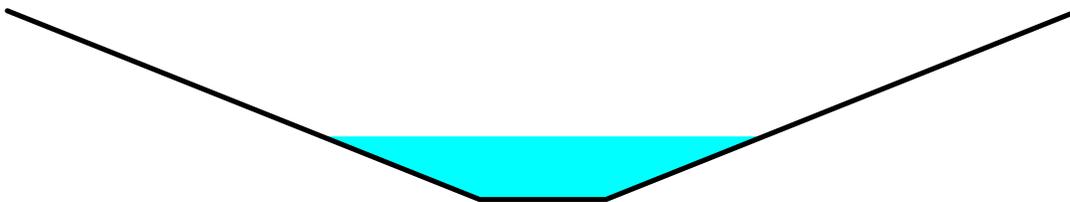
Summary for Reach 7R: Ditch 1

Inflow Area = 3.400 ac, 66.47% Impervious, Inflow Depth > 3.31" for 25-Year event
Inflow = 13.53 cfs @ 12.10 hrs, Volume= 0.938 af
Outflow = 12.66 cfs @ 12.15 hrs, Volume= 0.936 af, Atten= 6%, Lag= 3.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.87 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 4.7 min

Peak Storage= 1,380 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 154.41 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 305.0' Slope= 0.0066 '/'
Inlet Invert= 50.90', Outlet Invert= 48.90'



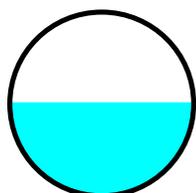
Summary for Reach 8R: 36"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 2.08" for 25-Year event
Inflow = 55.08 cfs @ 12.12 hrs, Volume= 6.629 af
Outflow = 54.12 cfs @ 12.15 hrs, Volume= 6.625 af, Atten= 2%, Lag= 1.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 15.02 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 6.03 fps, Avg. Travel Time= 1.1 min

Peak Storage= 1,410 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.53'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 105.42 cfs

36.0" Round Pipe
n= 0.014
Length= 390.0' Slope= 0.0290 '/'
Inlet Invert= 59.80', Outlet Invert= 48.50'



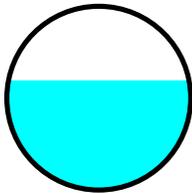
Summary for Reach 9R: 30"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 2.08" for 25-Year event
Inflow = 55.37 cfs @ 12.11 hrs, Volume= 6.632 af
Outflow = 55.08 cfs @ 12.12 hrs, Volume= 6.629 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 18.16 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 7.35 fps, Avg. Travel Time= 0.9 min

Peak Storage= 1,221 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.49'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 83.45 cfs

30.0" Round Pipe
n= 0.014
Length= 400.0' Slope= 0.0480 '/'
Inlet Invert= 79.60', Outlet Invert= 60.40'



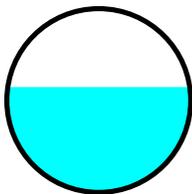
Summary for Reach 21R: 48" RCP

Inflow Area = 76.138 ac, 49.53% Impervious, Inflow Depth > 2.99" for 25-Year event
Inflow = 166.10 cfs @ 12.13 hrs, Volume= 18.969 af
Outflow = 166.01 cfs @ 12.14 hrs, Volume= 18.967 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 22.30 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.17 fps, Avg. Travel Time= 0.1 min

Peak Storage= 506 cf @ 12.14 hrs
Average Depth at Peak Storage= 2.29'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 265.78 cfs

48.0" Round Pipe
n= 0.014
Length= 68.0' Slope= 0.0397 '/'
Inlet Invert= 46.60', Outlet Invert= 43.90'



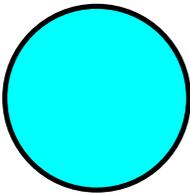
Summary for Reach L10:

Inflow Area = 47.830 ac, 41.27% Impervious, Inflow Depth > 2.42" for 25-Year event
Inflow = 85.16 cfs @ 12.11 hrs, Volume= 9.641 af
Outflow = 51.15 cfs @ 12.10 hrs, Volume= 9.616 af, Atten= 40%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.64 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 2.22 fps, Avg. Travel Time= 4.6 min

Peak Storage= 7,691 cf @ 12.05 hrs
Average Depth at Peak Storage= 4.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 51.15 cfs

48.0" Round Pipe
n= 0.014
Length= 612.0' Slope= 0.0015 '/'
Inlet Invert= 47.50', Outlet Invert= 46.60'



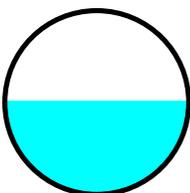
Summary for Reach L113: 72"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.92" for 25-Year event
Inflow = 257.26 cfs @ 12.30 hrs, Volume= 31.395 af
Outflow = 257.12 cfs @ 12.31 hrs, Volume= 31.392 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.76 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 6.51 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1,390 cf @ 12.31 hrs
Average Depth at Peak Storage= 3.06'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



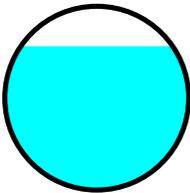
Summary for Reach L123:

Inflow Area = 24.400 ac, 68.44% Impervious, Inflow Depth > 3.38" for 25-Year event
Inflow = 66.46 cfs @ 12.10 hrs, Volume= 6.877 af
Outflow = 64.47 cfs @ 12.17 hrs, Volume= 6.862 af, Atten= 3%, Lag= 4.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 2.32 fps, Avg. Travel Time= 5.0 min

Peak Storage= 7,379 cf @ 12.13 hrs
Average Depth at Peak Storage= 3.13'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



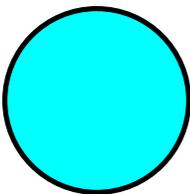
Summary for Reach L157:

Inflow Area = 15.780 ac, 73.13% Impervious, Inflow Depth > 3.56" for 25-Year event
Inflow = 66.95 cfs @ 12.10 hrs, Volume= 4.675 af
Outflow = 45.42 cfs @ 12.10 hrs, Volume= 4.672 af, Atten= 32%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.09 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.80 fps, Avg. Travel Time= 1.3 min

Peak Storage= 1,734 cf @ 12.05 hrs
Average Depth at Peak Storage= 4.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



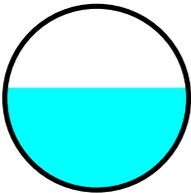
Summary for Reach L158:

Inflow Area = 19.170 ac, 68.86% Impervious, Inflow Depth > 3.35" for 25-Year event
Inflow = 49.52 cfs @ 12.11 hrs, Volume= 5.355 af
Outflow = 49.62 cfs @ 12.12 hrs, Volume= 5.351 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.95 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.92 fps, Avg. Travel Time= 1.5 min

Peak Storage= 1,822 cf @ 12.11 hrs
Average Depth at Peak Storage= 2.22'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



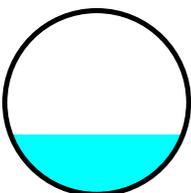
Summary for Reach L159:

Inflow Area = 2.310 ac, 45.89% Impervious, Inflow Depth > 2.26" for 25-Year event
Inflow = 2.55 cfs @ 12.87 hrs, Volume= 0.435 af
Outflow = 2.55 cfs @ 12.88 hrs, Volume= 0.435 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.89 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 0.8 min

Peak Storage= 62 cf @ 12.87 hrs
Average Depth at Peak Storage= 0.65'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/'
Inlet Invert= 41.90', Outlet Invert= 41.70'



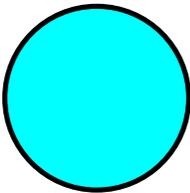
Summary for Reach L69: 60"

Inflow Area = 95.378 ac, 53.10% Impervious, Inflow Depth > 2.99" for 25-Year event
Inflow = 222.30 cfs @ 12.12 hrs, Volume= 23.765 af
Outflow = 206.99 cfs @ 12.28 hrs, Volume= 23.760 af, Atten= 7%, Lag= 9.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.37 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.49 fps, Avg. Travel Time= 0.5 min

Peak Storage= 2,494 cf @ 12.10 hrs
Average Depth at Peak Storage= 5.00'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/'
Inlet Invert= 38.84', Outlet Invert= 38.00'



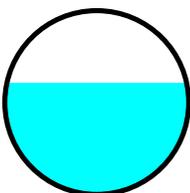
Summary for Reach L76:

Inflow Area = 13.110 ac, 74.29% Impervious, Inflow Depth > 3.61" for 25-Year event
Inflow = 58.38 cfs @ 12.07 hrs, Volume= 3.943 af
Outflow = 56.28 cfs @ 12.10 hrs, Volume= 3.938 af, Atten= 4%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.26 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 2.69 fps, Avg. Travel Time= 2.2 min

Peak Storage= 2,831 cf @ 12.09 hrs
Average Depth at Peak Storage= 2.43'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



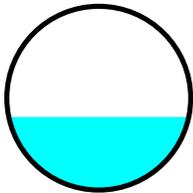
Summary for Reach L81:

Inflow Area = 25.840 ac, 68.73% Impervious, Inflow Depth > 3.39" for 25-Year event
Inflow = 68.67 cfs @ 12.16 hrs, Volume= 7.295 af
Outflow = 68.49 cfs @ 12.16 hrs, Volume= 7.293 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.48 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.34 fps, Avg. Travel Time= 0.6 min

Peak Storage= 876 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.98'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



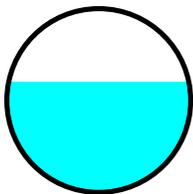
Summary for Reach P2: 78"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.92" for 25-Year event
Inflow = 257.12 cfs @ 12.31 hrs, Volume= 31.392 af
Outflow = 257.07 cfs @ 12.31 hrs, Volume= 31.391 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.32 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.58 fps, Avg. Travel Time= 0.1 min

Peak Storage= 521 cf @ 12.31 hrs
Average Depth at Peak Storage= 3.91'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 381.00 cfs

78.0" Round Pipe
n= 0.024
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.92" for 25-Year event
 Inflow = 257.07 cfs @ 12.31 hrs, Volume= 31.391 af
 Outflow = 257.07 cfs @ 12.31 hrs, Volume= 31.391 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 42.1P:

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 2.92" for 25-Year event
 Inflow = 268.87 cfs @ 12.16 hrs, Volume= 31.397 af
 Outflow = 257.26 cfs @ 12.30 hrs, Volume= 31.395 af, Atten= 4%, Lag= 8.7 min
 Primary = 257.26 cfs @ 12.30 hrs, Volume= 31.395 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 43.91' @ 12.30 hrs Surf.Area= 15,701 sf Storage= 45,983 cf

Plug-Flow detention time= 1.3 min calculated for 31.395 af (100% of inflow)
 Center-of-Mass det. time= 1.2 min (777.7 - 776.4)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=257.07 cfs @ 12.30 hrs HW=43.90' (Free Discharge)

↑1=Culvert (Barrel Controls 257.07 cfs @ 9.16 fps)

Summary for Pond 47P:

Inflow Area = 4.110 ac, 31.39% Impervious, Inflow Depth > 1.48" for 25-Year event
 Inflow = 5.78 cfs @ 12.07 hrs, Volume= 0.506 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 44.99' @ 20.00 hrs Surf.Area= 26,695 sf Storage= 22,042 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	44.00'	277,477 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.00	17,860	0	0
44.50	22,325	10,046	10,046
45.00	26,789	12,279	22,325
45.50	31,254	14,511	36,836
46.00	35,719	16,743	53,579
46.50	42,471	19,548	73,126
47.00	49,223	22,924	96,050
47.50	55,975	26,300	122,349
48.00	62,726	29,675	152,025
50.00	62,726	125,452	277,477

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P:

Inflow Area = 6.230 ac, 5.62% Impervious, Inflow Depth > 0.91" for 25-Year event
 Inflow = 3.60 cfs @ 12.45 hrs, Volume= 0.473 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 25-Year Rainfall=5.50"

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Peak Elev= 45.76' @ 20.00 hrs Surf.Area= 48,528 sf Storage= 20,552 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	513,572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	5,227	0	0
45.50	33,541	9,692	9,692
46.00	61,855	23,849	33,541
46.50	81,239	35,774	69,315
47.00	100,624	45,466	114,780
47.50	120,008	55,158	169,938
48.00	139,392	64,850	234,788
50.00	139,392	278,784	513,572

Device	Routing	Invert	Outlet Devices
#1	Primary	48.50'	75.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)

↑1=**Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 19L: Secondard Flow from 19P

Inflow = 48.88 cfs @ 12.16 hrs, Volume= 1.776 af
 Primary = 48.88 cfs @ 12.16 hrs, Volume= 1.776 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

25-Year Secondary Outflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment 1S: S6, 8, 9, 10** Runoff Area=5.450 ac 75.78% Impervious Runoff Depth>4.86"
Tc=5.0 min CN=87 Runoff=31.90 cfs 2.208 af
- Subcatchment 2S: S34-39** Runoff Area=13.110 ac 74.29% Impervious Runoff Depth>4.64"
Tc=5.0 min CN=85 Runoff=74.16 cfs 5.072 af
- Subcatchment S1:** Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>1.01"
Tc=30.2 min CN=46 Runoff=5.27 cfs 0.756 af
- Subcatchment S11:** Runoff Area=3.560 ac 92.70% Impervious Runoff Depth>5.65"
Tc=5.0 min CN=94 Runoff=22.78 cfs 1.677 af
- Subcatchment S11.1:** Runoff Area=24,742 sf 0.00% Impervious Runoff Depth>1.24"
Flow Length=952' Tc=11.1 min CN=49 Runoff=0.63 cfs 0.059 af
- Subcatchment S12:** Runoff Area=5.060 ac 8.10% Impervious Runoff Depth>1.09"
Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=47 Runoff=3.92 cfs 0.458 af
- Subcatchment S13:** Runoff Area=2.930 ac 98.63% Impervious Runoff Depth>6.00"
Tc=5.0 min CN=97 Runoff=19.15 cfs 1.466 af
- Subcatchment S14:** Runoff Area=3.760 ac 48.40% Impervious Runoff Depth>3.39"
Tc=7.9 min CN=73 Runoff=14.82 cfs 1.061 af
- Subcatchment S15:** Runoff Area=2.850 ac 77.19% Impervious Runoff Depth>4.86"
Tc=5.0 min CN=87 Runoff=16.68 cfs 1.155 af
- Subcatchment S16:** Runoff Area=3.550 ac 90.99% Impervious Runoff Depth>5.65"
Tc=5.0 min CN=94 Runoff=22.72 cfs 1.672 af
- Subcatchment S17:** Runoff Area=3.400 ac 66.47% Impervious Runoff Depth>4.32"
Tc=6.5 min CN=82 Runoff=17.45 cfs 1.223 af
- Subcatchment S18:** Runoff Area=2.630 ac 70.72% Impervious Runoff Depth>4.53"
Tc=5.0 min CN=84 Runoff=14.61 cfs 0.994 af
- Subcatchment S2:** Runoff Area=5.040 ac 66.07% Impervious Runoff Depth>3.99"
Tc=14.8 min CN=79 Runoff=19.02 cfs 1.676 af
- Subcatchment S3:** Runoff Area=3.380 ac 75.74% Impervious Runoff Depth>5.31"
Tc=5.0 min CN=91 Runoff=20.95 cfs 1.496 af
- Subcatchment S4:** Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>1.97"
Tc=25.6 min CN=58 Runoff=20.31 cfs 2.283 af
- Subcatchment S40:** Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>4.32"
Tc=5.0 min CN=82 Runoff=14.25 cfs 0.961 af

3659-12003C-Existing Conditions POA 2-01*Type III 24-hr 100-Year Rainfall=6.65"*

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Subcatchment S40.1:	Runoff Area=2.310 ac 45.89% Impervious Runoff Depth>3.12" Tc=63.2 min CN=71 Runoff=3.54 cfs 0.601 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>6.12" Tc=5.0 min CN=98 Runoff=21.01 cfs 1.632 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>3.69" Tc=5.0 min CN=76 Runoff=4.99 cfs 0.332 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>1.72" Tc=16.7 min CN=55 Runoff=2.99 cfs 0.291 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>4.64" Tc=5.0 min CN=85 Runoff=8.15 cfs 0.557 af
Subcatchment S42.1:	Runoff Area=1.660 ac 54.82% Impervious Runoff Depth>3.39" Tc=5.0 min CN=73 Runoff=7.08 cfs 0.469 af
Subcatchment S43:	Runoff Area=2.700 ac 93.70% Impervious Runoff Depth>5.77" Tc=5.0 min CN=95 Runoff=17.43 cfs 1.298 af
Subcatchment S44:	Runoff Area=1.430 ac 98.60% Impervious Runoff Depth>6.00" Tc=5.0 min CN=97 Runoff=9.35 cfs 0.715 af
Subcatchment S45:	Runoff Area=1.450 ac 55.17% Impervious Runoff Depth>3.69" Tc=5.0 min CN=76 Runoff=6.70 cfs 0.446 af
Subcatchment S45.1:	Runoff Area=0.740 ac 71.62% Impervious Runoff Depth>4.53" Tc=5.0 min CN=84 Runoff=4.11 cfs 0.280 af
Subcatchment S46:	Runoff Area=1.800 ac 62.78% Impervious Runoff Depth>4.11" Tc=5.0 min CN=80 Runoff=9.21 cfs 0.616 af
Subcatchment S47:	Runoff Area=2.940 ac 10.54% Impervious Runoff Depth>0.80" Tc=18.7 min CN=43 Runoff=1.44 cfs 0.197 af
Subcatchment S48:	Runoff Area=1.170 ac 83.76% Impervious Runoff Depth>5.20" Tc=5.0 min CN=90 Runoff=7.16 cfs 0.507 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>4.86" Tc=5.0 min CN=87 Runoff=18.26 cfs 1.264 af
Subcatchment S5:	Runoff Area=3.400 ac 78.24% Impervious Runoff Depth>4.86" Tc=5.0 min CN=87 Runoff=19.90 cfs 1.378 af
Subcatchment S5.1:	Runoff Area=3.550 ac 72.39% Impervious Runoff Depth>4.96" Tc=16.7 min CN=88 Runoff=15.28 cfs 1.467 af
Subcatchment S50:	Runoff Area=3.890 ac 73.52% Impervious Runoff Depth>4.64" Tc=5.0 min CN=85 Runoff=22.00 cfs 1.505 af
Subcatchment S51:	Runoff Area=6.230 ac 5.62% Impervious Runoff Depth>1.47" Tc=26.2 min CN=52 Runoff=6.34 cfs 0.761 af

Subcatchment S7: Runoff Area=4.060 ac 65.52% Impervious Runoff Depth>4.84"
Flow Length=150' Slope=0.0253 '/' Tc=20.9 min CN=87 Runoff=15.69 cfs 1.638 af

Reach 1R: 60" Avg. Flow Depth=5.00' Max Vel=11.34 fps Inflow=233.18 cfs 28.829 af
60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/' Capacity=196.22 cfs Outflow=208.05 cfs 28.808 af

Reach 2R: Ditch 2 Avg. Flow Depth=2.61' Max Vel=4.85 fps Inflow=108.34 cfs 9.896 af
n=0.030 L=370.0' S=0.0062 '/' Capacity=150.34 cfs Outflow=105.42 cfs 9.885 af

Reach 3R: 36" Avg. Flow Depth=1.63' Max Vel=18.48 fps Inflow=72.15 cfs 7.005 af
36.0" Round Pipe n=0.014 L=355.0' S=0.0417 '/' Capacity=126.46 cfs Outflow=72.08 cfs 7.003 af

Reach 4R: 36" Avg. Flow Depth=3.00' Max Vel=8.84 fps Inflow=76.29 cfs 5.852 af
36.0" Round Pipe n=0.014 L=123.0' S=0.0081 '/' Capacity=55.84 cfs Outflow=55.84 cfs 5.851 af

Reach 5R: 24" Avg. Flow Depth=1.02' Max Vel=11.73 fps Inflow=19.15 cfs 1.466 af
24.0" Round Pipe n=0.014 L=238.0' S=0.0307 '/' Capacity=36.79 cfs Outflow=18.76 cfs 1.465 af

Reach 6R: 24" Avg. Flow Depth=2.00' Max Vel=15.61 fps Inflow=74.40 cfs 3.326 af
24.0" Round Pipe n=0.014 L=450.0' S=0.0420 '/' Capacity=43.05 cfs Outflow=47.49 cfs 3.325 af

Reach 7R: Ditch 1 Avg. Flow Depth=1.13' Max Vel=3.08 fps Inflow=17.45 cfs 1.223 af
n=0.030 L=305.0' S=0.0066 '/' Capacity=154.41 cfs Outflow=16.34 cfs 1.220 af

Reach 8R: 36" Avg. Flow Depth=1.82' Max Vel=16.06 fps Inflow=71.93 cfs 9.051 af
36.0" Round Pipe n=0.014 L=390.0' S=0.0290 '/' Capacity=105.42 cfs Outflow=72.08 cfs 9.046 af

Reach 9R: 30" Avg. Flow Depth=1.82' Max Vel=19.15 fps Inflow=73.32 cfs 9.055 af
30.0" Round Pipe n=0.014 L=400.0' S=0.0480 '/' Capacity=83.45 cfs Outflow=71.93 cfs 9.051 af

Reach 21R: 48" RCP Avg. Flow Depth=2.50' Max Vel=22.96 fps Inflow=189.61 cfs 25.476 af
48.0" Round Pipe n=0.014 L=68.0' S=0.0397 '/' Capacity=265.78 cfs Outflow=189.43 cfs 25.474 af

Reach L10: Avg. Flow Depth=4.00' Max Vel=4.63 fps Inflow=110.61 cfs 12.892 af
48.0" Round Pipe n=0.014 L=612.0' S=0.0015 '/' Capacity=51.15 cfs Outflow=51.15 cfs 12.861 af

Reach L113: 72" Avg. Flow Depth=3.11' Max Vel=17.89 fps Inflow=265.14 cfs 41.450 af
72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/' Capacity=498.08 cfs Outflow=265.07 cfs 41.446 af

Reach L123: Avg. Flow Depth=3.57' Max Vel=6.14 fps Inflow=74.37 cfs 8.876 af
48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/' Capacity=67.64 cfs Outflow=71.15 cfs 8.857 af

Reach L157: Avg. Flow Depth=4.00' Max Vel=4.05 fps Inflow=85.27 cfs 6.028 af
48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/' Capacity=45.42 cfs Outflow=47.57 cfs 6.024 af

Reach L158: Avg. Flow Depth=2.30' Max Vel=7.03 fps Inflow=51.47 cfs 6.958 af
48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/' Capacity=83.69 cfs Outflow=52.00 cfs 6.953 af

Reach L159: Avg. Flow Depth=0.77' Max Vel=3.17 fps Inflow=3.54 cfs 0.601 af
24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/' Capacity=11.23 cfs Outflow=3.53 cfs 0.601 af

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 100-Year Rainfall=6.65"

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Reach L69: 60" Avg. Flow Depth=5.00' Max Vel=11.42 fps Inflow=237.27 cfs 31.577 af
60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=196.68 cfs 31.572 af

Reach L76: Avg. Flow Depth=2.87' Max Vel=7.60 fps Inflow=74.16 cfs 5.072 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/' Capacity=84.95 cfs Outflow=71.50 cfs 5.067 af

Reach L81: Avg. Flow Depth=2.11' Max Vel=9.78 fps Inflow=77.16 cfs 9.414 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/' Capacity=207.41 cfs Outflow=77.03 cfs 9.412 af

Reach P2: 78" Avg. Flow Depth=3.99' Max Vel=12.41 fps Inflow=265.07 cfs 41.446 af
78.0" Round Pipe n=0.024 L=25.0' S=0.0180 '/' Capacity=381.00 cfs Outflow=265.05 cfs 41.445 af

Reach POA 2: POA 2 Inflow=265.05 cfs 41.445 af
Outflow=265.05 cfs 41.445 af

Pond 42.1P: Peak Elev=44.15' Storage=49,942 cf Inflow=279.39 cfs 41.452 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/' Outflow=265.14 cfs 41.450 af

Pond 47P: Peak Elev=45.30' Storage=30,622 cf Inflow=7.26 cfs 0.703 af
Outflow=0.00 cfs 0.000 af

Pond 51P: Peak Elev=45.99' Storage=33,120 cf Inflow=6.34 cfs 0.761 af
Outflow=0.00 cfs 0.000 af

Year Second Inflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce Inflow=71.99 cfs 2.868 af
Primary=71.99 cfs 2.868 af

Total Runoff Area = 129.108 ac Runoff Volume = 40.170 af Average Runoff Depth = 3.73"
46.04% Pervious = 59.438 ac 53.96% Impervious = 69.670 ac

Summary for Subcatchment 1S: S6, 8, 9, 10

Runoff = 31.90 cfs @ 12.07 hrs, Volume= 2.208 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.680	49	
* 1.060	98	
* 0.110	69	
* 1.150	98	
* 0.260	49	
* 1.200	98	
* 0.270	49	
* 0.720	98	
5.450	87	Weighted Average
1.320		24.22% Pervious Area
4.130		75.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 2S: S34-39

Runoff = 74.16 cfs @ 12.07 hrs, Volume= 5.072 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.300	49	
* 1.970	98	
* 0.840	49	
* 0.100	98	
* 0.160	49	
* 1.290	98	
* 0.330	49	
* 0.380	98	
* 0.620	49	
* 3.250	98	
* 0.440	49	
* 2.270	98	
* 0.680	49	
* 0.480	98	
13.110	85	Weighted Average
3.370		25.71% Pervious Area
9.740		74.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S1:

Runoff = 5.27 cfs @ 12.53 hrs, Volume= 0.756 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S11:

Runoff = 22.78 cfs @ 12.07 hrs, Volume= 1.677 af, Depth> 5.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.260	49	
* 3.300	98	
3.560	94	Weighted Average
0.260		7.30% Pervious Area
3.300		92.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1:

Runoff = 0.63 cfs @ 12.19 hrs, Volume= 0.059 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (sf)	CN	Description
* 24,742	49	
24,742		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	40	0.3750	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
6.4	460	0.0055	1.19		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.3	390	0.0107	5.06	6.20	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
0.2	62	0.0065	5.39	16.94	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.014
11.1	952	Total			

Summary for Subcatchment S12:

Runoff = 3.92 cfs @ 12.32 hrs, Volume= 0.458 af, Depth> 1.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 4.650	43	
* 0.410	98	
5.060	47	Weighted Average
4.650		91.90% Pervious Area
0.410		8.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
18.6	260	Total			

Summary for Subcatchment S13:

Runoff = 19.15 cfs @ 12.07 hrs, Volume= 1.466 af, Depth> 6.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 0.040	49	
* 2.890	98	
2.930	97	Weighted Average
0.040		1.37% Pervious Area
2.890		98.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14:

Runoff = 14.82 cfs @ 12.11 hrs, Volume= 1.061 af, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.940	49	
* 1.820	98	
3.760	73	Weighted Average
1.940		51.60% Pervious Area
1.820		48.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9					Direct Entry,

Summary for Subcatchment S15:

Runoff = 16.68 cfs @ 12.07 hrs, Volume= 1.155 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.650	49	
* 2.200	98	
2.850	87	Weighted Average
0.650		22.81% Pervious Area
2.200		77.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S16:

Runoff = 22.72 cfs @ 12.07 hrs, Volume= 1.672 af, Depth> 5.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.320	49	
* 3.230	98	
3.550	94	Weighted Average
0.320		9.01% Pervious Area
3.230		90.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S17:

Runoff = 17.45 cfs @ 12.10 hrs, Volume= 1.223 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.140	49	
* 2.260	98	
3.400	82	Weighted Average
1.140		33.53% Pervious Area
2.260		66.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5					Direct Entry,

Summary for Subcatchment S18:

Runoff = 14.61 cfs @ 12.07 hrs, Volume= 0.994 af, Depth> 4.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.770	49	
* 1.860	98	
2.630	84	Weighted Average
0.770		29.28% Pervious Area
1.860		70.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S2:

Runoff = 19.02 cfs @ 12.20 hrs, Volume= 1.676 af, Depth> 3.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.690	43	
* 0.020	65	
* 3.330	98	
5.040	79	Weighted Average
1.710		33.93% Pervious Area
3.330		66.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 20.95 cfs @ 12.07 hrs, Volume= 1.496 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.820	69	
* 2.560	98	
3.380	91	Weighted Average
0.820		24.26% Pervious Area
2.560		75.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 20.31 cfs @ 12.39 hrs, Volume= 2.283 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S40:

Runoff = 14.25 cfs @ 12.07 hrs, Volume= 0.961 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 3.54 cfs @ 12.86 hrs, Volume= 0.601 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.250	49	
* 1.060	98	
2.310	71	Weighted Average
1.250		54.11% Pervious Area
1.060		45.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 21.01 cfs @ 12.07 hrs, Volume= 1.632 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 4.99 cfs @ 12.08 hrs, Volume= 0.332 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 2.99 cfs @ 12.26 hrs, Volume= 0.291 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 8.15 cfs @ 12.07 hrs, Volume= 0.557 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 7.08 cfs @ 12.08 hrs, Volume= 0.469 af, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.750	43	
* 0.910	98	Paved Surfaces and Wetlands
1.660	73	Weighted Average
0.750		45.18% Pervious Area
0.910		54.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S43:

Runoff = 17.43 cfs @ 12.07 hrs, Volume= 1.298 af, Depth> 5.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 0.170	49	
* 2.530	98	
2.700	95	Weighted Average
0.170		6.30% Pervious Area
2.530		93.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S44:

Runoff = 9.35 cfs @ 12.07 hrs, Volume= 0.715 af, Depth> 6.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.020	49	
* 1.410	98	
1.430	97	Weighted Average
0.020		1.40% Pervious Area
1.410		98.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45:

Runoff = 6.70 cfs @ 12.08 hrs, Volume= 0.446 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.650	49	
* 0.800	98	
1.450	76	Weighted Average
0.650		44.83% Pervious Area
0.800		55.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S45.1:

Runoff = 4.11 cfs @ 12.07 hrs, Volume= 0.280 af, Depth> 4.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.210	49	
* 0.530	98	
0.740	84	Weighted Average
0.210		28.38% Pervious Area
0.530		71.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S46:

Runoff = 9.21 cfs @ 12.07 hrs, Volume= 0.616 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.670	49	
* 1.130	98	
1.800	80	Weighted Average
0.670		37.22% Pervious Area
1.130		62.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47:

Runoff = 1.44 cfs @ 12.37 hrs, Volume= 0.197 af, Depth> 0.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.630	36	
0.310	98	Water Surface, HSG A
2.940	43	Weighted Average
2.630		89.46% Pervious Area
0.310		10.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S48:

Runoff = 7.16 cfs @ 12.07 hrs, Volume= 0.507 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.190	49	
* 0.980	98	
1.170	90	Weighted Average
0.190		16.24% Pervious Area
0.980		83.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S49:

Runoff = 18.26 cfs @ 12.07 hrs, Volume= 1.264 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5:

Runoff = 19.90 cfs @ 12.07 hrs, Volume= 1.378 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 0.740	49	
* 2.660	98	
3.400	87	Weighted Average
0.740		21.76% Pervious Area
2.660		78.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 15.28 cfs @ 12.22 hrs, Volume= 1.467 af, Depth> 4.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.570	98	
3.550	88	Weighted Average
0.980		27.61% Pervious Area
2.570		72.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S50:

Runoff = 22.00 cfs @ 12.07 hrs, Volume= 1.505 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.030	49	
* 2.860	98	
3.890	85	Weighted Average
1.030		26.48% Pervious Area
2.860		73.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S51:

Runoff = 6.34 cfs @ 12.42 hrs, Volume= 0.761 af, Depth> 1.47"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 5.880	49	
* 0.350	98	
6.230	52	Weighted Average
5.880		94.38% Pervious Area
0.350		5.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.2					Direct Entry,

Summary for Subcatchment S7:

Runoff = 15.69 cfs @ 12.28 hrs, Volume= 1.638 af, Depth> 4.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.730	69	
* 0.670	65	
* 2.660	98	
4.060	87	Weighted Average
1.400		34.48% Pervious Area
2.660		65.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7					Direct Entry,
0.2	150	0.0253	13.94	98.51	Pipe Channel, 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.014

20.9 150 Total

Summary for Reach 1R: 60"

Inflow Area = 84.258 ac, 52.35% Impervious, Inflow Depth > 4.11" for 100-Year event

Inflow = 233.18 cfs @ 12.10 hrs, Volume= 28.829 af

Outflow = 208.05 cfs @ 12.29 hrs, Volume= 28.808 af, Atten= 11%, Lag= 11.4 min

3659-12003C-Existing Conditions POA 2-01

Type III 24-hr 100-Year Rainfall=6.65"

Prepared by {enter your company name here}

Printed 11/29/2012

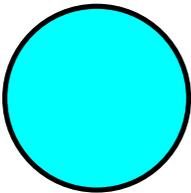
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Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.34 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 4.76 fps, Avg. Travel Time= 1.7 min

Peak Storage= 9,425 cf @ 12.10 hrs
Average Depth at Peak Storage= 5.00'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
n= 0.014
Length= 480.0' Slope= 0.0066 '/'
Inlet Invert= 42.00', Outlet Invert= 38.84'



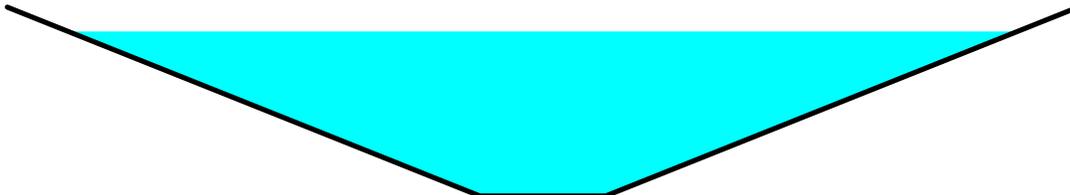
Summary for Reach 2R: Ditch 2

Inflow Area = 21.550 ac, 59.44% Impervious, Inflow Depth > 5.51" for 100-Year event
Inflow = 108.34 cfs @ 12.10 hrs, Volume= 9.896 af
Outflow = 105.42 cfs @ 12.14 hrs, Volume= 9.885 af, Atten= 3%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.85 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.73 fps, Avg. Travel Time= 3.6 min

Peak Storage= 8,249 cf @ 12.11 hrs
Average Depth at Peak Storage= 2.61'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 150.34 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 370.0' Slope= 0.0062 '/'
Inlet Invert= 48.90', Outlet Invert= 46.60'



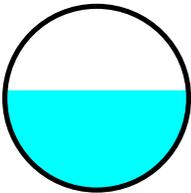
Summary for Reach 3R: 36"

Inflow Area = 14.600 ac, 50.14% Impervious, Inflow Depth > 5.76" for 100-Year event
Inflow = 72.15 cfs @ 12.08 hrs, Volume= 7.005 af
Outflow = 72.08 cfs @ 12.10 hrs, Volume= 7.003 af, Atten= 0%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 18.48 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 6.02 fps, Avg. Travel Time= 1.0 min

Peak Storage= 1,390 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.63'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 126.46 cfs

36.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0417 '/
Inlet Invert= 63.70', Outlet Invert= 48.90'



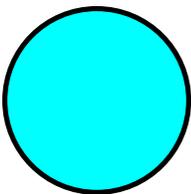
Summary for Reach 4R: 36"

Inflow Area = 11.750 ac, 43.57% Impervious, Inflow Depth > 5.98" for 100-Year event
Inflow = 76.29 cfs @ 12.10 hrs, Volume= 5.852 af
Outflow = 55.84 cfs @ 12.10 hrs, Volume= 5.851 af, Atten= 27%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.84 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.08 fps, Avg. Travel Time= 0.7 min

Peak Storage= 869 cf @ 12.05 hrs
Average Depth at Peak Storage= 3.00'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 55.84 cfs

36.0" Round Pipe
n= 0.014
Length= 123.0' Slope= 0.0081 '/
Inlet Invert= 68.80', Outlet Invert= 67.80'



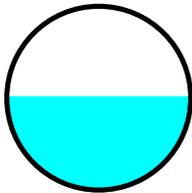
Summary for Reach 5R: 24"

Inflow Area = 2.930 ac, 98.63% Impervious, Inflow Depth > 6.00" for 100-Year event
Inflow = 19.15 cfs @ 12.07 hrs, Volume= 1.466 af
Outflow = 18.76 cfs @ 12.08 hrs, Volume= 1.465 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.73 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 4.19 fps, Avg. Travel Time= 0.9 min

Peak Storage= 384 cf @ 12.08 hrs
Average Depth at Peak Storage= 1.02'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 36.79 cfs

24.0" Round Pipe
n= 0.014
Length= 238.0' Slope= 0.0307 '/'
Inlet Invert= 79.70', Outlet Invert= 72.40'



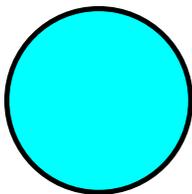
Summary for Reach 6R: 24"

Inflow Area = 5.060 ac, 8.10% Impervious, Inflow Depth > 7.89" for 100-Year event
Inflow = 74.40 cfs @ 12.16 hrs, Volume= 3.326 af
Outflow = 47.49 cfs @ 12.63 hrs, Volume= 3.325 af, Atten= 36%, Lag= 28.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 15.61 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 5.82 fps, Avg. Travel Time= 1.3 min

Peak Storage= 1,414 cf @ 12.10 hrs
Average Depth at Peak Storage= 2.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 43.05 cfs

24.0" Round Pipe
n= 0.014
Length= 450.0' Slope= 0.0420 '/'
Inlet Invert= 91.30', Outlet Invert= 72.40'



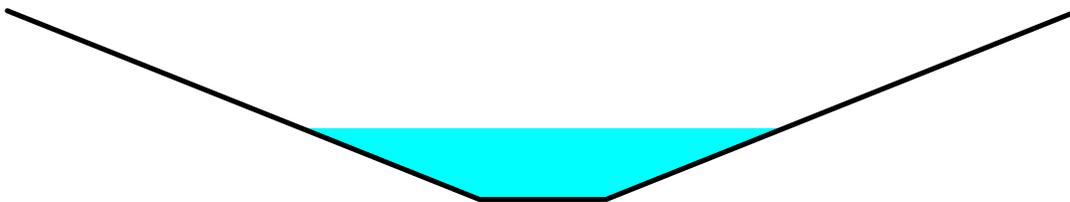
Summary for Reach 7R: Ditch 1

Inflow Area = 3.400 ac, 66.47% Impervious, Inflow Depth > 4.32" for 100-Year event
Inflow = 17.45 cfs @ 12.10 hrs, Volume= 1.223 af
Outflow = 16.34 cfs @ 12.15 hrs, Volume= 1.220 af, Atten= 6%, Lag= 3.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.08 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.15 fps, Avg. Travel Time= 4.4 min

Peak Storage= 1,670 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.13'
Bank-Full Depth= 3.00' Flow Area= 28.5 sf, Capacity= 154.41 cfs

2.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.5 '/' Top Width= 17.00'
Length= 305.0' Slope= 0.0066 '/'
Inlet Invert= 50.90', Outlet Invert= 48.90'



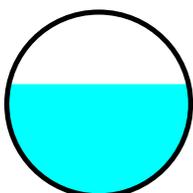
Summary for Reach 8R: 36"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 2.83" for 100-Year event
Inflow = 71.93 cfs @ 12.14 hrs, Volume= 9.051 af
Outflow = 72.08 cfs @ 12.16 hrs, Volume= 9.046 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 16.06 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 6.50 fps, Avg. Travel Time= 1.0 min

Peak Storage= 1,752 cf @ 12.15 hrs
Average Depth at Peak Storage= 1.82'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 105.42 cfs

36.0" Round Pipe
n= 0.014
Length= 390.0' Slope= 0.0290 '/'
Inlet Invert= 59.80', Outlet Invert= 48.50'



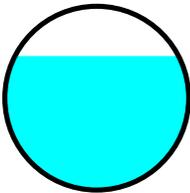
Summary for Reach 9R: 30"

Inflow Area = 38.320 ac, 33.79% Impervious, Inflow Depth > 2.84" for 100-Year event
Inflow = 73.32 cfs @ 12.12 hrs, Volume= 9.055 af
Outflow = 71.93 cfs @ 12.14 hrs, Volume= 9.051 af, Atten= 2%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 19.15 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 7.92 fps, Avg. Travel Time= 0.8 min

Peak Storage= 1,532 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.82'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 83.45 cfs

30.0" Round Pipe
n= 0.014
Length= 400.0' Slope= 0.0480 '/'
Inlet Invert= 79.60', Outlet Invert= 60.40'



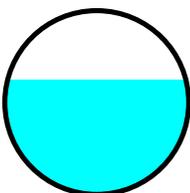
Summary for Reach 21R: 48" RCP

Inflow Area = 76.138 ac, 49.53% Impervious, Inflow Depth > 4.02" for 100-Year event
Inflow = 189.61 cfs @ 12.11 hrs, Volume= 25.476 af
Outflow = 189.43 cfs @ 12.11 hrs, Volume= 25.474 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 22.96 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 8.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 561 cf @ 12.11 hrs
Average Depth at Peak Storage= 2.50'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 265.78 cfs

48.0" Round Pipe
n= 0.014
Length= 68.0' Slope= 0.0397 '/'
Inlet Invert= 46.60', Outlet Invert= 43.90'



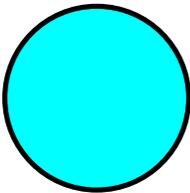
Summary for Reach L10:

Inflow Area = 47.830 ac, 41.27% Impervious, Inflow Depth > 3.23" for 100-Year event
Inflow = 110.61 cfs @ 12.12 hrs, Volume= 12.892 af
Outflow = 51.15 cfs @ 12.05 hrs, Volume= 12.861 af, Atten= 54%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.63 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 2.37 fps, Avg. Travel Time= 4.3 min

Peak Storage= 7,691 cf @ 12.00 hrs
Average Depth at Peak Storage= 4.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 51.15 cfs

48.0" Round Pipe
n= 0.014
Length= 612.0' Slope= 0.0015 '/'
Inlet Invert= 47.50', Outlet Invert= 46.60'



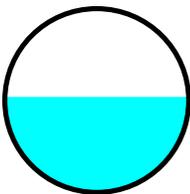
Summary for Reach L113: 72"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 3.85" for 100-Year event
Inflow = 265.14 cfs @ 12.31 hrs, Volume= 41.450 af
Outflow = 265.07 cfs @ 12.31 hrs, Volume= 41.446 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.89 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 7.12 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1,423 cf @ 12.31 hrs
Average Depth at Peak Storage= 3.11'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



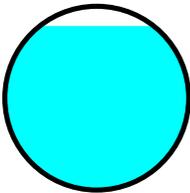
Summary for Reach L123:

Inflow Area = 24.400 ac, 68.44% Impervious, Inflow Depth > 4.37" for 100-Year event
Inflow = 74.37 cfs @ 12.07 hrs, Volume= 8.876 af
Outflow = 71.15 cfs @ 12.15 hrs, Volume= 8.857 af, Atten= 4%, Lag= 4.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.14 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 2.51 fps, Avg. Travel Time= 4.7 min

Peak Storage= 8,288 cf @ 12.11 hrs
Average Depth at Peak Storage= 3.57'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



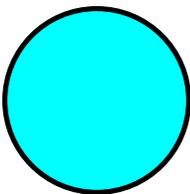
Summary for Reach L157:

Inflow Area = 15.780 ac, 73.13% Impervious, Inflow Depth > 4.58" for 100-Year event
Inflow = 85.27 cfs @ 12.10 hrs, Volume= 6.028 af
Outflow = 47.57 cfs @ 12.02 hrs, Volume= 6.024 af, Atten= 44%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.05 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 1.2 min

Peak Storage= 1,734 cf @ 12.05 hrs
Average Depth at Peak Storage= 4.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



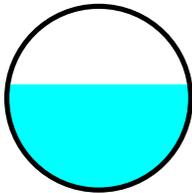
Summary for Reach L158:

Inflow Area = 19.170 ac, 68.86% Impervious, Inflow Depth > 4.36" for 100-Year event
Inflow = 51.47 cfs @ 12.06 hrs, Volume= 6.958 af
Outflow = 52.00 cfs @ 12.07 hrs, Volume= 6.953 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.03 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 3.09 fps, Avg. Travel Time= 1.4 min

Peak Storage= 1,897 cf @ 12.06 hrs
Average Depth at Peak Storage= 2.30'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



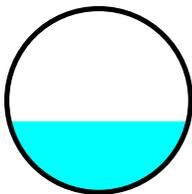
Summary for Reach L159:

Inflow Area = 2.310 ac, 45.89% Impervious, Inflow Depth > 3.12" for 100-Year event
Inflow = 3.54 cfs @ 12.86 hrs, Volume= 0.601 af
Outflow = 3.53 cfs @ 12.87 hrs, Volume= 0.601 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.17 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.64 fps, Avg. Travel Time= 0.7 min

Peak Storage= 78 cf @ 12.86 hrs
Average Depth at Peak Storage= 0.77'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/'
Inlet Invert= 41.90', Outlet Invert= 41.70'



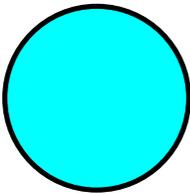
Summary for Reach L69: 60"

Inflow Area = 95.378 ac, 53.10% Impervious, Inflow Depth > 3.97" for 100-Year event
Inflow = 237.27 cfs @ 12.09 hrs, Volume= 31.577 af
Outflow = 196.68 cfs @ 12.10 hrs, Volume= 31.572 af, Atten= 17%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.42 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.87 fps, Avg. Travel Time= 0.4 min

Peak Storage= 2,494 cf @ 12.05 hrs
Average Depth at Peak Storage= 5.00'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/'
Inlet Invert= 38.84', Outlet Invert= 38.00'



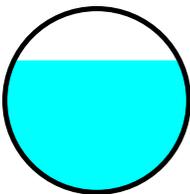
Summary for Reach L76:

Inflow Area = 13.110 ac, 74.29% Impervious, Inflow Depth > 4.64" for 100-Year event
Inflow = 74.16 cfs @ 12.07 hrs, Volume= 5.072 af
Outflow = 71.50 cfs @ 12.10 hrs, Volume= 5.067 af, Atten= 4%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.60 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 2.84 fps, Avg. Travel Time= 2.1 min

Peak Storage= 3,432 cf @ 12.09 hrs
Average Depth at Peak Storage= 2.87'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



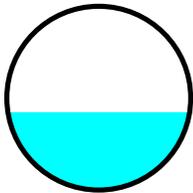
Summary for Reach L81:

Inflow Area = 25.840 ac, 68.73% Impervious, Inflow Depth > 4.37" for 100-Year event
Inflow = 77.16 cfs @ 12.13 hrs, Volume= 9.414 af
Outflow = 77.03 cfs @ 12.14 hrs, Volume= 9.412 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.78 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.61 fps, Avg. Travel Time= 0.6 min

Peak Storage= 955 cf @ 12.14 hrs
Average Depth at Peak Storage= 2.11'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



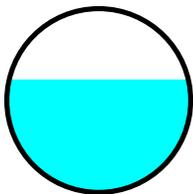
Summary for Reach P2: 78"

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 3.85" for 100-Year event
Inflow = 265.07 cfs @ 12.31 hrs, Volume= 41.446 af
Outflow = 265.05 cfs @ 12.31 hrs, Volume= 41.445 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.41 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.01 fps, Avg. Travel Time= 0.1 min

Peak Storage= 534 cf @ 12.31 hrs
Average Depth at Peak Storage= 3.99'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 381.00 cfs

78.0" Round Pipe
n= 0.024
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 3.85" for 100-Year event
 Inflow = 265.05 cfs @ 12.31 hrs, Volume= 41.445 af
 Outflow = 265.05 cfs @ 12.31 hrs, Volume= 41.445 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 42.1P:

Inflow Area = 129.108 ac, 53.96% Impervious, Inflow Depth > 3.85" for 100-Year event
 Inflow = 279.39 cfs @ 12.13 hrs, Volume= 41.452 af
 Outflow = 265.14 cfs @ 12.31 hrs, Volume= 41.450 af, Atten= 5%, Lag= 10.9 min
 Primary = 265.14 cfs @ 12.31 hrs, Volume= 41.450 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 44.15' @ 12.31 hrs Surf.Area= 16,364 sf Storage= 49,942 cf

Plug-Flow detention time= 1.5 min calculated for 41.450 af (100% of inflow)
 Center-of-Mass det. time= 1.5 min (776.3 - 774.8)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=264.99 cfs @ 12.31 hrs HW=44.15' (Free Discharge)

↑1=Culvert (Barrel Controls 264.99 cfs @ 9.37 fps)

Summary for Pond 47P:

Inflow Area = 4.110 ac, 31.39% Impervious, Inflow Depth > 2.05" for 100-Year event
 Inflow = 7.26 cfs @ 12.08 hrs, Volume= 0.703 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 45.30' @ 20.00 hrs Surf.Area= 29,425 sf Storage= 30,622 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	44.00'	277,477 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.00	17,860	0	0
44.50	22,325	10,046	10,046
45.00	26,789	12,279	22,325
45.50	31,254	14,511	36,836
46.00	35,719	16,743	53,579
46.50	42,471	19,548	73,126
47.00	49,223	22,924	96,050
47.50	55,975	26,300	122,349
48.00	62,726	29,675	152,025
50.00	62,726	125,452	277,477

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P:

Inflow Area = 6.230 ac, 5.62% Impervious, Inflow Depth > 1.47" for 100-Year event
 Inflow = 6.34 cfs @ 12.42 hrs, Volume= 0.761 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

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Type III 24-hr 100-Year Rainfall=6.65"

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Peak Elev= 45.99' @ 20.00 hrs Surf.Area= 61,468 sf Storage= 33,120 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	513,572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	5,227	0	0
45.50	33,541	9,692	9,692
46.00	61,855	23,849	33,541
46.50	81,239	35,774	69,315
47.00	100,624	45,466	114,780
47.50	120,008	55,158	169,938
48.00	139,392	64,850	234,788
50.00	139,392	278,784	513,572

Device	Routing	Invert	Outlet Devices
#1	Primary	48.50'	75.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' (Free Discharge)

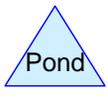
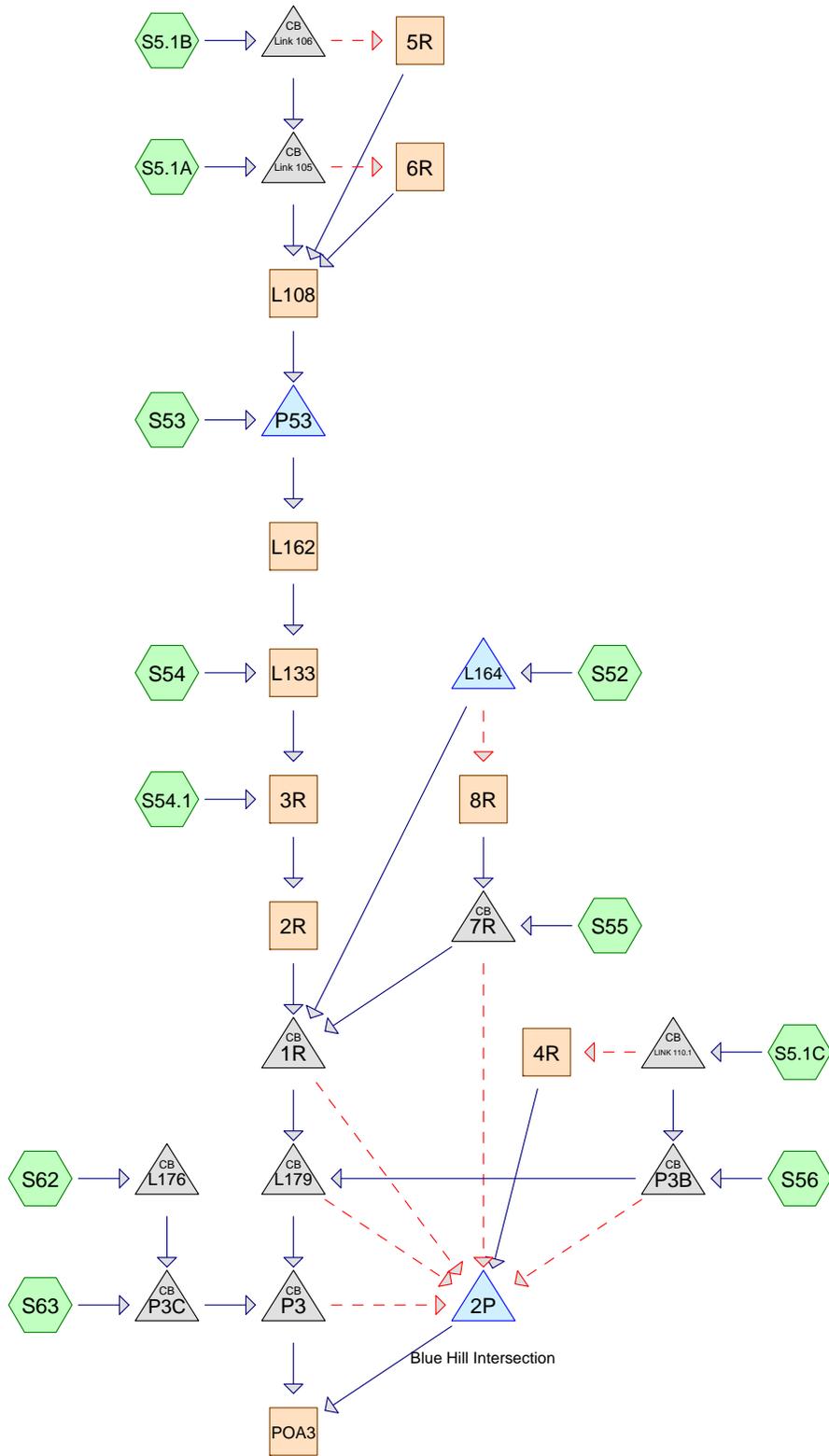
↑1=**Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 19L: Secondard Flow from 19P

Inflow = 71.99 cfs @ 12.16 hrs, Volume= 2.868 af
 Primary = 71.99 cfs @ 12.16 hrs, Volume= 2.868 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

100-Year Secondary Outflow Imported from 3659-12003C-Existing Conditions POA 1-01~Pond 19P.hce



Routing Diagram for 3659-12003C-Existing Conditions POA 3-01
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
27.960	49	50-75% Grass cover, Fair, HSG A (S5.1A, S5.1B, S5.1C, S63)
12.900	69	50-75% Grass cover, Fair, HSG B (S5.1C, S52)
3.200	79	50-75% Grass cover, Fair, HSG C (S5.1B)
13.160	98	Paved parking & roofs (S5.1A, S5.1B, S5.1C, S52, S54, S54.1, S55, S56, S62, S63)
0.340	98	Water Surface, HSG A (S53)
22.950	65	Woods/grass comb., Fair, HSG B (S53, S54, S54.1, S55, S56)
80.510	66	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
27.960	12.900	3.200	0.000	0.000	44.060	50-75% Grass cover, Fair	S5.1A, S5.1B, S5.1C, S52, S63
0.000	0.000	0.000	0.000	13.160	13.160	Paved parking & roofs	S5.1A, S5.1B, S5.1C, S52, S54, S54.1, S55, S56, S62, S63
0.340	0.000	0.000	0.000	0.000	0.340	Water Surface	S53
0.000	22.950	0.000	0.000	0.000	22.950	Woods/grass comb., Fair	S53, S54, S54.1, S55, S56
28.300	35.850	3.200	0.000	13.160	80.510	TOTAL AREA	

Time span=0.00-20.00 hrs, dt=0.02 hrs, 1001 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S5.1A:	Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>0.21" Tc=16.7 min CN=55 Runoff=1.40 cfs 0.265 af
Subcatchment S5.1B:	Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>0.45" Tc=25.4 min CN=63 Runoff=4.63 cfs 0.640 af
Subcatchment S5.1C:	Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>0.70" Tc=14.3 min CN=69 Runoff=10.67 cfs 1.019 af
Subcatchment S52:	Runoff Area=3.030 ac 53.14% Impervious Runoff Depth>1.57" Tc=5.0 min CN=84 Runoff=6.18 cfs 0.395 af
Subcatchment S53:	Runoff Area=5.340 ac 6.37% Impervious Runoff Depth>0.61" Tc=15.8 min CN=67 Runoff=2.63 cfs 0.272 af
Subcatchment S54:	Runoff Area=1.790 ac 11.17% Impervious Runoff Depth>0.70" Tc=14.0 min CN=69 Runoff=1.10 cfs 0.104 af
Subcatchment S54.1:	Runoff Area=1.570 ac 5.10% Impervious Runoff Depth>0.61" Tc=16.7 min CN=67 Runoff=0.76 cfs 0.080 af
Subcatchment S55:	Runoff Area=13.380 ac 10.31% Impervious Runoff Depth>0.65" Tc=36.7 min CN=68 Runoff=5.10 cfs 0.721 af
Subcatchment S56:	Runoff Area=4.240 ac 32.31% Impervious Runoff Depth>1.06" Tc=5.0 min CN=76 Runoff=5.72 cfs 0.373 af
Subcatchment S62:	Runoff Area=0.380 ac 100.00% Impervious Runoff Depth>2.83" Tc=5.0 min CN=98 Runoff=1.22 cfs 0.090 af
Subcatchment S63:	Runoff Area=1.040 ac 89.42% Impervious Runoff Depth>2.31" Tc=5.0 min CN=93 Runoff=2.98 cfs 0.200 af
Reach 2R:	Avg. Flow Depth=0.46' Max Vel=1.57 fps Inflow=8.47 cfs 1.339 af n=0.030 L=460.0' S=0.0073 '/ Capacity=417.73 cfs Outflow=8.24 cfs 1.330 af
Reach 3R:	Avg. Flow Depth=0.55' Max Vel=1.11 fps Inflow=8.56 cfs 1.344 af n=0.030 L=195.0' S=0.0028 '/ Capacity=122.08 cfs Outflow=8.47 cfs 1.339 af
Reach 4R:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.030 L=183.0' S=0.0231 '/ Capacity=117.03 cfs Outflow=0.00 cfs 0.000 af
Reach 5R:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.030 L=900.0' S=0.0289 '/ Capacity=20.61 cfs Outflow=0.00 cfs 0.000 af
Reach 6R:	Avg. Flow Depth=0.23' Max Vel=4.60 fps Inflow=6.02 cfs 0.906 af n=0.030 L=50.0' S=0.1600 '/ Capacity=48.49 cfs Outflow=6.02 cfs 0.905 af

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Type III 24-hr 2-Year Rainfall=3.20"

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Reach 8R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.030 L=730.0' S=0.0080 '/ Capacity=10.87 cfs Outflow=0.00 cfs 0.000 af

Reach L108: Avg. Flow Depth=0.07' Max Vel=2.11 fps Inflow=6.02 cfs 0.905 af
n=0.030 L=774.0' S=0.0646 '/ Capacity=1,762.00 cfs Outflow=5.80 cfs 0.896 af

Reach L133: Avg. Flow Depth=0.30' Max Vel=3.33 fps Inflow=8.09 cfs 1.267 af
n=0.030 L=344.0' S=0.0343 '/ Capacity=842.72 cfs Outflow=8.07 cfs 1.264 af

Reach L162: Avg. Flow Depth=0.53' Max Vel=2.88 fps Inflow=7.54 cfs 1.167 af
n=0.030 L=394.0' S=0.0124 '/ Capacity=120.49 cfs Outflow=7.49 cfs 1.163 af

Reach POA3: Inflow=23.45 cfs 4.103 af
Outflow=23.45 cfs 4.103 af

Pond 1R: Peak Elev=46.87' Inflow=14.67 cfs 2.417 af
24.0" Round Culvert n=0.014 L=150.0' S=0.0013 '/ Outflow=14.67 cfs 2.417 af

Pond 2P: Blue Hill Intersection Peak Elev=46.14' Storage=2,079 cf Inflow=4.90 cfs 0.150 af
Outflow=3.29 cfs 0.126 af

Pond 7R: Peak Elev=46.66' Inflow=5.10 cfs 0.721 af
Primary=5.60 cfs 0.692 af Secondary=4.90 cfs 0.029 af Outflow=5.10 cfs 0.721 af

Pond L164: Peak Elev=51.30' Storage=0 cf Inflow=6.18 cfs 0.395 af
Primary=6.18 cfs 0.395 af Secondary=0.00 cfs 0.000 af Outflow=6.18 cfs 0.395 af

Pond L176: Peak Elev=46.43' Inflow=1.22 cfs 0.090 af
12.0" Round Culvert n=0.014 L=242.0' S=0.0100 '/ Outflow=1.22 cfs 0.090 af

Pond L179: Peak Elev=45.81' Inflow=20.58 cfs 3.687 af
Primary=20.58 cfs 3.687 af Secondary=0.00 cfs 0.000 af Outflow=20.58 cfs 3.687 af

Pond Link 105: Peak Elev=140.43' Inflow=6.02 cfs 0.906 af
Primary=0.00 cfs 0.000 af Secondary=6.02 cfs 0.906 af Outflow=6.02 cfs 0.906 af

Pond Link 106: Peak Elev=143.03' Inflow=4.63 cfs 0.640 af
Primary=4.63 cfs 0.640 af Secondary=0.00 cfs 0.000 af Outflow=4.63 cfs 0.640 af

Pond LINK 110.1: Peak Elev=50.20' Inflow=10.67 cfs 1.019 af
Primary=10.67 cfs 1.019 af Secondary=0.00 cfs 0.000 af Outflow=10.67 cfs 1.019 af

Pond P3: Peak Elev=44.26' Inflow=21.19 cfs 3.977 af
Primary=21.19 cfs 3.977 af Secondary=0.00 cfs 0.000 af Outflow=21.19 cfs 3.977 af

Pond P3B: Peak Elev=46.25' Inflow=13.81 cfs 1.392 af
Primary=10.13 cfs 1.270 af Secondary=4.20 cfs 0.122 af Outflow=13.81 cfs 1.392 af

Pond P3C: Peak Elev=44.78' Inflow=4.20 cfs 0.290 af
18.0" Round Culvert n=0.014 L=127.0' S=0.0172 '/ Outflow=4.20 cfs 0.290 af

Pond P53: Peak Elev=78.44' Storage=208 cf Inflow=7.55 cfs 1.168 af
Outflow=7.54 cfs 1.167 af

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Total Runoff Area = 80.510 ac Runoff Volume = 4.159 af Average Runoff Depth = 0.62"
83.23% Pervious = 67.010 ac 16.77% Impervious = 13.500 ac

Summary for Subcatchment S5.1A:

Runoff = 1.40 cfs @ 12.50 hrs, Volume= 0.265 af, Depth> 0.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 4.63 cfs @ 12.46 hrs, Volume= 0.640 af, Depth> 0.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 10.67 cfs @ 12.22 hrs, Volume= 1.019 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52:

Runoff = 6.18 cfs @ 12.08 hrs, Volume= 0.395 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
1.420	69	50-75% Grass cover, Fair, HSG B
1.610	98	Paved parking & roofs
3.030	84	Weighted Average
1.420		46.86% Pervious Area
1.610		53.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S53:

Runoff = 2.63 cfs @ 12.26 hrs, Volume= 0.272 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
5.000	65	Woods/grass comb., Fair, HSG B
0.340	98	Water Surface, HSG A
5.340	67	Weighted Average
5.000		93.63% Pervious Area
0.340		6.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 1.10 cfs @ 12.22 hrs, Volume= 0.104 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
1.590	65	Woods/grass comb., Fair, HSG B
0.200	98	Paved parking & roofs
1.790	69	Weighted Average
1.590		88.83% Pervious Area
0.200		11.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S54.1:

Runoff = 0.76 cfs @ 12.27 hrs, Volume= 0.080 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
1.490	65	Woods/grass comb., Fair, HSG B
0.080	98	Paved parking & roofs
1.570	67	Weighted Average
1.490		94.90% Pervious Area
0.080		5.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S55:

Runoff = 5.10 cfs @ 12.59 hrs, Volume= 0.721 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
12.000	65	Woods/grass comb., Fair, HSG B
1.380	98	Paved parking & roofs
13.380	68	Weighted Average
12.000		89.69% Pervious Area
1.380		10.31% Impervious Area

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Type III 24-hr 2-Year Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7					Direct Entry,

Summary for Subcatchment S56:

Runoff = 5.72 cfs @ 12.08 hrs, Volume= 0.373 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
2.870	65	Woods/grass comb., Fair, HSG B
1.370	98	Paved parking & roofs
4.240	76	Weighted Average
2.870		67.69% Pervious Area
1.370		32.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S62:

Runoff = 1.22 cfs @ 12.07 hrs, Volume= 0.090 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
0.380	98	Paved parking & roofs
0.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S63:

Runoff = 2.98 cfs @ 12.07 hrs, Volume= 0.200 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
0.110	49	50-75% Grass cover, Fair, HSG A
0.930	98	Paved parking & roofs
1.040	93	Weighted Average
0.110		10.58% Pervious Area
0.930		89.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

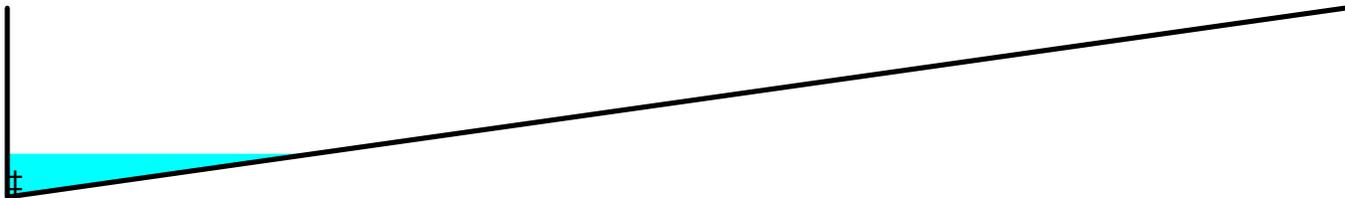
Summary for Reach 2R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 0.39" for 2-Year event
 Inflow = 8.47 cfs @ 12.59 hrs, Volume= 1.339 af
 Outflow = 8.24 cfs @ 12.65 hrs, Volume= 1.330 af, Atten= 3%, Lag= 3.9 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 1.57 fps, Min. Travel Time= 4.9 min
 Avg. Velocity = 1.01 fps, Avg. Travel Time= 7.6 min

Peak Storage= 2,422 cf @ 12.65 hrs
 Average Depth at Peak Storage= 0.46'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 417.73 cfs

0.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 100.00'
 Length= 460.0' Slope= 0.0073 '/'
 Inlet Invert= 50.25', Outlet Invert= 46.89'



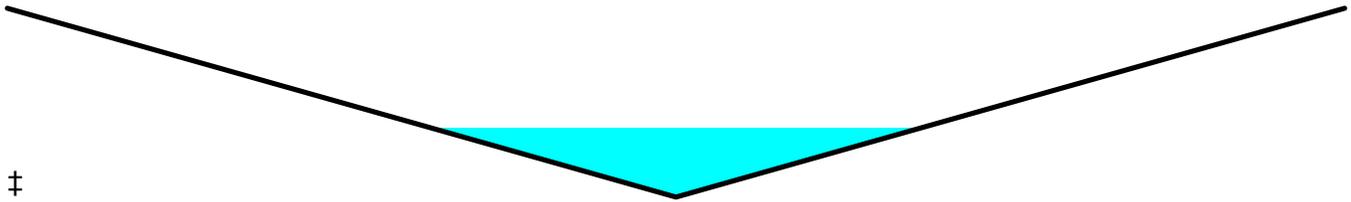
Summary for Reach 3R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 0.39" for 2-Year event
 Inflow = 8.56 cfs @ 12.55 hrs, Volume= 1.344 af
 Outflow = 8.47 cfs @ 12.59 hrs, Volume= 1.339 af, Atten= 1%, Lag= 2.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 1.11 fps, Min. Travel Time= 2.9 min
 Avg. Velocity = 0.71 fps, Avg. Travel Time= 4.6 min

Peak Storage= 1,483 cf @ 12.59 hrs
 Average Depth at Peak Storage= 0.55'
 Bank-Full Depth= 1.50' Flow Area= 56.3 sf, Capacity= 122.08 cfs

0.00' x 1.50' deep channel, n= 0.030
 Side Slope Z-value= 25.0 '/' Top Width= 75.00'
 Length= 195.0' Slope= 0.0028 '/'
 Inlet Invert= 50.80', Outlet Invert= 50.25'



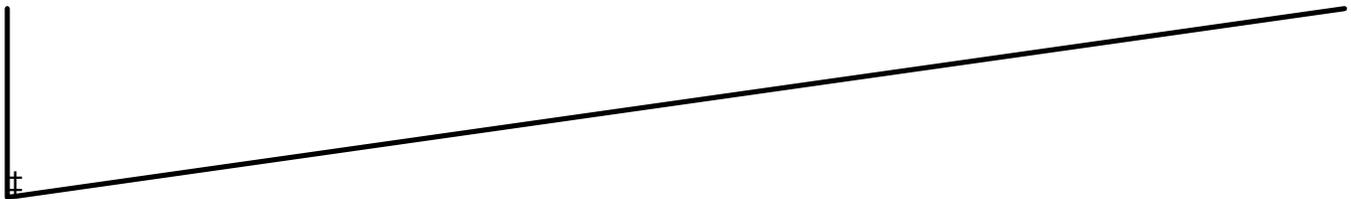
Summary for Reach 4R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 117.03 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 183.0' Slope= 0.0231 '/'
 Inlet Invert= 51.23', Outlet Invert= 47.00'



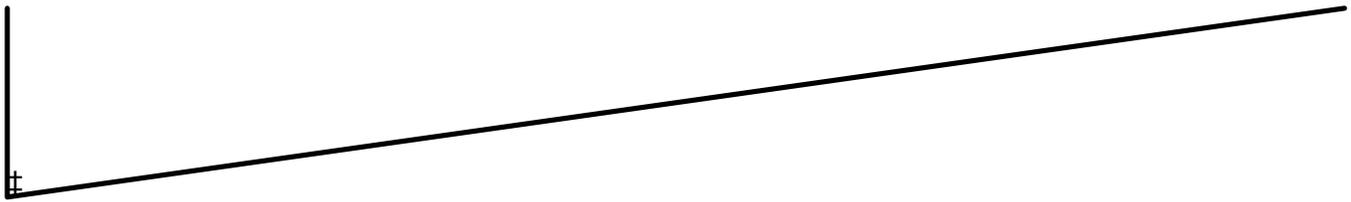
Summary for Reach 5R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



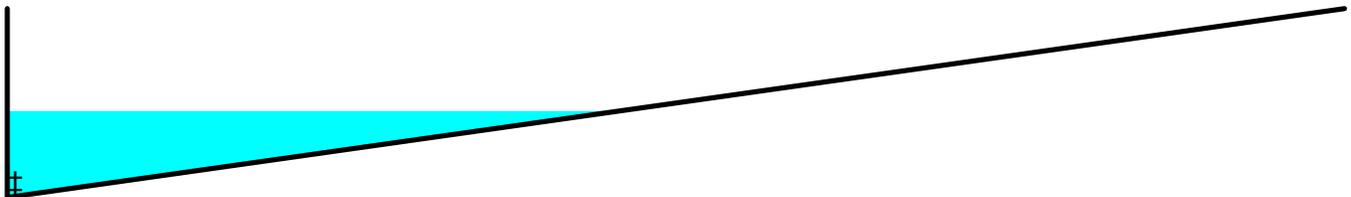
Summary for Reach 6R:

Inflow = 6.02 cfs @ 12.47 hrs, Volume= 0.906 af
 Outflow = 6.02 cfs @ 12.47 hrs, Volume= 0.905 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 4.60 fps, Min. Travel Time= 0.2 min
 Avg. Velocity = 2.98 fps, Avg. Travel Time= 0.3 min

Peak Storage= 65 cf @ 12.47 hrs
 Average Depth at Peak Storage= 0.23'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



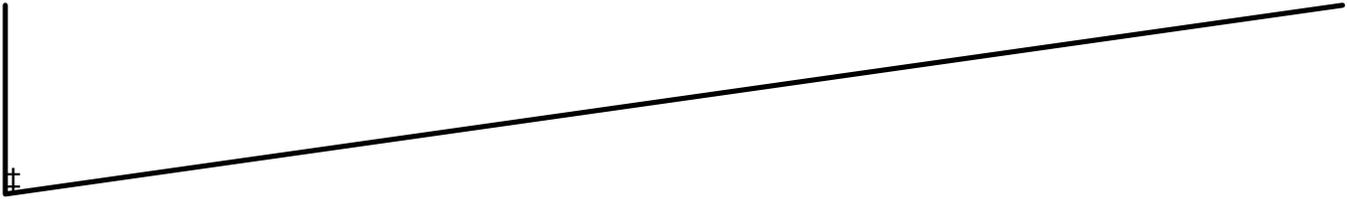
Summary for Reach 8R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 10.87 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 730.0' Slope= 0.0080 '/'
 Inlet Invert= 52.20', Outlet Invert= 46.33'



Summary for Reach L108:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.34" for 2-Year event
 Inflow = 6.02 cfs @ 12.47 hrs, Volume= 0.905 af
 Outflow = 5.80 cfs @ 12.55 hrs, Volume= 0.896 af, Atten= 4%, Lag= 4.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.11 fps, Min. Travel Time= 6.1 min
 Avg. Velocity = 1.15 fps, Avg. Travel Time= 11.2 min

Peak Storage= 2,128 cf @ 12.55 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 ' / ' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 ' / '
 Inlet Invert= 132.00', Outlet Invert= 82.00'



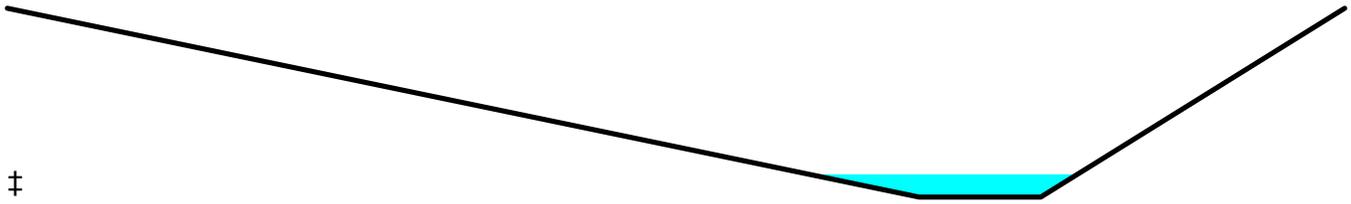
Summary for Reach L133:

Inflow Area = 39.370 ac, 13.72% Impervious, Inflow Depth > 0.39" for 2-Year event
 Inflow = 8.09 cfs @ 12.54 hrs, Volume= 1.267 af
 Outflow = 8.07 cfs @ 12.56 hrs, Volume= 1.264 af, Atten= 0%, Lag= 1.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 3.33 fps, Min. Travel Time= 1.7 min
 Avg. Velocity = 1.95 fps, Avg. Travel Time= 2.9 min

Peak Storage= 833 cf @ 12.56 hrs
 Average Depth at Peak Storage= 0.30'
 Bank-Full Depth= 2.50' Flow Area= 75.0 sf, Capacity= 842.72 cfs

5.00' x 2.50' deep channel, n= 0.030
 Side Slope Z-value= 15.0 5.0 ' / ' Top Width= 55.00'
 Length= 344.0' Slope= 0.0343 ' / '
 Inlet Invert= 62.60', Outlet Invert= 50.80'



Summary for Reach L162:

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 0.37" for 2-Year event
 Inflow = 7.54 cfs @ 12.52 hrs, Volume= 1.167 af
 Outflow = 7.49 cfs @ 12.55 hrs, Volume= 1.163 af, Atten= 1%, Lag= 1.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.88 fps, Min. Travel Time= 2.3 min
 Avg. Velocity = 1.70 fps, Avg. Travel Time= 3.9 min

Peak Storage= 1,024 cf @ 12.55 hrs
 Average Depth at Peak Storage= 0.53'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 120.49 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 '/' Top Width= 17.00'
 Length= 394.0' Slope= 0.0124 '/'
 Inlet Invert= 67.50', Outlet Invert= 62.60'



Summary for Reach POA3:

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 0.61" for 2-Year event
 Inflow = 23.45 cfs @ 12.56 hrs, Volume= 4.103 af
 Outflow = 23.45 cfs @ 12.56 hrs, Volume= 4.103 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Summary for Pond 1R:

Inflow Area = 57.350 ac, 14.77% Impervious, Inflow Depth > 0.51" for 2-Year event
 Inflow = 14.67 cfs @ 12.63 hrs, Volume= 2.417 af
 Outflow = 14.67 cfs @ 12.63 hrs, Volume= 2.417 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.67 cfs @ 12.63 hrs, Volume= 2.417 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

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Peak Elev= 46.87' @ 12.66 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.10'	24.0" Round Culvert L= 150.0' Ke= 0.500 Inlet / Outlet Invert= 42.10' / 41.90' S= 0.0013 ' / Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=10.27 cfs @ 12.63 hrs HW=46.02' TW=45.41' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 10.27 cfs @ 3.27 fps)

Summary for Pond 2P: Blue Hill Intersection

Inflow	=	4.90 cfs @ 12.68 hrs,	Volume=	0.150 af
Outflow	=	3.29 cfs @ 12.31 hrs,	Volume=	0.126 af, Atten= 33%, Lag= 0.0 min
Primary	=	3.29 cfs @ 12.31 hrs,	Volume=	0.126 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 46.14' @ 12.31 hrs Surf.Area= 10,796 sf Storage= 2,079 cf

Plug-Flow detention time= 13.6 min calculated for 0.126 af (84% of inflow)
Center-of-Mass det. time= 10.3 min (750.6 - 740.3)

Volume	Invert	Avail.Storage	Storage Description
#1	45.50'	29,372 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.50	1	0	0
46.00	4,216	1,054	1,054
47.00	52,420	28,318	29,372

Device	Routing	Invert	Outlet Devices
#1	Primary	46.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 47.50 46.50 46.00 46.50 47.50

Primary OutFlow Max=3.29 cfs @ 12.31 hrs HW=46.14' TW=0.00' (Dynamic Tailwater)

↑1=Curb (Weir Controls 3.29 cfs @ 0.48 fps)

Summary for Pond 7R:

Inflow Area =	13.380 ac, 10.31% Impervious, Inflow Depth > 0.65" for 2-Year event
Inflow =	5.10 cfs @ 12.59 hrs, Volume= 0.721 af
Outflow =	5.10 cfs @ 12.59 hrs, Volume= 0.721 af, Atten= 0%, Lag= 0.0 min
Primary =	5.60 cfs @ 12.63 hrs, Volume= 0.692 af
Secondary =	4.90 cfs @ 12.68 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 46.66' @ 12.68 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 42.10' S= 0.0900 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.33'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.59 cfs @ 12.63 hrs HW=46.03' TW=46.01' (Dynamic Tailwater)

↳ **1=Culvert** (Inlet Controls 1.59 cfs @ 0.51 fps)

Secondary OutFlow Max=4.89 cfs @ 12.68 hrs HW=46.66' TW=46.10' (Dynamic Tailwater)

↳ **2=Orifice/Grate** (Weir Controls 4.89 cfs @ 1.87 fps)

Summary for Pond L164:

Inflow Area = 3.030 ac, 53.14% Impervious, Inflow Depth > 1.57" for 2-Year event
 Inflow = 6.18 cfs @ 12.08 hrs, Volume= 0.395 af
 Outflow = 6.18 cfs @ 12.08 hrs, Volume= 0.395 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.18 cfs @ 12.08 hrs, Volume= 0.395 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 51.30' @ 0.00 hrs Surf.Area= 1 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	51.30'	5,183 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.30	1	0	0
52.00	4,805	1,682	1,682
52.50	9,200	3,501	5,183

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	24.0" Round Culvert L= 720.0' Ke= 0.500 Inlet / Outlet Invert= 45.80' / 42.10' S= 0.0051 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	51.50'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 12.08 hrs HW=51.30' TW=45.23' (Dynamic Tailwater)

↳ **1=Culvert** (Passes 0.00 cfs of 18.00 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.30' TW=52.20' (Dynamic Tailwater)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond L176:

Inflow Area = 0.380 ac, 100.00% Impervious, Inflow Depth > 2.83" for 2-Year event
 Inflow = 1.22 cfs @ 12.07 hrs, Volume= 0.090 af
 Outflow = 1.22 cfs @ 12.07 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.22 cfs @ 12.07 hrs, Volume= 0.090 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.43' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	12.0" Round Culvert L= 242.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 45.80' / 43.38' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 0.79 sf

Primary OutFlow Max=1.15 cfs @ 12.07 hrs HW=46.42' TW=44.71' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 1.15 cfs @ 3.19 fps)

Summary for Pond L179:

Inflow Area = 79.090 ac, 15.41% Impervious, Inflow Depth > 0.56" for 2-Year event
 Inflow = 20.58 cfs @ 12.56 hrs, Volume= 3.687 af
 Outflow = 20.58 cfs @ 12.56 hrs, Volume= 3.687 af, Atten= 0%, Lag= 0.0 min
 Primary = 20.58 cfs @ 12.56 hrs, Volume= 3.687 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 45.81' @ 12.56 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=18.78 cfs @ 12.56 hrs HW=45.74' TW=44.20' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 18.78 cfs @ 5.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.90' TW=45.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.34" for 2-Year event
 Inflow = 6.02 cfs @ 12.47 hrs, Volume= 0.906 af
 Outflow = 6.02 cfs @ 12.47 hrs, Volume= 0.906 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 6.02 cfs @ 12.47 hrs, Volume= 0.906 af

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 140.43' @ 12.47 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=140.00' TW=132.00' (Dynamic Tailwater)

↑**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=6.01 cfs @ 12.47 hrs HW=140.43' TW=140.23' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Weir Controls 6.01 cfs @ 1.76 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 0.45" for 2-Year event
 Inflow = 4.63 cfs @ 12.46 hrs, Volume= 0.640 af
 Outflow = 4.63 cfs @ 12.46 hrs, Volume= 0.640 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.63 cfs @ 12.46 hrs, Volume= 0.640 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 143.03' @ 12.46 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.63 cfs @ 12.46 hrs HW=143.03' TW=140.43' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 4.63 cfs @ 3.78 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.80' TW=158.00' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond LINK 110.1:

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 0.70" for 2-Year event
 Inflow = 10.67 cfs @ 12.22 hrs, Volume= 1.019 af
 Outflow = 10.67 cfs @ 12.22 hrs, Volume= 1.019 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.67 cfs @ 12.22 hrs, Volume= 1.019 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

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Peak Elev= 50.20' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=10.64 cfs @ 12.22 hrs HW=50.19' TW=46.24' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 10.64 cfs @ 6.02 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=46.45' TW=51.23' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3:

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 0.59" for 2-Year event
 Inflow = 21.19 cfs @ 12.56 hrs, Volume= 3.977 af
 Outflow = 21.19 cfs @ 12.56 hrs, Volume= 3.977 af, Atten= 0%, Lag= 0.0 min
 Primary = 21.19 cfs @ 12.56 hrs, Volume= 3.977 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 44.26' @ 12.56 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=20.82 cfs @ 12.56 hrs HW=44.20' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Barrel Controls 20.82 cfs @ 6.63 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=45.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3B:

Inflow Area = 21.740 ac, 17.11% Impervious, Inflow Depth > 0.77" for 2-Year event
 Inflow = 13.81 cfs @ 12.20 hrs, Volume= 1.392 af
 Outflow = 13.81 cfs @ 12.20 hrs, Volume= 1.392 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.13 cfs @ 12.06 hrs, Volume= 1.270 af
 Secondary = 4.20 cfs @ 12.16 hrs, Volume= 0.122 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.25' @ 12.24 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.67 cfs @ 12.06 hrs HW=45.71' TW=45.08' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 6.67 cfs @ 3.77 fps)**Secondary OutFlow** Max=3.90 cfs @ 12.16 hrs HW=46.22' TW=46.02' (Dynamic Tailwater)↑**2=Orifice/Grate** (Weir Controls 3.90 cfs @ 1.64 fps)**Summary for Pond P3C:**

Inflow Area = 1.420 ac, 92.25% Impervious, Inflow Depth > 2.45" for 2-Year event
 Inflow = 4.20 cfs @ 12.07 hrs, Volume= 0.290 af
 Outflow = 4.20 cfs @ 12.07 hrs, Volume= 0.290 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.20 cfs @ 12.07 hrs, Volume= 0.290 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 44.78' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf

Primary OutFlow Max=4.09 cfs @ 12.07 hrs HW=44.72' TW=44.11' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 4.09 cfs @ 3.26 fps)**Summary for Pond P53:**

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 0.37" for 2-Year event
 Inflow = 7.55 cfs @ 12.51 hrs, Volume= 1.168 af
 Outflow = 7.54 cfs @ 12.52 hrs, Volume= 1.167 af, Atten= 0%, Lag= 0.6 min
 Primary = 7.54 cfs @ 12.52 hrs, Volume= 1.167 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 78.44' @ 12.52 hrs Surf.Area= 952 sf Storage= 208 cf

Plug-Flow detention time= 0.3 min calculated for 1.167 af (100% of inflow)

Center-of-Mass det. time= 0.3 min (870.6 - 870.4)

Volume	Invert	Avail.Storage	Storage Description
#1	78.00'	43,344 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 2-Year Rainfall=3.20"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	0	0	0
78.25	545	68	68
78.50	1,089	204	272
78.75	1,634	340	613
79.00	2,178	477	1,089
79.25	3,920	762	1,852
79.50	5,663	1,198	3,049
79.75	7,405	1,634	4,683
80.00	9,148	2,069	6,752
84.00	9,148	36,592	43,344

Device	Routing	Invert	Outlet Devices
#1	Primary	78.00'	10.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=7.54 cfs @ 12.52 hrs HW=78.44' TW=68.03' (Dynamic Tailwater)

↑1=**Broad-Crested Rectangular Weir** (Weir Controls 7.54 cfs @ 1.73 fps)

Time span=0.00-20.00 hrs, dt=0.02 hrs, 1001 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S5.1A: Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>0.69" Tc=16.7 min CN=55 Runoff=7.51 cfs 0.880 af

Subcatchment S5.1B: Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>1.13" Tc=25.4 min CN=63 Runoff=13.88 cfs 1.601 af

Subcatchment S5.1C: Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>1.53" Tc=14.3 min CN=69 Runoff=25.37 cfs 2.226 af

Subcatchment S52: Runoff Area=3.030 ac 53.14% Impervious Runoff Depth>2.73" Tc=5.0 min CN=84 Runoff=10.63 cfs 0.688 af

Subcatchment S53: Runoff Area=5.340 ac 6.37% Impervious Runoff Depth>1.39" Tc=15.8 min CN=67 Runoff=6.71 cfs 0.619 af

Subcatchment S54: Runoff Area=1.790 ac 11.17% Impervious Runoff Depth>1.53" Tc=14.0 min CN=69 Runoff=2.62 cfs 0.228 af

Subcatchment S54.1: Runoff Area=1.570 ac 5.10% Impervious Runoff Depth>1.39" Tc=16.7 min CN=67 Runoff=1.93 cfs 0.182 af

Subcatchment S55: Runoff Area=13.380 ac 10.31% Impervious Runoff Depth>1.44" Tc=36.7 min CN=68 Runoff=12.35 cfs 1.610 af

Subcatchment S56: Runoff Area=4.240 ac 32.31% Impervious Runoff Depth>2.05" Tc=5.0 min CN=76 Runoff=11.32 cfs 0.724 af

Subcatchment S62: Runoff Area=0.380 ac 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=98 Runoff=1.76 cfs 0.132 af

Subcatchment S63: Runoff Area=1.040 ac 89.42% Impervious Runoff Depth>3.61" Tc=5.0 min CN=93 Runoff=4.53 cfs 0.313 af

Reach 2R: Avg. Flow Depth=0.73' Max Vel=2.13 fps Inflow=28.75 cfs 3.470 af n=0.030 L=460.0' S=0.0073 '/' Capacity=417.73 cfs Outflow=28.27 cfs 3.455 af

Reach 3R: Avg. Flow Depth=0.87' Max Vel=1.51 fps Inflow=28.91 cfs 3.479 af n=0.030 L=195.0' S=0.0028 '/' Capacity=122.08 cfs Outflow=28.75 cfs 3.470 af

Reach 4R: Avg. Flow Depth=0.44' Max Vel=2.70 fps Inflow=12.97 cfs 0.299 af n=0.030 L=183.0' S=0.0231 '/' Capacity=117.03 cfs Outflow=12.85 cfs 0.299 af

Reach 5R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.030 L=900.0' S=0.0289 '/' Capacity=20.61 cfs Outflow=0.00 cfs 0.000 af

Reach 6R: Avg. Flow Depth=0.35' Max Vel=6.14 fps Inflow=19.01 cfs 2.437 af n=0.030 L=50.0' S=0.1600 '/' Capacity=48.49 cfs Outflow=19.01 cfs 2.437 af

Reach 8R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
 n=0.030 L=730.0' S=0.0080 '/ Capacity=10.87 cfs Outflow=0.00 cfs 0.000 af

Reach L108: Avg. Flow Depth=0.15' Max Vel=3.47 fps Inflow=20.95 cfs 2.480 af
 n=0.030 L=774.0' S=0.0646 '/ Capacity=1,762.00 cfs Outflow=20.71 cfs 2.464 af

Reach L133: Avg. Flow Depth=0.56' Max Vel=4.67 fps Inflow=27.48 cfs 3.303 af
 n=0.030 L=344.0' S=0.0343 '/ Capacity=842.72 cfs Outflow=27.43 cfs 3.297 af

Reach L162: Avg. Flow Depth=0.99' Max Vel=4.04 fps Inflow=25.82 cfs 3.082 af
 n=0.030 L=394.0' S=0.0124 '/ Capacity=120.49 cfs Outflow=25.75 cfs 3.075 af

Reach POA3: Inflow=63.16 cfs 9.125 af
 Outflow=63.16 cfs 9.125 af

Pond 1R: Peak Elev=52.79' Inflow=32.76 cfs 4.974 af
 24.0" Round Culvert n=0.014 L=150.0' S=0.0013 '/ Outflow=32.76 cfs 4.974 af

Pond 2P: Blue Hill Intersection Peak Elev=46.37' Storage=5,911 cf Inflow=40.14 cfs 2.260 af
 Outflow=39.81 cfs 2.235 af

Pond 7R: Peak Elev=46.94' Inflow=12.35 cfs 1.610 af
 Primary=5.07 cfs 0.829 af Secondary=12.35 cfs 0.781 af Outflow=12.35 cfs 1.610 af

Pond L164: Peak Elev=51.62' Storage=348 cf Inflow=10.63 cfs 0.688 af
 Primary=10.63 cfs 0.691 af Secondary=0.00 cfs 0.000 af Outflow=10.63 cfs 0.691 af

Pond L176: Peak Elev=46.73' Inflow=1.76 cfs 0.132 af
 12.0" Round Culvert n=0.014 L=242.0' S=0.0100 '/ Outflow=1.76 cfs 0.132 af

Pond L179: Peak Elev=46.81' Inflow=35.77 cfs 6.811 af
 Primary=23.64 cfs 6.446 af Secondary=12.77 cfs 0.365 af Outflow=35.77 cfs 6.811 af

Pond Link 105: Peak Elev=141.33' Inflow=20.95 cfs 2.481 af
 Primary=1.94 cfs 0.044 af Secondary=19.01 cfs 2.437 af Outflow=20.95 cfs 2.481 af

Pond Link 106: Peak Elev=147.94' Inflow=13.88 cfs 1.601 af
 Primary=13.88 cfs 1.601 af Secondary=0.00 cfs 0.000 af Outflow=13.88 cfs 1.601 af

Pond LINK 110.1: Peak Elev=52.11' Inflow=25.37 cfs 2.226 af
 Primary=12.43 cfs 1.927 af Secondary=12.97 cfs 0.299 af Outflow=25.37 cfs 2.226 af

Pond P3: Peak Elev=44.81' Inflow=24.65 cfs 6.890 af
 Primary=24.65 cfs 6.890 af Secondary=0.00 cfs 0.000 af Outflow=24.65 cfs 6.890 af

Pond P3B: Peak Elev=46.92' Inflow=22.94 cfs 2.651 af
 Primary=10.05 cfs 1.837 af Secondary=15.87 cfs 0.815 af Outflow=22.94 cfs 2.651 af

Pond P3C: Peak Elev=45.62' Inflow=6.29 cfs 0.445 af
 18.0" Round Culvert n=0.014 L=127.0' S=0.0172 '/ Outflow=6.29 cfs 0.445 af

Pond P53: Peak Elev=78.98' Storage=1,050 cf Inflow=25.86 cfs 3.082 af
 Outflow=25.82 cfs 3.082 af

Total Runoff Area = 80.510 ac Runoff Volume = 9.201 af Average Runoff Depth = 1.37"
83.23% Pervious = 67.010 ac 16.77% Impervious = 13.500 ac

Summary for Subcatchment S5.1A:

Runoff = 7.51 cfs @ 12.30 hrs, Volume= 0.880 af, Depth> 0.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 13.88 cfs @ 12.40 hrs, Volume= 1.601 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 25.37 cfs @ 12.21 hrs, Volume= 2.226 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52:

Runoff = 10.63 cfs @ 12.07 hrs, Volume= 0.688 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
1.420	69	50-75% Grass cover, Fair, HSG B
1.610	98	Paved parking & roofs
3.030	84	Weighted Average
1.420		46.86% Pervious Area
1.610		53.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S53:

Runoff = 6.71 cfs @ 12.23 hrs, Volume= 0.619 af, Depth> 1.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
5.000	65	Woods/grass comb., Fair, HSG B
0.340	98	Water Surface, HSG A
5.340	67	Weighted Average
5.000		93.63% Pervious Area
0.340		6.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 2.62 cfs @ 12.20 hrs, Volume= 0.228 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
1.590	65	Woods/grass comb., Fair, HSG B
0.200	98	Paved parking & roofs
1.790	69	Weighted Average
1.590		88.83% Pervious Area
0.200		11.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S54.1:

Runoff = 1.93 cfs @ 12.25 hrs, Volume= 0.182 af, Depth> 1.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
1.490	65	Woods/grass comb., Fair, HSG B
0.080	98	Paved parking & roofs
1.570	67	Weighted Average
1.490		94.90% Pervious Area
0.080		5.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S55:

Runoff = 12.35 cfs @ 12.54 hrs, Volume= 1.610 af, Depth> 1.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
12.000	65	Woods/grass comb., Fair, HSG B
1.380	98	Paved parking & roofs
13.380	68	Weighted Average
12.000		89.69% Pervious Area
1.380		10.31% Impervious Area

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7					Direct Entry,

Summary for Subcatchment S56:

Runoff = 11.32 cfs @ 12.08 hrs, Volume= 0.724 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
2.870	65	Woods/grass comb., Fair, HSG B
1.370	98	Paved parking & roofs
4.240	76	Weighted Average
2.870		67.69% Pervious Area
1.370		32.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S62:

Runoff = 1.76 cfs @ 12.07 hrs, Volume= 0.132 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
0.380	98	Paved parking & roofs
0.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S63:

Runoff = 4.53 cfs @ 12.07 hrs, Volume= 0.313 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
0.110	49	50-75% Grass cover, Fair, HSG A
0.930	98	Paved parking & roofs
1.040	93	Weighted Average
0.110		10.58% Pervious Area
0.930		89.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

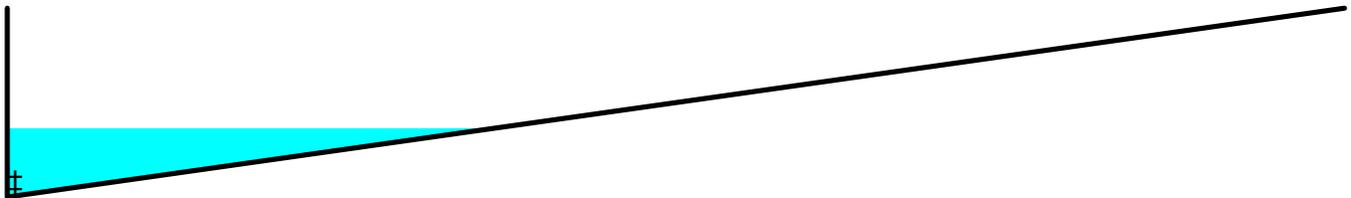
Summary for Reach 2R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 1.02" for 10-Year event
 Inflow = 28.75 cfs @ 12.44 hrs, Volume= 3.470 af
 Outflow = 28.27 cfs @ 12.50 hrs, Volume= 3.455 af, Atten= 2%, Lag= 3.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.13 fps, Min. Travel Time= 3.6 min
 Avg. Velocity = 1.16 fps, Avg. Travel Time= 6.6 min

Peak Storage= 6,103 cf @ 12.50 hrs
 Average Depth at Peak Storage= 0.73'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 417.73 cfs

0.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 100.00'
 Length= 460.0' Slope= 0.0073 '/'
 Inlet Invert= 50.25', Outlet Invert= 46.89'



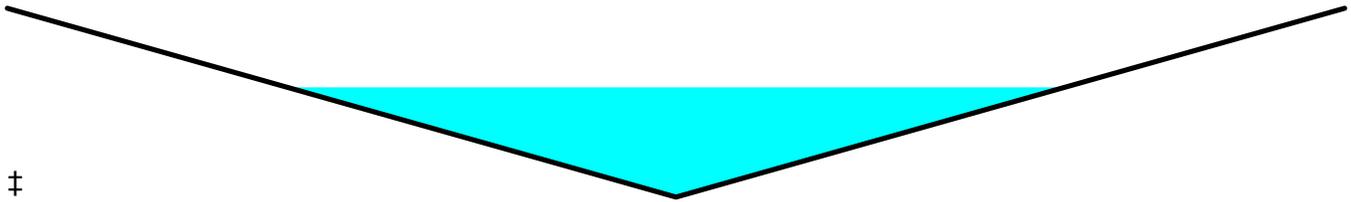
Summary for Reach 3R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 1.02" for 10-Year event
 Inflow = 28.91 cfs @ 12.41 hrs, Volume= 3.479 af
 Outflow = 28.75 cfs @ 12.44 hrs, Volume= 3.470 af, Atten= 1%, Lag= 1.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 1.51 fps, Min. Travel Time= 2.1 min
 Avg. Velocity = 0.82 fps, Avg. Travel Time= 4.0 min

Peak Storage= 3,708 cf @ 12.44 hrs
 Average Depth at Peak Storage= 0.87'
 Bank-Full Depth= 1.50' Flow Area= 56.3 sf, Capacity= 122.08 cfs

0.00' x 1.50' deep channel, n= 0.030
 Side Slope Z-value= 25.0 '/' Top Width= 75.00'
 Length= 195.0' Slope= 0.0028 '/'
 Inlet Invert= 50.80', Outlet Invert= 50.25'



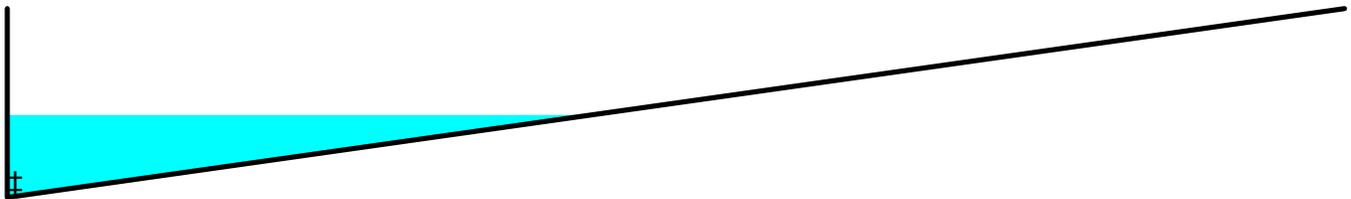
Summary for Reach 4R:

Inflow = 12.97 cfs @ 12.21 hrs, Volume= 0.299 af
 Outflow = 12.85 cfs @ 12.22 hrs, Volume= 0.299 af, Atten= 1%, Lag= 0.9 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.70 fps, Min. Travel Time= 1.1 min
 Avg. Velocity = 0.86 fps, Avg. Travel Time= 3.5 min

Peak Storage= 873 cf @ 12.22 hrs
 Average Depth at Peak Storage= 0.44'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 117.03 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 183.0' Slope= 0.0231 '/'
 Inlet Invert= 51.23', Outlet Invert= 47.00'



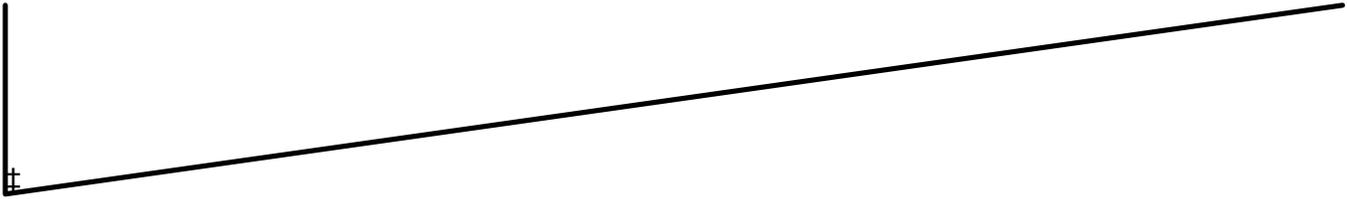
Summary for Reach 5R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



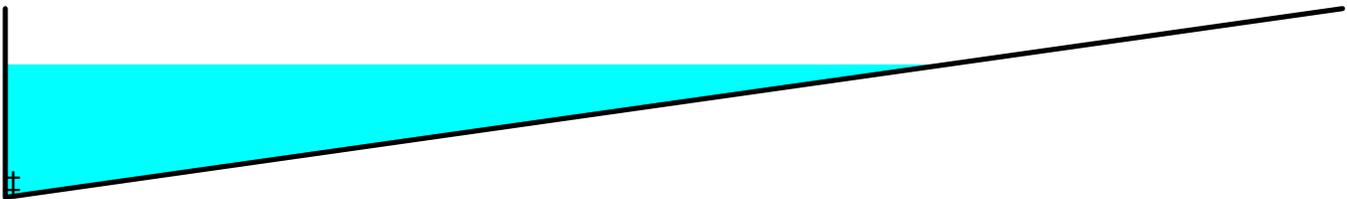
Summary for Reach 6R:

Inflow = 19.01 cfs @ 12.37 hrs, Volume= 2.437 af
 Outflow = 19.01 cfs @ 12.37 hrs, Volume= 2.437 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 6.14 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 3.60 fps, Avg. Travel Time= 0.2 min

Peak Storage= 155 cf @ 12.37 hrs
 Average Depth at Peak Storage= 0.35'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



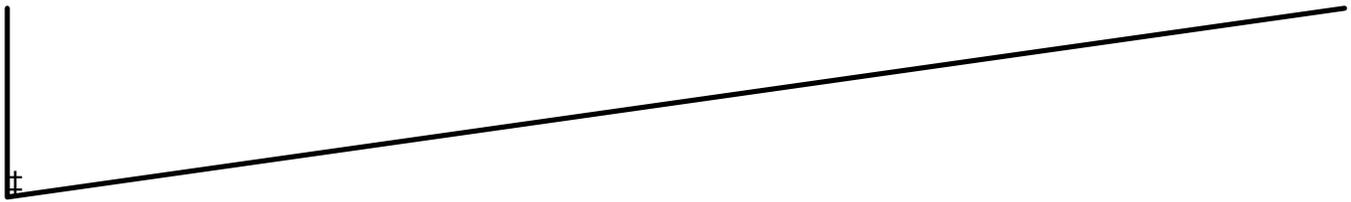
Summary for Reach 8R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 10.87 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 730.0' Slope= 0.0080 '/'
 Inlet Invert= 52.20', Outlet Invert= 46.33'



Summary for Reach L108:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.92" for 10-Year event
 Inflow = 20.95 cfs @ 12.37 hrs, Volume= 2.480 af
 Outflow = 20.71 cfs @ 12.41 hrs, Volume= 2.464 af, Atten= 1%, Lag= 2.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 3.47 fps, Min. Travel Time= 3.7 min
 Avg. Velocity = 1.56 fps, Avg. Travel Time= 8.3 min

Peak Storage= 4,625 cf @ 12.41 hrs
 Average Depth at Peak Storage= 0.15'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



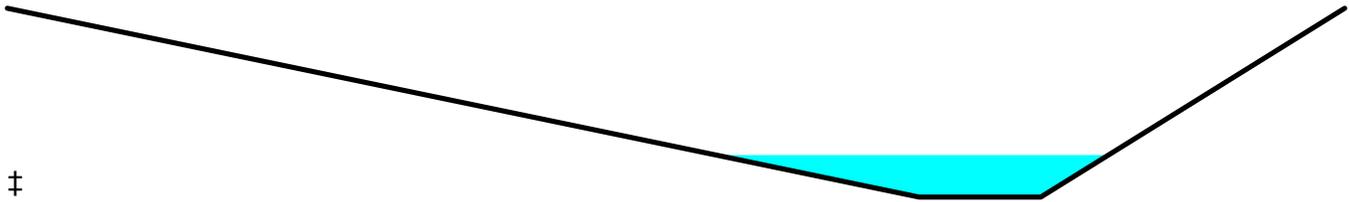
Summary for Reach L133:

Inflow Area = 39.370 ac, 13.72% Impervious, Inflow Depth > 1.01" for 10-Year event
 Inflow = 27.48 cfs @ 12.41 hrs, Volume= 3.303 af
 Outflow = 27.43 cfs @ 12.42 hrs, Volume= 3.297 af, Atten= 0%, Lag= 1.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 4.67 fps, Min. Travel Time= 1.2 min
 Avg. Velocity = 2.35 fps, Avg. Travel Time= 2.4 min

Peak Storage= 2,022 cf @ 12.42 hrs
 Average Depth at Peak Storage= 0.56'
 Bank-Full Depth= 2.50' Flow Area= 75.0 sf, Capacity= 842.72 cfs

5.00' x 2.50' deep channel, n= 0.030
 Side Slope Z-value= 15.0 5.0 '/' Top Width= 55.00'
 Length= 344.0' Slope= 0.0343 '/'
 Inlet Invert= 62.60', Outlet Invert= 50.80'



Summary for Reach L162:

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 0.98" for 10-Year event
 Inflow = 25.82 cfs @ 12.40 hrs, Volume= 3.082 af
 Outflow = 25.75 cfs @ 12.42 hrs, Volume= 3.075 af, Atten= 0%, Lag= 1.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 4.04 fps, Min. Travel Time= 1.6 min
 Avg. Velocity = 2.07 fps, Avg. Travel Time= 3.2 min

Peak Storage= 2,510 cf @ 12.42 hrs
 Average Depth at Peak Storage= 0.99'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 120.49 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 '/' Top Width= 17.00'
 Length= 394.0' Slope= 0.0124 '/'
 Inlet Invert= 67.50', Outlet Invert= 62.60'



Summary for Reach POA3:

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 1.36" for 10-Year event
 Inflow = 63.16 cfs @ 12.40 hrs, Volume= 9.125 af
 Outflow = 63.16 cfs @ 12.40 hrs, Volume= 9.125 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Summary for Pond 1R:

Inflow Area = 57.350 ac, 14.77% Impervious, Inflow Depth > 1.04" for 10-Year event
 Inflow = 32.76 cfs @ 12.48 hrs, Volume= 4.974 af
 Outflow = 32.76 cfs @ 12.48 hrs, Volume= 4.974 af, Atten= 0%, Lag= 0.0 min
 Primary = 32.76 cfs @ 12.48 hrs, Volume= 4.974 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 52.79' @ 12.48 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.10'	24.0" Round Culvert L= 150.0' Ke= 0.500 Inlet / Outlet Invert= 42.10' / 41.90' S= 0.0013 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=32.15 cfs @ 12.48 hrs HW=52.77' TW=46.80' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 32.15 cfs @ 10.23 fps)

Summary for Pond 2P: Blue Hill Intersection

Inflow = 40.14 cfs @ 12.38 hrs, Volume= 2.260 af
 Outflow = 39.81 cfs @ 12.40 hrs, Volume= 2.235 af, Atten= 1%, Lag= 1.2 min
 Primary = 39.81 cfs @ 12.40 hrs, Volume= 2.235 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.37' @ 12.40 hrs Surf.Area= 22,046 sf Storage= 5,911 cf

Plug-Flow detention time= 3.2 min calculated for 2.233 af (99% of inflow)
 Center-of-Mass det. time= 2.8 min (750.5 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	45.50'	29,372 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.50	1	0	0
46.00	4,216	1,054	1,054
47.00	52,420	28,318	29,372

Device	Routing	Invert	Outlet Devices
#1	Primary	46.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 47.50 46.50 46.00 46.50 47.50

Primary OutFlow Max=39.78 cfs @ 12.40 hrs HW=46.37' TW=0.00' (Dynamic Tailwater)

↑1=Curb (Weir Controls 39.78 cfs @ 0.80 fps)

Summary for Pond 7R:

Inflow Area = 13.380 ac, 10.31% Impervious, Inflow Depth > 1.44" for 10-Year event
 Inflow = 12.35 cfs @ 12.54 hrs, Volume= 1.610 af
 Outflow = 12.35 cfs @ 12.54 hrs, Volume= 1.610 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.07 cfs @ 13.16 hrs, Volume= 0.829 af
 Secondary = 12.35 cfs @ 12.54 hrs, Volume= 0.781 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.94' @ 12.53 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 42.10' S= 0.0900 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.33'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 13.16 hrs HW=45.87' TW=46.74' (Dynamic Tailwater)

↳1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=12.36 cfs @ 12.54 hrs HW=46.94' TW=46.36' (Dynamic Tailwater)

↳2=Orifice/Grate (Weir Controls 12.36 cfs @ 2.54 fps)

Summary for Pond L164:

Inflow Area = 3.030 ac, 53.14% Impervious, Inflow Depth > 2.73" for 10-Year event
 Inflow = 10.63 cfs @ 12.07 hrs, Volume= 0.688 af
 Outflow = 10.63 cfs @ 12.07 hrs, Volume= 0.691 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.63 cfs @ 12.07 hrs, Volume= 0.691 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 51.62' @ 12.54 hrs Surf.Area= 2,185 sf Storage= 348 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.2 min (779.8 - 779.5)

Volume	Invert	Avail.Storage	Storage Description
#1	51.30'	5,183 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.30	1	0	0
52.00	4,805	1,682	1,682
52.50	9,200	3,501	5,183

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	24.0" Round Culvert L= 720.0' Ke= 0.500 Inlet / Outlet Invert= 45.80' / 42.10' S= 0.0051 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	51.50'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=14.76 cfs @ 12.07 hrs HW=51.30' TW=47.22' (Dynamic Tailwater)

↳1=Culvert (Outlet Controls 14.76 cfs @ 4.70 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=51.30' TW=52.20' (Dynamic Tailwater)

↳2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond L176:

Inflow Area = 0.380 ac, 100.00% Impervious, Inflow Depth > 4.16" for 10-Year event
 Inflow = 1.76 cfs @ 12.07 hrs, Volume= 0.132 af
 Outflow = 1.76 cfs @ 12.07 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.76 cfs @ 12.07 hrs, Volume= 0.132 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.73' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	12.0" Round Culvert L= 242.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 45.80' / 43.38' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 0.79 sf

Primary OutFlow Max=1.63 cfs @ 12.07 hrs HW=46.70' TW=45.58' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 1.63 cfs @ 2.89 fps)

Summary for Pond L179:

Inflow Area = 79.090 ac, 15.41% Impervious, Inflow Depth > 1.03" for 10-Year event
 Inflow = 35.77 cfs @ 12.48 hrs, Volume= 6.811 af
 Outflow = 35.77 cfs @ 12.48 hrs, Volume= 6.811 af, Atten= 0%, Lag= 0.0 min
 Primary = 23.64 cfs @ 12.60 hrs, Volume= 6.446 af
 Secondary = 12.77 cfs @ 12.48 hrs, Volume= 0.365 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.81' @ 12.48 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=20.84 cfs @ 12.60 hrs HW=46.65' TW=44.76' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 20.84 cfs @ 6.63 fps)

Secondary OutFlow Max=12.74 cfs @ 12.48 hrs HW=46.80' TW=46.37' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 12.74 cfs @ 3.18 fps)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.92" for 10-Year event
 Inflow = 20.95 cfs @ 12.37 hrs, Volume= 2.481 af
 Outflow = 20.95 cfs @ 12.37 hrs, Volume= 2.481 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.94 cfs @ 12.37 hrs, Volume= 0.044 af
 Secondary = 19.01 cfs @ 12.37 hrs, Volume= 2.437 af

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 141.33' @ 12.37 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.93 cfs @ 12.37 hrs HW=141.33' TW=132.15' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 1.93 cfs @ 2.58 fps)

Secondary OutFlow Max=19.01 cfs @ 12.37 hrs HW=141.33' TW=140.35' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Orifice Controls 19.01 cfs @ 4.75 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 1.13" for 10-Year event
 Inflow = 13.88 cfs @ 12.40 hrs, Volume= 1.601 af
 Outflow = 13.88 cfs @ 12.40 hrs, Volume= 1.601 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.88 cfs @ 12.40 hrs, Volume= 1.601 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 147.94' @ 12.40 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.87 cfs @ 12.40 hrs HW=147.94' TW=141.32' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 13.87 cfs @ 11.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.80' TW=158.00' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond LINK 110.1:

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 1.53" for 10-Year event
 Inflow = 25.37 cfs @ 12.21 hrs, Volume= 2.226 af
 Outflow = 25.37 cfs @ 12.21 hrs, Volume= 2.226 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.43 cfs @ 12.22 hrs, Volume= 1.927 af
 Secondary = 12.97 cfs @ 12.21 hrs, Volume= 0.299 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

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Peak Elev= 52.11' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=12.39 cfs @ 12.22 hrs HW=52.11' TW=46.75' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 12.39 cfs @ 7.01 fps)**Secondary OutFlow** Max=12.80 cfs @ 12.21 hrs HW=52.11' TW=51.66' (Dynamic Tailwater)↑**2=Orifice/Grate** (Orifice Controls 12.80 cfs @ 3.20 fps)**Summary for Pond P3:**

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 1.03" for 10-Year event
 Inflow = 24.65 cfs @ 12.07 hrs, Volume= 6.890 af
 Outflow = 24.65 cfs @ 12.07 hrs, Volume= 6.890 af, Atten= 0%, Lag= 0.0 min
 Primary = 24.65 cfs @ 12.07 hrs, Volume= 6.890 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 44.81' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=24.58 cfs @ 12.07 hrs HW=44.80' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Barrel Controls 24.58 cfs @ 7.83 fps)**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=45.50' (Dynamic Tailwater)↑**2=Orifice/Grate** (Controls 0.00 cfs)**Summary for Pond P3B:**

Inflow Area = 21.740 ac, 17.11% Impervious, Inflow Depth > 1.46" for 10-Year event
 Inflow = 22.94 cfs @ 12.08 hrs, Volume= 2.651 af
 Outflow = 22.94 cfs @ 12.08 hrs, Volume= 2.651 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.05 cfs @ 11.92 hrs, Volume= 1.837 af
 Secondary = 15.87 cfs @ 12.08 hrs, Volume= 0.815 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 46.92' @ 12.10 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.56 cfs @ 11.92 hrs HW=45.88' TW=44.85' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 8.56 cfs @ 4.85 fps)**Secondary OutFlow** Max=15.45 cfs @ 12.08 hrs HW=46.91' TW=46.26' (Dynamic Tailwater)↑**2=Orifice/Grate** (Orifice Controls 15.45 cfs @ 3.86 fps)**Summary for Pond P3C:**

Inflow Area = 1.420 ac, 92.25% Impervious, Inflow Depth > 3.76" for 10-Year event
 Inflow = 6.29 cfs @ 12.07 hrs, Volume= 0.445 af
 Outflow = 6.29 cfs @ 12.07 hrs, Volume= 0.445 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.29 cfs @ 12.07 hrs, Volume= 0.445 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 45.62' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf

Primary OutFlow Max=6.15 cfs @ 12.07 hrs HW=45.58' TW=44.79' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 6.15 cfs @ 3.48 fps)**Summary for Pond P53:**

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 0.98" for 10-Year event
 Inflow = 25.86 cfs @ 12.38 hrs, Volume= 3.082 af
 Outflow = 25.82 cfs @ 12.40 hrs, Volume= 3.082 af, Atten= 0%, Lag= 0.9 min
 Primary = 25.82 cfs @ 12.40 hrs, Volume= 3.082 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 78.98' @ 12.40 hrs Surf.Area= 2,138 sf Storage= 1,050 cf

Plug-Flow detention time= 0.5 min calculated for 3.079 af (100% of inflow)

Center-of-Mass det. time= 0.4 min (844.9 - 844.4)

Volume	Invert	Avail.Storage	Storage Description
#1	78.00'	43,344 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	0	0	0
78.25	545	68	68
78.50	1,089	204	272
78.75	1,634	340	613
79.00	2,178	477	1,089
79.25	3,920	762	1,852
79.50	5,663	1,198	3,049
79.75	7,405	1,634	4,683
80.00	9,148	2,069	6,752
84.00	9,148	36,592	43,344

Device	Routing	Invert	Outlet Devices
#1	Primary	78.00'	10.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=25.81 cfs @ 12.40 hrs HW=78.98' TW=68.49' (Dynamic Tailwater)

↑1=**Broad-Crested Rectangular Weir** (Weir Controls 25.81 cfs @ 2.63 fps)

Time span=0.00-20.00 hrs, dt=0.02 hrs, 1001 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S5.1A:	Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>1.10" Tc=16.7 min CN=55 Runoff=13.53 cfs 1.404 af
Subcatchment S5.1B:	Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>1.66" Tc=25.4 min CN=63 Runoff=21.10 cfs 2.350 af
Subcatchment S5.1C:	Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>2.14" Tc=14.3 min CN=69 Runoff=36.11 cfs 3.120 af
Subcatchment S52:	Runoff Area=3.030 ac 53.14% Impervious Runoff Depth>3.51" Tc=5.0 min CN=84 Runoff=13.54 cfs 0.886 af
Subcatchment S53:	Runoff Area=5.340 ac 6.37% Impervious Runoff Depth>1.98" Tc=15.8 min CN=67 Runoff=9.74 cfs 0.880 af
Subcatchment S54:	Runoff Area=1.790 ac 11.17% Impervious Runoff Depth>2.14" Tc=14.0 min CN=69 Runoff=3.72 cfs 0.319 af
Subcatchment S54.1:	Runoff Area=1.570 ac 5.10% Impervious Runoff Depth>1.98" Tc=16.7 min CN=67 Runoff=2.80 cfs 0.259 af
Subcatchment S55:	Runoff Area=13.380 ac 10.31% Impervious Runoff Depth>2.04" Tc=36.7 min CN=68 Runoff=17.74 cfs 2.274 af
Subcatchment S56:	Runoff Area=4.240 ac 32.31% Impervious Runoff Depth>2.75" Tc=5.0 min CN=76 Runoff=15.18 cfs 0.972 af
Subcatchment S62:	Runoff Area=0.380 ac 100.00% Impervious Runoff Depth>5.02" Tc=5.0 min CN=98 Runoff=2.11 cfs 0.159 af
Subcatchment S63:	Runoff Area=1.040 ac 89.42% Impervious Runoff Depth>4.45" Tc=5.0 min CN=93 Runoff=5.51 cfs 0.386 af
Reach 2R:	Avg. Flow Depth=0.86' Max Vel=2.39 fps Inflow=45.29 cfs 5.164 af n=0.030 L=460.0' S=0.0073 '/' Capacity=417.73 cfs Outflow=44.68 cfs 5.145 af
Reach 3R:	Avg. Flow Depth=1.03' Max Vel=1.69 fps Inflow=45.51 cfs 5.175 af n=0.030 L=195.0' S=0.0028 '/' Capacity=122.08 cfs Outflow=45.29 cfs 5.164 af
Reach 4R:	Avg. Flow Depth=0.54' Max Vel=3.11 fps Inflow=22.91 cfs 0.652 af n=0.030 L=183.0' S=0.0231 '/' Capacity=117.03 cfs Outflow=22.80 cfs 0.652 af
Reach 5R:	Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af n=0.030 L=900.0' S=0.0289 '/' Capacity=20.61 cfs Outflow=0.00 cfs 0.000 af
Reach 6R:	Avg. Flow Depth=0.39' Max Vel=6.57 fps Inflow=24.95 cfs 3.491 af n=0.030 L=50.0' S=0.1600 '/' Capacity=48.49 cfs Outflow=24.95 cfs 3.490 af

Reach 8R: Avg. Flow Depth=0.19' Max Vel=0.93 fps Inflow=3.90 cfs 0.029 af
n=0.030 L=730.0' S=0.0080 '/ Capacity=10.87 cfs Outflow=0.87 cfs 0.029 af

Reach L108: Avg. Flow Depth=0.19' Max Vel=4.16 fps Inflow=33.52 cfs 3.754 af
n=0.030 L=774.0' S=0.0646 '/ Capacity=1,762.00 cfs Outflow=33.20 cfs 3.733 af

Reach L133: Avg. Flow Depth=0.69' Max Vel=5.27 fps Inflow=43.34 cfs 4.923 af
n=0.030 L=344.0' S=0.0343 '/ Capacity=842.72 cfs Outflow=43.28 cfs 4.916 af

Reach L162: Avg. Flow Depth=1.23' Max Vel=4.56 fps Inflow=40.90 cfs 4.612 af
n=0.030 L=394.0' S=0.0124 '/ Capacity=120.49 cfs Outflow=40.80 cfs 4.604 af

Reach POA3: Inflow=91.34 cfs 12.925 af
Outflow=91.34 cfs 12.925 af

Pond 1R: Peak Elev=59.10' Inflow=44.68 cfs 7.021 af
24.0" Round Culvert n=0.014 L=150.0' S=0.0013 '/ Outflow=44.68 cfs 7.021 af

Pond 2P: Blue Hill Intersection Peak Elev=46.45' Storage=7,857 cf Inflow=65.68 cfs 4.311 af
Outflow=65.34 cfs 4.286 af

Pond 7R: Peak Elev=47.33' Inflow=18.18 cfs 2.303 af
Primary=5.68 cfs 1.011 af Secondary=18.18 cfs 1.292 af Outflow=18.18 cfs 2.303 af

Pond L164: Peak Elev=52.39' Storage=4,209 cf Inflow=13.54 cfs 0.886 af
Primary=13.24 cfs 0.865 af Secondary=3.90 cfs 0.029 af Outflow=13.24 cfs 0.894 af

Pond L176: Peak Elev=47.52' Inflow=2.11 cfs 0.159 af
12.0" Round Culvert n=0.014 L=242.0' S=0.0100 '/ Outflow=2.11 cfs 0.159 af

Pond L179: Peak Elev=47.59' Inflow=44.68 cfs 9.150 af
Primary=25.27 cfs 8.094 af Secondary=20.56 cfs 1.056 af Outflow=44.68 cfs 9.150 af

Pond Link 105: Peak Elev=142.07' Inflow=33.52 cfs 3.754 af
Primary=8.57 cfs 0.264 af Secondary=24.95 cfs 3.491 af Outflow=33.52 cfs 3.754 af

Pond Link 106: Peak Elev=155.18' Inflow=21.10 cfs 2.350 af
Primary=21.10 cfs 2.350 af Secondary=0.00 cfs 0.000 af Outflow=21.10 cfs 2.350 af

Pond LINK 110.1: Peak Elev=53.18' Inflow=36.11 cfs 3.120 af
Primary=13.20 cfs 2.468 af Secondary=22.91 cfs 0.652 af Outflow=36.11 cfs 3.120 af

Pond P3: Peak Elev=45.28' Inflow=26.96 cfs 8.639 af
Primary=26.96 cfs 8.639 af Secondary=0.00 cfs 0.000 af Outflow=26.96 cfs 8.639 af

Pond P3B: Peak Elev=47.34' Inflow=26.73 cfs 3.440 af
Primary=9.53 cfs 2.129 af Secondary=19.29 cfs 1.311 af Outflow=26.73 cfs 3.440 af

Pond P3C: Peak Elev=46.40' Inflow=7.63 cfs 0.545 af
18.0" Round Culvert n=0.014 L=127.0' S=0.0172 '/ Outflow=7.63 cfs 0.545 af

Pond P53: Peak Elev=79.31' Storage=2,086 cf Inflow=41.07 cfs 4.613 af
Outflow=40.90 cfs 4.612 af

Total Runoff Area = 80.510 ac Runoff Volume = 13.008 af Average Runoff Depth = 1.94"
83.23% Pervious = 67.010 ac 16.77% Impervious = 13.500 ac

Summary for Subcatchment S5.1A:

Runoff = 13.53 cfs @ 12.27 hrs, Volume= 1.404 af, Depth> 1.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 21.10 cfs @ 12.38 hrs, Volume= 2.350 af, Depth> 1.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 36.11 cfs @ 12.20 hrs, Volume= 3.120 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52:

Runoff = 13.54 cfs @ 12.07 hrs, Volume= 0.886 af, Depth> 3.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
1.420	69	50-75% Grass cover, Fair, HSG B
1.610	98	Paved parking & roofs
3.030	84	Weighted Average
1.420		46.86% Pervious Area
1.610		53.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S53:

Runoff = 9.74 cfs @ 12.23 hrs, Volume= 0.880 af, Depth> 1.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
5.000	65	Woods/grass comb., Fair, HSG B
0.340	98	Water Surface, HSG A
5.340	67	Weighted Average
5.000		93.63% Pervious Area
0.340		6.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 3.72 cfs @ 12.20 hrs, Volume= 0.319 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
1.590	65	Woods/grass comb., Fair, HSG B
0.200	98	Paved parking & roofs
1.790	69	Weighted Average
1.590		88.83% Pervious Area
0.200		11.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S54.1:

Runoff = 2.80 cfs @ 12.24 hrs, Volume= 0.259 af, Depth> 1.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
1.490	65	Woods/grass comb., Fair, HSG B
0.080	98	Paved parking & roofs
1.570	67	Weighted Average
1.490		94.90% Pervious Area
0.080		5.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S55:

Runoff = 17.74 cfs @ 12.53 hrs, Volume= 2.274 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
12.000	65	Woods/grass comb., Fair, HSG B
1.380	98	Paved parking & roofs
13.380	68	Weighted Average
12.000		89.69% Pervious Area
1.380		10.31% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7					Direct Entry,

Summary for Subcatchment S56:

Runoff = 15.18 cfs @ 12.08 hrs, Volume= 0.972 af, Depth> 2.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
2.870	65	Woods/grass comb., Fair, HSG B
1.370	98	Paved parking & roofs
4.240	76	Weighted Average
2.870		67.69% Pervious Area
1.370		32.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S62:

Runoff = 2.11 cfs @ 12.07 hrs, Volume= 0.159 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
0.380	98	Paved parking & roofs
0.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S63:

Runoff = 5.51 cfs @ 12.07 hrs, Volume= 0.386 af, Depth> 4.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
0.110	49	50-75% Grass cover, Fair, HSG A
0.930	98	Paved parking & roofs
1.040	93	Weighted Average
0.110		10.58% Pervious Area
0.930		89.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

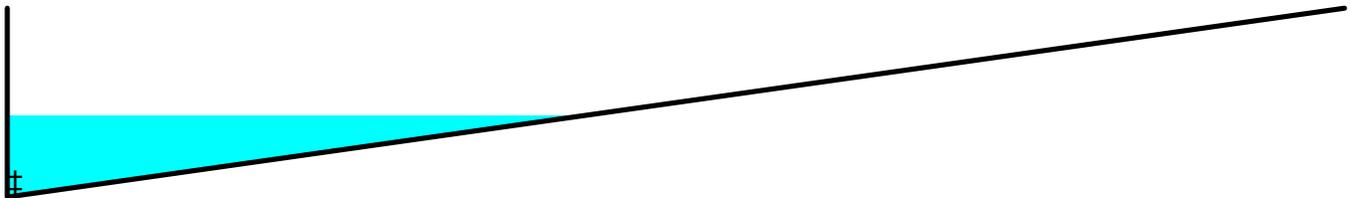
Summary for Reach 2R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 1.51" for 25-Year event
 Inflow = 45.29 cfs @ 12.41 hrs, Volume= 5.164 af
 Outflow = 44.68 cfs @ 12.46 hrs, Volume= 5.145 af, Atten= 1%, Lag= 2.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.39 fps, Min. Travel Time= 3.2 min
 Avg. Velocity = 1.23 fps, Avg. Travel Time= 6.2 min

Peak Storage= 8,602 cf @ 12.46 hrs
 Average Depth at Peak Storage= 0.86'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 417.73 cfs

0.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 100.00'
 Length= 460.0' Slope= 0.0073 '/'
 Inlet Invert= 50.25', Outlet Invert= 46.89'



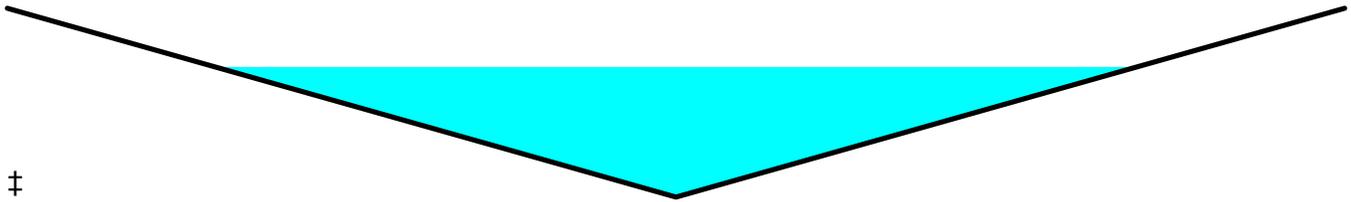
Summary for Reach 3R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 1.52" for 25-Year event
 Inflow = 45.51 cfs @ 12.38 hrs, Volume= 5.175 af
 Outflow = 45.29 cfs @ 12.41 hrs, Volume= 5.164 af, Atten= 0%, Lag= 1.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 1.69 fps, Min. Travel Time= 1.9 min
 Avg. Velocity = 0.87 fps, Avg. Travel Time= 3.7 min

Peak Storage= 5,214 cf @ 12.41 hrs
 Average Depth at Peak Storage= 1.03'
 Bank-Full Depth= 1.50' Flow Area= 56.3 sf, Capacity= 122.08 cfs

0.00' x 1.50' deep channel, n= 0.030
 Side Slope Z-value= 25.0 '/' Top Width= 75.00'
 Length= 195.0' Slope= 0.0028 '/'
 Inlet Invert= 50.80', Outlet Invert= 50.25'



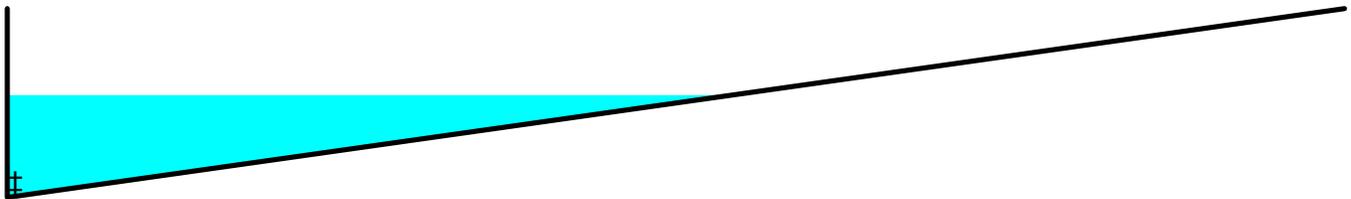
Summary for Reach 4R:

Inflow = 22.91 cfs @ 12.20 hrs, Volume= 0.652 af
 Outflow = 22.80 cfs @ 12.22 hrs, Volume= 0.652 af, Atten= 0%, Lag= 0.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 3.11 fps, Min. Travel Time= 1.0 min
 Avg. Velocity = 1.06 fps, Avg. Travel Time= 2.9 min

Peak Storage= 1,342 cf @ 12.22 hrs
 Average Depth at Peak Storage= 0.54'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 117.03 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 183.0' Slope= 0.0231 '/'
 Inlet Invert= 51.23', Outlet Invert= 47.00'



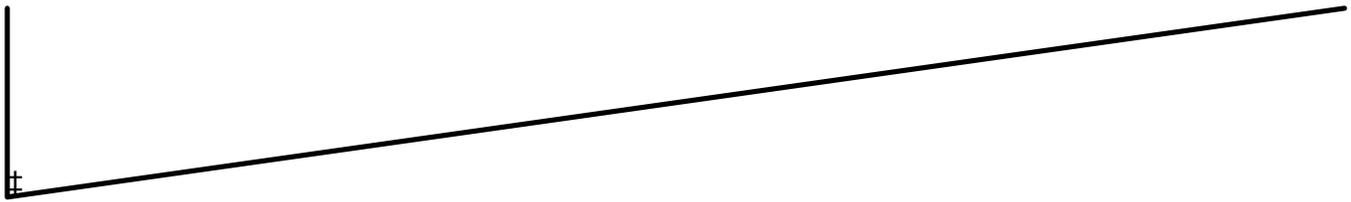
Summary for Reach 5R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



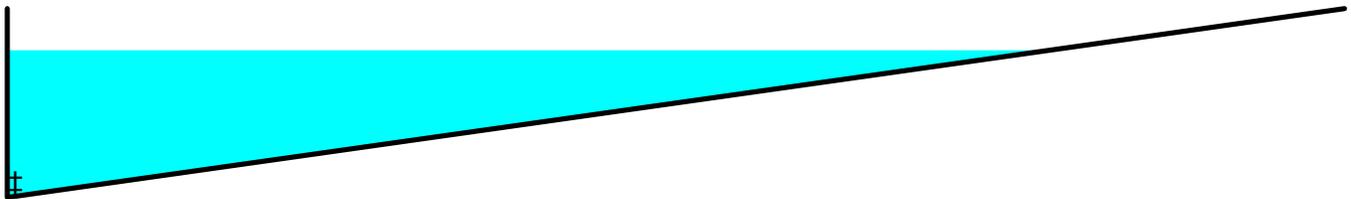
Summary for Reach 6R:

Inflow = 24.95 cfs @ 12.34 hrs, Volume= 3.491 af
 Outflow = 24.95 cfs @ 12.34 hrs, Volume= 3.490 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 6.57 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 3.82 fps, Avg. Travel Time= 0.2 min

Peak Storage= 190 cf @ 12.34 hrs
 Average Depth at Peak Storage= 0.39'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



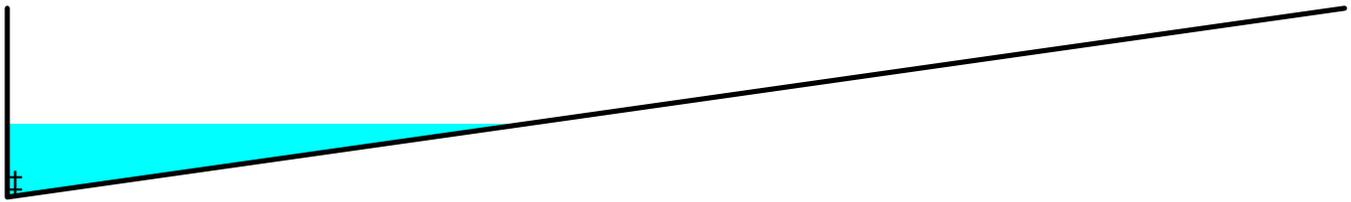
Summary for Reach 8R:

Inflow = 3.90 cfs @ 12.44 hrs, Volume= 0.029 af
 Outflow = 0.87 cfs @ 12.72 hrs, Volume= 0.029 af, Atten= 78%, Lag= 16.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 0.93 fps, Min. Travel Time= 13.1 min
 Avg. Velocity = 0.24 fps, Avg. Travel Time= 51.6 min

Peak Storage= 688 cf @ 12.72 hrs
 Average Depth at Peak Storage= 0.19'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 10.87 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 730.0' Slope= 0.0080 '/'
 Inlet Invert= 52.20', Outlet Invert= 46.33'



Summary for Reach L108:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 1.40" for 25-Year event
 Inflow = 33.52 cfs @ 12.34 hrs, Volume= 3.754 af
 Outflow = 33.20 cfs @ 12.38 hrs, Volume= 3.733 af, Atten= 1%, Lag= 2.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 4.16 fps, Min. Travel Time= 3.1 min
 Avg. Velocity = 1.74 fps, Avg. Travel Time= 7.4 min

Peak Storage= 6,171 cf @ 12.38 hrs
 Average Depth at Peak Storage= 0.19'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



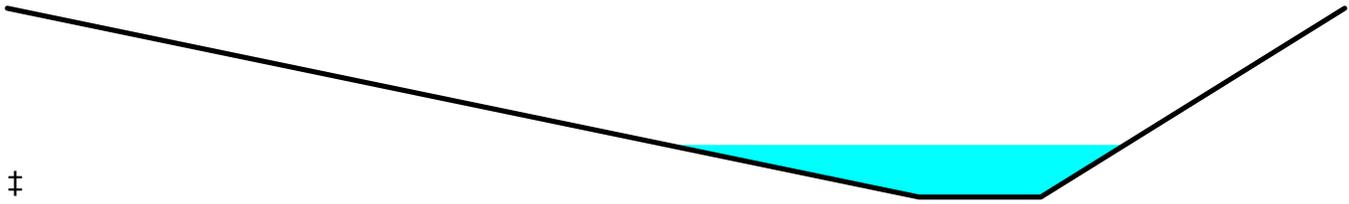
Summary for Reach L133:

Inflow Area = 39.370 ac, 13.72% Impervious, Inflow Depth > 1.50" for 25-Year event
 Inflow = 43.34 cfs @ 12.38 hrs, Volume= 4.923 af
 Outflow = 43.28 cfs @ 12.39 hrs, Volume= 4.916 af, Atten= 0%, Lag= 0.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 5.27 fps, Min. Travel Time= 1.1 min
 Avg. Velocity = 2.53 fps, Avg. Travel Time= 2.3 min

Peak Storage= 2,827 cf @ 12.39 hrs
 Average Depth at Peak Storage= 0.69'
 Bank-Full Depth= 2.50' Flow Area= 75.0 sf, Capacity= 842.72 cfs

5.00' x 2.50' deep channel, n= 0.030
 Side Slope Z-value= 15.0 5.0 '/' Top Width= 55.00'
 Length= 344.0' Slope= 0.0343 '/'
 Inlet Invert= 62.60', Outlet Invert= 50.80'



Summary for Reach L162:

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 1.47" for 25-Year event
 Inflow = 40.90 cfs @ 12.37 hrs, Volume= 4.612 af
 Outflow = 40.80 cfs @ 12.39 hrs, Volume= 4.604 af, Atten= 0%, Lag= 1.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 4.56 fps, Min. Travel Time= 1.4 min
 Avg. Velocity = 2.22 fps, Avg. Travel Time= 3.0 min

Peak Storage= 3,525 cf @ 12.39 hrs
 Average Depth at Peak Storage= 1.23'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 120.49 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 '/' Top Width= 17.00'
 Length= 394.0' Slope= 0.0124 '/'
 Inlet Invert= 67.50', Outlet Invert= 62.60'



Summary for Reach POA3:

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 1.93" for 25-Year event
 Inflow = 91.34 cfs @ 12.41 hrs, Volume= 12.925 af
 Outflow = 91.34 cfs @ 12.41 hrs, Volume= 12.925 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Summary for Pond 1R:

Inflow Area = 57.350 ac, 14.77% Impervious, Inflow Depth > 1.47" for 25-Year event
 Inflow = 44.68 cfs @ 12.46 hrs, Volume= 7.021 af
 Outflow = 44.68 cfs @ 12.46 hrs, Volume= 7.021 af, Atten= 0%, Lag= 0.0 min
 Primary = 44.68 cfs @ 12.46 hrs, Volume= 7.021 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

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Peak Elev= 59.10' @ 12.46 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.10'	24.0" Round Culvert L= 150.0' Ke= 0.500 Inlet / Outlet Invert= 42.10' / 41.90' S= 0.0013 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=44.64 cfs @ 12.46 hrs HW=59.09' TW=47.59' (Dynamic Tailwater)

↑**1=Culvert** (Outlet Controls 44.64 cfs @ 14.21 fps)

Summary for Pond 2P: Blue Hill Intersection

Inflow	=	65.68 cfs @ 12.38 hrs, Volume=	4.311 af
Outflow	=	65.34 cfs @ 12.41 hrs, Volume=	4.286 af, Atten= 1%, Lag= 1.3 min
Primary	=	65.34 cfs @ 12.41 hrs, Volume=	4.286 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 46.45' @ 12.41 hrs Surf.Area= 25,953 sf Storage= 7,857 cf

Plug-Flow detention time= 2.9 min calculated for 4.286 af (99% of inflow)
Center-of-Mass det. time= 2.4 min (752.3 - 749.9)

Volume	Invert	Avail.Storage	Storage Description
#1	45.50'	29,372 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.50	1	0	0
46.00	4,216	1,054	1,054
47.00	52,420	28,318	29,372

Device	Routing	Invert	Outlet Devices
#1	Primary	46.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 47.50 46.50 46.00 46.50 47.50

Primary OutFlow Max=65.30 cfs @ 12.41 hrs HW=46.45' TW=0.00' (Dynamic Tailwater)

↑**1=Curb** (Weir Controls 65.30 cfs @ 0.88 fps)

Summary for Pond 7R:

Inflow Area =	13.380 ac, 10.31% Impervious, Inflow Depth > 2.07" for 25-Year event
Inflow =	18.18 cfs @ 12.56 hrs, Volume= 2.303 af
Outflow =	18.18 cfs @ 12.56 hrs, Volume= 2.303 af, Atten= 0%, Lag= 0.0 min
Primary =	5.68 cfs @ 13.32 hrs, Volume= 1.011 af
Secondary =	18.18 cfs @ 12.56 hrs, Volume= 1.292 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 47.33' @ 12.55 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 42.10' S= 0.0900 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.33'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 13.32 hrs HW=46.28' TW=47.60' (Dynamic Tailwater)

↳1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=18.22 cfs @ 12.56 hrs HW=47.32' TW=46.43' (Dynamic Tailwater)

↳2=Orifice/Grate (Orifice Controls 18.22 cfs @ 4.55 fps)

Summary for Pond L164:

Inflow Area = 3.030 ac, 53.14% Impervious, Inflow Depth > 3.51" for 25-Year event
 Inflow = 13.54 cfs @ 12.07 hrs, Volume= 0.886 af
 Outflow = 13.24 cfs @ 13.00 hrs, Volume= 0.894 af, Atten= 2%, Lag= 55.6 min
 Primary = 13.24 cfs @ 13.00 hrs, Volume= 0.865 af
 Secondary = 3.90 cfs @ 12.44 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 52.39' @ 12.75 hrs Surf.Area= 8,217 sf Storage= 4,209 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 3.7 min (777.3 - 773.6)

Volume	Invert	Avail.Storage	Storage Description
#1	51.30'	5,183 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.30	1	0	0
52.00	4,805	1,682	1,682
52.50	9,200	3,501	5,183

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	24.0" Round Culvert L= 720.0' Ke= 0.500 Inlet / Outlet Invert= 45.80' / 42.10' S= 0.0051 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	51.50'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 13.00 hrs HW=51.80' TW=51.85' (Dynamic Tailwater)

↳1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 12.44 hrs HW=52.22' TW=52.29' (Dynamic Tailwater)

↳2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond L176:

Inflow Area = 0.380 ac, 100.00% Impervious, Inflow Depth > 5.02" for 25-Year event
 Inflow = 2.11 cfs @ 12.07 hrs, Volume= 0.159 af
 Outflow = 2.11 cfs @ 12.07 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.11 cfs @ 12.07 hrs, Volume= 0.159 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 47.52' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	12.0" Round Culvert L= 242.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 45.80' / 43.38' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 0.79 sf

Primary OutFlow Max=1.94 cfs @ 12.07 hrs HW=47.22' TW=46.24' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 1.94 cfs @ 2.47 fps)

Summary for Pond L179:

Inflow Area = 79.090 ac, 15.41% Impervious, Inflow Depth > 1.39" for 25-Year event
 Inflow = 44.68 cfs @ 12.46 hrs, Volume= 9.150 af
 Outflow = 44.68 cfs @ 12.46 hrs, Volume= 9.150 af, Atten= 0%, Lag= 0.0 min
 Primary = 25.27 cfs @ 13.04 hrs, Volume= 8.094 af
 Secondary = 20.56 cfs @ 12.46 hrs, Volume= 1.056 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 47.59' @ 12.46 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=18.32 cfs @ 13.04 hrs HW=46.45' TW=44.98' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 18.32 cfs @ 5.83 fps)

Secondary OutFlow Max=20.55 cfs @ 12.46 hrs HW=47.59' TW=46.45' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 20.55 cfs @ 5.14 fps)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 1.40" for 25-Year event
 Inflow = 33.52 cfs @ 12.34 hrs, Volume= 3.754 af
 Outflow = 33.52 cfs @ 12.34 hrs, Volume= 3.754 af, Atten= 0%, Lag= 0.0 min
 Primary = 8.57 cfs @ 12.34 hrs, Volume= 0.264 af
 Secondary = 24.95 cfs @ 12.34 hrs, Volume= 3.491 af

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 142.07' @ 12.34 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.57 cfs @ 12.34 hrs HW=142.07' TW=132.19' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 8.57 cfs @ 3.91 fps)

Secondary OutFlow Max=24.94 cfs @ 12.34 hrs HW=142.07' TW=140.39' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Orifice Controls 24.94 cfs @ 6.23 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 1.66" for 25-Year event
 Inflow = 21.10 cfs @ 12.38 hrs, Volume= 2.350 af
 Outflow = 21.10 cfs @ 12.38 hrs, Volume= 2.350 af, Atten= 0%, Lag= 0.0 min
 Primary = 21.10 cfs @ 12.38 hrs, Volume= 2.350 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 155.18' @ 12.38 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=21.09 cfs @ 12.38 hrs HW=155.17' TW=142.04' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 21.09 cfs @ 17.19 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.80' TW=158.00' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond LINK 110.1:

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 2.14" for 25-Year event
 Inflow = 36.11 cfs @ 12.20 hrs, Volume= 3.120 af
 Outflow = 36.11 cfs @ 12.20 hrs, Volume= 3.120 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.20 cfs @ 12.21 hrs, Volume= 2.468 af
 Secondary = 22.91 cfs @ 12.20 hrs, Volume= 0.652 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

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Peak Elev= 53.18' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.21 cfs @ 12.21 hrs HW=53.17' TW=47.09' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 13.21 cfs @ 7.47 fps)**Secondary OutFlow** Max=22.82 cfs @ 12.20 hrs HW=53.17' TW=51.77' (Dynamic Tailwater)↑**2=Orifice/Grate** (Orifice Controls 22.82 cfs @ 5.71 fps)**Summary for Pond P3:**

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 1.29" for 25-Year event
 Inflow = 26.96 cfs @ 12.26 hrs, Volume= 8.639 af
 Outflow = 26.96 cfs @ 12.26 hrs, Volume= 8.639 af, Atten= 0%, Lag= 0.0 min
 Primary = 26.96 cfs @ 12.26 hrs, Volume= 8.639 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 45.28' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=26.77 cfs @ 12.26 hrs HW=45.23' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 26.77 cfs @ 8.52 fps)**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=45.50' (Dynamic Tailwater)↑**2=Orifice/Grate** (Controls 0.00 cfs)**Summary for Pond P3B:**

Inflow Area = 21.740 ac, 17.11% Impervious, Inflow Depth > 1.90" for 25-Year event
 Inflow = 26.73 cfs @ 12.08 hrs, Volume= 3.440 af
 Outflow = 26.73 cfs @ 12.08 hrs, Volume= 3.440 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.53 cfs @ 11.81 hrs, Volume= 2.129 af
 Secondary = 19.29 cfs @ 12.08 hrs, Volume= 1.311 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 47.34' @ 12.09 hrs

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Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.92 cfs @ 11.81 hrs HW=45.83' TW=44.95' (Dynamic Tailwater)

↑**1=Culvert** (Outlet Controls 7.92 cfs @ 4.48 fps)

Secondary OutFlow Max=19.03 cfs @ 12.08 hrs HW=47.33' TW=46.36' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Orifice Controls 19.03 cfs @ 4.76 fps)

Summary for Pond P3C:

Inflow Area = 1.420 ac, 92.25% Impervious, Inflow Depth > 4.60" for 25-Year event
 Inflow = 7.63 cfs @ 12.07 hrs, Volume= 0.545 af
 Outflow = 7.63 cfs @ 12.07 hrs, Volume= 0.545 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.63 cfs @ 12.07 hrs, Volume= 0.545 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.40' @ 12.06 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf

Primary OutFlow Max=7.45 cfs @ 12.07 hrs HW=46.24' TW=45.08' (Dynamic Tailwater)

↑**1=Culvert** (Outlet Controls 7.45 cfs @ 4.22 fps)

Summary for Pond P53:

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 1.47" for 25-Year event
 Inflow = 41.07 cfs @ 12.34 hrs, Volume= 4.613 af
 Outflow = 40.90 cfs @ 12.37 hrs, Volume= 4.612 af, Atten= 0%, Lag= 1.5 min
 Primary = 40.90 cfs @ 12.37 hrs, Volume= 4.612 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 79.31' @ 12.37 hrs Surf.Area= 4,317 sf Storage= 2,086 cf

Plug-Flow detention time= 0.6 min calculated for 4.612 af (100% of inflow)
 Center-of-Mass det. time= 0.5 min (835.5 - 835.0)

Volume	Invert	Avail.Storage	Storage Description
#1	78.00'	43,344 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	0	0	0
78.25	545	68	68
78.50	1,089	204	272
78.75	1,634	340	613
79.00	2,178	477	1,089
79.25	3,920	762	1,852
79.50	5,663	1,198	3,049
79.75	7,405	1,634	4,683
80.00	9,148	2,069	6,752
84.00	9,148	36,592	43,344

Device	Routing	Invert	Outlet Devices
#1	Primary	78.00'	10.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=40.87 cfs @ 12.37 hrs HW=79.31' TW=68.72' (Dynamic Tailwater)

↑1=**Broad-Crested Rectangular Weir** (Weir Controls 40.87 cfs @ 3.13 fps)

Time span=0.00-20.00 hrs, dt=0.02 hrs, 1001 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment S5.1A: Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>1.72"
Tc=16.7 min CN=55 Runoff=22.53 cfs 2.184 af

Subcatchment S5.1B: Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>2.41"
Tc=25.4 min CN=63 Runoff=31.24 cfs 3.412 af

Subcatchment S5.1C: Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>2.98"
Tc=14.3 min CN=69 Runoff=50.71 cfs 4.353 af

Subcatchment S52: Runoff Area=3.030 ac 53.14% Impervious Runoff Depth>4.53"
Tc=5.0 min CN=84 Runoff=17.28 cfs 1.145 af

Subcatchment S53: Runoff Area=5.340 ac 6.37% Impervious Runoff Depth>2.79"
Tc=15.8 min CN=67 Runoff=13.90 cfs 1.242 af

Subcatchment S54: Runoff Area=1.790 ac 11.17% Impervious Runoff Depth>2.99"
Tc=14.0 min CN=69 Runoff=5.23 cfs 0.445 af

Subcatchment S54.1: Runoff Area=1.570 ac 5.10% Impervious Runoff Depth>2.79"
Tc=16.7 min CN=67 Runoff=4.00 cfs 0.365 af

Subcatchment S55: Runoff Area=13.380 ac 10.31% Impervious Runoff Depth>2.86"
Tc=36.7 min CN=68 Runoff=25.10 cfs 3.194 af

Subcatchment S56: Runoff Area=4.240 ac 32.31% Impervious Runoff Depth>3.69"
Tc=5.0 min CN=76 Runoff=20.26 cfs 1.304 af

Subcatchment S62: Runoff Area=0.380 ac 100.00% Impervious Runoff Depth>6.12"
Tc=5.0 min CN=98 Runoff=2.56 cfs 0.194 af

Subcatchment S63: Runoff Area=1.040 ac 89.42% Impervious Runoff Depth>5.54"
Tc=5.0 min CN=93 Runoff=6.76 cfs 0.480 af

Reach 2R: Avg. Flow Depth=1.00' Max Vel=2.62 fps Inflow=65.61 cfs 7.590 af
n=0.030 L=460.0' S=0.0073 '/ Capacity=417.73 cfs Outflow=64.96 cfs 7.566 af

Reach 3R: Avg. Flow Depth=1.19' Max Vel=1.86 fps Inflow=65.84 cfs 7.604 af
n=0.030 L=195.0' S=0.0028 '/ Capacity=122.08 cfs Outflow=65.61 cfs 7.590 af

Reach 4R: Avg. Flow Depth=0.64' Max Vel=3.48 fps Inflow=35.81 cfs 1.185 af
n=0.030 L=183.0' S=0.0231 '/ Capacity=117.03 cfs Outflow=35.74 cfs 1.185 af

Reach 5R: Avg. Flow Depth=0.32' Max Vel=2.45 fps Inflow=7.72 cfs 0.156 af
n=0.030 L=900.0' S=0.0289 '/ Capacity=20.61 cfs Outflow=6.30 cfs 0.156 af

Reach 6R: Avg. Flow Depth=0.42' Max Vel=6.88 fps Inflow=29.98 cfs 4.805 af
n=0.030 L=50.0' S=0.1600 '/ Capacity=48.49 cfs Outflow=29.97 cfs 4.804 af

- Reach 8R:** Avg. Flow Depth=0.35' Max Vel=1.38 fps Inflow=12.59 cfs 0.208 af
n=0.030 L=730.0' S=0.0080 '/ Capacity=10.87 cfs Outflow=4.29 cfs 0.208 af
- Reach L108:** Avg. Flow Depth=0.24' Max Vel=4.79 fps Inflow=47.96 cfs 5.595 af
n=0.030 L=774.0' S=0.0646 '/ Capacity=1,762.00 cfs Outflow=47.84 cfs 5.570 af
- Reach L133:** Avg. Flow Depth=0.82' Max Vel=5.80 fps Inflow=62.50 cfs 7.247 af
n=0.030 L=344.0' S=0.0343 '/ Capacity=842.72 cfs Outflow=62.45 cfs 7.238 af
- Reach L162:** Avg. Flow Depth=1.45' Max Vel=5.01 fps Inflow=58.77 cfs 6.812 af
n=0.030 L=394.0' S=0.0124 '/ Capacity=120.49 cfs Outflow=58.72 cfs 6.801 af
- Reach POA3:** Inflow=135.60 cfs 18.217 af
Outflow=135.60 cfs 18.217 af
- Pond 1R:** Peak Elev=74.40' Inflow=64.96 cfs 9.640 af
24.0" Round Culvert n=0.014 L=150.0' S=0.0013 '/ Outflow=64.96 cfs 9.640 af
- Pond 2P: Blue Hill Intersection** Peak Elev=46.54' Storage=10,470 cf Inflow=104.50 cfs 7.425 af
Outflow=104.24 cfs 7.401 af
- Pond 7R:** Peak Elev=48.81' Inflow=29.09 cfs 3.401 af
Primary=5.16 cfs 1.130 af Secondary=29.09 cfs 2.271 af Outflow=29.09 cfs 3.401 af
- Pond L164:** Peak Elev=52.55' Storage=5,183 cf Inflow=17.28 cfs 1.145 af
Primary=13.31 cfs 0.943 af Secondary=12.59 cfs 0.208 af Outflow=13.31 cfs 1.151 af
- Pond L176:** Peak Elev=48.92' Inflow=2.56 cfs 0.194 af
12.0" Round Culvert n=0.014 L=242.0' S=0.0100 '/ Outflow=2.56 cfs 0.194 af
- Pond L179:** Peak Elev=50.05' Inflow=64.96 cfs 12.194 af
Primary=28.90 cfs 10.143 af Secondary=36.06 cfs 2.051 af Outflow=64.96 cfs 12.194 af
- Pond Link 105:** Peak Elev=142.84' Inflow=45.76 cfs 5.440 af
Primary=15.79 cfs 0.635 af Secondary=29.98 cfs 4.805 af Outflow=45.76 cfs 5.440 af
- Pond Link 106:** Peak Elev=158.51' Inflow=31.24 cfs 3.412 af
Primary=23.63 cfs 3.256 af Secondary=7.72 cfs 0.156 af Outflow=31.24 cfs 3.412 af
- Pond LINK 110.1:** Peak Elev=55.32' Inflow=50.71 cfs 4.353 af
Primary=14.91 cfs 3.168 af Secondary=35.81 cfs 1.185 af Outflow=50.71 cfs 4.353 af
- Pond P3:** Peak Elev=46.41' Inflow=31.41 cfs 10.816 af
Primary=31.41 cfs 10.816 af Secondary=0.00 cfs 0.000 af Outflow=31.41 cfs 10.816 af
- Pond P3B:** Peak Elev=47.99' Inflow=32.25 cfs 4.472 af
Primary=8.88 cfs 2.554 af Secondary=23.89 cfs 1.918 af Outflow=32.25 cfs 4.472 af
- Pond P3C:** Peak Elev=47.38' Inflow=9.32 cfs 0.674 af
18.0" Round Culvert n=0.014 L=127.0' S=0.0172 '/ Outflow=9.32 cfs 0.674 af
- Pond P53:** Peak Elev=79.61' Storage=3,684 cf Inflow=59.02 cfs 6.813 af
Outflow=58.77 cfs 6.812 af

Total Runoff Area = 80.510 ac Runoff Volume = 18.318 af Average Runoff Depth = 2.73"
83.23% Pervious = 67.010 ac 16.77% Impervious = 13.500 ac

Summary for Subcatchment S5.1A:

Runoff = 22.53 cfs @ 12.25 hrs, Volume= 2.184 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 31.24 cfs @ 12.37 hrs, Volume= 3.412 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 50.71 cfs @ 12.20 hrs, Volume= 4.353 af, Depth> 2.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52:

Runoff = 17.28 cfs @ 12.07 hrs, Volume= 1.145 af, Depth> 4.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
1.420	69	50-75% Grass cover, Fair, HSG B
1.610	98	Paved parking & roofs
3.030	84	Weighted Average
1.420		46.86% Pervious Area
1.610		53.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S53:

Runoff = 13.90 cfs @ 12.22 hrs, Volume= 1.242 af, Depth> 2.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
5.000	65	Woods/grass comb., Fair, HSG B
0.340	98	Water Surface, HSG A
5.340	67	Weighted Average
5.000		93.63% Pervious Area
0.340		6.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 5.23 cfs @ 12.20 hrs, Volume= 0.445 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
1.590	65	Woods/grass comb., Fair, HSG B
0.200	98	Paved parking & roofs
1.790	69	Weighted Average
1.590		88.83% Pervious Area
0.200		11.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S54.1:

Runoff = 4.00 cfs @ 12.24 hrs, Volume= 0.365 af, Depth> 2.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
1.490	65	Woods/grass comb., Fair, HSG B
0.080	98	Paved parking & roofs
1.570	67	Weighted Average
1.490		94.90% Pervious Area
0.080		5.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S55:

Runoff = 25.10 cfs @ 12.52 hrs, Volume= 3.194 af, Depth> 2.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
12.000	65	Woods/grass comb., Fair, HSG B
1.380	98	Paved parking & roofs
13.380	68	Weighted Average
12.000		89.69% Pervious Area
1.380		10.31% Impervious Area

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Type III 24-hr 100-Year Rainfall=6.65"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7					Direct Entry,

Summary for Subcatchment S56:

Runoff = 20.26 cfs @ 12.07 hrs, Volume= 1.304 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
2.870	65	Woods/grass comb., Fair, HSG B
1.370	98	Paved parking & roofs
4.240	76	Weighted Average
2.870		67.69% Pervious Area
1.370		32.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S62:

Runoff = 2.56 cfs @ 12.07 hrs, Volume= 0.194 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
0.380	98	Paved parking & roofs
0.380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S63:

Runoff = 6.76 cfs @ 12.07 hrs, Volume= 0.480 af, Depth> 5.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
0.110	49	50-75% Grass cover, Fair, HSG A
0.930	98	Paved parking & roofs
1.040	93	Weighted Average
0.110		10.58% Pervious Area
0.930		89.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

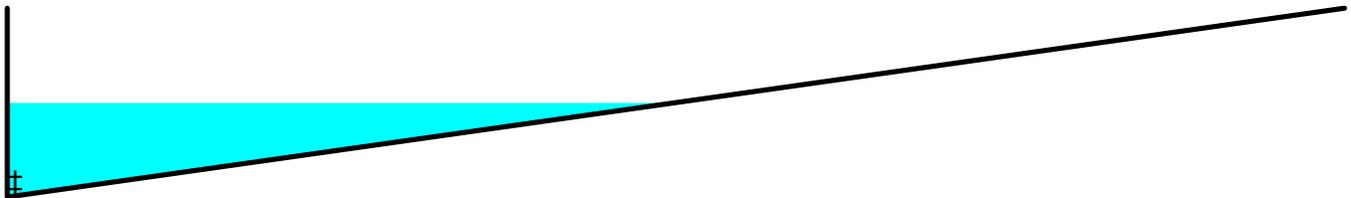
Summary for Reach 2R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 2.22" for 100-Year event
 Inflow = 65.61 cfs @ 12.37 hrs, Volume= 7.590 af
 Outflow = 64.96 cfs @ 12.42 hrs, Volume= 7.566 af, Atten= 1%, Lag= 3.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.62 fps, Min. Travel Time= 2.9 min
 Avg. Velocity = 1.31 fps, Avg. Travel Time= 5.8 min

Peak Storage= 11,391 cf @ 12.42 hrs
 Average Depth at Peak Storage= 1.00'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 417.73 cfs

0.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 100.00'
 Length= 460.0' Slope= 0.0073 '/'
 Inlet Invert= 50.25', Outlet Invert= 46.89'



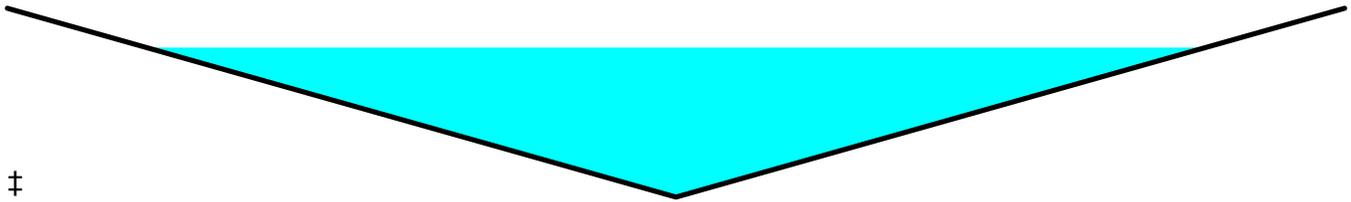
Summary for Reach 3R:

Inflow Area = 40.940 ac, 13.39% Impervious, Inflow Depth > 2.23" for 100-Year event
 Inflow = 65.84 cfs @ 12.34 hrs, Volume= 7.604 af
 Outflow = 65.61 cfs @ 12.37 hrs, Volume= 7.590 af, Atten= 0%, Lag= 1.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 1.86 fps, Min. Travel Time= 1.7 min
 Avg. Velocity = 0.93 fps, Avg. Travel Time= 3.5 min

Peak Storage= 6,885 cf @ 12.37 hrs
 Average Depth at Peak Storage= 1.19'
 Bank-Full Depth= 1.50' Flow Area= 56.3 sf, Capacity= 122.08 cfs

0.00' x 1.50' deep channel, n= 0.030
 Side Slope Z-value= 25.0 '/' Top Width= 75.00'
 Length= 195.0' Slope= 0.0028 '/'
 Inlet Invert= 50.80', Outlet Invert= 50.25'



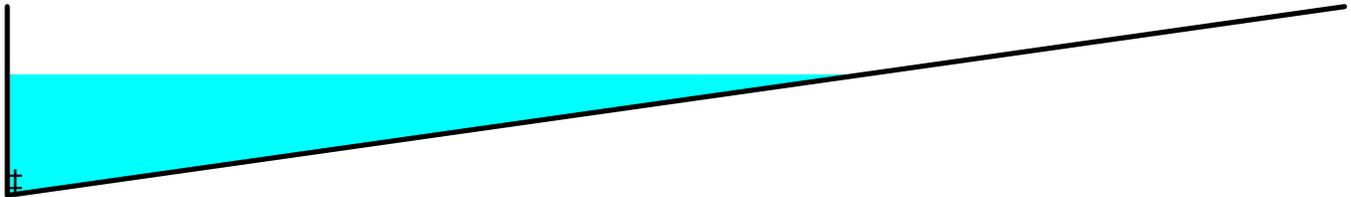
Summary for Reach 4R:

Inflow = 35.81 cfs @ 12.20 hrs, Volume= 1.185 af
 Outflow = 35.74 cfs @ 12.21 hrs, Volume= 1.185 af, Atten= 0%, Lag= 0.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 3.48 fps, Min. Travel Time= 0.9 min
 Avg. Velocity = 1.26 fps, Avg. Travel Time= 2.4 min

Peak Storage= 1,879 cf @ 12.21 hrs
 Average Depth at Peak Storage= 0.64'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 117.03 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 183.0' Slope= 0.0231 '/'
 Inlet Invert= 51.23', Outlet Invert= 47.00'



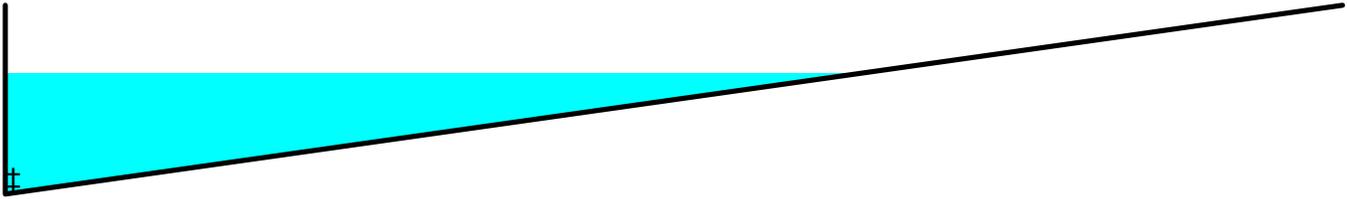
Summary for Reach 5R:

Inflow = 7.72 cfs @ 12.37 hrs, Volume= 0.156 af
 Outflow = 6.30 cfs @ 12.45 hrs, Volume= 0.156 af, Atten= 18%, Lag= 4.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 2.45 fps, Min. Travel Time= 6.1 min
 Avg. Velocity = 0.41 fps, Avg. Travel Time= 36.5 min

Peak Storage= 2,314 cf @ 12.45 hrs
 Average Depth at Peak Storage= 0.32'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



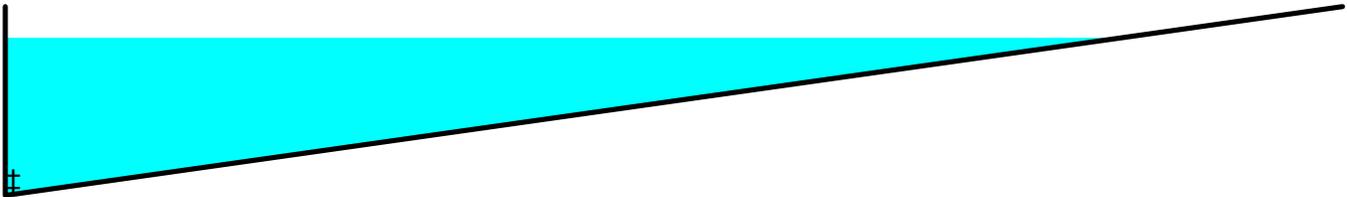
Summary for Reach 6R:

Inflow = 29.98 cfs @ 12.26 hrs, Volume= 4.805 af
 Outflow = 29.97 cfs @ 12.26 hrs, Volume= 4.804 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 6.88 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 4.06 fps, Avg. Travel Time= 0.2 min

Peak Storage= 218 cf @ 12.26 hrs
 Average Depth at Peak Storage= 0.42'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



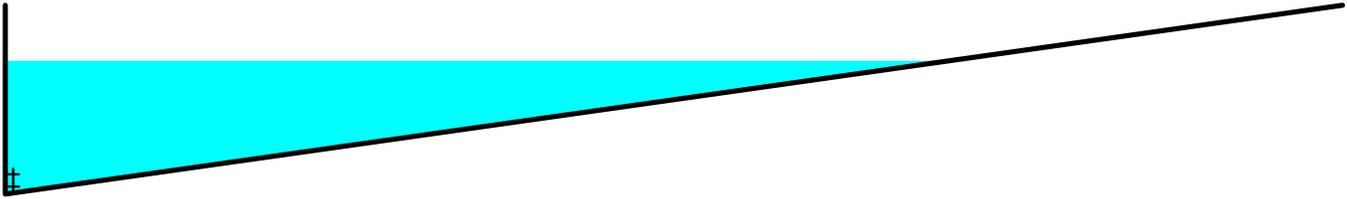
Summary for Reach 8R:

Inflow = 12.59 cfs @ 12.32 hrs, Volume= 0.208 af
 Outflow = 4.29 cfs @ 12.45 hrs, Volume= 0.208 af, Atten= 66%, Lag= 7.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 1.38 fps, Min. Travel Time= 8.8 min
 Avg. Velocity = 0.33 fps, Avg. Travel Time= 37.1 min

Peak Storage= 2,272 cf @ 12.45 hrs
 Average Depth at Peak Storage= 0.35'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 10.87 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 730.0' Slope= 0.0080 '/'
 Inlet Invert= 52.20', Outlet Invert= 46.33'



Summary for Reach L108:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 2.08" for 100-Year event
 Inflow = 47.96 cfs @ 12.37 hrs, Volume= 5.595 af
 Outflow = 47.84 cfs @ 12.40 hrs, Volume= 5.570 af, Atten= 0%, Lag= 1.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 4.79 fps, Min. Travel Time= 2.7 min
 Avg. Velocity = 1.93 fps, Avg. Travel Time= 6.7 min

Peak Storage= 7,722 cf @ 12.40 hrs
 Average Depth at Peak Storage= 0.24'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



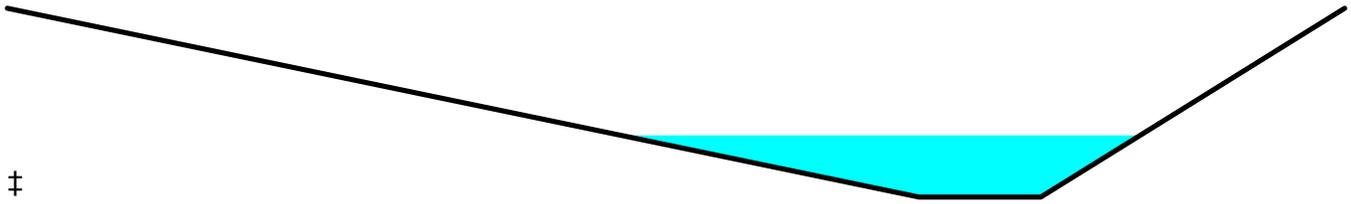
Summary for Reach L133:

Inflow Area = 39.370 ac, 13.72% Impervious, Inflow Depth > 2.21" for 100-Year event
 Inflow = 62.50 cfs @ 12.34 hrs, Volume= 7.247 af
 Outflow = 62.45 cfs @ 12.36 hrs, Volume= 7.238 af, Atten= 0%, Lag= 0.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 5.80 fps, Min. Travel Time= 1.0 min
 Avg. Velocity = 2.72 fps, Avg. Travel Time= 2.1 min

Peak Storage= 3,707 cf @ 12.36 hrs
 Average Depth at Peak Storage= 0.82'
 Bank-Full Depth= 2.50' Flow Area= 75.0 sf, Capacity= 842.72 cfs

5.00' x 2.50' deep channel, n= 0.030
 Side Slope Z-value= 15.0 5.0 '/' Top Width= 55.00'
 Length= 344.0' Slope= 0.0343 '/'
 Inlet Invert= 62.60', Outlet Invert= 50.80'



Summary for Reach L162:

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 2.18" for 100-Year event
 Inflow = 58.77 cfs @ 12.34 hrs, Volume= 6.812 af
 Outflow = 58.72 cfs @ 12.36 hrs, Volume= 6.801 af, Atten= 0%, Lag= 1.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Max. Velocity= 5.01 fps, Min. Travel Time= 1.3 min
 Avg. Velocity = 2.40 fps, Avg. Travel Time= 2.7 min

Peak Storage= 4,617 cf @ 12.36 hrs
 Average Depth at Peak Storage= 1.45'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 120.49 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 '/' Top Width= 17.00'
 Length= 394.0' Slope= 0.0124 '/'
 Inlet Invert= 67.50', Outlet Invert= 62.60'



Summary for Reach POA3:

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 2.72" for 100-Year event
 Inflow = 135.60 cfs @ 12.38 hrs, Volume= 18.217 af
 Outflow = 135.60 cfs @ 12.38 hrs, Volume= 18.217 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Summary for Pond 1R:

Inflow Area = 57.350 ac, 14.77% Impervious, Inflow Depth > 2.02" for 100-Year event
 Inflow = 64.96 cfs @ 12.42 hrs, Volume= 9.640 af
 Outflow = 64.96 cfs @ 12.42 hrs, Volume= 9.640 af, Atten= 0%, Lag= 0.0 min
 Primary = 64.96 cfs @ 12.42 hrs, Volume= 9.640 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 74.40' @ 12.43 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.10'	24.0" Round Culvert L= 150.0' Ke= 0.500 Inlet / Outlet Invert= 42.10' / 41.90' S= 0.0013 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=64.93 cfs @ 12.42 hrs HW=74.37' TW=50.05' (Dynamic Tailwater)

↑1=Culvert (Outlet Controls 64.93 cfs @ 20.67 fps)

Summary for Pond 2P: Blue Hill Intersection

Inflow = 104.50 cfs @ 12.35 hrs, Volume= 7.425 af
 Outflow = 104.24 cfs @ 12.37 hrs, Volume= 7.401 af, Atten= 0%, Lag= 1.3 min
 Primary = 104.24 cfs @ 12.37 hrs, Volume= 7.401 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 46.54' @ 12.37 hrs Surf.Area= 30,422 sf Storage= 10,470 cf

Plug-Flow detention time= 2.6 min calculated for 7.401 af (100% of inflow)
 Center-of-Mass det. time= 2.1 min (755.1 - 753.0)

Volume	Invert	Avail.Storage	Storage Description
#1	45.50'	29,372 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.50	1	0	0
46.00	4,216	1,054	1,054
47.00	52,420	28,318	29,372

Device	Routing	Invert	Outlet Devices
#1	Primary	46.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 47.50 46.50 46.00 46.50 47.50

Primary OutFlow Max=104.19 cfs @ 12.37 hrs HW=46.54' TW=0.00' (Dynamic Tailwater)

↑1=Curb (Weir Controls 104.19 cfs @ 1.04 fps)

Summary for Pond 7R:

Inflow Area = 13.380 ac, 10.31% Impervious, Inflow Depth > 3.05" for 100-Year event
 Inflow = 29.09 cfs @ 12.51 hrs, Volume= 3.401 af
 Outflow = 29.09 cfs @ 12.51 hrs, Volume= 3.401 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.16 cfs @ 13.68 hrs, Volume= 1.130 af
 Secondary = 29.09 cfs @ 12.51 hrs, Volume= 2.271 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 48.81' @ 12.50 hrs

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Type III 24-hr 100-Year Rainfall=6.65"

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Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 42.10' S= 0.0900 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.33'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 13.68 hrs HW=46.17' TW=47.94' (Dynamic Tailwater)

↳1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=29.11 cfs @ 12.51 hrs HW=48.81' TW=46.53' (Dynamic Tailwater)

↳2=Orifice/Grate (Orifice Controls 29.11 cfs @ 7.28 fps)

Summary for Pond L164:

Inflow Area = 3.030 ac, 53.14% Impervious, Inflow Depth > 4.53" for 100-Year event
 Inflow = 17.28 cfs @ 12.07 hrs, Volume= 1.145 af
 Outflow = 13.31 cfs @ 13.20 hrs, Volume= 1.151 af, Atten= 23%, Lag= 67.6 min
 Primary = 13.31 cfs @ 13.20 hrs, Volume= 0.943 af
 Secondary = 12.59 cfs @ 12.32 hrs, Volume= 0.208 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 52.55' @ 12.47 hrs Surf.Area= 9,200 sf Storage= 5,183 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 6.2 min (773.7 - 767.4)

Volume	Invert	Avail.Storage	Storage Description
#1	51.30'	5,183 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.30	1	0	0
52.00	4,805	1,682	1,682
52.50	9,200	3,501	5,183

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	24.0" Round Culvert L= 720.0' Ke= 0.500 Inlet / Outlet Invert= 45.80' / 42.10' S= 0.0051 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	51.50'	30.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 13.20 hrs HW=51.82' TW=51.92' (Dynamic Tailwater)

↳1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 12.32 hrs HW=52.49' TW=52.51' (Dynamic Tailwater)

↳2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond L176:

Inflow Area = 0.380 ac, 100.00% Impervious, Inflow Depth > 6.12" for 100-Year event
 Inflow = 2.56 cfs @ 12.07 hrs, Volume= 0.194 af
 Outflow = 2.56 cfs @ 12.07 hrs, Volume= 0.194 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.56 cfs @ 12.07 hrs, Volume= 0.194 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 48.92' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	45.80'	12.0" Round Culvert L= 242.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 45.80' / 43.38' S= 0.0100 '/ Cc= 0.900 n= 0.014, Flow Area= 0.79 sf

Primary OutFlow Max=2.32 cfs @ 12.07 hrs HW=48.66' TW=47.26' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 2.32 cfs @ 2.95 fps)

Summary for Pond L179:

Inflow Area = 79.090 ac, 15.41% Impervious, Inflow Depth > 1.85" for 100-Year event
 Inflow = 64.96 cfs @ 12.42 hrs, Volume= 12.194 af
 Outflow = 64.96 cfs @ 12.42 hrs, Volume= 12.194 af, Atten= 0%, Lag= 0.0 min
 Primary = 28.90 cfs @ 12.43 hrs, Volume= 10.143 af
 Secondary = 36.06 cfs @ 12.42 hrs, Volume= 2.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs
 Peak Elev= 50.05' @ 12.42 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=29.03 cfs @ 12.43 hrs HW=50.04' TW=46.36' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 29.03 cfs @ 9.24 fps)

Secondary OutFlow Max=36.07 cfs @ 12.42 hrs HW=50.05' TW=46.54' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 36.07 cfs @ 9.02 fps)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 2.02" for 100-Year event
 Inflow = 45.76 cfs @ 12.26 hrs, Volume= 5.440 af
 Outflow = 45.76 cfs @ 12.26 hrs, Volume= 5.440 af, Atten= 0%, Lag= 0.0 min
 Primary = 15.79 cfs @ 12.26 hrs, Volume= 0.635 af
 Secondary = 29.98 cfs @ 12.26 hrs, Volume= 4.805 af

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Type III 24-hr 100-Year Rainfall=6.65"

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 142.84' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.78 cfs @ 12.26 hrs HW=142.84' TW=132.23' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 15.78 cfs @ 5.02 fps)**Secondary OutFlow** Max=29.96 cfs @ 12.26 hrs HW=142.84' TW=140.42' (Dynamic Tailwater)↑**2=Orifice/Grate** (Orifice Controls 29.96 cfs @ 7.49 fps)**Summary for Pond Link 106:**

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 2.41" for 100-Year event
 Inflow = 31.24 cfs @ 12.37 hrs, Volume= 3.412 af
 Outflow = 31.24 cfs @ 12.37 hrs, Volume= 3.412 af, Atten= 0%, Lag= 0.0 min
 Primary = 23.63 cfs @ 12.48 hrs, Volume= 3.256 af
 Secondary = 7.72 cfs @ 12.37 hrs, Volume= 0.156 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 158.51' @ 12.39 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=23.64 cfs @ 12.48 hrs HW=158.43' TW=142.41' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 23.64 cfs @ 19.26 fps)**Secondary OutFlow** Max=7.50 cfs @ 12.37 hrs HW=158.50' TW=158.29' (Dynamic Tailwater)↑**2=Orifice/Grate** (Weir Controls 7.50 cfs @ 1.86 fps)**Summary for Pond LINK 110.1:**

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 2.98" for 100-Year event
 Inflow = 50.71 cfs @ 12.20 hrs, Volume= 4.353 af
 Outflow = 50.71 cfs @ 12.20 hrs, Volume= 4.353 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.91 cfs @ 12.20 hrs, Volume= 3.168 af
 Secondary = 35.81 cfs @ 12.20 hrs, Volume= 1.185 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

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Type III 24-hr 100-Year Rainfall=6.65"

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Peak Elev= 55.32' @ 12.20 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=14.74 cfs @ 12.20 hrs HW=55.32' TW=47.74' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 14.74 cfs @ 8.34 fps)**Secondary OutFlow** Max=35.76 cfs @ 12.20 hrs HW=55.32' TW=51.87' (Dynamic Tailwater)↑**2=Orifice/Grate** (Orifice Controls 35.76 cfs @ 8.94 fps)**Summary for Pond P3:**

Inflow Area = 80.510 ac, 16.77% Impervious, Inflow Depth > 1.61" for 100-Year event
 Inflow = 31.41 cfs @ 12.39 hrs, Volume= 10.816 af
 Outflow = 31.41 cfs @ 12.39 hrs, Volume= 10.816 af, Atten= 0%, Lag= 0.0 min
 Primary = 31.41 cfs @ 12.39 hrs, Volume= 10.816 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 46.41' @ 12.39 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=31.39 cfs @ 12.39 hrs HW=46.41' TW=0.00' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 31.39 cfs @ 9.99 fps)**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=45.50' (Dynamic Tailwater)↑**2=Orifice/Grate** (Controls 0.00 cfs)**Summary for Pond P3B:**

Inflow Area = 21.740 ac, 17.11% Impervious, Inflow Depth > 2.47" for 100-Year event
 Inflow = 32.25 cfs @ 12.08 hrs, Volume= 4.472 af
 Outflow = 32.25 cfs @ 12.08 hrs, Volume= 4.472 af, Atten= 0%, Lag= 0.0 min
 Primary = 8.88 cfs @ 11.69 hrs, Volume= 2.554 af
 Secondary = 23.89 cfs @ 12.09 hrs, Volume= 1.918 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 47.99' @ 12.27 hrs

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Type III 24-hr 100-Year Rainfall=6.65"

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Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.95 cfs @ 11.69 hrs HW=45.85' TW=45.17' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 6.95 cfs @ 3.94 fps)**Secondary OutFlow** Max=23.66 cfs @ 12.09 hrs HW=47.95' TW=46.44' (Dynamic Tailwater)↑**2=Orifice/Grate** (Orifice Controls 23.66 cfs @ 5.92 fps)**Summary for Pond P3C:**

Inflow Area = 1.420 ac, 92.25% Impervious, Inflow Depth > 5.69" for 100-Year event
 Inflow = 9.32 cfs @ 12.07 hrs, Volume= 0.674 af
 Outflow = 9.32 cfs @ 12.07 hrs, Volume= 0.674 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.32 cfs @ 12.07 hrs, Volume= 0.674 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 47.38' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf

Primary OutFlow Max=9.17 cfs @ 12.07 hrs HW=47.26' TW=45.51' (Dynamic Tailwater)↑**1=Culvert** (Outlet Controls 9.17 cfs @ 5.19 fps)**Summary for Pond P53:**

Inflow Area = 37.580 ac, 13.84% Impervious, Inflow Depth > 2.18" for 100-Year event
 Inflow = 59.02 cfs @ 12.30 hrs, Volume= 6.813 af
 Outflow = 58.77 cfs @ 12.34 hrs, Volume= 6.812 af, Atten= 0%, Lag= 2.5 min
 Primary = 58.77 cfs @ 12.34 hrs, Volume= 6.812 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.02 hrs

Peak Elev= 79.61' @ 12.34 hrs Surf.Area= 6,397 sf Storage= 3,684 cf

Plug-Flow detention time= 0.7 min calculated for 6.805 af (100% of inflow)

Center-of-Mass det. time= 0.6 min (827.0 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	78.00'	43,344 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 100-Year Rainfall=6.65"

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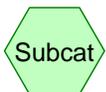
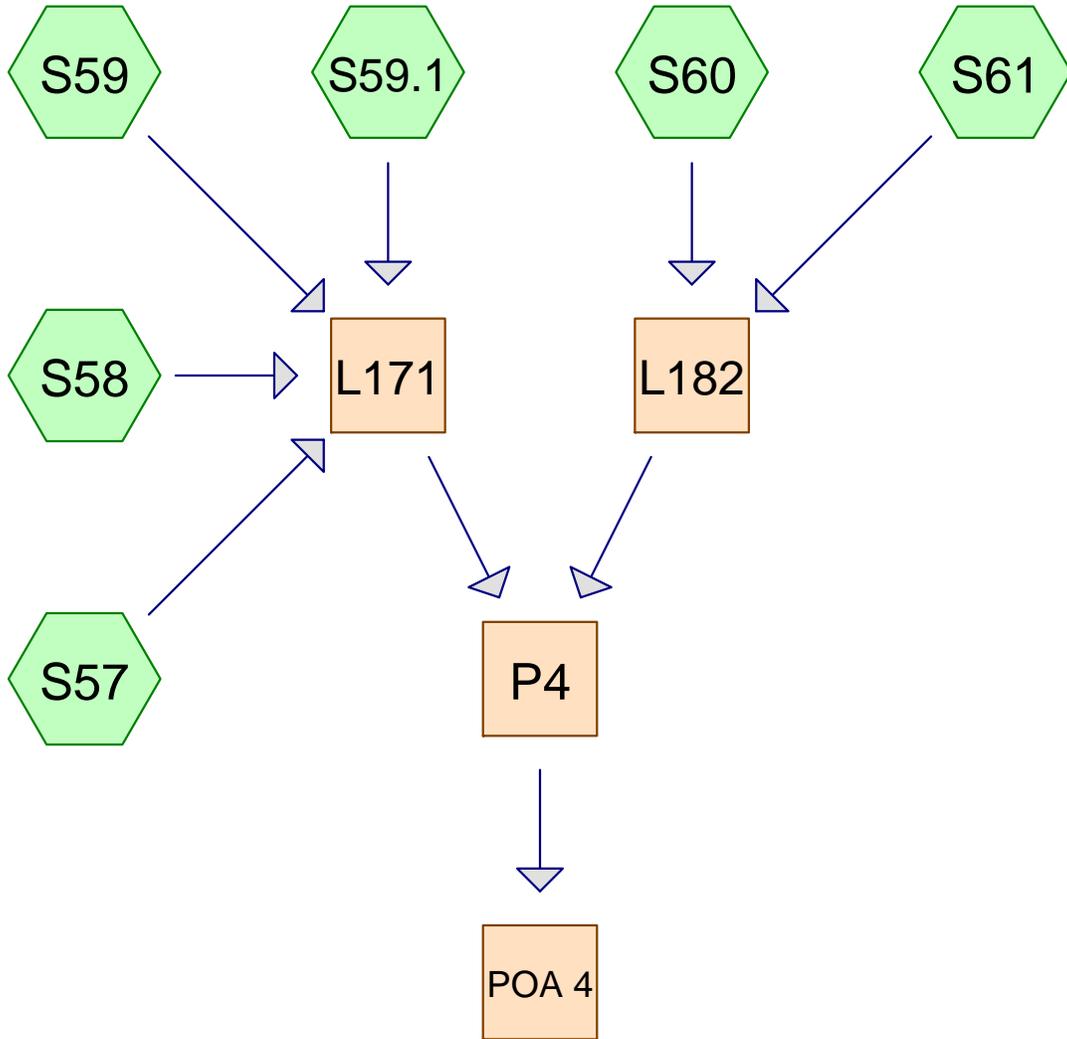
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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
78.00	0	0	0
78.25	545	68	68
78.50	1,089	204	272
78.75	1,634	340	613
79.00	2,178	477	1,089
79.25	3,920	762	1,852
79.50	5,663	1,198	3,049
79.75	7,405	1,634	4,683
80.00	9,148	2,069	6,752
84.00	9,148	36,592	43,344

Device	Routing	Invert	Outlet Devices
#1	Primary	78.00'	10.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=58.76 cfs @ 12.34 hrs HW=79.61' TW=68.95' (Dynamic Tailwater)

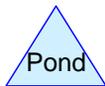
↑1=**Broad-Crested Rectangular Weir** (Weir Controls 58.76 cfs @ 3.66 fps)



Subcat



Reach



Pond



Link

Routing Diagram for 3659-12003C-Existing Conditions POA 4-01

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
7.940	49	(S57, S58, S59, S59.1, S60, S61)
12.020	98	(S57, S58, S59, S59.1, S60, S61)
19.960	79	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	19.960	19.960		S57, S58, S59, S59.1, S60, S61
0.000	0.000	0.000	0.000	19.960	19.960	TOTAL AREA	

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment S57: Runoff Area=5.320 ac 93.98% Impervious Runoff Depth>2.51"
Tc=5.0 min CN=95 Runoff=15.69 cfs 1.112 af

Subcatchment S58: Runoff Area=2.110 ac 85.78% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=91 Runoff=5.53 cfs 0.374 af

Subcatchment S59: Runoff Area=1.900 ac 80.53% Impervious Runoff Depth>1.87"
Tc=5.0 min CN=88 Runoff=4.43 cfs 0.296 af

Subcatchment S59.1: Runoff Area=1.680 ac 42.26% Impervious Runoff Depth>0.75"
Tc=5.0 min CN=70 Runoff=1.48 cfs 0.105 af

Subcatchment S60: Runoff Area=4.600 ac 51.74% Impervious Runoff Depth>0.95"
Tc=5.0 min CN=74 Runoff=5.34 cfs 0.363 af

Subcatchment S61: Runoff Area=4.350 ac 13.56% Impervious Runoff Depth>0.23"
Flow Length=700' Slope=0.0050 '/ Tc=45.9 min CN=56 Runoff=0.33 cfs 0.083 af

Reach L171: Avg. Flow Depth=2.05' Max Vel=5.24 fps Inflow=27.11 cfs 1.887 af
36.0" Round Pipe n=0.014 L=138.0' S=0.0029 '/ Capacity=33.34 cfs Outflow=26.55 cfs 1.886 af

Reach L182: Avg. Flow Depth=0.65' Max Vel=4.06 fps Inflow=5.34 cfs 0.446 af
48.0" Round Pipe n=0.014 L=100.0' S=0.0050 '/ Capacity=94.32 cfs Outflow=5.27 cfs 0.446 af

Reach P4: Avg. Flow Depth=2.01' Max Vel=4.57 fps Inflow=31.80 cfs 2.332 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/ Capacity=57.47 cfs Outflow=29.02 cfs 2.321 af

Reach POA 4: Inflow=29.02 cfs 2.321 af
Outflow=29.02 cfs 2.321 af

Total Runoff Area = 19.960 ac Runoff Volume = 2.333 af Average Runoff Depth = 1.40"
39.78% Pervious = 7.940 ac 60.22% Impervious = 12.020 ac

Summary for Subcatchment S57:

Runoff = 15.69 cfs @ 12.07 hrs, Volume= 1.112 af, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.320	49	
* 5.000	98	
5.320	95	Weighted Average
0.320		6.02% Pervious Area
5.000		93.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 5.53 cfs @ 12.07 hrs, Volume= 0.374 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.300	49	
* 1.810	98	
2.110	91	Weighted Average
0.300		14.22% Pervious Area
1.810		85.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 4.43 cfs @ 12.08 hrs, Volume= 0.296 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.370	49	
* 1.530	98	
1.900	88	Weighted Average
0.370		19.47% Pervious Area
1.530		80.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59.1:

Runoff = 1.48 cfs @ 12.09 hrs, Volume= 0.105 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.970	49	
* 0.710	98	
1.680	70	Weighted Average
0.970		57.74% Pervious Area
0.710		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S60:

Runoff = 5.34 cfs @ 12.09 hrs, Volume= 0.363 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.220	49	
* 2.380	98	
4.600	74	Weighted Average
2.220		48.26% Pervious Area
2.380		51.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S61:

Runoff = 0.33 cfs @ 12.91 hrs, Volume= 0.083 af, Depth> 0.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 3.760	49	
* 0.590	98	
4.350	56	Weighted Average
3.760		86.44% Pervious Area
0.590		13.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.3					Direct Entry,
1.6	700	0.0050	7.51	94.32	Pipe Channel,
					48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00'
					n= 0.014
45.9	700	Total			

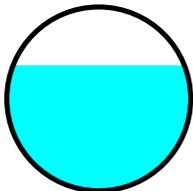
Summary for Reach L171:

Inflow Area = 11.010 ac, 82.20% Impervious, Inflow Depth > 2.06" for 2-Year event
 Inflow = 27.11 cfs @ 12.07 hrs, Volume= 1.887 af
 Outflow = 26.55 cfs @ 12.09 hrs, Volume= 1.886 af, Atten= 2%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.24 fps, Min. Travel Time= 0.4 min
 Avg. Velocity= 1.86 fps, Avg. Travel Time= 1.2 min

Peak Storage= 710 cf @ 12.08 hrs
 Average Depth at Peak Storage= 2.05'
 Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 33.34 cfs

36.0" Round Pipe
 n= 0.014
 Length= 138.0' Slope= 0.0029 '/'
 Inlet Invert= 41.70', Outlet Invert= 41.30'



Summary for Reach L182:

Inflow Area = 8.950 ac, 33.18% Impervious, Inflow Depth > 0.60" for 2-Year event
 Inflow = 5.34 cfs @ 12.09 hrs, Volume= 0.446 af
 Outflow = 5.27 cfs @ 12.10 hrs, Volume= 0.446 af, Atten= 1%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 4.06 fps, Min. Travel Time= 0.4 min
 Avg. Velocity= 1.87 fps, Avg. Travel Time= 0.9 min

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Type III 24-hr 2-Year Rainfall=3.20"

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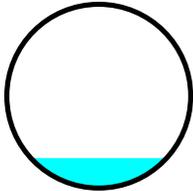
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Peak Storage= 132 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.65'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 94.32 cfs

48.0" Round Pipe
n= 0.014
Length= 100.0' Slope= 0.0050 '/'
Inlet Invert= 39.70', Outlet Invert= 39.20'



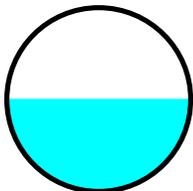
Summary for Reach P4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 1.40" for 2-Year event
Inflow = 31.80 cfs @ 12.09 hrs, Volume= 2.332 af
Outflow = 29.02 cfs @ 12.18 hrs, Volume= 2.321 af, Atten= 9%, Lag= 5.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.57 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 1.63 fps, Avg. Travel Time= 8.5 min

Peak Storage= 5,294 cf @ 12.13 hrs
Average Depth at Peak Storage= 2.01'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 1.40" for 2-Year event
Inflow = 29.02 cfs @ 12.18 hrs, Volume= 2.321 af
Outflow = 29.02 cfs @ 12.18 hrs, Volume= 2.321 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment S57: Runoff Area=5.320 ac 93.98% Impervious Runoff Depth>3.82"
Tc=5.0 min CN=95 Runoff=23.31 cfs 1.696 af

Subcatchment S58: Runoff Area=2.110 ac 85.78% Impervious Runoff Depth>3.40"
Tc=5.0 min CN=91 Runoff=8.61 cfs 0.598 af

Subcatchment S59: Runoff Area=1.900 ac 80.53% Impervious Runoff Depth>3.10"
Tc=5.0 min CN=88 Runoff=7.23 cfs 0.491 af

Subcatchment S59.1: Runoff Area=1.680 ac 42.26% Impervious Runoff Depth>1.60"
Tc=5.0 min CN=70 Runoff=3.36 cfs 0.224 af

Subcatchment S60: Runoff Area=4.600 ac 51.74% Impervious Runoff Depth>1.90"
Tc=5.0 min CN=74 Runoff=10.98 cfs 0.726 af

Subcatchment S61: Runoff Area=4.350 ac 13.56% Impervious Runoff Depth>0.73"
Flow Length=700' Slope=0.0050 '/ Tc=45.9 min CN=56 Runoff=1.55 cfs 0.265 af

Reach L171: Avg. Flow Depth=3.00' Max Vel=5.36 fps Inflow=42.49 cfs 3.009 af
36.0" Round Pipe n=0.014 L=138.0' S=0.0029 '/ Capacity=33.34 cfs Outflow=35.61 cfs 3.008 af

Reach L182: Avg. Flow Depth=0.93' Max Vel=5.02 fps Inflow=11.03 cfs 0.991 af
48.0" Round Pipe n=0.014 L=100.0' S=0.0050 '/ Capacity=94.32 cfs Outflow=10.93 cfs 0.991 af

Reach P4: Avg. Flow Depth=2.58' Max Vel=5.01 fps Inflow=44.24 cfs 3.998 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/ Capacity=57.47 cfs Outflow=42.85 cfs 3.984 af

Reach POA 4: Inflow=42.85 cfs 3.984 af
Outflow=42.85 cfs 3.984 af

Total Runoff Area = 19.960 ac Runoff Volume = 4.000 af Average Runoff Depth = 2.40"
39.78% Pervious = 7.940 ac 60.22% Impervious = 12.020 ac

Summary for Subcatchment S57:

Runoff = 23.31 cfs @ 12.07 hrs, Volume= 1.696 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.320	49	
* 5.000	98	
5.320	95	Weighted Average
0.320		6.02% Pervious Area
5.000		93.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 8.61 cfs @ 12.07 hrs, Volume= 0.598 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.300	49	
* 1.810	98	
2.110	91	Weighted Average
0.300		14.22% Pervious Area
1.810		85.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 7.23 cfs @ 12.07 hrs, Volume= 0.491 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.370	49	
* 1.530	98	
1.900	88	Weighted Average
0.370		19.47% Pervious Area
1.530		80.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59.1:

Runoff = 3.36 cfs @ 12.08 hrs, Volume= 0.224 af, Depth> 1.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.970	49	
* 0.710	98	
1.680	70	Weighted Average
0.970		57.74% Pervious Area
0.710		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S60:

Runoff = 10.98 cfs @ 12.08 hrs, Volume= 0.726 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.220	49	
* 2.380	98	
4.600	74	Weighted Average
2.220		48.26% Pervious Area
2.380		51.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S61:

Runoff = 1.55 cfs @ 12.75 hrs, Volume= 0.265 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 3.760	49	
* 0.590	98	
4.350	56	Weighted Average
3.760		86.44% Pervious Area
0.590		13.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.3					Direct Entry,
1.6	700	0.0050	7.51	94.32	Pipe Channel,
					48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00'
					n= 0.014
45.9	700	Total			

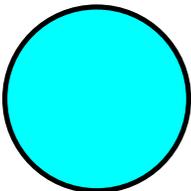
Summary for Reach L171:

Inflow Area = 11.010 ac, 82.20% Impervious, Inflow Depth > 3.28" for 10-Year event
 Inflow = 42.49 cfs @ 12.07 hrs, Volume= 3.009 af
 Outflow = 35.61 cfs @ 12.18 hrs, Volume= 3.008 af, Atten= 16%, Lag= 6.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.36 fps, Min. Travel Time= 0.4 min
 Avg. Velocity = 2.10 fps, Avg. Travel Time= 1.1 min

Peak Storage= 975 cf @ 12.05 hrs
 Average Depth at Peak Storage= 3.00'
 Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 33.34 cfs

36.0" Round Pipe
 n= 0.014
 Length= 138.0' Slope= 0.0029 '/'
 Inlet Invert= 41.70', Outlet Invert= 41.30'



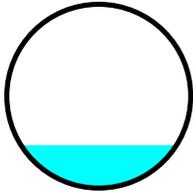
Summary for Reach L182:

Inflow Area = 8.950 ac, 33.18% Impervious, Inflow Depth > 1.33" for 10-Year event
 Inflow = 11.03 cfs @ 12.08 hrs, Volume= 0.991 af
 Outflow = 10.93 cfs @ 12.09 hrs, Volume= 0.991 af, Atten= 1%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.02 fps, Min. Travel Time= 0.3 min
 Avg. Velocity = 2.23 fps, Avg. Travel Time= 0.7 min

Peak Storage= 220 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 94.32 cfs

48.0" Round Pipe
n= 0.014
Length= 100.0' Slope= 0.0050 '/'
Inlet Invert= 39.70', Outlet Invert= 39.20'



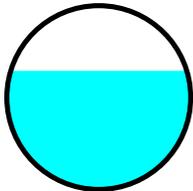
Summary for Reach P4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 2.40" for 10-Year event
Inflow = 44.24 cfs @ 12.10 hrs, Volume= 3.998 af
Outflow = 42.85 cfs @ 12.20 hrs, Volume= 3.984 af, Atten= 3%, Lag= 5.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.01 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 1.88 fps, Avg. Travel Time= 7.4 min

Peak Storage= 7,148 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.58'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 2.39" for 10-Year event
Inflow = 42.85 cfs @ 12.20 hrs, Volume= 3.984 af
Outflow = 42.85 cfs @ 12.20 hrs, Volume= 3.984 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment S57: Runoff Area=5.320 ac 93.98% Impervious Runoff Depth>4.68"
Tc=5.0 min CN=95 Runoff=28.17 cfs 2.073 af

Subcatchment S58: Runoff Area=2.110 ac 85.78% Impervious Runoff Depth>4.23"
Tc=5.0 min CN=91 Runoff=10.58 cfs 0.745 af

Subcatchment S59: Runoff Area=1.900 ac 80.53% Impervious Runoff Depth>3.92"
Tc=5.0 min CN=88 Runoff=9.02 cfs 0.620 af

Subcatchment S59.1: Runoff Area=1.680 ac 42.26% Impervious Runoff Depth>2.23"
Tc=5.0 min CN=70 Runoff=4.72 cfs 0.312 af

Subcatchment S60: Runoff Area=4.600 ac 51.74% Impervious Runoff Depth>2.57"
Tc=5.0 min CN=74 Runoff=14.93 cfs 0.986 af

Subcatchment S61: Runoff Area=4.350 ac 13.56% Impervious Runoff Depth>1.15"
Flow Length=700' Slope=0.0050 '/' Tc=45.9 min CN=56 Runoff=2.66 cfs 0.418 af

Reach L171: Avg. Flow Depth=3.00' Max Vel=5.37 fps Inflow=52.47 cfs 3.750 af
36.0" Round Pipe n=0.014 L=138.0' S=0.0029 '/' Capacity=33.34 cfs Outflow=33.44 cfs 3.749 af

Reach L182: Avg. Flow Depth=1.09' Max Vel=5.49 fps Inflow=15.15 cfs 1.404 af
48.0" Round Pipe n=0.014 L=100.0' S=0.0050 '/' Capacity=94.32 cfs Outflow=15.02 cfs 1.404 af

Reach P4: Avg. Flow Depth=2.75' Max Vel=5.10 fps Inflow=48.38 cfs 5.152 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/' Capacity=57.47 cfs Outflow=47.12 cfs 5.135 af

Reach POA 4: Inflow=47.12 cfs 5.135 af
Outflow=47.12 cfs 5.135 af

Total Runoff Area = 19.960 ac Runoff Volume = 5.155 af Average Runoff Depth = 3.10"
39.78% Pervious = 7.940 ac 60.22% Impervious = 12.020 ac

Summary for Subcatchment S57:

Runoff = 28.17 cfs @ 12.07 hrs, Volume= 2.073 af, Depth> 4.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.320	49	
* 5.000	98	
5.320	95	Weighted Average
0.320		6.02% Pervious Area
5.000		93.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 10.58 cfs @ 12.07 hrs, Volume= 0.745 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.300	49	
* 1.810	98	
2.110	91	Weighted Average
0.300		14.22% Pervious Area
1.810		85.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 9.02 cfs @ 12.07 hrs, Volume= 0.620 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.370	49	
* 1.530	98	
1.900	88	Weighted Average
0.370		19.47% Pervious Area
1.530		80.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59.1:

Runoff = 4.72 cfs @ 12.08 hrs, Volume= 0.312 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.970	49	
* 0.710	98	
1.680	70	Weighted Average
0.970		57.74% Pervious Area
0.710		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S60:

Runoff = 14.93 cfs @ 12.08 hrs, Volume= 0.986 af, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.220	49	
* 2.380	98	
4.600	74	Weighted Average
2.220		48.26% Pervious Area
2.380		51.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S61:

Runoff = 2.66 cfs @ 12.72 hrs, Volume= 0.418 af, Depth> 1.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 3.760	49	
* 0.590	98	
4.350	56	Weighted Average
3.760		86.44% Pervious Area
0.590		13.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.3					Direct Entry,
1.6	700	0.0050	7.51	94.32	Pipe Channel,
					48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00'
					n= 0.014
45.9	700	Total			

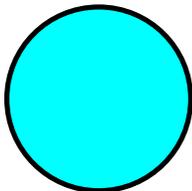
Summary for Reach L171:

Inflow Area = 11.010 ac, 82.20% Impervious, Inflow Depth > 4.09" for 25-Year event
 Inflow = 52.47 cfs @ 12.07 hrs, Volume= 3.750 af
 Outflow = 33.44 cfs @ 12.05 hrs, Volume= 3.749 af, Atten= 36%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.37 fps, Min. Travel Time= 0.4 min
 Avg. Velocity= 2.23 fps, Avg. Travel Time= 1.0 min

Peak Storage= 975 cf @ 12.05 hrs
 Average Depth at Peak Storage= 3.00'
 Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 33.34 cfs

36.0" Round Pipe
 n= 0.014
 Length= 138.0' Slope= 0.0029 '/'
 Inlet Invert= 41.70', Outlet Invert= 41.30'



Summary for Reach L182:

Inflow Area = 8.950 ac, 33.18% Impervious, Inflow Depth > 1.88" for 25-Year event
 Inflow = 15.15 cfs @ 12.08 hrs, Volume= 1.404 af
 Outflow = 15.02 cfs @ 12.09 hrs, Volume= 1.404 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.49 fps, Min. Travel Time= 0.3 min
 Avg. Velocity= 2.39 fps, Avg. Travel Time= 0.7 min

3659-12003C-Existing Conditions POA 4-01

Type III 24-hr 25-Year Rainfall=5.50"

Prepared by {enter your company name here}

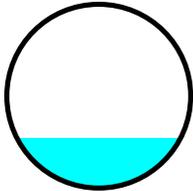
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Peak Storage= 276 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.09'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 94.32 cfs

48.0" Round Pipe
n= 0.014
Length= 100.0' Slope= 0.0050 '/'
Inlet Invert= 39.70', Outlet Invert= 39.20'



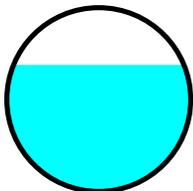
Summary for Reach P4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 3.10" for 25-Year event
Inflow = 48.38 cfs @ 12.09 hrs, Volume= 5.152 af
Outflow = 47.12 cfs @ 12.17 hrs, Volume= 5.135 af, Atten= 3%, Lag= 5.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.10 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 6.9 min

Peak Storage= 7,695 cf @ 12.13 hrs
Average Depth at Peak Storage= 2.75'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 3.09" for 25-Year event
Inflow = 47.12 cfs @ 12.17 hrs, Volume= 5.135 af
Outflow = 47.12 cfs @ 12.17 hrs, Volume= 5.135 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment S57: Runoff Area=5.320 ac 93.98% Impervious Runoff Depth>5.77"
Tc=5.0 min CN=95 Runoff=34.34 cfs 2.557 af

Subcatchment S58: Runoff Area=2.110 ac 85.78% Impervious Runoff Depth>5.31"
Tc=5.0 min CN=91 Runoff=13.08 cfs 0.934 af

Subcatchment S59: Runoff Area=1.900 ac 80.53% Impervious Runoff Depth>4.97"
Tc=5.0 min CN=88 Runoff=11.30 cfs 0.787 af

Subcatchment S59.1: Runoff Area=1.680 ac 42.26% Impervious Runoff Depth>3.09"
Tc=5.0 min CN=70 Runoff=6.56 cfs 0.433 af

Subcatchment S60: Runoff Area=4.600 ac 51.74% Impervious Runoff Depth>3.49"
Tc=5.0 min CN=74 Runoff=20.18 cfs 1.338 af

Subcatchment S61: Runoff Area=4.350 ac 13.56% Impervious Runoff Depth>1.78"
Flow Length=700' Slope=0.0050 '/ Tc=45.9 min CN=56 Runoff=4.32 cfs 0.644 af

Reach L171: Avg. Flow Depth=3.00' Max Vel=5.33 fps Inflow=65.27 cfs 4.711 af
36.0" Round Pipe n=0.014 L=138.0' S=0.0029 '/ Capacity=33.34 cfs Outflow=33.34 cfs 4.709 af

Reach L182: Avg. Flow Depth=1.28' Max Vel=6.01 fps Inflow=20.78 cfs 1.982 af
48.0" Round Pipe n=0.014 L=100.0' S=0.0050 '/ Capacity=94.32 cfs Outflow=20.63 cfs 1.981 af

Reach P4: Avg. Flow Depth=3.00' Max Vel=5.18 fps Inflow=53.97 cfs 6.691 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/ Capacity=57.47 cfs Outflow=52.23 cfs 6.670 af

Reach POA 4: Inflow=52.23 cfs 6.670 af
Outflow=52.23 cfs 6.670 af

Total Runoff Area = 19.960 ac Runoff Volume = 6.694 af Average Runoff Depth = 4.02"
39.78% Pervious = 7.940 ac 60.22% Impervious = 12.020 ac

Summary for Subcatchment S57:

Runoff = 34.34 cfs @ 12.07 hrs, Volume= 2.557 af, Depth> 5.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.320	49	
* 5.000	98	
5.320	95	Weighted Average
0.320		6.02% Pervious Area
5.000		93.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 13.08 cfs @ 12.07 hrs, Volume= 0.934 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.300	49	
* 1.810	98	
2.110	91	Weighted Average
0.300		14.22% Pervious Area
1.810		85.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 11.30 cfs @ 12.07 hrs, Volume= 0.787 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.370	49	
* 1.530	98	
1.900	88	Weighted Average
0.370		19.47% Pervious Area
1.530		80.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59.1:

Runoff = 6.56 cfs @ 12.08 hrs, Volume= 0.433 af, Depth> 3.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.970	49	
* 0.710	98	
1.680	70	Weighted Average
0.970		57.74% Pervious Area
0.710		42.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S60:

Runoff = 20.18 cfs @ 12.08 hrs, Volume= 1.338 af, Depth> 3.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.220	49	
* 2.380	98	
4.600	74	Weighted Average
2.220		48.26% Pervious Area
2.380		51.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S61:

Runoff = 4.32 cfs @ 12.69 hrs, Volume= 0.644 af, Depth> 1.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 3.760	49	
* 0.590	98	
4.350	56	Weighted Average
3.760		86.44% Pervious Area
0.590		13.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.3					Direct Entry,
1.6	700	0.0050	7.51	94.32	Pipe Channel, 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.014
45.9	700	Total			

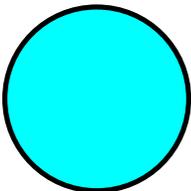
Summary for Reach L171:

Inflow Area = 11.010 ac, 82.20% Impervious, Inflow Depth > 5.14" for 100-Year event
 Inflow = 65.27 cfs @ 12.07 hrs, Volume= 4.711 af
 Outflow = 33.34 cfs @ 12.05 hrs, Volume= 4.709 af, Atten= 49%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 5.33 fps, Min. Travel Time= 0.4 min
 Avg. Velocity = 2.37 fps, Avg. Travel Time= 1.0 min

Peak Storage= 975 cf @ 12.00 hrs
 Average Depth at Peak Storage= 3.00'
 Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 33.34 cfs

36.0" Round Pipe
 n= 0.014
 Length= 138.0' Slope= 0.0029 '/'
 Inlet Invert= 41.70', Outlet Invert= 41.30'



Summary for Reach L182:

Inflow Area = 8.950 ac, 33.18% Impervious, Inflow Depth > 2.66" for 100-Year event
 Inflow = 20.78 cfs @ 12.08 hrs, Volume= 1.982 af
 Outflow = 20.63 cfs @ 12.09 hrs, Volume= 1.981 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 6.01 fps, Min. Travel Time= 0.3 min
 Avg. Velocity = 2.56 fps, Avg. Travel Time= 0.7 min

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Type III 24-hr 100-Year Rainfall=6.65"

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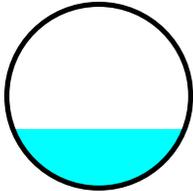
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Peak Storage= 346 cf @ 12.08 hrs
Average Depth at Peak Storage= 1.28'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 94.32 cfs

48.0" Round Pipe
n= 0.014
Length= 100.0' Slope= 0.0050 '/'
Inlet Invert= 39.70', Outlet Invert= 39.20'



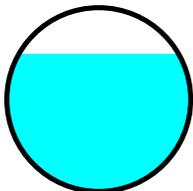
Summary for Reach P4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 4.02" for 100-Year event
Inflow = 53.97 cfs @ 12.09 hrs, Volume= 6.691 af
Outflow = 52.23 cfs @ 12.17 hrs, Volume= 6.670 af, Atten= 3%, Lag= 4.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.18 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 2.16 fps, Avg. Travel Time= 6.5 min

Peak Storage= 8,439 cf @ 12.12 hrs
Average Depth at Peak Storage= 3.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

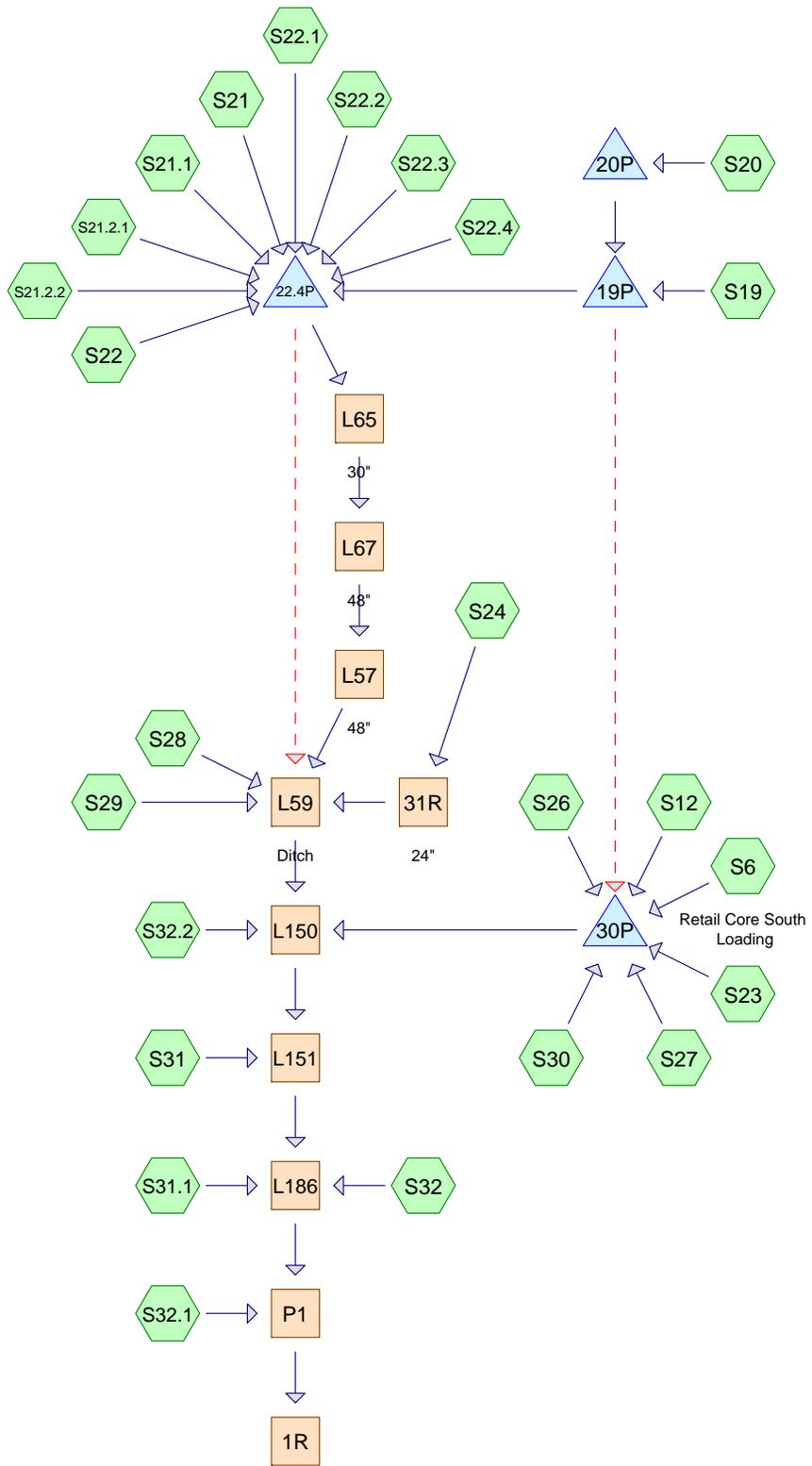
48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



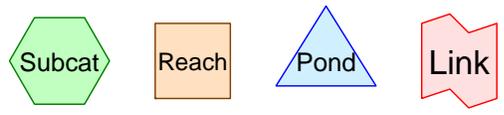
Summary for Reach POA 4:

Inflow Area = 19.960 ac, 60.22% Impervious, Inflow Depth > 4.01" for 100-Year event
Inflow = 52.23 cfs @ 12.17 hrs, Volume= 6.670 af
Outflow = 52.23 cfs @ 12.17 hrs, Volume= 6.670 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



Point of Analysis 1



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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.842	43	(S12, S19)
41.146	98	(S12, S19, S20, S21, S21.1, S21.2.1, S22, S22.1, S22.2, S22.3, S23, S24, S27, S28, S31, S31.1, S32, S32.1, S32.2)
3.360	65	(S19)
9.300	76	(S19)
10.444	49	(S21, S21.1, S21.2.1, S21.2.2, S23, S26, S30, S32.1, S32.2)
5.680	69	(S22, S22.1, S22.2, S22.3, S22.4, S28, S32)
4.940	60	(S22.4, S31.1)
0.620	89	(S28, S31.1)
0.440	79	(S31.1)
0.936	39	>75% Grass cover, Good, HSG A (S6)
6.351	61	>75% Grass cover, Good, HSG B (S27, S29, S31)
1.226	98	Paved parking, HSG A (S6)
0.695	98	Paved parking, HSG B (S29)
97.980	76	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	88.772	88.772		S12, S19, S20, S21, S21.1, S21.2.1, S21.2.2, S22, S22.1, S22.2, S22.3, S22.4, S23, S24, S26, S27, S28, S30, S31, S31.1, S32, S32.1, S32.2
0.936	6.351	0.000	0.000	0.000	7.287	>75% Grass cover, Good	S27, S29, S31, S6
1.226	0.695	0.000	0.000	0.000	1.921	Paved parking	S29, S6
2.162	7.046	0.000	0.000	88.772	97.980	TOTAL AREA	

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S12:** Runoff Area=218,472 sf 12.42% Impervious Runoff Depth>0.10"
Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=50 Runoff=0.10 cfs 0.042 af
- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>0.66"
Tc=11.4 min CN=68 Runoff=15.48 cfs 1.409 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>2.83"
Tc=5.0 min CN=98 Runoff=8.25 cfs 0.622 af
- Subcatchment S21:** Runoff Area=5.517 ac 62.75% Impervious Runoff Depth>1.29"
Flow Length=640' Slope=0.0600 '/' Tc=12.1 min CN=80 Runoff=7.28 cfs 0.594 af
- Subcatchment S21.1:** Runoff Area=48,374 sf 22.82% Impervious Runoff Depth>0.35"
Flow Length=410' Tc=11.6 min CN=60 Runoff=0.25 cfs 0.033 af
- Subcatchment S21.2.1:** Runoff Area=4,774 sf 72.83% Impervious Runoff Depth>1.64"
Tc=5.0 min CN=85 Runoff=0.23 cfs 0.015 af
- Subcatchment S21.2.2:** Runoff Area=13,984 sf 0.00% Impervious Runoff Depth>0.08"
Flow Length=90' Slope=0.0070 '/' Tc=13.2 min CN=49 Runoff=0.00 cfs 0.002 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>2.04"
Tc=5.0 min CN=90 Runoff=8.17 cfs 0.549 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>1.87"
Tc=5.0 min CN=88 Runoff=7.02 cfs 0.470 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=91 Runoff=5.81 cfs 0.394 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=91 Runoff=3.01 cfs 0.204 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>0.36"
Tc=5.0 min CN=60 Runoff=1.42 cfs 0.147 af
- Subcatchment S23:** Runoff Area=269,131 sf 76.11% Impervious Runoff Depth>1.71"
Flow Length=2,025' Tc=12.4 min CN=86 Runoff=10.73 cfs 0.880 af
- Subcatchment S24:** Runoff Area=26,018 sf 100.00% Impervious Runoff Depth>2.83"
Tc=5.0 min CN=98 Runoff=1.87 cfs 0.141 af
- Subcatchment S26:** Runoff Area=127,956 sf 0.00% Impervious Runoff Depth>0.08"
Tc=5.0 min CN=49 Runoff=0.04 cfs 0.021 af
- Subcatchment S27:** Runoff Area=249,700 sf 86.24% Impervious Runoff Depth>2.31"
Tc=5.0 min CN=93 Runoff=16.01 cfs 1.104 af

Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>2.04" Tc=5.0 min CN=90 Runoff=22.38 cfs 1.504 af
Subcatchment S29:	Runoff Area=144,253 sf 20.98% Impervious Runoff Depth>0.70" Tc=7.8 min CN=69 Runoff=2.42 cfs 0.194 af
Subcatchment S30:	Runoff Area=81,302 sf 0.00% Impervious Runoff Depth>0.08" Tc=5.0 min CN=49 Runoff=0.03 cfs 0.013 af
Subcatchment S31:	Runoff Area=170,766 sf 24.87% Impervious Runoff Depth>0.74" Tc=14.4 min CN=70 Runoff=2.58 cfs 0.243 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>1.64" Tc=9.2 min CN=85 Runoff=1.67 cfs 0.125 af
Subcatchment S32:	Runoff Area=63,019 sf 49.57% Impervious Runoff Depth>1.50" Tc=5.0 min CN=83 Runoff=2.73 cfs 0.180 af
Subcatchment S32.1:	Runoff Area=124,022 sf 80.54% Impervious Runoff Depth>1.87" Tc=5.0 min CN=88 Runoff=6.64 cfs 0.444 af
Subcatchment S32.2:	Runoff Area=92,636 sf 83.67% Impervious Runoff Depth>2.04" Tc=5.0 min CN=90 Runoff=5.38 cfs 0.361 af
Subcatchment S6: Retail Core South	Runoff Area=94,182 sf 56.70% Impervious Runoff Depth>0.84" Flow Length=926' Tc=9.5 min CN=72 Runoff=1.90 cfs 0.152 af
Reach 1R: Point of Analysis 1	Inflow=50.27 cfs 9.455 af Outflow=50.27 cfs 9.455 af
Reach 31R: 24"	Avg. Flow Depth=0.62' Max Vel=2.06 fps Inflow=1.87 cfs 0.141 af 24.0" Round Pipe n=0.014 L=420.0' S=0.0015 '/ Capacity=8.20 cfs Outflow=1.68 cfs 0.140 af
Reach L150:	Avg. Flow Depth=1.26' Max Vel=3.13 fps Inflow=43.81 cfs 8.511 af n=0.030 L=136.0' S=0.0043 '/ Capacity=654.46 cfs Outflow=43.16 cfs 8.501 af
Reach L151:	Avg. Flow Depth=1.23' Max Vel=5.26 fps Inflow=45.71 cfs 8.744 af n=0.030 L=155.0' S=0.0148 '/ Capacity=2,128.99 cfs Outflow=45.57 cfs 8.738 af
Reach L186:	Avg. Flow Depth=1.89' Max Vel=2.59 fps Inflow=48.36 cfs 9.044 af n=0.030 L=340.0' S=0.0020 '/ Capacity=279.47 cfs Outflow=47.45 cfs 9.013 af
Reach L57: 48"	Avg. Flow Depth=1.23' Max Vel=5.33 fps Inflow=17.47 cfs 4.074 af 48.0" Round Pipe n=0.014 L=446.0' S=0.0041 '/ Capacity=85.21 cfs Outflow=17.46 cfs 4.066 af
Reach L59: Ditch	Avg. Flow Depth=1.22' Max Vel=3.36 fps Inflow=35.54 cfs 5.904 af n=0.030 L=430.0' S=0.0053 '/ Capacity=196.83 cfs Outflow=34.30 cfs 5.884 af
Reach L65: 30"	Avg. Flow Depth=0.59' Max Vel=19.68 fps Inflow=17.47 cfs 4.077 af 30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/ Capacity=142.22 cfs Outflow=17.48 cfs 4.077 af
Reach L67: 48"	Avg. Flow Depth=1.00' Max Vel=7.12 fps Inflow=17.48 cfs 4.077 af 48.0" Round Pipe n=0.014 L=185.0' S=0.0092 '/ Capacity=127.86 cfs Outflow=17.47 cfs 4.074 af

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Type III 24-hr 2-Year Rainfall=3.20"

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Reach P1: Avg. Flow Depth=0.61' Max Vel=6.92 fps Inflow=50.54 cfs 9.457 af
n=0.030 L=46.0' S=0.0435 '/ Capacity=407.83 cfs Outflow=50.27 cfs 9.455 af

Pond 19P: Peak Elev=139.31' Storage=1,830 cf Inflow=23.26 cfs 2.029 af
Primary=10.66 cfs 1.756 af Secondary=10.75 cfs 0.270 af Outflow=21.41 cfs 2.026 af

Pond 20P: Peak Elev=167.55' Storage=2,838 cf Inflow=8.25 cfs 0.622 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/ Outflow=11.03 cfs 0.620 af

Pond 22.4P: Peak Elev=74.15' Storage=39,122 cf Inflow=41.20 cfs 4.163 af
Primary=17.47 cfs 4.077 af Secondary=0.00 cfs 0.000 af Outflow=17.47 cfs 4.077 af

Pond 30P: Peak Elev=49.81' Storage=47,784 cf Inflow=36.54 cfs 2.482 af
Outflow=10.60 cfs 2.266 af

Total Runoff Area = 97.980 ac Runoff Volume = 9.843 af Average Runoff Depth = 1.21"
56.05% Pervious = 54.913 ac 43.95% Impervious = 43.067 ac

Summary for Subcatchment S12:

Runoff = 0.10 cfs @ 12.94 hrs, Volume= 0.042 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 191,337	43	
* 27,135	98	
218,472	50	Weighted Average
191,337		87.58% Pervious Area
27,135		12.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel,
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'
					n= 0.014
18.6	260	Total			

Summary for Subcatchment S19:

Runoff = 15.48 cfs @ 12.19 hrs, Volume= 1.409 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 8.25 cfs @ 12.07 hrs, Volume= 0.622 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 7.28 cfs @ 12.17 hrs, Volume= 0.594 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.055	49	
* 3.462	98	
5.517	80	Weighted Average
2.055		37.25% Pervious Area
3.462		62.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					Direct Entry,
0.6	640	0.0600	19.11	60.03	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 0.25 cfs @ 12.26 hrs, Volume= 0.033 af, Depth> 0.35"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 37,334	49	
* 11,040	98	
48,374	60	Weighted Average
37,334		77.18% Pervious Area
11,040		22.82% Impervious Area

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Type III 24-hr 2-Year Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.015 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 3,477	98	
* 1,297	49	
4,774	85	Weighted Average
1,297		27.17% Pervious Area
3,477		72.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.00 cfs @ 13.78 hrs, Volume= 0.002 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 13,984	49	
13,984		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 8.17 cfs @ 12.07 hrs, Volume= 0.549 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 7.02 cfs @ 12.08 hrs, Volume= 0.470 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 5.81 cfs @ 12.07 hrs, Volume= 0.394 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 3.01 cfs @ 12.07 hrs, Volume= 0.204 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 1.42 cfs @ 12.12 hrs, Volume= 0.147 af, Depth> 0.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23:

Runoff = 10.73 cfs @ 12.17 hrs, Volume= 0.880 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (sf)	CN	Description
* 64,303	49	
* 204,828	98	
269,131	86	Weighted Average
64,303		23.89% Pervious Area
204,828		76.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0250	0.19		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
0.9	156	0.0350	3.01		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	174	0.0360	3.85		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.2	40	0.0050	4.03	4.95	Pipe Channel, 15" HDPE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.5	1,555	0.0200	17.51	220.07	Pipe Channel, 48" HDPE 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.012
12.4	2,025	Total			

Summary for Subcatchment S24:

Runoff = 1.87 cfs @ 12.07 hrs, Volume= 0.141 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 26,018	98	
26,018		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S26:

Runoff = 0.04 cfs @ 13.65 hrs, Volume= 0.021 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 127,956	49	
127,956		100.00% Pervious Area

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Type III 24-hr 2-Year Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S27:

Runoff = 16.01 cfs @ 12.07 hrs, Volume= 1.104 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
34,357	61	>75% Grass cover, Good, HSG B
* 215,343	98	
249,700	93	Weighted Average
34,357		13.76% Pervious Area
215,343		86.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S28:

Runoff = 22.38 cfs @ 12.07 hrs, Volume= 1.504 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 2.42 cfs @ 12.13 hrs, Volume= 0.194 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (sf)	CN	Description
113,984	61	>75% Grass cover, Good, HSG B
30,269	98	Paved parking, HSG B
144,253	69	Weighted Average
113,984		79.02% Pervious Area
30,269		20.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 0.03 cfs @ 13.65 hrs, Volume= 0.013 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 81,302	49	
81,302		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S31:

Runoff = 2.58 cfs @ 12.22 hrs, Volume= 0.243 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
128,293	61	>75% Grass cover, Good, HSG B
* 42,473	98	
170,766	70	Weighted Average
128,293		75.13% Pervious Area
42,473		24.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 1.67 cfs @ 12.13 hrs, Volume= 0.125 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 2.73 cfs @ 12.08 hrs, Volume= 0.180 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 31,783	69	
* 31,236	98	
63,019	83	Weighted Average
31,783		50.43% Pervious Area
31,236		49.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 6.64 cfs @ 12.08 hrs, Volume= 0.444 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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	Area (sf)	CN	Description
*	24,135	49	
*	99,887	98	
	124,022	88	Weighted Average
	24,135		19.46% Pervious Area
	99,887		80.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.2:

Runoff = 5.38 cfs @ 12.07 hrs, Volume= 0.361 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	15,123	49	
*	77,513	98	
	92,636	90	Weighted Average
	15,123		16.33% Pervious Area
	77,513		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S6: Retail Core South Loading

Runoff = 1.90 cfs @ 12.15 hrs, Volume= 0.152 af, Depth> 0.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
	40,780	39	>75% Grass cover, Good, HSG A
	53,402	98	Paved parking, HSG A
	94,182	72	Weighted Average
	40,780		43.30% Pervious Area
	53,402		56.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	75	0.1460	0.24		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.2	100	0.2700	8.37		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	45	0.0010	0.98	0.19	Pipe Channel, Underdrain 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.012
3.4	706	0.0050	3.47	2.73	Pipe Channel, 12" Pipe 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
9.5	926	Total			

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 1.16" for 2-Year event
 Inflow = 50.27 cfs @ 12.28 hrs, Volume= 9.455 af
 Outflow = 50.27 cfs @ 12.28 hrs, Volume= 9.455 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

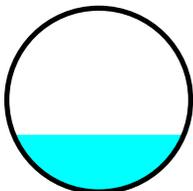
Summary for Reach 31R: 24"

Inflow Area = 0.597 ac, 100.00% Impervious, Inflow Depth > 2.83" for 2-Year event
 Inflow = 1.87 cfs @ 12.07 hrs, Volume= 0.141 af
 Outflow = 1.68 cfs @ 12.17 hrs, Volume= 0.140 af, Atten= 10%, Lag= 5.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.06 fps, Min. Travel Time= 3.4 min
 Avg. Velocity = 0.72 fps, Avg. Travel Time= 9.7 min

Peak Storage= 347 cf @ 12.11 hrs
 Average Depth at Peak Storage= 0.62'
 Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 8.20 cfs

24.0" Round Pipe
 n= 0.014
 Length= 420.0' Slope= 0.0015 '/'
 Inlet Invert= 47.70', Outlet Invert= 47.06'



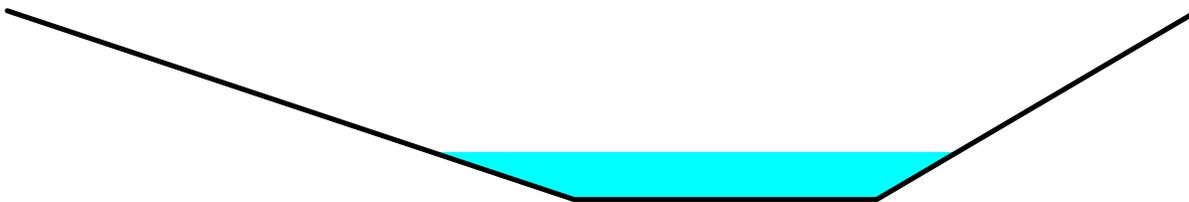
Summary for Reach L150:

Inflow Area = 88.846 ac, 43.59% Impervious, Inflow Depth > 1.15" for 2-Year event
Inflow = 43.81 cfs @ 12.17 hrs, Volume= 8.511 af
Outflow = 43.16 cfs @ 12.20 hrs, Volume= 8.501 af, Atten= 1%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.13 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.22 fps, Avg. Travel Time= 1.9 min

Peak Storage= 1,880 cf @ 12.18 hrs
Average Depth at Peak Storage= 1.26'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/' Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/'
Inlet Invert= 48.58', Outlet Invert= 48.00'



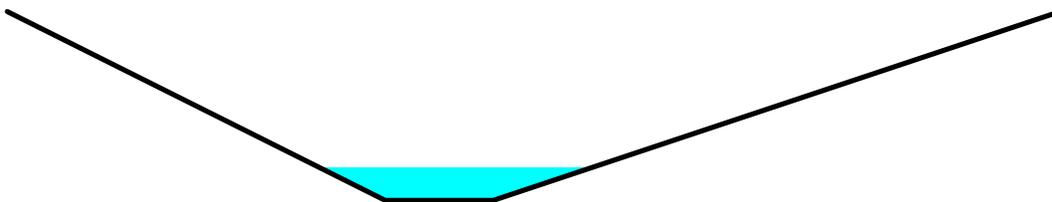
Summary for Reach L151:

Inflow Area = 92.766 ac, 42.80% Impervious, Inflow Depth > 1.13" for 2-Year event
Inflow = 45.71 cfs @ 12.20 hrs, Volume= 8.744 af
Outflow = 45.57 cfs @ 12.22 hrs, Volume= 8.738 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.26 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.22 fps, Avg. Travel Time= 1.2 min

Peak Storage= 1,348 cf @ 12.21 hrs
Average Depth at Peak Storage= 1.23'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 95.133 ac, 42.86% Impervious, Inflow Depth > 1.14" for 2-Year event
Inflow = 48.36 cfs @ 12.21 hrs, Volume= 9.044 af
Outflow = 47.45 cfs @ 12.28 hrs, Volume= 9.013 af, Atten= 2%, Lag= 4.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.59 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 1.01 fps, Avg. Travel Time= 5.6 min

Peak Storage= 6,270 cf @ 12.24 hrs
Average Depth at Peak Storage= 1.89'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



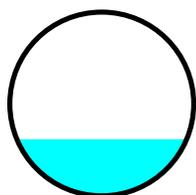
Summary for Reach L57: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 0.98" for 2-Year event
Inflow = 17.47 cfs @ 12.52 hrs, Volume= 4.074 af
Outflow = 17.46 cfs @ 12.56 hrs, Volume= 4.066 af, Atten= 0%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.33 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 2.32 fps, Avg. Travel Time= 3.2 min

Peak Storage= 1,461 cf @ 12.54 hrs
Average Depth at Peak Storage= 1.23'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 85.21 cfs

48.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0041 '/'
Inlet Invert= 49.00', Outlet Invert= 47.18'



Summary for Reach L59: Ditch

Inflow Area = 62.827 ac, 40.52% Impervious, Inflow Depth > 1.13" for 2-Year event
Inflow = 35.54 cfs @ 12.10 hrs, Volume= 5.904 af
Outflow = 34.30 cfs @ 12.17 hrs, Volume= 5.884 af, Atten= 3%, Lag= 4.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.36 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 1.23 fps, Avg. Travel Time= 5.8 min

Peak Storage= 4,433 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.22'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



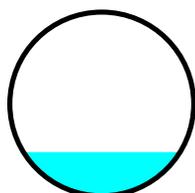
Summary for Reach L65: 30"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 0.98" for 2-Year event
Inflow = 17.47 cfs @ 12.51 hrs, Volume= 4.077 af
Outflow = 17.48 cfs @ 12.51 hrs, Volume= 4.077 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 19.68 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 8.59 fps, Avg. Travel Time= 0.2 min

Peak Storage= 92 cf @ 12.50 hrs
Average Depth at Peak Storage= 0.59'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



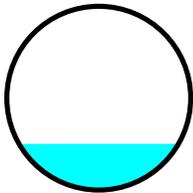
Summary for Reach L67: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 0.98" for 2-Year event
Inflow = 17.48 cfs @ 12.51 hrs, Volume= 4.077 af
Outflow = 17.47 cfs @ 12.52 hrs, Volume= 4.074 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.12 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.10 fps, Avg. Travel Time= 1.0 min

Peak Storage= 454 cf @ 12.51 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 127.86 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0092 '/'
Inlet Invert= 50.70', Outlet Invert= 49.00'



Summary for Reach P1:

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 1.16" for 2-Year event
Inflow = 50.54 cfs @ 12.27 hrs, Volume= 9.457 af
Outflow = 50.27 cfs @ 12.28 hrs, Volume= 9.455 af, Atten= 1%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.92 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.41 fps, Avg. Travel Time= 0.3 min

Peak Storage= 335 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.61'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
Length= 46.0' Slope= 0.0435 '/'
Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 0.86" for 2-Year event
 Inflow = 23.26 cfs @ 12.11 hrs, Volume= 2.029 af
 Outflow = 21.41 cfs @ 12.14 hrs, Volume= 2.026 af, Atten= 8%, Lag= 1.7 min
 Primary = 10.66 cfs @ 12.14 hrs, Volume= 1.756 af
 Secondary = 10.75 cfs @ 12.14 hrs, Volume= 0.270 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 139.31' @ 12.14 hrs Surf.Area= 2,248 sf Storage= 1,830 cf

Plug-Flow detention time= 2.5 min calculated for 2.026 af (100% of inflow)
 Center-of-Mass det. time= 1.9 min (809.6 - 807.7)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=10.61 cfs @ 12.14 hrs HW=139.31' (Free Discharge)
 ↑1=Culvert (Inlet Controls 10.61 cfs @ 4.18 fps)

Secondary OutFlow Max=10.50 cfs @ 12.14 hrs HW=139.31' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 10.50 cfs @ 1.49 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 2.83" for 2-Year event
 Inflow = 8.25 cfs @ 12.07 hrs, Volume= 0.622 af
 Outflow = 11.03 cfs @ 12.10 hrs, Volume= 0.620 af, Atten= 0%, Lag= 1.7 min
 Primary = 11.03 cfs @ 12.10 hrs, Volume= 0.620 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

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Type III 24-hr 2-Year Rainfall=3.20"

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Peak Elev= 167.55' @ 12.10 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 13.1 min calculated for 0.618 af (99% of inflow)
 Center-of-Mass det. time= 11.3 min (739.2 - 727.9)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=10.97 cfs @ 12.10 hrs HW=167.54' (Free Discharge)
 ←1=Culvert (Inlet Controls 10.97 cfs @ 4.23 fps)

Summary for Pond 22.4P:

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 1.00" for 2-Year event
 Inflow = 41.20 cfs @ 12.10 hrs, Volume= 4.163 af
 Outflow = 17.47 cfs @ 12.51 hrs, Volume= 4.077 af, Atten= 58%, Lag= 24.4 min
 Primary = 17.47 cfs @ 12.51 hrs, Volume= 4.077 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 74.15' @ 12.51 hrs Surf.Area= 22,559 sf Storage= 39,122 cf

Plug-Flow detention time= 34.1 min calculated for 4.067 af (98% of inflow)
 Center-of-Mass det. time= 26.3 min (829.1 - 802.8)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/ S= 0.0100 Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=17.47 cfs @ 12.51 hrs HW=74.15' (Free Discharge)

↑**2=Culvert** (Inlet Controls 17.47 cfs @ 7.26 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 30P:

Inflow Area = 23.892 ac, 48.11% Impervious, Inflow Depth > 1.25" for 2-Year event
 Inflow = 36.54 cfs @ 12.12 hrs, Volume= 2.482 af
 Outflow = 10.60 cfs @ 12.51 hrs, Volume= 2.266 af, Atten= 71%, Lag= 23.6 min
 Primary = 10.60 cfs @ 12.51 hrs, Volume= 2.266 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 49.81' @ 12.51 hrs Surf.Area= 60,719 sf Storage= 47,784 cf

Plug-Flow detention time= 102.1 min calculated for 2.260 af (91% of inflow)
 Center-of-Mass det. time= 73.2 min (852.2 - 779.0)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	264,538 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.00	57,194	0	0
50.00	61,543	59,369	59,369
51.00	66,022	63,783	123,151
52.00	70,631	68,327	191,478
53.00	75,490	73,061	264,538

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	90.0 deg x 4.0' long x 2.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#2	Primary	52.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=10.58 cfs @ 12.51 hrs HW=49.81' (Free Discharge)

- ↑ 1=Sharp-Crested Vee/Trap Weir (Weir Controls 10.58 cfs @ 2.72 fps)
- └ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S12:** Runoff Area=218,472 sf 12.42% Impervious Runoff Depth>0.46"
Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=50 Runoff=1.27 cfs 0.192 af
- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>1.46"
Tc=11.4 min CN=68 Runoff=38.41 cfs 3.139 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>4.16"
Tc=5.0 min CN=98 Runoff=11.95 cfs 0.916 af
- Subcatchment S21:** Runoff Area=5.517 ac 62.75% Impervious Runoff Depth>2.37"
Flow Length=640' Slope=0.0600 '/' Tc=12.1 min CN=80 Runoff=13.42 cfs 1.090 af
- Subcatchment S21.1:** Runoff Area=48,374 sf 22.82% Impervious Runoff Depth>0.96"
Flow Length=410' Tc=11.6 min CN=60 Runoff=0.98 cfs 0.089 af
- Subcatchment S21.2.1:** Runoff Area=4,774 sf 72.83% Impervious Runoff Depth>2.82"
Tc=5.0 min CN=85 Runoff=0.38 cfs 0.026 af
- Subcatchment S21.2.2:** Runoff Area=13,984 sf 0.00% Impervious Runoff Depth>0.42"
Flow Length=90' Slope=0.0070 '/' Tc=13.2 min CN=49 Runoff=0.07 cfs 0.011 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>3.30"
Tc=5.0 min CN=90 Runoff=12.90 cfs 0.888 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>3.10"
Tc=5.0 min CN=88 Runoff=11.46 cfs 0.778 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>3.40"
Tc=5.0 min CN=91 Runoff=9.06 cfs 0.629 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>3.40"
Tc=5.0 min CN=91 Runoff=4.69 cfs 0.326 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>0.97"
Tc=5.0 min CN=60 Runoff=5.48 cfs 0.400 af
- Subcatchment S23:** Runoff Area=269,131 sf 76.11% Impervious Runoff Depth>2.90"
Flow Length=2,025' Tc=12.4 min CN=86 Runoff=17.96 cfs 1.495 af
- Subcatchment S24:** Runoff Area=26,018 sf 100.00% Impervious Runoff Depth>4.16"
Tc=5.0 min CN=98 Runoff=2.70 cfs 0.207 af
- Subcatchment S26:** Runoff Area=127,956 sf 0.00% Impervious Runoff Depth>0.42"
Tc=5.0 min CN=49 Runoff=0.78 cfs 0.103 af
- Subcatchment S27:** Runoff Area=249,700 sf 86.24% Impervious Runoff Depth>3.61"
Tc=5.0 min CN=93 Runoff=24.32 cfs 1.724 af

Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>3.30" Tc=5.0 min CN=90 Runoff=35.34 cfs 2.433 af
Subcatchment S29:	Runoff Area=144,253 sf 20.98% Impervious Runoff Depth>1.53" Tc=7.8 min CN=69 Runoff=5.81 cfs 0.423 af
Subcatchment S30:	Runoff Area=81,302 sf 0.00% Impervious Runoff Depth>0.42" Tc=5.0 min CN=49 Runoff=0.50 cfs 0.066 af
Subcatchment S31:	Runoff Area=170,766 sf 24.87% Impervious Runoff Depth>1.60" Tc=14.4 min CN=70 Runoff=5.94 cfs 0.522 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>2.81" Tc=9.2 min CN=85 Runoff=2.83 cfs 0.216 af
Subcatchment S32:	Runoff Area=63,019 sf 49.57% Impervious Runoff Depth>2.64" Tc=5.0 min CN=83 Runoff=4.76 cfs 0.318 af
Subcatchment S32.1:	Runoff Area=124,022 sf 80.54% Impervious Runoff Depth>3.10" Tc=5.0 min CN=88 Runoff=10.84 cfs 0.736 af
Subcatchment S32.2:	Runoff Area=92,636 sf 83.67% Impervious Runoff Depth>3.30" Tc=5.0 min CN=90 Runoff=8.49 cfs 0.585 af
Subcatchment S6: Retail Core South	Runoff Area=94,182 sf 56.70% Impervious Runoff Depth>1.74" Flow Length=926' Tc=9.5 min CN=72 Runoff=4.13 cfs 0.314 af
Reach 1R: Point of Analysis 1	Inflow=90.89 cfs 17.096 af Outflow=90.89 cfs 17.096 af
Reach 31R: 24"	Avg. Flow Depth=0.76' Max Vel=2.29 fps Inflow=2.70 cfs 0.207 af 24.0" Round Pipe n=0.014 L=420.0' S=0.0015 '/' Capacity=8.20 cfs Outflow=2.49 cfs 0.207 af
Reach L150:	Avg. Flow Depth=1.73' Max Vel=3.72 fps Inflow=77.87 cfs 15.373 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=76.67 cfs 15.359 af
Reach L151:	Avg. Flow Depth=1.65' Max Vel=6.17 fps Inflow=82.54 cfs 15.881 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=82.38 cfs 15.872 af
Reach L186:	Avg. Flow Depth=2.56' Max Vel=3.04 fps Inflow=87.29 cfs 16.405 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=86.21 cfs 16.363 af
Reach L57: 48"	Avg. Flow Depth=1.40' Max Vel=5.71 fps Inflow=22.35 cfs 7.090 af 48.0" Round Pipe n=0.014 L=446.0' S=0.0041 '/' Capacity=85.21 cfs Outflow=22.34 cfs 7.077 af
Reach L59: Ditch	Avg. Flow Depth=1.60' Max Vel=3.89 fps Inflow=58.33 cfs 10.140 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=55.96 cfs 10.112 af
Reach L65: 30"	Avg. Flow Depth=0.67' Max Vel=21.12 fps Inflow=22.35 cfs 7.095 af 30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/' Capacity=142.22 cfs Outflow=22.36 cfs 7.094 af
Reach L67: 48"	Avg. Flow Depth=1.13' Max Vel=7.65 fps Inflow=22.36 cfs 7.094 af 48.0" Round Pipe n=0.014 L=185.0' S=0.0092 '/' Capacity=127.86 cfs Outflow=22.35 cfs 7.090 af

Reach P1: Avg. Flow Depth=0.88' Max Vel=8.64 fps Inflow=90.95 cfs 17.099 af
n=0.030 L=46.0' S=0.0435 '/ Outflow=90.89 cfs 17.096 af

Pond 19P: Peak Elev=139.65' Storage=2,662 cf Inflow=46.96 cfs 4.052 af
Primary=14.02 cfs 2.976 af Secondary=32.17 cfs 1.070 af Outflow=46.19 cfs 4.047 af

Pond 20P: Peak Elev=167.70' Storage=2,838 cf Inflow=11.95 cfs 0.916 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/ Outflow=12.67 cfs 0.912 af

Pond 22.4P: Peak Elev=75.60' Storage=76,284 cf Inflow=67.81 cfs 7.213 af
Primary=22.35 cfs 7.095 af Secondary=0.00 cfs 0.000 af Outflow=22.35 cfs 7.095 af

Pond 30P: Peak Elev=50.47' Storage=88,897 cf Inflow=72.92 cfs 4.965 af
Outflow=28.89 cfs 4.676 af

Total Runoff Area = 97.980 ac Runoff Volume = 17.625 af Average Runoff Depth = 2.16"
56.05% Pervious = 54.913 ac 43.95% Impervious = 43.067 ac

Summary for Subcatchment S12:

Runoff = 1.27 cfs @ 12.43 hrs, Volume= 0.192 af, Depth> 0.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 191,337	43	
* 27,135	98	
218,472	50	Weighted Average
191,337		87.58% Pervious Area
27,135		12.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel,
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'
					n= 0.014
18.6	260	Total			

Summary for Subcatchment S19:

Runoff = 38.41 cfs @ 12.17 hrs, Volume= 3.139 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 11.95 cfs @ 12.07 hrs, Volume= 0.916 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 13.42 cfs @ 12.17 hrs, Volume= 1.090 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.055	49	
* 3.462	98	
5.517	80	Weighted Average
2.055		37.25% Pervious Area
3.462		62.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					Direct Entry,
0.6	640	0.0600	19.11	60.03	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 0.98 cfs @ 12.19 hrs, Volume= 0.089 af, Depth> 0.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 37,334	49	
* 11,040	98	
48,374	60	Weighted Average
37,334		77.18% Pervious Area
11,040		22.82% Impervious Area

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.38 cfs @ 12.07 hrs, Volume= 0.026 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 3,477	98	
* 1,297	49	
4,774	85	Weighted Average
1,297		27.17% Pervious Area
3,477		72.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.07 cfs @ 12.37 hrs, Volume= 0.011 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 13,984	49	
13,984		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 12.90 cfs @ 12.07 hrs, Volume= 0.888 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 11.46 cfs @ 12.07 hrs, Volume= 0.778 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 9.06 cfs @ 12.07 hrs, Volume= 0.629 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 4.69 cfs @ 12.07 hrs, Volume= 0.326 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 5.48 cfs @ 12.09 hrs, Volume= 0.400 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23:

Runoff = 17.96 cfs @ 12.17 hrs, Volume= 1.495 af, Depth> 2.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (sf)	CN	Description
* 64,303	49	
* 204,828	98	
269,131	86	Weighted Average
64,303		23.89% Pervious Area
204,828		76.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0250	0.19		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
0.9	156	0.0350	3.01		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	174	0.0360	3.85		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.2	40	0.0050	4.03	4.95	Pipe Channel, 15" HDPE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.5	1,555	0.0200	17.51	220.07	Pipe Channel, 48" HDPE 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.012
12.4	2,025	Total			

Summary for Subcatchment S24:

Runoff = 2.70 cfs @ 12.07 hrs, Volume= 0.207 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 26,018	98	
26,018		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S26:

Runoff = 0.78 cfs @ 12.15 hrs, Volume= 0.103 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 127,956	49	
127,956		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S27:

Runoff = 24.32 cfs @ 12.07 hrs, Volume= 1.724 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
34,357	61	>75% Grass cover, Good, HSG B
* 215,343	98	
249,700	93	Weighted Average
34,357		13.76% Pervious Area
215,343		86.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S28:

Runoff = 35.34 cfs @ 12.07 hrs, Volume= 2.433 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 5.81 cfs @ 12.12 hrs, Volume= 0.423 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (sf)	CN	Description
113,984	61	>75% Grass cover, Good, HSG B
30,269	98	Paved parking, HSG B
144,253	69	Weighted Average
113,984		79.02% Pervious Area
30,269		20.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 0.50 cfs @ 12.15 hrs, Volume= 0.066 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 81,302	49	
81,302		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S31:

Runoff = 5.94 cfs @ 12.21 hrs, Volume= 0.522 af, Depth> 1.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
128,293	61	>75% Grass cover, Good, HSG B
* 42,473	98	
170,766	70	Weighted Average
128,293		75.13% Pervious Area
42,473		24.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 2.83 cfs @ 12.13 hrs, Volume= 0.216 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 4.76 cfs @ 12.08 hrs, Volume= 0.318 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 31,783	69	
* 31,236	98	
63,019	83	Weighted Average
31,783		50.43% Pervious Area
31,236		49.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 10.84 cfs @ 12.07 hrs, Volume= 0.736 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	24,135	49	
*	99,887	98	
	124,022	88	Weighted Average
	24,135		19.46% Pervious Area
	99,887		80.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.2:

Runoff = 8.49 cfs @ 12.07 hrs, Volume= 0.585 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	15,123	49	
*	77,513	98	
	92,636	90	Weighted Average
	15,123		16.33% Pervious Area
	77,513		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S6: Retail Core South Loading

Runoff = 4.13 cfs @ 12.14 hrs, Volume= 0.314 af, Depth> 1.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	40,780	39	>75% Grass cover, Good, HSG A
	53,402	98	Paved parking, HSG A
	94,182	72	Weighted Average
	40,780		43.30% Pervious Area
	53,402		56.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	75	0.1460	0.24		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.2	100	0.2700	8.37		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	45	0.0010	0.98	0.19	Pipe Channel, Underdrain 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.012
3.4	706	0.0050	3.47	2.73	Pipe Channel, 12" Pipe 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
9.5	926	Total			

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 2.09" for 10-Year event
 Inflow = 90.89 cfs @ 12.26 hrs, Volume= 17.096 af
 Outflow = 90.89 cfs @ 12.26 hrs, Volume= 17.096 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

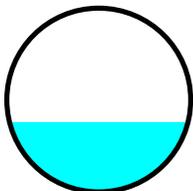
Summary for Reach 31R: 24"

Inflow Area = 0.597 ac, 100.00% Impervious, Inflow Depth > 4.16" for 10-Year event
 Inflow = 2.70 cfs @ 12.07 hrs, Volume= 0.207 af
 Outflow = 2.49 cfs @ 12.16 hrs, Volume= 0.207 af, Atten= 8%, Lag= 5.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.29 fps, Min. Travel Time= 3.1 min
 Avg. Velocity = 0.81 fps, Avg. Travel Time= 8.6 min

Peak Storage= 458 cf @ 12.11 hrs
 Average Depth at Peak Storage= 0.76'
 Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 8.20 cfs

24.0" Round Pipe
 n= 0.014
 Length= 420.0' Slope= 0.0015 '/'
 Inlet Invert= 47.70', Outlet Invert= 47.06'



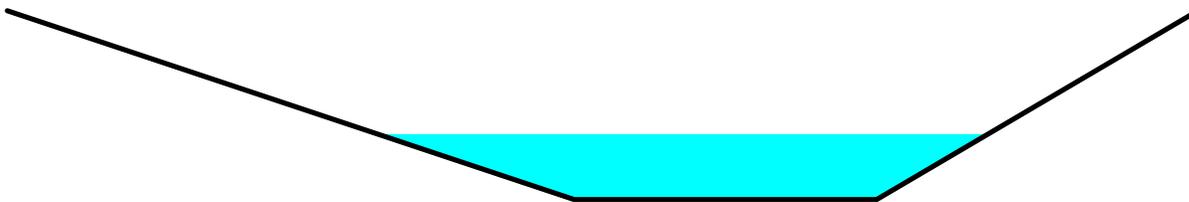
Summary for Reach L150:

Inflow Area = 88.846 ac, 43.59% Impervious, Inflow Depth > 2.08" for 10-Year event
Inflow = 77.87 cfs @ 12.16 hrs, Volume= 15.373 af
Outflow = 76.67 cfs @ 12.19 hrs, Volume= 15.359 af, Atten= 2%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.72 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 1.6 min

Peak Storage= 2,843 cf @ 12.17 hrs
Average Depth at Peak Storage= 1.73'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/' Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/'
Inlet Invert= 48.58', Outlet Invert= 48.00'



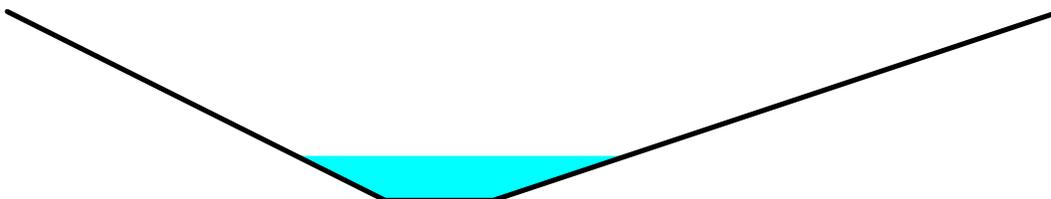
Summary for Reach L151:

Inflow Area = 92.766 ac, 42.80% Impervious, Inflow Depth > 2.05" for 10-Year event
Inflow = 82.54 cfs @ 12.19 hrs, Volume= 15.881 af
Outflow = 82.38 cfs @ 12.21 hrs, Volume= 15.872 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.17 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.61 fps, Avg. Travel Time= 1.0 min

Peak Storage= 2,076 cf @ 12.20 hrs
Average Depth at Peak Storage= 1.65'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 95.133 ac, 42.86% Impervious, Inflow Depth > 2.07" for 10-Year event
Inflow = 87.29 cfs @ 12.20 hrs, Volume= 16.405 af
Outflow = 86.21 cfs @ 12.26 hrs, Volume= 16.363 af, Atten= 1%, Lag= 3.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.04 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 1.22 fps, Avg. Travel Time= 4.7 min

Peak Storage= 9,697 cf @ 12.22 hrs
Average Depth at Peak Storage= 2.56'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



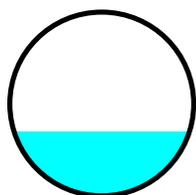
Summary for Reach L57: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 1.70" for 10-Year event
Inflow = 22.35 cfs @ 12.57 hrs, Volume= 7.090 af
Outflow = 22.34 cfs @ 12.61 hrs, Volume= 7.077 af, Atten= 0%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.71 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 2.76 fps, Avg. Travel Time= 2.7 min

Peak Storage= 1,745 cf @ 12.59 hrs
Average Depth at Peak Storage= 1.40'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 85.21 cfs

48.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0041 '/'
Inlet Invert= 49.00', Outlet Invert= 47.18'



Summary for Reach L59: Ditch

Inflow Area = 62.827 ac, 40.52% Impervious, Inflow Depth > 1.94" for 10-Year event
Inflow = 58.33 cfs @ 12.09 hrs, Volume= 10.140 af
Outflow = 55.96 cfs @ 12.15 hrs, Volume= 10.112 af, Atten= 4%, Lag= 3.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.89 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.49 fps, Avg. Travel Time= 4.8 min

Peak Storage= 6,323 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.60'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



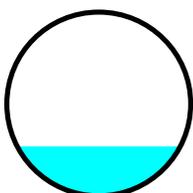
Summary for Reach L65: 30"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 1.70" for 10-Year event
Inflow = 22.35 cfs @ 12.56 hrs, Volume= 7.095 af
Outflow = 22.36 cfs @ 12.56 hrs, Volume= 7.094 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 21.12 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 10.20 fps, Avg. Travel Time= 0.2 min

Peak Storage= 110 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



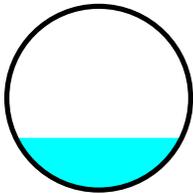
Summary for Reach L67: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 1.70" for 10-Year event
Inflow = 22.36 cfs @ 12.56 hrs, Volume= 7.094 af
Outflow = 22.35 cfs @ 12.57 hrs, Volume= 7.090 af, Atten= 0%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.65 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.68 fps, Avg. Travel Time= 0.8 min

Peak Storage= 541 cf @ 12.57 hrs
Average Depth at Peak Storage= 1.13'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 127.86 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0092 '/'
Inlet Invert= 50.70', Outlet Invert= 49.00'



Summary for Reach P1:

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 2.09" for 10-Year event
Inflow = 90.95 cfs @ 12.25 hrs, Volume= 17.099 af
Outflow = 90.89 cfs @ 12.26 hrs, Volume= 17.096 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.64 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.96 fps, Avg. Travel Time= 0.3 min

Peak Storage= 484 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.88'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
Length= 46.0' Slope= 0.0435 '/'
Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 1.71" for 10-Year event
 Inflow = 46.96 cfs @ 12.15 hrs, Volume= 4.052 af
 Outflow = 46.19 cfs @ 12.16 hrs, Volume= 4.047 af, Atten= 2%, Lag= 0.6 min
 Primary = 14.02 cfs @ 12.16 hrs, Volume= 2.976 af
 Secondary = 32.17 cfs @ 12.16 hrs, Volume= 1.070 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 139.65' @ 12.16 hrs Surf.Area= 2,709 sf Storage= 2,662 cf

Plug-Flow detention time= 2.1 min calculated for 4.047 af (100% of inflow)
 Center-of-Mass det. time= 1.6 min (801.1 - 799.4)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=13.96 cfs @ 12.16 hrs HW=139.64' (Free Discharge)
 ↑1=Culvert (Inlet Controls 13.96 cfs @ 4.62 fps)

Secondary OutFlow Max=31.65 cfs @ 12.16 hrs HW=139.64' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 31.65 cfs @ 2.15 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 4.16" for 10-Year event
 Inflow = 11.95 cfs @ 12.07 hrs, Volume= 0.916 af
 Outflow = 12.67 cfs @ 12.06 hrs, Volume= 0.912 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.67 cfs @ 12.06 hrs, Volume= 0.912 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

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Peak Elev= 167.70' @ 12.06 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 12.0 min calculated for 0.912 af (100% of inflow)

Center-of-Mass det. time= 10.3 min (731.5 - 721.2)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=12.10 cfs @ 12.06 hrs HW=167.65' (Free Discharge)

↑1=Culvert (Inlet Controls 12.10 cfs @ 4.37 fps)

Summary for Pond 22.4P:

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 1.73" for 10-Year event
 Inflow = 67.81 cfs @ 12.09 hrs, Volume= 7.213 af
 Outflow = 22.35 cfs @ 12.56 hrs, Volume= 7.095 af, Atten= 67%, Lag= 28.0 min
 Primary = 22.35 cfs @ 12.56 hrs, Volume= 7.095 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 75.60' @ 12.56 hrs Surf.Area= 28,772 sf Storage= 76,284 cf

Plug-Flow detention time= 39.9 min calculated for 7.077 af (98% of inflow)

Center-of-Mass det. time= 33.6 min (831.7 - 798.2)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 10-Year Rainfall=4.60"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/ Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=22.34 cfs @ 12.56 hrs HW=75.60' (Free Discharge)

↑**2=Culvert** (Inlet Controls 22.34 cfs @ 9.29 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 30P:

Inflow Area = 23.892 ac, 48.11% Impervious, Inflow Depth > 2.49" for 10-Year event
 Inflow = 72.92 cfs @ 12.13 hrs, Volume= 4.965 af
 Outflow = 28.89 cfs @ 12.47 hrs, Volume= 4.676 af, Atten= 60%, Lag= 20.5 min
 Primary = 28.89 cfs @ 12.47 hrs, Volume= 4.676 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 50.47' @ 12.47 hrs Surf.Area= 63,656 sf Storage= 88,897 cf

Plug-Flow detention time= 79.9 min calculated for 4.676 af (94% of inflow)
 Center-of-Mass det. time= 59.1 min (828.0 - 768.9)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	264,538 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.00	57,194	0	0
50.00	61,543	59,369	59,369
51.00	66,022	63,783	123,151
52.00	70,631	68,327	191,478
53.00	75,490	73,061	264,538

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	90.0 deg x 4.0' long x 2.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#2	Primary	52.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=28.82 cfs @ 12.47 hrs HW=50.47' (Free Discharge)

- ↑1=Sharp-Crested Vee/Trap Weir (Weir Controls 28.82 cfs @ 3.58 fps)
- └2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S12:** Runoff Area=218,472 sf 12.42% Impervious Runoff Depth>0.79"
Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=50 Runoff=2.68 cfs 0.332 af
- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>2.06"
Tc=11.4 min CN=68 Runoff=55.19 cfs 4.430 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>5.02"
Tc=5.0 min CN=98 Runoff=14.31 cfs 1.105 af
- Subcatchment S21:** Runoff Area=5.517 ac 62.75% Impervious Runoff Depth>3.11"
Flow Length=640' Slope=0.0600 '/' Tc=12.1 min CN=80 Runoff=17.54 cfs 1.431 af
- Subcatchment S21.1:** Runoff Area=48,374 sf 22.82% Impervious Runoff Depth>1.45"
Flow Length=410' Tc=11.6 min CN=60 Runoff=1.57 cfs 0.134 af
- Subcatchment S21.2.1:** Runoff Area=4,774 sf 72.83% Impervious Runoff Depth>3.61"
Tc=5.0 min CN=85 Runoff=0.49 cfs 0.033 af
- Subcatchment S21.2.2:** Runoff Area=13,984 sf 0.00% Impervious Runoff Depth>0.74"
Flow Length=90' Slope=0.0070 '/' Tc=13.2 min CN=49 Runoff=0.17 cfs 0.020 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>4.13"
Tc=5.0 min CN=90 Runoff=15.92 cfs 1.111 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>3.92"
Tc=5.0 min CN=88 Runoff=14.29 cfs 0.982 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>4.23"
Tc=5.0 min CN=91 Runoff=11.13 cfs 0.783 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>4.23"
Tc=5.0 min CN=91 Runoff=5.77 cfs 0.406 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>1.46"
Tc=5.0 min CN=60 Runoff=8.71 cfs 0.603 af
- Subcatchment S23:** Runoff Area=269,131 sf 76.11% Impervious Runoff Depth>3.70"
Flow Length=2,025' Tc=12.4 min CN=86 Runoff=22.66 cfs 1.906 af
- Subcatchment S24:** Runoff Area=26,018 sf 100.00% Impervious Runoff Depth>5.02"
Tc=5.0 min CN=98 Runoff=3.24 cfs 0.250 af
- Subcatchment S26:** Runoff Area=127,956 sf 0.00% Impervious Runoff Depth>0.74"
Tc=5.0 min CN=49 Runoff=2.05 cfs 0.182 af
- Subcatchment S27:** Runoff Area=249,700 sf 86.24% Impervious Runoff Depth>4.45"
Tc=5.0 min CN=93 Runoff=29.62 cfs 2.127 af

Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>4.13" Tc=5.0 min CN=90 Runoff=43.63 cfs 3.044 af
Subcatchment S29:	Runoff Area=144,253 sf 20.98% Impervious Runoff Depth>2.15" Tc=7.8 min CN=69 Runoff=8.26 cfs 0.592 af
Subcatchment S30:	Runoff Area=81,302 sf 0.00% Impervious Runoff Depth>0.74" Tc=5.0 min CN=49 Runoff=1.30 cfs 0.116 af
Subcatchment S31:	Runoff Area=170,766 sf 24.87% Impervious Runoff Depth>2.22" Tc=14.4 min CN=70 Runoff=8.37 cfs 0.726 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>3.60" Tc=9.2 min CN=85 Runoff=3.59 cfs 0.276 af
Subcatchment S32:	Runoff Area=63,019 sf 49.57% Impervious Runoff Depth>3.41" Tc=5.0 min CN=83 Runoff=6.14 cfs 0.411 af
Subcatchment S32.1:	Runoff Area=124,022 sf 80.54% Impervious Runoff Depth>3.92" Tc=5.0 min CN=88 Runoff=13.52 cfs 0.929 af
Subcatchment S32.2:	Runoff Area=92,636 sf 83.67% Impervious Runoff Depth>4.13" Tc=5.0 min CN=90 Runoff=10.48 cfs 0.731 af
Subcatchment S6: Retail Core South	Runoff Area=94,182 sf 56.70% Impervious Runoff Depth>2.40" Flow Length=926' Tc=9.5 min CN=72 Runoff=5.71 cfs 0.432 af
Reach 1R: Point of Analysis 1	Inflow=119.42 cfs 22.483 af Outflow=119.42 cfs 22.483 af
Reach 31R: 24"	Avg. Flow Depth=0.84' Max Vel=2.41 fps Inflow=3.24 cfs 0.250 af 24.0" Round Pipe n=0.014 L=420.0' S=0.0015 '/' Capacity=8.20 cfs Outflow=3.00 cfs 0.249 af
Reach L150:	Avg. Flow Depth=2.00' Max Vel=4.01 fps Inflow=101.78 cfs 20.218 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=100.40 cfs 20.203 af
Reach L151:	Avg. Flow Depth=1.88' Max Vel=6.64 fps Inflow=108.72 cfs 20.929 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=108.57 cfs 20.918 af
Reach L186:	Avg. Flow Depth=2.94' Max Vel=3.28 fps Inflow=114.76 cfs 21.606 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=113.57 cfs 21.557 af
Reach L57: 48"	Avg. Flow Depth=1.48' Max Vel=5.88 fps Inflow=24.85 cfs 9.109 af 48.0" Round Pipe n=0.014 L=446.0' S=0.0041 '/' Capacity=85.21 cfs Outflow=24.84 cfs 9.094 af
Reach L59: Ditch	Avg. Flow Depth=1.78' Max Vel=4.13 fps Inflow=71.46 cfs 12.979 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=68.50 cfs 12.947 af
Reach L65: 30"	Avg. Flow Depth=0.71' Max Vel=21.77 fps Inflow=24.85 cfs 9.115 af 30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/' Capacity=142.22 cfs Outflow=24.85 cfs 9.114 af
Reach L67: 48"	Avg. Flow Depth=1.20' Max Vel=7.88 fps Inflow=24.85 cfs 9.114 af 48.0" Round Pipe n=0.014 L=185.0' S=0.0092 '/' Capacity=127.86 cfs Outflow=24.85 cfs 9.109 af

Reach P1: Avg. Flow Depth=1.04' Max Vel=9.55 fps Inflow=119.48 cfs 22.486 af
n=0.030 L=46.0' S=0.0435 '/' Capacity=407.83 cfs Outflow=119.42 cfs 22.483 af

Pond 19P: Peak Elev=139.87' Storage=3,287 cf Inflow=64.53 cfs 5.531 af
Primary=15.61 cfs 3.749 af Secondary=48.88 cfs 1.776 af Outflow=64.49 cfs 5.525 af

Pond 20P: Peak Elev=167.88' Storage=2,838 cf Inflow=14.31 cfs 1.105 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/' Outflow=14.34 cfs 1.101 af

Pond 22.4P: Peak Elev=76.48' Storage=103,231 cf Inflow=85.47 cfs 9.253 af
Primary=24.85 cfs 9.115 af Secondary=0.00 cfs 0.000 af Outflow=24.85 cfs 9.115 af

Pond 30P: Peak Elev=50.90' Storage=116,390 cf Inflow=102.14 cfs 6.871 af
Outflow=45.06 cfs 6.540 af

Total Runoff Area = 97.980 ac Runoff Volume = 23.094 af Average Runoff Depth = 2.83"
56.05% Pervious = 54.913 ac 43.95% Impervious = 43.067 ac

Summary for Subcatchment S12:

Runoff = 2.68 cfs @ 12.34 hrs, Volume= 0.332 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 191,337	43	
* 27,135	98	
218,472	50	Weighted Average
191,337		87.58% Pervious Area
27,135		12.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel,
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'
					n= 0.014
18.6	260	Total			

Summary for Subcatchment S19:

Runoff = 55.19 cfs @ 12.17 hrs, Volume= 4.430 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 14.31 cfs @ 12.07 hrs, Volume= 1.105 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 17.54 cfs @ 12.17 hrs, Volume= 1.431 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.055	49	
* 3.462	98	
5.517	80	Weighted Average
2.055		37.25% Pervious Area
3.462		62.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					Direct Entry,
0.6	640	0.0600	19.11	60.03	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 1.57 cfs @ 12.18 hrs, Volume= 0.134 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 37,334	49	
* 11,040	98	
48,374	60	Weighted Average
37,334		77.18% Pervious Area
11,040		22.82% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.50"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.49 cfs @ 12.07 hrs, Volume= 0.033 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 3,477	98	
* 1,297	49	
4,774	85	Weighted Average
1,297		27.17% Pervious Area
3,477		72.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.17 cfs @ 12.25 hrs, Volume= 0.020 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 13,984	49	
13,984		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 15.92 cfs @ 12.07 hrs, Volume= 1.111 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 14.29 cfs @ 12.07 hrs, Volume= 0.982 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 11.13 cfs @ 12.07 hrs, Volume= 0.783 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 5.77 cfs @ 12.07 hrs, Volume= 0.406 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 8.71 cfs @ 12.09 hrs, Volume= 0.603 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23:

Runoff = 22.66 cfs @ 12.17 hrs, Volume= 1.906 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (sf)	CN	Description
* 64,303	49	
* 204,828	98	
269,131	86	Weighted Average
64,303		23.89% Pervious Area
204,828		76.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0250	0.19		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
0.9	156	0.0350	3.01		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	174	0.0360	3.85		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.2	40	0.0050	4.03	4.95	Pipe Channel, 15" HDPE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.5	1,555	0.0200	17.51	220.07	Pipe Channel, 48" HDPE 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.012
12.4	2,025	Total			

Summary for Subcatchment S24:

Runoff = 3.24 cfs @ 12.07 hrs, Volume= 0.250 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 26,018	98	
26,018		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S26:

Runoff = 2.05 cfs @ 12.11 hrs, Volume= 0.182 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 127,956	49	
127,956		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S27:

Runoff = 29.62 cfs @ 12.07 hrs, Volume= 2.127 af, Depth> 4.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
34,357	61	>75% Grass cover, Good, HSG B
* 215,343	98	
249,700	93	Weighted Average
34,357		13.76% Pervious Area
215,343		86.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S28:

Runoff = 43.63 cfs @ 12.07 hrs, Volume= 3.044 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 8.26 cfs @ 12.12 hrs, Volume= 0.592 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (sf)	CN	Description
113,984	61	>75% Grass cover, Good, HSG B
30,269	98	Paved parking, HSG B
144,253	69	Weighted Average
113,984		79.02% Pervious Area
30,269		20.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 1.30 cfs @ 12.11 hrs, Volume= 0.116 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 81,302	49	
81,302		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S31:

Runoff = 8.37 cfs @ 12.21 hrs, Volume= 0.726 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
128,293	61	>75% Grass cover, Good, HSG B
* 42,473	98	
170,766	70	Weighted Average
128,293		75.13% Pervious Area
42,473		24.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 3.59 cfs @ 12.13 hrs, Volume= 0.276 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 6.14 cfs @ 12.07 hrs, Volume= 0.411 af, Depth> 3.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 31,783	69	
* 31,236	98	
63,019	83	Weighted Average
31,783		50.43% Pervious Area
31,236		49.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 13.52 cfs @ 12.07 hrs, Volume= 0.929 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	24,135	49	
*	99,887	98	
	124,022	88	Weighted Average
	24,135		19.46% Pervious Area
	99,887		80.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.2:

Runoff = 10.48 cfs @ 12.07 hrs, Volume= 0.731 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	15,123	49	
*	77,513	98	
	92,636	90	Weighted Average
	15,123		16.33% Pervious Area
	77,513		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S6: Retail Core South Loading

Runoff = 5.71 cfs @ 12.14 hrs, Volume= 0.432 af, Depth> 2.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
	40,780	39	>75% Grass cover, Good, HSG A
	53,402	98	Paved parking, HSG A
	94,182	72	Weighted Average
	40,780		43.30% Pervious Area
	53,402		56.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	75	0.1460	0.24		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.2	100	0.2700	8.37		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	45	0.0010	0.98	0.19	Pipe Channel, Underdrain 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.012
3.4	706	0.0050	3.47	2.73	Pipe Channel, 12" Pipe 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
9.5	926	Total			

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 2.75" for 25-Year event
 Inflow = 119.42 cfs @ 12.25 hrs, Volume= 22.483 af
 Outflow = 119.42 cfs @ 12.25 hrs, Volume= 22.483 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

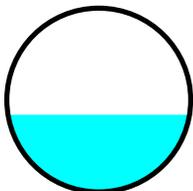
Summary for Reach 31R: 24"

Inflow Area = 0.597 ac, 100.00% Impervious, Inflow Depth > 5.02" for 25-Year event
 Inflow = 3.24 cfs @ 12.07 hrs, Volume= 0.250 af
 Outflow = 3.00 cfs @ 12.16 hrs, Volume= 0.249 af, Atten= 7%, Lag= 5.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.41 fps, Min. Travel Time= 2.9 min
 Avg. Velocity = 0.86 fps, Avg. Travel Time= 8.1 min

Peak Storage= 524 cf @ 12.11 hrs
 Average Depth at Peak Storage= 0.84'
 Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 8.20 cfs

24.0" Round Pipe
 n= 0.014
 Length= 420.0' Slope= 0.0015 '/'
 Inlet Invert= 47.70', Outlet Invert= 47.06'



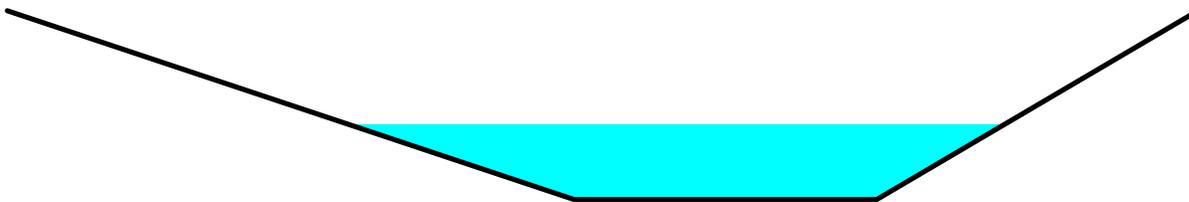
Summary for Reach L150:

Inflow Area = 88.846 ac, 43.59% Impervious, Inflow Depth > 2.73" for 25-Year event
Inflow = 101.78 cfs @ 12.17 hrs, Volume= 20.218 af
Outflow = 100.40 cfs @ 12.19 hrs, Volume= 20.203 af, Atten= 1%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.01 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.60 fps, Avg. Travel Time= 1.4 min

Peak Storage= 3,443 cf @ 12.17 hrs
Average Depth at Peak Storage= 2.00'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/' Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/'
Inlet Invert= 48.58', Outlet Invert= 48.00'



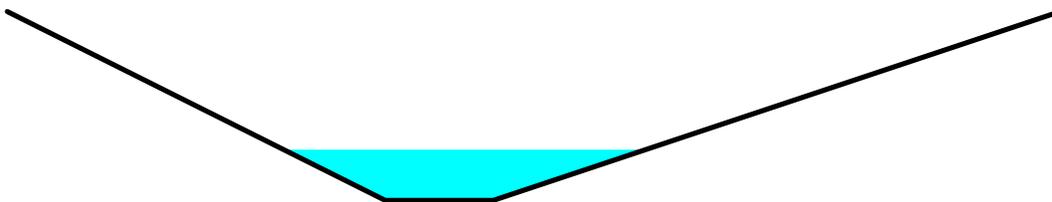
Summary for Reach L151:

Inflow Area = 92.766 ac, 42.80% Impervious, Inflow Depth > 2.71" for 25-Year event
Inflow = 108.72 cfs @ 12.19 hrs, Volume= 20.929 af
Outflow = 108.57 cfs @ 12.21 hrs, Volume= 20.918 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.64 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.82 fps, Avg. Travel Time= 0.9 min

Peak Storage= 2,542 cf @ 12.20 hrs
Average Depth at Peak Storage= 1.88'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 95.133 ac, 42.86% Impervious, Inflow Depth > 2.73" for 25-Year event
Inflow = 114.76 cfs @ 12.20 hrs, Volume= 21.606 af
Outflow = 113.57 cfs @ 12.26 hrs, Volume= 21.557 af, Atten= 1%, Lag= 3.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.28 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.33 fps, Avg. Travel Time= 4.3 min

Peak Storage= 11,871 cf @ 12.22 hrs
Average Depth at Peak Storage= 2.94'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



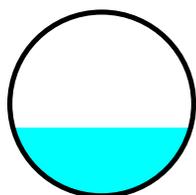
Summary for Reach L57: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.18" for 25-Year event
Inflow = 24.85 cfs @ 12.60 hrs, Volume= 9.109 af
Outflow = 24.84 cfs @ 12.64 hrs, Volume= 9.094 af, Atten= 0%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.88 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 2.5 min

Peak Storage= 1,884 cf @ 12.62 hrs
Average Depth at Peak Storage= 1.48'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 85.21 cfs

48.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0041 '/'
Inlet Invert= 49.00', Outlet Invert= 47.18'



Summary for Reach L59: Ditch

Inflow Area = 62.827 ac, 40.52% Impervious, Inflow Depth > 2.48" for 25-Year event
Inflow = 71.46 cfs @ 12.09 hrs, Volume= 12.979 af
Outflow = 68.50 cfs @ 12.14 hrs, Volume= 12.947 af, Atten= 4%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.13 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 1.63 fps, Avg. Travel Time= 4.4 min

Peak Storage= 7,328 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.78'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



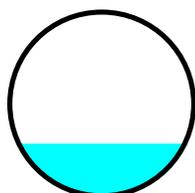
Summary for Reach L65: 30"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.18" for 25-Year event
Inflow = 24.85 cfs @ 12.59 hrs, Volume= 9.115 af
Outflow = 24.85 cfs @ 12.59 hrs, Volume= 9.114 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 21.77 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 11.10 fps, Avg. Travel Time= 0.2 min

Peak Storage= 119 cf @ 12.59 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



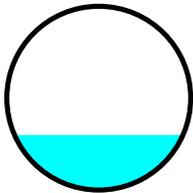
Summary for Reach L67: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.18" for 25-Year event
Inflow = 24.85 cfs @ 12.59 hrs, Volume= 9.114 af
Outflow = 24.85 cfs @ 12.60 hrs, Volume= 9.109 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.88 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 4.00 fps, Avg. Travel Time= 0.8 min

Peak Storage= 583 cf @ 12.60 hrs
Average Depth at Peak Storage= 1.20'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 127.86 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0092 '/'
Inlet Invert= 50.70', Outlet Invert= 49.00'



Summary for Reach P1:

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 2.75" for 25-Year event
Inflow = 119.48 cfs @ 12.25 hrs, Volume= 22.486 af
Outflow = 119.42 cfs @ 12.25 hrs, Volume= 22.483 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.55 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.27 fps, Avg. Travel Time= 0.2 min

Peak Storage= 576 cf @ 12.25 hrs
Average Depth at Peak Storage= 1.04'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
Length= 46.0' Slope= 0.0435 '/'
Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 2.33" for 25-Year event
 Inflow = 64.53 cfs @ 12.15 hrs, Volume= 5.531 af
 Outflow = 64.49 cfs @ 12.16 hrs, Volume= 5.525 af, Atten= 0%, Lag= 0.6 min
 Primary = 15.61 cfs @ 12.16 hrs, Volume= 3.749 af
 Secondary = 48.88 cfs @ 12.16 hrs, Volume= 1.776 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 139.87' @ 12.16 hrs Surf.Area= 3,009 sf Storage= 3,287 cf

Plug-Flow detention time= 1.9 min calculated for 5.511 af (100% of inflow)
 Center-of-Mass det. time= 1.5 min (796.4 - 794.9)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=15.55 cfs @ 12.16 hrs HW=139.86' (Free Discharge)
 ↖1=Culvert (Inlet Controls 15.55 cfs @ 4.95 fps)

Secondary OutFlow Max=48.13 cfs @ 12.16 hrs HW=139.86' (Free Discharge)
 ↖2=Broad-Crested Rectangular Weir (Weir Controls 48.13 cfs @ 2.44 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 5.02" for 25-Year event
 Inflow = 14.31 cfs @ 12.07 hrs, Volume= 1.105 af
 Outflow = 14.34 cfs @ 12.07 hrs, Volume= 1.101 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.34 cfs @ 12.07 hrs, Volume= 1.101 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

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Type III 24-hr 25-Year Rainfall=5.50"

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Peak Elev= 167.88' @ 12.07 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 11.5 min calculated for 1.098 af (99% of inflow)
 Center-of-Mass det. time= 9.8 min (728.1 - 718.4)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=13.81 cfs @ 12.07 hrs HW=167.82' (Free Discharge)
 ←1=Culvert (Inlet Controls 13.81 cfs @ 4.60 fps)

Summary for Pond 22.4P:

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.22" for 25-Year event
 Inflow = 85.47 cfs @ 12.09 hrs, Volume= 9.253 af
 Outflow = 24.85 cfs @ 12.59 hrs, Volume= 9.115 af, Atten= 71%, Lag= 29.7 min
 Primary = 24.85 cfs @ 12.59 hrs, Volume= 9.115 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 76.48' @ 12.59 hrs Surf.Area= 32,381 sf Storage= 103,231 cf

Plug-Flow detention time= 45.4 min calculated for 9.092 af (98% of inflow)
 Center-of-Mass det. time= 39.6 min (834.7 - 795.2)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 25-Year Rainfall=5.50"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/ Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=24.85 cfs @ 12.59 hrs HW=76.48' (Free Discharge)

↑**2=Culvert** (Inlet Controls 24.85 cfs @ 10.33 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 30P:

Inflow Area = 23.892 ac, 48.11% Impervious, Inflow Depth > 3.45" for 25-Year event
 Inflow = 102.14 cfs @ 12.13 hrs, Volume= 6.871 af
 Outflow = 45.06 cfs @ 12.44 hrs, Volume= 6.540 af, Atten= 56%, Lag= 18.5 min
 Primary = 45.06 cfs @ 12.44 hrs, Volume= 6.540 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 50.90' @ 12.44 hrs Surf.Area= 65,562 sf Storage= 116,390 cf

Plug-Flow detention time= 70.4 min calculated for 6.524 af (95% of inflow)
 Center-of-Mass det. time= 53.0 min (817.8 - 764.8)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	264,538 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.00	57,194	0	0
50.00	61,543	59,369	59,369
51.00	66,022	63,783	123,151
52.00	70,631	68,327	191,478
53.00	75,490	73,061	264,538

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	90.0 deg x 4.0' long x 2.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#2	Primary	52.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=45.01 cfs @ 12.44 hrs HW=50.90' (Free Discharge)

- ↑1=Sharp-Crested Vee/Trap Weir (Weir Controls 45.01 cfs @ 4.03 fps)
- └2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

- Subcatchment S12:** Runoff Area=218,472 sf 12.42% Impervious Runoff Depth>1.31"
Flow Length=260' Slope=0.0427 '/' Tc=18.6 min CN=50 Runoff=5.04 cfs 0.549 af
- Subcatchment S19:** Runoff Area=25.790 ac 18.15% Impervious Runoff Depth>2.89"
Tc=11.4 min CN=68 Runoff=78.10 cfs 6.218 af
- Subcatchment S20:** Runoff Area=2.640 ac 100.00% Impervious Runoff Depth>6.12"
Tc=5.0 min CN=98 Runoff=17.33 cfs 1.347 af
- Subcatchment S21:** Runoff Area=5.517 ac 62.75% Impervious Runoff Depth>4.10"
Flow Length=640' Slope=0.0600 '/' Tc=12.1 min CN=80 Runoff=22.90 cfs 1.884 af
- Subcatchment S21.1:** Runoff Area=48,374 sf 22.82% Impervious Runoff Depth>2.15"
Flow Length=410' Tc=11.6 min CN=60 Runoff=2.43 cfs 0.199 af
- Subcatchment S21.2.1:** Runoff Area=4,774 sf 72.83% Impervious Runoff Depth>4.64"
Tc=5.0 min CN=85 Runoff=0.62 cfs 0.042 af
- Subcatchment S21.2.2:** Runoff Area=13,984 sf 0.00% Impervious Runoff Depth>1.24"
Flow Length=90' Slope=0.0070 '/' Tc=13.2 min CN=49 Runoff=0.34 cfs 0.033 af
- Subcatchment S22:** Runoff Area=3.230 ac 73.07% Impervious Runoff Depth>5.20"
Tc=5.0 min CN=90 Runoff=19.76 cfs 1.399 af
- Subcatchment S22.1:** Runoff Area=3.010 ac 65.12% Impervious Runoff Depth>4.97"
Tc=5.0 min CN=88 Runoff=17.90 cfs 1.247 af
- Subcatchment S22.2:** Runoff Area=2.220 ac 76.13% Impervious Runoff Depth>5.31"
Tc=5.0 min CN=91 Runoff=13.76 cfs 0.982 af
- Subcatchment S22.3:** Runoff Area=1.150 ac 75.65% Impervious Runoff Depth>5.31"
Tc=5.0 min CN=91 Runoff=7.13 cfs 0.509 af
- Subcatchment S22.4:** Runoff Area=4.970 ac 0.00% Impervious Runoff Depth>2.16"
Tc=5.0 min CN=60 Runoff=13.31 cfs 0.895 af
- Subcatchment S23:** Runoff Area=269,131 sf 76.11% Impervious Runoff Depth>4.74"
Flow Length=2,025' Tc=12.4 min CN=86 Runoff=28.66 cfs 2.442 af
- Subcatchment S24:** Runoff Area=26,018 sf 100.00% Impervious Runoff Depth>6.12"
Tc=5.0 min CN=98 Runoff=3.92 cfs 0.305 af
- Subcatchment S26:** Runoff Area=127,956 sf 0.00% Impervious Runoff Depth>1.25"
Tc=5.0 min CN=49 Runoff=4.03 cfs 0.305 af
- Subcatchment S27:** Runoff Area=249,700 sf 86.24% Impervious Runoff Depth>5.54"
Tc=5.0 min CN=93 Runoff=36.34 cfs 2.645 af

Subcatchment S28:	Runoff Area=8.850 ac 69.72% Impervious Runoff Depth>5.20" Tc=5.0 min CN=90 Runoff=54.15 cfs 3.832 af
Subcatchment S29:	Runoff Area=144,253 sf 20.98% Impervious Runoff Depth>2.99" Tc=7.8 min CN=69 Runoff=11.59 cfs 0.826 af
Subcatchment S30:	Runoff Area=81,302 sf 0.00% Impervious Runoff Depth>1.25" Tc=5.0 min CN=49 Runoff=2.56 cfs 0.194 af
Subcatchment S31:	Runoff Area=170,766 sf 24.87% Impervious Runoff Depth>3.08" Tc=14.4 min CN=70 Runoff=11.67 cfs 1.007 af
Subcatchment S31.1:	Runoff Area=0.920 ac 38.04% Impervious Runoff Depth>4.64" Tc=9.2 min CN=85 Runoff=4.56 cfs 0.356 af
Subcatchment S32:	Runoff Area=63,019 sf 49.57% Impervious Runoff Depth>4.43" Tc=5.0 min CN=83 Runoff=7.88 cfs 0.534 af
Subcatchment S32.1:	Runoff Area=124,022 sf 80.54% Impervious Runoff Depth>4.97" Tc=5.0 min CN=88 Runoff=16.93 cfs 1.180 af
Subcatchment S32.2:	Runoff Area=92,636 sf 83.67% Impervious Runoff Depth>5.20" Tc=5.0 min CN=90 Runoff=13.01 cfs 0.921 af
Subcatchment S6: Retail Core South	Runoff Area=94,182 sf 56.70% Impervious Runoff Depth>3.28" Flow Length=926' Tc=9.5 min CN=72 Runoff=7.83 cfs 0.592 af
Reach 1R: Point of Analysis 1	Inflow=159.21 cfs 29.730 af Outflow=159.21 cfs 29.730 af
Reach 31R: 24"	Avg. Flow Depth=0.94' Max Vel=2.53 fps Inflow=3.92 cfs 0.305 af 24.0" Round Pipe n=0.014 L=420.0' S=0.0015 '/' Capacity=8.20 cfs Outflow=3.62 cfs 0.304 af
Reach L150:	Avg. Flow Depth=2.32' Max Vel=4.35 fps Inflow=135.95 cfs 26.745 af n=0.030 L=136.0' S=0.0043 '/' Capacity=654.46 cfs Outflow=134.41 cfs 26.727 af
Reach L151:	Avg. Flow Depth=2.17' Max Vel=7.17 fps Inflow=146.04 cfs 27.734 af n=0.030 L=155.0' S=0.0148 '/' Capacity=2,128.99 cfs Outflow=145.75 cfs 27.722 af
Reach L186:	Avg. Flow Depth=3.39' Max Vel=3.54 fps Inflow=153.59 cfs 28.611 af n=0.030 L=340.0' S=0.0020 '/' Capacity=279.47 cfs Outflow=151.85 cfs 28.554 af
Reach L57: 48"	Avg. Flow Depth=1.57' Max Vel=6.05 fps Inflow=27.60 cfs 11.705 af 48.0" Round Pipe n=0.014 L=446.0' S=0.0041 '/' Capacity=85.21 cfs Outflow=27.59 cfs 11.687 af
Reach L59: Ditch	Avg. Flow Depth=1.99' Max Vel=4.38 fps Inflow=87.82 cfs 16.649 af n=0.030 L=430.0' S=0.0053 '/' Capacity=196.83 cfs Outflow=84.02 cfs 16.611 af
Reach L65: 30"	Avg. Flow Depth=0.75' Max Vel=22.43 fps Inflow=27.60 cfs 11.712 af 30.0" Round Pipe n=0.014 L=104.0' S=0.1394 '/' Capacity=142.22 cfs Outflow=27.60 cfs 11.711 af
Reach L67: 48"	Avg. Flow Depth=1.26' Max Vel=8.12 fps Inflow=27.60 cfs 11.711 af 48.0" Round Pipe n=0.014 L=185.0' S=0.0092 '/' Capacity=127.86 cfs Outflow=27.60 cfs 11.705 af

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Reach P1: Avg. Flow Depth=1.25' Max Vel=10.58 fps Inflow=159.29 cfs 29.733 af
n=0.030 L=46.0' S=0.0435 '/' Capacity=407.83 cfs Outflow=159.21 cfs 29.730 af

Pond 19P: Peak Elev=140.12' Storage=4,100 cf Inflow=87.93 cfs 7.559 af
Primary=17.38 cfs 4.683 af Secondary=71.99 cfs 2.868 af Outflow=89.38 cfs 7.551 af

Pond 20P: Peak Elev=168.43' Storage=2,838 cf Inflow=17.33 cfs 1.347 af
24.0" Round Culvert n=0.014 L=293.0' S=0.0819 '/' Outflow=18.24 cfs 1.342 af

Pond 22.4P: Peak Elev=77.56' Storage=140,363 cf Inflow=108.28 cfs 11.874 af
Primary=27.60 cfs 11.712 af Secondary=0.00 cfs 0.000 af Outflow=27.60 cfs 11.712 af

Pond 30P: Peak Elev=51.47' Storage=154,914 cf Inflow=142.38 cfs 9.595 af
Outflow=64.14 cfs 9.213 af

Total Runoff Area = 97.980 ac Runoff Volume = 30.442 af Average Runoff Depth = 3.73"
56.05% Pervious = 54.913 ac 43.95% Impervious = 43.067 ac

Summary for Subcatchment S12:

Runoff = 5.04 cfs @ 12.31 hrs, Volume= 0.549 af, Depth> 1.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 191,337	43	
* 27,135	98	
218,472	50	Weighted Average
191,337		87.58% Pervious Area
27,135		12.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.2					Direct Entry,
0.4	260	0.0427	10.10	12.40	Pipe Channel, 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.014
18.6	260	Total			

Summary for Subcatchment S19:

Runoff = 78.10 cfs @ 12.16 hrs, Volume= 6.218 af, Depth> 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 8.450	43	
* 3.360	65	
* 9.300	76	
* 4.680	98	
25.790	68	Weighted Average
21.110		81.85% Pervious Area
4.680		18.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4					Direct Entry,

Summary for Subcatchment S20:

Runoff = 17.33 cfs @ 12.07 hrs, Volume= 1.347 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 2.640	98	
2.640		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21:

Runoff = 22.90 cfs @ 12.17 hrs, Volume= 1.884 af, Depth> 4.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.055	49	
* 3.462	98	
5.517	80	Weighted Average
2.055		37.25% Pervious Area
3.462		62.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5					Direct Entry,
0.6	640	0.0600	19.11	60.03	Pipe Channel, 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
12.1	640	Total			

Summary for Subcatchment S21.1:

Runoff = 2.43 cfs @ 12.17 hrs, Volume= 0.199 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 37,334	49	
* 11,040	98	
48,374	60	Weighted Average
37,334		77.18% Pervious Area
11,040		22.82% Impervious Area

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Type III 24-hr 100-Year Rainfall=6.65"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	100	0.1100	0.15		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
0.6	170	0.0865	4.74		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.1	140	0.1015	28.84	141.57	Pipe Channel, 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
11.6	410	Total			

Summary for Subcatchment S21.2.1:

Runoff = 0.62 cfs @ 12.07 hrs, Volume= 0.042 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 3,477	98	
* 1,297	49	
4,774	85	Weighted Average
1,297		27.17% Pervious Area
3,477		72.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S21.2.2:

Runoff = 0.34 cfs @ 12.22 hrs, Volume= 0.033 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 13,984	49	
13,984		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.8					Direct Entry,
0.4	90	0.0070	4.11	3.23	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
13.2	90	Total			

Summary for Subcatchment S22:

Runoff = 19.76 cfs @ 12.07 hrs, Volume= 1.399 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.870	69	
* 2.360	98	
3.230	90	Weighted Average
0.870		26.93% Pervious Area
2.360		73.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.1:

Runoff = 17.90 cfs @ 12.07 hrs, Volume= 1.247 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.050	69	
* 1.960	98	
3.010	88	Weighted Average
1.050		34.88% Pervious Area
1.960		65.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.2:

Runoff = 13.76 cfs @ 12.07 hrs, Volume= 0.982 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.530	69	
* 1.690	98	
2.220	91	Weighted Average
0.530		23.87% Pervious Area
1.690		76.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.3:

Runoff = 7.13 cfs @ 12.07 hrs, Volume= 0.509 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.280	69	
* 0.870	98	
1.150	91	Weighted Average
0.280		24.35% Pervious Area
0.870		75.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S22.4:

Runoff = 13.31 cfs @ 12.09 hrs, Volume= 0.895 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.100	69	
* 4.870	60	
4.970	60	Weighted Average
4.970		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S23:

Runoff = 28.66 cfs @ 12.17 hrs, Volume= 2.442 af, Depth> 4.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (sf)	CN	Description
* 64,303	49	
* 204,828	98	
269,131	86	Weighted Average
64,303		23.89% Pervious Area
204,828		76.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0250	0.19		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
0.9	156	0.0350	3.01		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	174	0.0360	3.85		Shallow Concentrated Flow, Shallow Conc Paved Kv= 20.3 fps
0.2	40	0.0050	4.03	4.95	Pipe Channel, 15" HDPE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.5	1,555	0.0200	17.51	220.07	Pipe Channel, 48" HDPE 48.0" Round Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.012
12.4	2,025	Total			

Summary for Subcatchment S24:

Runoff = 3.92 cfs @ 12.07 hrs, Volume= 0.305 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 26,018	98	
26,018		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S26:

Runoff = 4.03 cfs @ 12.10 hrs, Volume= 0.305 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 127,956	49	
127,956		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S27:

Runoff = 36.34 cfs @ 12.07 hrs, Volume= 2.645 af, Depth> 5.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
34,357	61	>75% Grass cover, Good, HSG B
* 215,343	98	
249,700	93	Weighted Average
34,357		13.76% Pervious Area
215,343		86.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S28:

Runoff = 54.15 cfs @ 12.07 hrs, Volume= 3.832 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 2.120	69	
* 0.560	89	
* 6.170	98	
8.850	90	Weighted Average
2.680		30.28% Pervious Area
6.170		69.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S29:

Runoff = 11.59 cfs @ 12.12 hrs, Volume= 0.826 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
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Type III 24-hr 100-Year Rainfall=6.65"

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Area (sf)	CN	Description
113,984	61	>75% Grass cover, Good, HSG B
30,269	98	Paved parking, HSG B
144,253	69	Weighted Average
113,984		79.02% Pervious Area
30,269		20.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8					Direct Entry,

Summary for Subcatchment S30:

Runoff = 2.56 cfs @ 12.10 hrs, Volume= 0.194 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 81,302	49	
81,302		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S31:

Runoff = 11.67 cfs @ 12.20 hrs, Volume= 1.007 af, Depth> 3.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
128,293	61	>75% Grass cover, Good, HSG B
* 42,473	98	
170,766	70	Weighted Average
128,293		75.13% Pervious Area
42,473		24.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4					Direct Entry,

Summary for Subcatchment S31.1:

Runoff = 4.56 cfs @ 12.13 hrs, Volume= 0.356 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.070	60	
* 0.440	79	
* 0.060	89	
* 0.350	98	
0.920	85	Weighted Average
0.570		61.96% Pervious Area
0.350		38.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2					Direct Entry,

Summary for Subcatchment S32:

Runoff = 7.88 cfs @ 12.07 hrs, Volume= 0.534 af, Depth> 4.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 31,783	69	
* 31,236	98	
63,019	83	Weighted Average
31,783		50.43% Pervious Area
31,236		49.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.1:

Runoff = 16.93 cfs @ 12.07 hrs, Volume= 1.180 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	24,135	49	
*	99,887	98	
	124,022	88	Weighted Average
	24,135		19.46% Pervious Area
	99,887		80.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S32.2:

Runoff = 13.01 cfs @ 12.07 hrs, Volume= 0.921 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	15,123	49	
*	77,513	98	
	92,636	90	Weighted Average
	15,123		16.33% Pervious Area
	77,513		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S6: Retail Core South Loading

Runoff = 7.83 cfs @ 12.14 hrs, Volume= 0.592 af, Depth> 3.28"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
	40,780	39	>75% Grass cover, Good, HSG A
	53,402	98	Paved parking, HSG A
	94,182	72	Weighted Average
	40,780		43.30% Pervious Area
	53,402		56.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	75	0.1460	0.24		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
0.2	100	0.2700	8.37		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
0.8	45	0.0010	0.98	0.19	Pipe Channel, Underdrain 6.0" Round Area= 0.2 sf Perim= 1.6' r= 0.13' n= 0.012
3.4	706	0.0050	3.47	2.73	Pipe Channel, 12" Pipe 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
9.5	926	Total			

Summary for Reach 1R: Point of Analysis 1

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 3.64" for 100-Year event
 Inflow = 159.21 cfs @ 12.25 hrs, Volume= 29.730 af
 Outflow = 159.21 cfs @ 12.25 hrs, Volume= 29.730 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

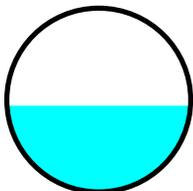
Summary for Reach 31R: 24"

Inflow Area = 0.597 ac, 100.00% Impervious, Inflow Depth > 6.12" for 100-Year event
 Inflow = 3.92 cfs @ 12.07 hrs, Volume= 0.305 af
 Outflow = 3.62 cfs @ 12.15 hrs, Volume= 0.304 af, Atten= 8%, Lag= 4.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.53 fps, Min. Travel Time= 2.8 min
 Avg. Velocity = 0.91 fps, Avg. Travel Time= 7.7 min

Peak Storage= 606 cf @ 12.11 hrs
 Average Depth at Peak Storage= 0.94'
 Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 8.20 cfs

24.0" Round Pipe
 n= 0.014
 Length= 420.0' Slope= 0.0015 '/'
 Inlet Invert= 47.70', Outlet Invert= 47.06'



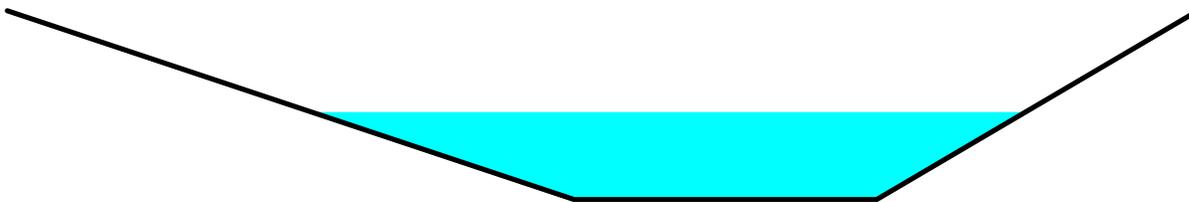
Summary for Reach L150:

Inflow Area = 88.846 ac, 43.59% Impervious, Inflow Depth > 3.61" for 100-Year event
Inflow = 135.95 cfs @ 12.17 hrs, Volume= 26.745 af
Outflow = 134.41 cfs @ 12.19 hrs, Volume= 26.727 af, Atten= 1%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.35 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 1.3 min

Peak Storage= 4,241 cf @ 12.17 hrs
Average Depth at Peak Storage= 2.32'
Bank-Full Depth= 5.00' Flow Area= 98.8 sf, Capacity= 654.46 cfs

8.00' x 5.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 1.7 '/' Top Width= 31.50'
Length= 136.0' Slope= 0.0043 '/'
Inlet Invert= 48.58', Outlet Invert= 48.00'



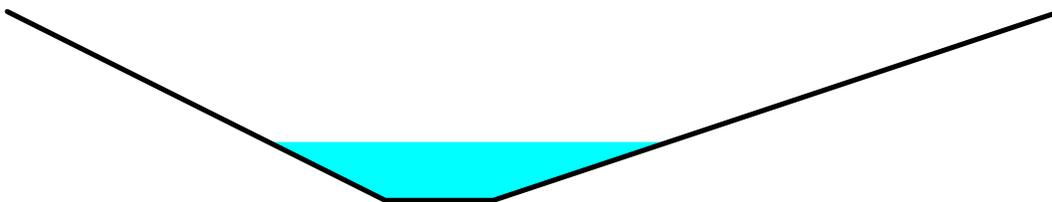
Summary for Reach L151:

Inflow Area = 92.766 ac, 42.80% Impervious, Inflow Depth > 3.59" for 100-Year event
Inflow = 146.04 cfs @ 12.19 hrs, Volume= 27.734 af
Outflow = 145.75 cfs @ 12.21 hrs, Volume= 27.722 af, Atten= 0%, Lag= 0.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.17 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.07 fps, Avg. Travel Time= 0.8 min

Peak Storage= 3,161 cf @ 12.20 hrs
Average Depth at Peak Storage= 2.17'
Bank-Full Depth= 7.00' Flow Area= 150.5 sf, Capacity= 2,128.99 cfs

4.00' x 7.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 3.0 '/' Top Width= 39.00'
Length= 155.0' Slope= 0.0148 '/'
Inlet Invert= 48.00', Outlet Invert= 45.71'



Summary for Reach L186:

Inflow Area = 95.133 ac, 42.86% Impervious, Inflow Depth > 3.61" for 100-Year event
Inflow = 153.59 cfs @ 12.20 hrs, Volume= 28.611 af
Outflow = 151.85 cfs @ 12.25 hrs, Volume= 28.554 af, Atten= 1%, Lag= 3.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.54 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 3.9 min

Peak Storage= 14,714 cf @ 12.22 hrs
Average Depth at Peak Storage= 3.39'
Bank-Full Depth= 4.50' Flow Area= 67.5 sf, Capacity= 279.47 cfs

6.00' x 4.50' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 24.00'
Length= 340.0' Slope= 0.0020 '/'
Inlet Invert= 45.71', Outlet Invert= 45.04'



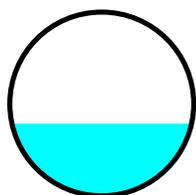
Summary for Reach L57: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.81" for 100-Year event
Inflow = 27.60 cfs @ 12.64 hrs, Volume= 11.705 af
Outflow = 27.59 cfs @ 12.67 hrs, Volume= 11.687 af, Atten= 0%, Lag= 2.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.05 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 3.28 fps, Avg. Travel Time= 2.3 min

Peak Storage= 2,034 cf @ 12.65 hrs
Average Depth at Peak Storage= 1.57'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 85.21 cfs

48.0" Round Pipe
n= 0.014
Length= 446.0' Slope= 0.0041 '/'
Inlet Invert= 49.00', Outlet Invert= 47.18'



Summary for Reach L59: Ditch

Inflow Area = 62.827 ac, 40.52% Impervious, Inflow Depth > 3.18" for 100-Year event
Inflow = 87.82 cfs @ 12.09 hrs, Volume= 16.649 af
Outflow = 84.02 cfs @ 12.14 hrs, Volume= 16.611 af, Atten= 4%, Lag= 3.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.38 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 4.0 min

Peak Storage= 8,512 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.99'
Bank-Full Depth= 3.00' Flow Area= 36.0 sf, Capacity= 196.83 cfs

6.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 2.0 '/' Top Width= 18.00'
Length= 430.0' Slope= 0.0053 '/'
Inlet Invert= 48.58', Outlet Invert= 46.28'



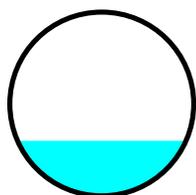
Summary for Reach L65: 30"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.81" for 100-Year event
Inflow = 27.60 cfs @ 12.62 hrs, Volume= 11.712 af
Outflow = 27.60 cfs @ 12.62 hrs, Volume= 11.711 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 22.43 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 12.10 fps, Avg. Travel Time= 0.1 min

Peak Storage= 128 cf @ 12.62 hrs
Average Depth at Peak Storage= 0.75'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 142.22 cfs

30.0" Round Pipe
n= 0.014
Length= 104.0' Slope= 0.1394 '/'
Inlet Invert= 71.00', Outlet Invert= 56.50'



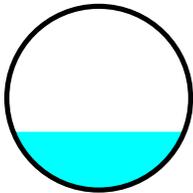
Summary for Reach L67: 48"

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.81" for 100-Year event
Inflow = 27.60 cfs @ 12.62 hrs, Volume= 11.711 af
Outflow = 27.60 cfs @ 12.64 hrs, Volume= 11.705 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.12 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 4.37 fps, Avg. Travel Time= 0.7 min

Peak Storage= 629 cf @ 12.63 hrs
Average Depth at Peak Storage= 1.26'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 127.86 cfs

48.0" Round Pipe
n= 0.014
Length= 185.0' Slope= 0.0092 '/'
Inlet Invert= 50.70', Outlet Invert= 49.00'



Summary for Reach P1:

Inflow Area = 97.980 ac, 43.95% Impervious, Inflow Depth > 3.64" for 100-Year event
Inflow = 159.29 cfs @ 12.25 hrs, Volume= 29.733 af
Outflow = 159.21 cfs @ 12.25 hrs, Volume= 29.730 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.58 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.64 fps, Avg. Travel Time= 0.2 min

Peak Storage= 692 cf @ 12.25 hrs
Average Depth at Peak Storage= 1.25'
Bank-Full Depth= 2.33' Flow Area= 28.0 sf, Capacity= 407.83 cfs

12.00' x 2.33' deep channel, n= 0.030
Length= 46.0' Slope= 0.0435 '/'
Inlet Invert= 43.00', Outlet Invert= 41.00'



Summary for Pond 19P:

Inflow Area = 28.430 ac, 25.75% Impervious, Inflow Depth > 3.19" for 100-Year event
 Inflow = 87.93 cfs @ 12.15 hrs, Volume= 7.559 af
 Outflow = 89.38 cfs @ 12.16 hrs, Volume= 7.551 af, Atten= 0%, Lag= 0.5 min
 Primary = 17.38 cfs @ 12.16 hrs, Volume= 4.683 af
 Secondary = 71.99 cfs @ 12.16 hrs, Volume= 2.868 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 140.12' @ 12.16 hrs Surf.Area= 3,359 sf Storage= 4,100 cf

Plug-Flow detention time= 1.8 min calculated for 7.532 af (100% of inflow)
 Center-of-Mass det. time= 1.4 min (791.3 - 790.0)

Volume	Invert	Avail.Storage	Storage Description
#1	137.80'	30,987 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
137.80	174	0	0
138.30	860	259	259
138.80	1,546	602	860
139.30	2,232	945	1,805
139.80	2,919	1,288	3,092
140.30	3,605	1,631	4,723
140.80	4,291	1,974	6,697
141.30	4,977	2,317	9,014
141.80	5,663	2,660	11,674
148.00	567	19,313	30,987

Device	Routing	Invert	Outlet Devices
#1	Primary	137.80'	24.0" Round Culvert L= 612.0' Ke= 0.500 Inlet / Outlet Invert= 137.80' / 105.30' S= 0.0531 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	139.00'	23.0' long x 18.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=17.32 cfs @ 12.16 hrs HW=140.11' (Free Discharge)
 ↖**1=Culvert** (Inlet Controls 17.32 cfs @ 5.51 fps)

Secondary OutFlow Max=71.01 cfs @ 12.16 hrs HW=140.11' (Free Discharge)
 ↖**2=Broad-Crested Rectangular Weir** (Weir Controls 71.01 cfs @ 2.78 fps)

Summary for Pond 20P:

Inflow Area = 2.640 ac, 100.00% Impervious, Inflow Depth > 6.12" for 100-Year event
 Inflow = 17.33 cfs @ 12.07 hrs, Volume= 1.347 af
 Outflow = 18.24 cfs @ 12.09 hrs, Volume= 1.342 af, Atten= 0%, Lag= 1.0 min
 Primary = 18.24 cfs @ 12.09 hrs, Volume= 1.342 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

3659-12003C-Proposed Conditions POA 1-01

Type III 24-hr 100-Year Rainfall=6.65"

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Peak Elev= 168.43' @ 12.09 hrs Surf.Area= 4,356 sf Storage= 2,838 cf

Plug-Flow detention time= 10.9 min calculated for 1.338 af (99% of inflow)
 Center-of-Mass det. time= 9.2 min (724.8 - 715.6)

Volume	Invert	Avail.Storage	Storage Description
#1	166.00'	2,838 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
166.00	0	0	0
166.25	2,875	359	359
166.50	3,790	833	1,193
166.75	4,225	1,002	2,194
166.90	4,356	644	2,838

Device	Routing	Invert	Outlet Devices
#1	Primary	166.00'	24.0" Round Culvert L= 293.0' Ke= 0.500 Inlet / Outlet Invert= 166.00' / 142.00' S= 0.0819 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=17.34 cfs @ 12.09 hrs HW=168.31' (Free Discharge)
 ←1=Culvert (Inlet Controls 17.34 cfs @ 5.52 fps)

Summary for Pond 22.4P:

Inflow Area = 50.068 ac, 35.94% Impervious, Inflow Depth > 2.85" for 100-Year event
 Inflow = 108.28 cfs @ 12.09 hrs, Volume= 11.874 af
 Outflow = 27.60 cfs @ 12.62 hrs, Volume= 11.712 af, Atten= 75%, Lag= 31.8 min
 Primary = 27.60 cfs @ 12.62 hrs, Volume= 11.712 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 77.56' @ 12.62 hrs Surf.Area= 36,624 sf Storage= 140,363 cf

Plug-Flow detention time= 53.2 min calculated for 11.712 af (99% of inflow)
 Center-of-Mass det. time= 47.8 min (839.1 - 791.3)

Volume	Invert	Avail.Storage	Storage Description
#1	71.00'	233,786 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

3659-12003C-Proposed Conditions POA 1-01

Type III 24-hr 100-Year Rainfall=6.65"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
71.00	5,227	0	0
71.25	5,793	1,378	1,378
71.50	6,360	1,519	2,897
71.75	6,926	1,661	4,557
72.00	7,492	1,802	6,360
72.25	9,295	2,098	8,458
72.50	11,097	2,549	11,007
72.75	12,899	3,000	14,007
73.00	14,702	3,450	17,457
73.25	16,504	3,901	21,357
73.50	18,306	4,351	25,709
73.75	20,108	4,802	30,510
74.00	21,911	5,252	35,763
74.25	22,983	5,612	41,375
74.50	24,056	5,880	47,254
74.75	25,129	6,148	53,403
75.00	26,201	6,416	59,819
75.25	27,274	6,684	66,503
75.50	28,347	6,953	73,456
75.75	29,419	7,221	80,677
76.00	30,492	7,489	88,165
76.25	31,478	7,746	95,912
76.50	32,463	7,993	103,904
76.75	33,449	8,239	112,143
77.00	34,434	8,485	120,629
77.25	35,420	8,732	129,360
77.50	36,405	8,978	138,339
77.75	37,391	9,225	147,563
78.00	38,376	9,471	157,034
79.00	38,376	38,376	195,410
80.00	38,376	38,376	233,786

Device	Routing	Invert	Outlet Devices
#1	Secondary	79.00'	12.0' long x 37.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	71.00'	21.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 71.00' / 70.99' S= 0.0100 1/ S= 0.0100 Cc= 0.900 n= 0.005, Flow Area= 2.41 sf

Primary OutFlow Max=27.60 cfs @ 12.62 hrs HW=77.55' (Free Discharge)

↑**2=Culvert** (Inlet Controls 27.60 cfs @ 11.47 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=71.00' (Free Discharge)

↑**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 30P:

Inflow Area = 23.892 ac, 48.11% Impervious, Inflow Depth > 4.82" for 100-Year event
 Inflow = 142.38 cfs @ 12.14 hrs, Volume= 9.595 af
 Outflow = 64.14 cfs @ 12.43 hrs, Volume= 9.213 af, Atten= 55%, Lag= 17.9 min
 Primary = 64.14 cfs @ 12.43 hrs, Volume= 9.213 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 51.47' @ 12.43 hrs Surf.Area= 68,203 sf Storage= 154,914 cf

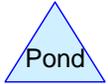
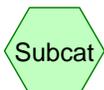
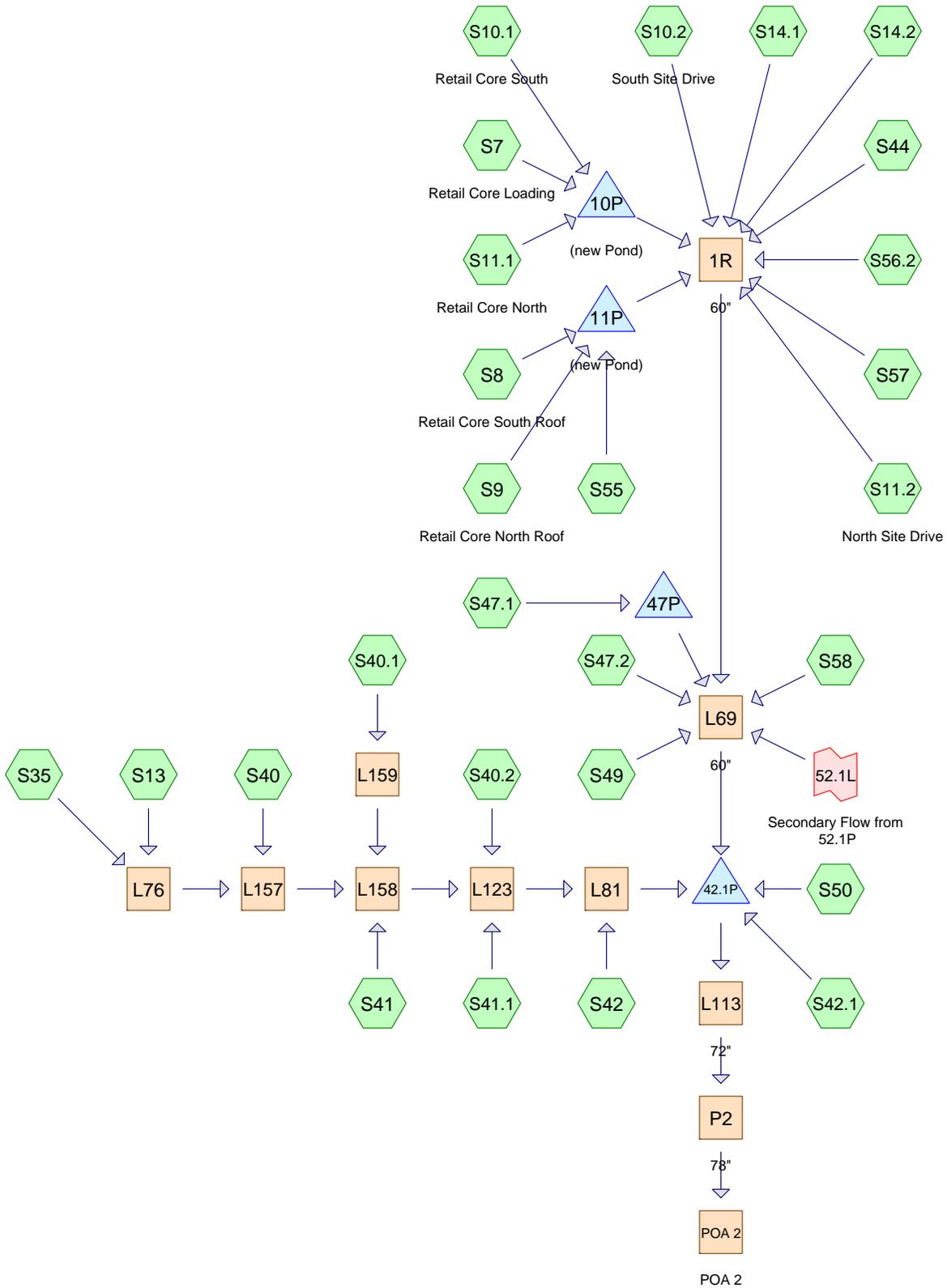
Plug-Flow detention time= 62.7 min calculated for 9.190 af (96% of inflow)
 Center-of-Mass det. time= 48.0 min (809.3 - 761.3)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	264,538 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.00	57,194	0	0
50.00	61,543	59,369	59,369
51.00	66,022	63,783	123,151
52.00	70,631	68,327	191,478
53.00	75,490	73,061	264,538

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	90.0 deg x 4.0' long x 2.00' rise Sharp-Crested Vee/Trap Weir Cv= 2.50 (C= 3.13)
#2	Primary	52.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=64.08 cfs @ 12.43 hrs HW=51.47' (Free Discharge)

- 1=Sharp-Crested Vee/Trap Weir (Orifice Controls 64.08 cfs @ 5.34 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)



Routing Diagram for 3659-12003C-Proposed Conditions POA 2-01
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
14.559	49	(S13, S14.1, S14.2, S35, S40, S40.1, S41, S41.1, S42, S44, S49, S50, S57)
21.574	98	(S13, S14.1, S14.2, S35, S40, S40.1, S40.2, S41, S41.1, S42, S42.1, S44, S47.1, S47.2, S49, S50, S57)
2.882	36	(S41, S41.1, S47.1, S47.2)
1.326	43	(S42.1)
5.162	39	>75% Grass cover, Good, HSG A (S10.1, S10.2, S11.1, S11.2, S55, S58, S7)
0.561	61	>75% Grass cover, Good, HSG B (S56.2)
0.758	98	Paved parking & roofs (S56.2)
27.350	98	Paved parking, HSG A (S10.1, S10.2, S11.1, S11.2, S55, S58, S7)
17.725	98	Roofs, HSG A (S10.1, S11.1, S55, S58, S8, S9)
91.897	84	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	40.341	40.341		S13, S14.1, S14.2, S35, S40, S40.1, S40.2, S41, S41.1, S42, S42.1, S44, S47.1, S47.2, S49, S50, S57
5.162	0.561	0.000	0.000	0.000	5.723	>75% Grass cover, Good	S10.1, S10.2, S11.1, S11.2, S55, S56.2, S58, S7
27.350	0.000	0.000	0.000	0.000	27.350	Paved parking	S10.1, S10.2, S11.1, S11.2, S55, S58, S7
0.000	0.000	0.000	0.000	0.758	0.758	Paved parking & roofs	S56.2
17.725	0.000	0.000	0.000	0.000	17.725	Roofs	S10.1, S11.1, S55, S58, S8, S9
50.238	0.561	0.000	0.000	41.099	91.897	TOTAL AREA	

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment S10.1: Retail Core South	Runoff Area=591,222 sf 95.05% Impervious Runoff Depth>2.51" Tc=5.0 min CN=95 Runoff=40.04 cfs 2.837 af
Subcatchment S10.2: South Site Drive	Runoff Area=18,117 sf 74.41% Impervious Runoff Depth>1.50" Tc=5.0 min CN=83 Runoff=0.78 cfs 0.052 af
Subcatchment S11.1: Retail Core North	Runoff Area=368,315 sf 93.92% Impervious Runoff Depth>2.41" Tc=5.0 min CN=94 Runoff=24.30 cfs 1.697 af
Subcatchment S11.2: North Site Drive	Runoff Area=116,724 sf 71.17% Impervious Runoff Depth>1.36" Tc=5.0 min CN=81 Runoff=4.60 cfs 0.304 af
Subcatchment S13:	Runoff Area=172,769 sf 64.10% Impervious Runoff Depth>1.30" Tc=5.0 min CN=80 Runoff=6.47 cfs 0.428 af
Subcatchment S14.1:	Runoff Area=146,796 sf 67.83% Impervious Runoff Depth>1.43" Tc=5.0 min CN=82 Runoff=6.07 cfs 0.401 af
Subcatchment S14.2:	Runoff Area=70,406 sf 70.08% Impervious Runoff Depth>1.50" Tc=5.0 min CN=83 Runoff=3.05 cfs 0.201 af
Subcatchment S35:	Runoff Area=58,042 sf 78.43% Impervious Runoff Depth>1.79" Tc=5.0 min CN=87 Runoff=2.99 cfs 0.199 af
Subcatchment S40:	Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>1.43" Tc=5.0 min CN=82 Runoff=4.81 cfs 0.317 af
Subcatchment S40.1:	Runoff Area=2.328 ac 45.53% Impervious Runoff Depth>0.77" Tc=63.2 min CN=71 Runoff=0.82 cfs 0.150 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>2.83" Tc=5.0 min CN=98 Runoff=10.00 cfs 0.754 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>1.06" Tc=5.0 min CN=76 Runoff=1.42 cfs 0.095 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>0.21" Tc=16.7 min CN=55 Runoff=0.19 cfs 0.035 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>1.64" Tc=5.0 min CN=85 Runoff=2.97 cfs 0.197 af
Subcatchment S42.1:	Runoff Area=75,003 sf 22.98% Impervious Runoff Depth>0.24" Flow Length=362' Tc=11.1 min CN=56 Runoff=0.20 cfs 0.034 af
Subcatchment S44:	Runoff Area=62,267 sf 92.33% Impervious Runoff Depth>2.41" Tc=5.0 min CN=94 Runoff=4.11 cfs 0.287 af

Subcatchment S47.1:	Runoff Area=100,677 sf 4.60% Impervious Runoff Depth=0.00" Flow Length=271' Tc=11.5 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment S47.2:	Runoff Area=77,444 sf 75.42% Impervious Runoff Depth>1.49" Tc=18.7 min CN=83 Runoff=2.31 cfs 0.220 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>1.79" Tc=5.0 min CN=87 Runoff=7.00 cfs 0.466 af
Subcatchment S50:	Runoff Area=270,033 sf 6.86% Impervious Runoff Depth>0.14" Flow Length=1,000' Tc=24.1 min CN=52 Runoff=0.24 cfs 0.071 af
Subcatchment S55:	Runoff Area=199,027 sf 86.53% Impervious Runoff Depth>2.04" Tc=5.0 min CN=90 Runoff=11.55 cfs 0.777 af
Subcatchment S56.2:	Runoff Area=57,424 sf 57.47% Impervious Runoff Depth>1.43" Tc=5.0 min CN=82 Runoff=2.37 cfs 0.157 af
Subcatchment S57:	Runoff Area=32,627 sf 76.10% Impervious Runoff Depth>1.71" Tc=5.0 min CN=86 Runoff=1.61 cfs 0.107 af
Subcatchment S58:	Runoff Area=228,917 sf 88.60% Impervious Runoff Depth>2.13" Tc=5.0 min CN=91 Runoff=13.76 cfs 0.932 af
Subcatchment S7: Retail Core Loading	Runoff Area=248,742 sf 67.01% Impervious Runoff Depth>1.23" Tc=5.0 min CN=79 Runoff=8.84 cfs 0.587 af
Subcatchment S8: Retail Core South	Runoff Area=219,409 sf 100.00% Impervious Runoff Depth>2.83" Tc=5.0 min CN=98 Runoff=15.75 cfs 1.187 af
Subcatchment S9: Retail Core North	Runoff Area=197,875 sf 100.00% Impervious Runoff Depth>2.83" Tc=5.0 min CN=98 Runoff=14.20 cfs 1.071 af
Reach 1R: 60"	Avg. Flow Depth=1.13' Max Vel=6.60 fps Inflow=22.54 cfs 1.613 af 60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/ Capacity=196.22 cfs Outflow=21.91 cfs 1.611 af
Reach L113: 72"	Avg. Flow Depth=1.54' Max Vel=12.48 fps Inflow=71.79 cfs 8.183 af 72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/ Capacity=498.08 cfs Outflow=71.80 cfs 8.182 af
Reach L123:	Avg. Flow Depth=1.62' Max Vel=4.86 fps Inflow=24.77 cfs 1.976 af 48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/ Capacity=67.64 cfs Outflow=23.28 cfs 1.970 af
Reach L157:	Avg. Flow Depth=1.53' Max Vel=3.19 fps Inflow=14.13 cfs 0.943 af 48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/ Capacity=45.42 cfs Outflow=14.11 cfs 0.943 af
Reach L158:	Avg. Flow Depth=1.16' Max Vel=5.07 fps Inflow=15.56 cfs 1.187 af 48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/ Capacity=83.69 cfs Outflow=15.41 cfs 1.186 af
Reach L159:	Avg. Flow Depth=0.37' Max Vel=2.09 fps Inflow=0.82 cfs 0.150 af 24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/ Capacity=11.23 cfs Outflow=0.82 cfs 0.150 af
Reach L69: 60"	Avg. Flow Depth=1.70' Max Vel=8.31 fps Inflow=48.57 cfs 5.914 af 60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/ Capacity=196.68 cfs Outflow=48.75 cfs 5.912 af

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Type III 24-hr 2-Year Rainfall=3.20"

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Reach L76: Avg. Flow Depth=0.90' Max Vel=4.45 fps Inflow=9.45 cfs 0.627 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/' Capacity=84.95 cfs Outflow=9.39 cfs 0.626 af

Reach L81: Avg. Flow Depth=1.20' Max Vel=7.16 fps Inflow=26.03 cfs 2.167 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/' Capacity=207.41 cfs Outflow=25.99 cfs 2.166 af

Reach P2: 78" Avg. Flow Depth=1.46' Max Vel=12.89 fps Inflow=71.80 cfs 8.182 af
78.0" Round Pipe n=0.014 L=25.0' S=0.0180 '/' Capacity=653.15 cfs Outflow=71.80 cfs 8.182 af

Reach POA 2: POA 2 Inflow=71.80 cfs 8.182 af
Outflow=71.80 cfs 8.182 af

Pond 10P: (new Pond) Peak Elev=48.36' Storage=42,604 cf Inflow=73.15 cfs 5.120 af
Discarded=21.81 cfs 5.116 af Primary=0.00 cfs 0.000 af Outflow=21.81 cfs 5.116 af

Pond 11P: (new Pond) Peak Elev=50.20' Storage=31,028 cf Inflow=41.50 cfs 3.034 af
Discarded=8.46 cfs 2.927 af Primary=3.55 cfs 0.105 af Outflow=12.01 cfs 3.032 af

Pond 42.1P: Peak Elev=39.57' Storage=3,473 cf Inflow=74.16 cfs 8.184 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/' Outflow=71.79 cfs 8.183 af

Pond 47P: Peak Elev=42.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Secondary ~~Outflow~~ Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce Inflow=10.13 cfs 2.686 af
Primary=10.13 cfs 2.686 af

Total Runoff Area = 91.897 ac Runoff Volume = 13.562 af Average Runoff Depth = 1.77"
26.65% Pervious = 24.491 ac 73.35% Impervious = 67.407 ac

Summary for Subcatchment S10.1: Retail Core South

Runoff = 40.04 cfs @ 12.07 hrs, Volume= 2.837 af, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
29,236	39	>75% Grass cover, Good, HSG A
463,066	98	Paved parking, HSG A
98,920	98	Roofs, HSG A
591,222	95	Weighted Average
29,236		4.95% Pervious Area
561,986		95.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S10.2: South Site Drive

Runoff = 0.78 cfs @ 12.08 hrs, Volume= 0.052 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
4,636	39	>75% Grass cover, Good, HSG A
13,481	98	Paved parking, HSG A
18,117	83	Weighted Average
4,636		25.59% Pervious Area
13,481		74.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1: Retail Core North

Runoff = 24.30 cfs @ 12.07 hrs, Volume= 1.697 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Area (sf)	CN	Description
22,400	39	>75% Grass cover, Good, HSG A
324,581	98	Paved parking, HSG A
21,334	98	Roofs, HSG A
368,315	94	Weighted Average
22,400		6.08% Pervious Area
345,915		93.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.2: North Site Drive

Runoff = 4.60 cfs @ 12.08 hrs, Volume= 0.304 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
33,650	39	>75% Grass cover, Good, HSG A
83,074	98	Paved parking, HSG A
116,724	81	Weighted Average
33,650		28.83% Pervious Area
83,074		71.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S13:

Runoff = 6.47 cfs @ 12.08 hrs, Volume= 0.428 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 62,018	49	
* 110,751	98	
172,769	80	Weighted Average
62,018		35.90% Pervious Area
110,751		64.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.1:

Runoff = 6.07 cfs @ 12.08 hrs, Volume= 0.401 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	47,226	49	
*	99,570	98	
	146,796	82	Weighted Average
	47,226		32.17% Pervious Area
	99,570		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.2:

Runoff = 3.05 cfs @ 12.08 hrs, Volume= 0.201 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	21,068	49	
*	49,338	98	
	70,406	83	Weighted Average
	21,068		29.92% Pervious Area
	49,338		70.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S35:

Runoff = 2.99 cfs @ 12.08 hrs, Volume= 0.199 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	12,520	49	
*	45,522	98	
	58,042	87	Weighted Average
	12,520		21.57% Pervious Area
	45,522		78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40:

Runoff = 4.81 cfs @ 12.08 hrs, Volume= 0.317 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 0.82 cfs @ 12.94 hrs, Volume= 0.150 af, Depth> 0.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.268	49	
* 1.060	98	
2.328	71	Weighted Average
1.268		54.47% Pervious Area
1.060		45.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 10.00 cfs @ 12.07 hrs, Volume= 0.754 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 1.42 cfs @ 12.08 hrs, Volume= 0.095 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 0.19 cfs @ 12.50 hrs, Volume= 0.035 af, Depth> 0.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 2.97 cfs @ 12.08 hrs, Volume= 0.197 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 0.20 cfs @ 12.39 hrs, Volume= 0.034 af, Depth> 0.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 57,770	43	
* 17,233	98	
75,003	56	Weighted Average
57,770		77.02% Pervious Area
17,233		22.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0500	0.25		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
4.3	262	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
11.1	362	Total			

Summary for Subcatchment S44:

Runoff = 4.11 cfs @ 12.07 hrs, Volume= 0.287 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

Prepared by {enter your company name here}

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	Area (sf)	CN	Description
*	4,774	49	
*	57,493	98	
	62,267	94	Weighted Average
	4,774		7.67% Pervious Area
	57,493		92.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47.1:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	96,047	36	
*	4,630	98	
	100,677	39	Weighted Average
	96,047		95.40% Pervious Area
	4,630		4.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0475	0.17		Sheet Flow, Sheet
					Grass: Dense n= 0.240 P2= 3.20"
1.4	171	0.0160	2.04		Shallow Concentrated Flow, Shallow Conc
					Unpaved Kv= 16.1 fps
11.5	271	Total			

Summary for Subcatchment S47.2:

Runoff = 2.31 cfs @ 12.26 hrs, Volume= 0.220 af, Depth> 1.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	19,033	36	
*	58,411	98	
	77,444	83	Weighted Average
	19,033		24.58% Pervious Area
	58,411		75.42% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S49:

Runoff = 7.00 cfs @ 12.08 hrs, Volume= 0.466 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S50:

Runoff = 0.24 cfs @ 12.69 hrs, Volume= 0.071 af, Depth> 0.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 251,512	49	
* 18,521	98	
270,033	52	Weighted Average
251,512		93.14% Pervious Area
18,521		6.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0570	0.18		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
14.7	900	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
24.1	1,000	Total			

Summary for Subcatchment S55:

Runoff = 11.55 cfs @ 12.07 hrs, Volume= 0.777 af, Depth> 2.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	128,788	98	Roofs, HSG A
	43,425	98	Paved parking, HSG A
	26,814	39	>75% Grass cover, Good, HSG A
	199,027	90	Weighted Average
	26,814		13.47% Pervious Area
	172,213		86.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.2:

Runoff = 2.37 cfs @ 12.08 hrs, Volume= 0.157 af, Depth> 1.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
	24,425	61	>75% Grass cover, Good, HSG B
	32,999	98	Paved parking & roofs
	57,424	82	Weighted Average
	24,425		42.53% Pervious Area
	32,999		57.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S57:

Runoff = 1.61 cfs @ 12.08 hrs, Volume= 0.107 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

	Area (sf)	CN	Description
*	7,797	49	
*	24,830	98	
	32,627	86	Weighted Average
	7,797		23.90% Pervious Area
	24,830		76.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 13.76 cfs @ 12.07 hrs, Volume= 0.932 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
26,090	39	>75% Grass cover, Good, HSG A
97,041	98	Paved parking, HSG A
105,786	98	Roofs, HSG A
228,917	91	Weighted Average
26,090		11.40% Pervious Area
202,827		88.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S7: Retail Core Loading

Runoff = 8.84 cfs @ 12.08 hrs, Volume= 0.587 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
82,052	39	>75% Grass cover, Good, HSG A
166,690	98	Paved parking, HSG A
248,742	79	Weighted Average
82,052		32.99% Pervious Area
166,690		67.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S8: Retail Core South Roof

Runoff = 15.75 cfs @ 12.07 hrs, Volume= 1.187 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
219,409	98	Roofs, HSG A
219,409		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S9: Retail Core North Roof

Runoff = 14.20 cfs @ 12.07 hrs, Volume= 1.071 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
197,875	98	Roofs, HSG A
197,875		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

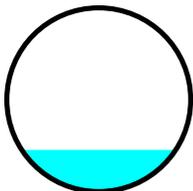
Summary for Reach 1R: 60"

Inflow Area = 53.465 ac, 86.94% Impervious, Inflow Depth > 0.36" for 2-Year event
 Inflow = 22.54 cfs @ 12.08 hrs, Volume= 1.613 af
 Outflow = 21.91 cfs @ 12.09 hrs, Volume= 1.611 af, Atten= 3%, Lag= 1.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 2
 Max. Velocity= 6.60 fps, Min. Travel Time= 1.2 min
 Avg. Velocity = 2.14 fps, Avg. Travel Time= 3.7 min

Peak Storage= 1,593 cf @ 12.09 hrs
 Average Depth at Peak Storage= 1.13'
 Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
 n= 0.014
 Length= 480.0' Slope= 0.0066 '/'
 Inlet Invert= 42.00', Outlet Invert= 38.84'



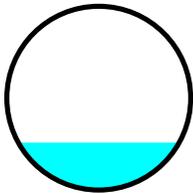
Summary for Reach L113: 72"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 1.07" for 2-Year event
Inflow = 71.79 cfs @ 12.13 hrs, Volume= 8.183 af
Outflow = 71.80 cfs @ 12.13 hrs, Volume= 8.182 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.48 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.43 fps, Avg. Travel Time= 0.4 min

Peak Storage= 550 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.54'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



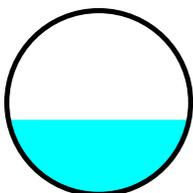
Summary for Reach L123:

Inflow Area = 16.607 ac, 63.51% Impervious, Inflow Depth > 1.43" for 2-Year event
Inflow = 24.77 cfs @ 12.10 hrs, Volume= 1.976 af
Outflow = 23.28 cfs @ 12.13 hrs, Volume= 1.970 af, Atten= 6%, Lag= 1.8 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.86 fps, Min. Travel Time= 2.4 min
Avg. Velocity = 1.66 fps, Avg. Travel Time= 7.0 min

Peak Storage= 3,338 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.62'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



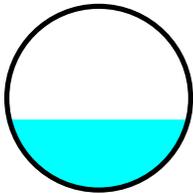
Summary for Reach L157:

Inflow Area = 7.969 ac, 67.61% Impervious, Inflow Depth > 1.42" for 2-Year event
Inflow = 14.13 cfs @ 12.09 hrs, Volume= 0.943 af
Outflow = 14.11 cfs @ 12.10 hrs, Volume= 0.943 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.19 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 2.0 min

Peak Storage= 610 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.53'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/
Inlet Invert= 41.86', Outlet Invert= 41.70'



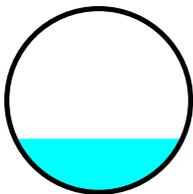
Summary for Reach L158:

Inflow Area = 11.377 ac, 61.95% Impervious, Inflow Depth > 1.25" for 2-Year event
Inflow = 15.56 cfs @ 12.10 hrs, Volume= 1.187 af
Outflow = 15.41 cfs @ 12.11 hrs, Volume= 1.186 af, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.07 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 2.2 min

Peak Storage= 771 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.16'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/
Inlet Invert= 41.60', Outlet Invert= 40.60'



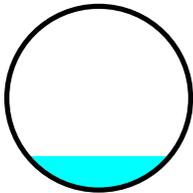
Summary for Reach L159:

Inflow Area = 2.328 ac, 45.53% Impervious, Inflow Depth > 0.77" for 2-Year event
Inflow = 0.82 cfs @ 12.94 hrs, Volume= 0.150 af
Outflow = 0.82 cfs @ 12.94 hrs, Volume= 0.150 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.09 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.25 fps, Avg. Travel Time= 0.9 min

Peak Storage= 28 cf @ 12.94 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/'
Inlet Invert= 41.90', Outlet Invert= 41.70'



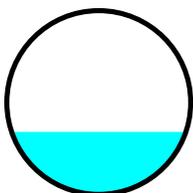
Summary for Reach L69: 60"

Inflow Area = 65.930 ac, 83.39% Impervious, Inflow Depth > 1.08" for 2-Year event
Inflow = 48.57 cfs @ 12.09 hrs, Volume= 5.914 af
Outflow = 48.75 cfs @ 12.10 hrs, Volume= 5.912 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.31 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.24 fps, Avg. Travel Time= 0.7 min

Peak Storage= 745 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.70'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/'
Inlet Invert= 38.84', Outlet Invert= 38.00'



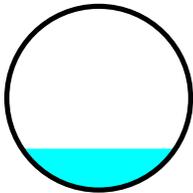
Summary for Reach L76:

Inflow Area = 5.299 ac, 67.71% Impervious, Inflow Depth > 1.42" for 2-Year event
Inflow = 9.45 cfs @ 12.08 hrs, Volume= 0.627 af
Outflow = 9.39 cfs @ 12.10 hrs, Volume= 0.626 af, Atten= 1%, Lag= 1.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.45 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.60 fps, Avg. Travel Time= 3.7 min

Peak Storage= 749 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.90'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



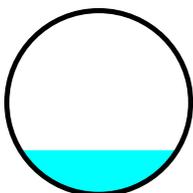
Summary for Reach L81:

Inflow Area = 18.047 ac, 64.32% Impervious, Inflow Depth > 1.44" for 2-Year event
Inflow = 26.03 cfs @ 12.12 hrs, Volume= 2.167 af
Outflow = 25.99 cfs @ 12.12 hrs, Volume= 2.166 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.16 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.40 fps, Avg. Travel Time= 0.8 min

Peak Storage= 436 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.20'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



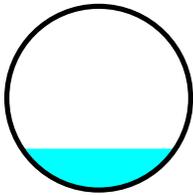
Summary for Reach P2: 78"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 1.07" for 2-Year event
Inflow = 71.80 cfs @ 12.13 hrs, Volume= 8.182 af
Outflow = 71.80 cfs @ 12.13 hrs, Volume= 8.182 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.89 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 4.59 fps, Avg. Travel Time= 0.1 min

Peak Storage= 139 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.46'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 653.15 cfs

78.0" Round Pipe
n= 0.014
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 1.07" for 2-Year event
Inflow = 71.80 cfs @ 12.13 hrs, Volume= 8.182 af
Outflow = 71.80 cfs @ 12.13 hrs, Volume= 8.182 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 10P: (new Pond)

Inflow Area = 27.738 ac, 88.94% Impervious, Inflow Depth > 2.22" for 2-Year event
Inflow = 73.15 cfs @ 12.07 hrs, Volume= 5.120 af
Outflow = 21.81 cfs @ 12.40 hrs, Volume= 5.116 af, Atten= 70%, Lag= 19.5 min
Discarded = 21.81 cfs @ 12.40 hrs, Volume= 5.116 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 48.36' @ 12.40 hrs Surf.Area= 61,050 sf Storage= 42,604 cf

Plug-Flow detention time= 11.5 min calculated for 5.103 af (100% of inflow)
Center-of-Mass det. time= 11.0 min (770.0 - 759.0)

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Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	150,150 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	257,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			793,650 cf Overall - 150,150 cf Embedded = 643,500 cf x 40.0% Voids
		407,550 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	11,550	0	0
48.00	11,550	11,550	11,550
49.00	11,550	11,550	23,100
50.00	11,550	11,550	34,650
51.00	11,550	11,550	46,200
52.00	11,550	11,550	57,750
53.00	11,550	11,550	69,300
53.25	11,550	2,888	72,188
60.00	11,550	77,963	150,150

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	61,050	0	0
48.00	61,050	61,050	61,050
49.00	61,050	61,050	122,100
50.00	61,050	61,050	183,150
51.00	61,050	61,050	244,200
52.00	61,050	61,050	305,250
53.00	61,050	61,050	366,300
53.25	61,050	15,263	381,563
60.00	61,050	412,088	793,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	15.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=21.81 cfs @ 12.40 hrs HW=48.36' (Free Discharge)

↑**1=Exfiltration** (Controls 21.81 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=47.00' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 11P: (new Pond)

Inflow Area = 14.149 ac, 95.65% Impervious, Inflow Depth > 2.57" for 2-Year event
 Inflow = 41.50 cfs @ 12.07 hrs, Volume= 3.034 af
 Outflow = 12.01 cfs @ 12.40 hrs, Volume= 3.032 af, Atten= 71%, Lag= 19.7 min
 Discarded = 8.46 cfs @ 12.40 hrs, Volume= 2.927 af
 Primary = 3.55 cfs @ 12.40 hrs, Volume= 0.105 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

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Peak Elev= 50.20' @ 12.40 hrs Surf.Area= 18,500 sf Storage= 31,028 cf

Plug-Flow detention time= 19.5 min calculated for 3.032 af (100% of inflow)
Center-of-Mass det. time= 19.2 min (758.9 - 739.7)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	50,050 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	76,180 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			240,500 cf Overall - 50,050 cf Embedded = 190,450 cf x 40.0% Voids
		126,230 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,850	0	0
48.00	3,850	3,850	3,850
49.00	3,850	3,850	7,700
50.00	3,850	3,850	11,550
51.00	3,850	3,850	15,400
52.00	3,850	3,850	19,250
53.00	3,850	3,850	23,100
54.00	3,850	3,850	26,950
54.50	3,850	1,925	28,875
60.00	3,850	21,175	50,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	18,500	0	0
48.00	18,500	18,500	18,500
49.00	18,500	18,500	37,000
50.00	18,500	18,500	55,500
51.00	18,500	18,500	74,000
52.00	18,500	18,500	92,500
53.00	18,500	18,500	111,000
54.00	18,500	18,500	129,500
54.50	18,500	9,250	138,750
60.00	18,500	101,750	240,500

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	18.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=8.46 cfs @ 12.40 hrs HW=50.20' (Free Discharge)
 ↑**1=Exfiltration** (Controls 8.46 cfs)

Primary OutFlow Max=3.53 cfs @ 12.40 hrs HW=50.20' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 3.53 cfs @ 2.84 fps)

Summary for Pond 42.1P:

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 1.07" for 2-Year event
 Inflow = 74.16 cfs @ 12.11 hrs, Volume= 8.184 af
 Outflow = 71.79 cfs @ 12.13 hrs, Volume= 8.183 af, Atten= 3%, Lag= 1.3 min
 Primary = 71.79 cfs @ 12.13 hrs, Volume= 8.183 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 39.57' @ 12.13 hrs Surf.Area= 2,846 sf Storage= 3,473 cf

Plug-Flow detention time= 0.4 min calculated for 8.163 af (100% of inflow)
 Center-of-Mass det. time= 0.3 min (817.6 - 817.3)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 1/' Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=70.50 cfs @ 12.13 hrs HW=39.54' (Free Discharge)
 ↑**1=Culvert** (Barrel Controls 70.50 cfs @ 6.09 fps)

Summary for Pond 47P:

Inflow Area = 2.311 ac, 4.60% Impervious, Inflow Depth = 0.00" for 2-Year event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 42.00' @ 0.00 hrs Surf.Area= 10,588 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	243,835 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
42.00	10,588	0	0
43.00	18,319	14,454	14,454
44.00	25,630	21,975	36,428
45.00	30,580	28,105	64,533
46.00	36,447	33,514	98,047
50.00	36,447	145,788	243,835

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 52.1L: Secondary Flow from 52.1P

Inflow = 10.13 cfs @ 12.46 hrs, Volume= 2.686 af
 Primary = 10.13 cfs @ 12.46 hrs, Volume= 2.686 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

2-Year Secondary Outflow Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment S10.1: Retail Core South	Runoff Area=591,222 sf 95.05% Impervious Runoff Depth>3.82" Tc=5.0 min CN=95 Runoff=59.47 cfs 4.326 af
Subcatchment S10.2: South Site Drive	Runoff Area=18,117 sf 74.41% Impervious Runoff Depth>2.64" Tc=5.0 min CN=83 Runoff=1.37 cfs 0.091 af
Subcatchment S11.1: Retail Core North	Runoff Area=368,315 sf 93.92% Impervious Runoff Depth>3.72" Tc=5.0 min CN=94 Runoff=36.49 cfs 2.618 af
Subcatchment S11.2: North Site Drive	Runoff Area=116,724 sf 71.17% Impervious Runoff Depth>2.46" Tc=5.0 min CN=81 Runoff=8.28 cfs 0.550 af
Subcatchment S13:	Runoff Area=172,769 sf 64.10% Impervious Runoff Depth>2.38" Tc=5.0 min CN=80 Runoff=11.85 cfs 0.785 af
Subcatchment S14.1:	Runoff Area=146,796 sf 67.83% Impervious Runoff Depth>2.55" Tc=5.0 min CN=82 Runoff=10.75 cfs 0.715 af
Subcatchment S14.2:	Runoff Area=70,406 sf 70.08% Impervious Runoff Depth>2.64" Tc=5.0 min CN=83 Runoff=5.32 cfs 0.355 af
Subcatchment S35:	Runoff Area=58,042 sf 78.43% Impervious Runoff Depth>3.01" Tc=5.0 min CN=87 Runoff=4.94 cfs 0.334 af
Subcatchment S40:	Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>2.55" Tc=5.0 min CN=82 Runoff=8.52 cfs 0.567 af
Subcatchment S40.1:	Runoff Area=2.328 ac 45.53% Impervious Runoff Depth>1.63" Tc=63.2 min CN=71 Runoff=1.84 cfs 0.317 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=98 Runoff=14.48 cfs 1.110 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>2.05" Tc=5.0 min CN=76 Runoff=2.79 cfs 0.184 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>0.69" Tc=16.7 min CN=55 Runoff=1.00 cfs 0.117 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>2.82" Tc=5.0 min CN=85 Runoff=5.06 cfs 0.338 af
Subcatchment S42.1:	Runoff Area=75,003 sf 22.98% Impervious Runoff Depth>0.75" Flow Length=362' Tc=11.1 min CN=56 Runoff=1.08 cfs 0.107 af
Subcatchment S44:	Runoff Area=62,267 sf 92.33% Impervious Runoff Depth>3.72" Tc=5.0 min CN=94 Runoff=6.17 cfs 0.443 af

Subcatchment S47.1:	Runoff Area=100,677 sf 4.60% Impervious Runoff Depth>0.09" Flow Length=271' Tc=11.5 min CN=39 Runoff=0.04 cfs 0.018 af
Subcatchment S47.2:	Runoff Area=77,444 sf 75.42% Impervious Runoff Depth>2.62" Tc=18.7 min CN=83 Runoff=4.05 cfs 0.389 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>3.01" Tc=5.0 min CN=87 Runoff=11.58 cfs 0.781 af
Subcatchment S50:	Runoff Area=270,033 sf 6.86% Impervious Runoff Depth>0.55" Flow Length=1,000' Tc=24.1 min CN=52 Runoff=1.91 cfs 0.282 af
Subcatchment S55:	Runoff Area=199,027 sf 86.53% Impervious Runoff Depth>3.30" Tc=5.0 min CN=90 Runoff=18.24 cfs 1.256 af
Subcatchment S56.2:	Runoff Area=57,424 sf 57.47% Impervious Runoff Depth>2.55" Tc=5.0 min CN=82 Runoff=4.21 cfs 0.280 af
Subcatchment S57:	Runoff Area=32,627 sf 76.10% Impervious Runoff Depth>2.91" Tc=5.0 min CN=86 Runoff=2.71 cfs 0.182 af
Subcatchment S58:	Runoff Area=228,917 sf 88.60% Impervious Runoff Depth>3.40" Tc=5.0 min CN=91 Runoff=21.45 cfs 1.489 af
Subcatchment S7: Retail Core Loading	Runoff Area=248,742 sf 67.01% Impervious Runoff Depth>2.29" Tc=5.0 min CN=79 Runoff=16.49 cfs 1.091 af
Subcatchment S8: Retail Core South	Runoff Area=219,409 sf 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=98 Runoff=22.79 cfs 1.748 af
Subcatchment S9: Retail Core North	Runoff Area=197,875 sf 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=98 Runoff=20.55 cfs 1.576 af
Reach 1R: 60"	Avg. Flow Depth=1.63' Max Vel=8.12 fps Inflow=46.57 cfs 3.389 af 60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/' Capacity=196.22 cfs Outflow=45.32 cfs 3.386 af
Reach L113: 72"	Avg. Flow Depth=2.08' Max Vel=14.75 fps Inflow=128.50 cfs 16.649 af 72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/' Capacity=498.08 cfs Outflow=128.45 cfs 16.647 af
Reach L123:	Avg. Flow Depth=2.22' Max Vel=5.58 fps Inflow=42.12 cfs 3.410 af 48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/' Capacity=67.64 cfs Outflow=40.11 cfs 3.402 af
Reach L157:	Avg. Flow Depth=2.13' Max Vel=3.71 fps Inflow=25.14 cfs 1.684 af 48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/' Capacity=45.42 cfs Outflow=25.16 cfs 1.683 af
Reach L158:	Avg. Flow Depth=1.60' Max Vel=6.00 fps Inflow=28.18 cfs 2.184 af 48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/' Capacity=83.69 cfs Outflow=28.06 cfs 2.182 af
Reach L159:	Avg. Flow Depth=0.55' Max Vel=2.64 fps Inflow=1.84 cfs 0.317 af 24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/' Capacity=11.23 cfs Outflow=1.84 cfs 0.317 af
Reach L69: 60"	Avg. Flow Depth=2.38' Max Vel=9.79 fps Inflow=90.42 cfs 12.524 af 60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=90.52 cfs 12.521 af

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Type III 24-hr 10-Year Rainfall=4.60"

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Reach L76: Avg. Flow Depth=1.20' Max Vel=5.25 fps Inflow=16.76 cfs 1.119 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/ Capacity=84.95 cfs Outflow=16.72 cfs 1.117 af

Reach L81: Avg. Flow Depth=1.58' Max Vel=8.37 fps Inflow=44.64 cfs 3.740 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/ Capacity=207.41 cfs Outflow=44.58 cfs 3.740 af

Reach P2: 78" Avg. Flow Depth=1.95' Max Vel=15.28 fps Inflow=128.45 cfs 16.647 af
78.0" Round Pipe n=0.014 L=25.0' S=0.0180 '/ Capacity=653.15 cfs Outflow=128.44 cfs 16.647 af

Reach POA 2: POA 2 Inflow=128.44 cfs 16.647 af
Outflow=128.44 cfs 16.647 af

Pond 10P: (new Pond) Peak Elev=49.92' Storage=91,669 cf Inflow=112.49 cfs 8.035 af
Discarded=22.52 cfs 7.991 af Primary=1.38 cfs 0.037 af Outflow=23.90 cfs 8.028 af

Pond 11P: (new Pond) Peak Elev=51.33' Storage=42,080 cf Inflow=61.58 cfs 4.580 af
Discarded=8.65 cfs 3.840 af Primary=20.86 cfs 0.736 af Outflow=29.52 cfs 4.577 af

Pond 42.1P: Peak Elev=40.93' Storage=10,273 cf Inflow=136.18 cfs 16.650 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/ Outflow=128.50 cfs 16.649 af

Pond 47P: Peak Elev=42.07' Storage=790 cf Inflow=0.04 cfs 0.018 af
Outflow=0.00 cfs 0.000 af

Secondary **Outflow** Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce Inflow=25.69 cfs 6.479 af
Primary=25.69 cfs 6.479 af

Total Runoff Area = 91.897 ac Runoff Volume = 22.050 af Average Runoff Depth = 2.88"
26.65% Pervious = 24.491 ac 73.35% Impervious = 67.407 ac

Summary for Subcatchment S10.1: Retail Core South

Runoff = 59.47 cfs @ 12.07 hrs, Volume= 4.326 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
29,236	39	>75% Grass cover, Good, HSG A
463,066	98	Paved parking, HSG A
98,920	98	Roofs, HSG A
591,222	95	Weighted Average
29,236		4.95% Pervious Area
561,986		95.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S10.2: South Site Drive

Runoff = 1.37 cfs @ 12.08 hrs, Volume= 0.091 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
4,636	39	>75% Grass cover, Good, HSG A
13,481	98	Paved parking, HSG A
18,117	83	Weighted Average
4,636		25.59% Pervious Area
13,481		74.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1: Retail Core North

Runoff = 36.49 cfs @ 12.07 hrs, Volume= 2.618 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
22,400	39	>75% Grass cover, Good, HSG A
324,581	98	Paved parking, HSG A
21,334	98	Roofs, HSG A
368,315	94	Weighted Average
22,400		6.08% Pervious Area
345,915		93.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.2: North Site Drive

Runoff = 8.28 cfs @ 12.08 hrs, Volume= 0.550 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
33,650	39	>75% Grass cover, Good, HSG A
83,074	98	Paved parking, HSG A
116,724	81	Weighted Average
33,650		28.83% Pervious Area
83,074		71.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S13:

Runoff = 11.85 cfs @ 12.08 hrs, Volume= 0.785 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 62,018	49	
* 110,751	98	
172,769	80	Weighted Average
62,018		35.90% Pervious Area
110,751		64.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.1:

Runoff = 10.75 cfs @ 12.08 hrs, Volume= 0.715 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	47,226	49	
*	99,570	98	
	146,796	82	Weighted Average
	47,226		32.17% Pervious Area
	99,570		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.2:

Runoff = 5.32 cfs @ 12.08 hrs, Volume= 0.355 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	21,068	49	
*	49,338	98	
	70,406	83	Weighted Average
	21,068		29.92% Pervious Area
	49,338		70.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S35:

Runoff = 4.94 cfs @ 12.07 hrs, Volume= 0.334 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	12,520	49	
*	45,522	98	
	58,042	87	Weighted Average
	12,520		21.57% Pervious Area
	45,522		78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40:

Runoff = 8.52 cfs @ 12.08 hrs, Volume= 0.567 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 1.84 cfs @ 12.88 hrs, Volume= 0.317 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.268	49	
* 1.060	98	
2.328	71	Weighted Average
1.268		54.47% Pervious Area
1.060		45.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 14.48 cfs @ 12.07 hrs, Volume= 1.110 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 2.79 cfs @ 12.08 hrs, Volume= 0.184 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 1.00 cfs @ 12.30 hrs, Volume= 0.117 af, Depth> 0.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 5.06 cfs @ 12.07 hrs, Volume= 0.338 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 1.08 cfs @ 12.20 hrs, Volume= 0.107 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 57,770	43	
* 17,233	98	
75,003	56	Weighted Average
57,770		77.02% Pervious Area
17,233		22.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0500	0.25		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
4.3	262	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
11.1	362	Total			

Summary for Subcatchment S44:

Runoff = 6.17 cfs @ 12.07 hrs, Volume= 0.443 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	4,774	49	
*	57,493	98	
	62,267	94	Weighted Average
	4,774		7.67% Pervious Area
	57,493		92.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47.1:

Runoff = 0.04 cfs @ 14.66 hrs, Volume= 0.018 af, Depth> 0.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	96,047	36	
*	4,630	98	
	100,677	39	Weighted Average
	96,047		95.40% Pervious Area
	4,630		4.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0475	0.17		Sheet Flow, Sheet
					Grass: Dense n= 0.240 P2= 3.20"
1.4	171	0.0160	2.04		Shallow Concentrated Flow, Shallow Conc
					Unpaved Kv= 16.1 fps
11.5	271	Total			

Summary for Subcatchment S47.2:

Runoff = 4.05 cfs @ 12.26 hrs, Volume= 0.389 af, Depth> 2.62"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	19,033	36	
*	58,411	98	
	77,444	83	Weighted Average
	19,033		24.58% Pervious Area
	58,411		75.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S49:

Runoff = 11.58 cfs @ 12.07 hrs, Volume= 0.781 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S50:

Runoff = 1.91 cfs @ 12.47 hrs, Volume= 0.282 af, Depth> 0.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 251,512	49	
* 18,521	98	
270,033	52	Weighted Average
251,512		93.14% Pervious Area
18,521		6.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0570	0.18		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
14.7	900	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
24.1	1,000	Total			

Summary for Subcatchment S55:

Runoff = 18.24 cfs @ 12.07 hrs, Volume= 1.256 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	128,788	98	Roofs, HSG A
	43,425	98	Paved parking, HSG A
	26,814	39	>75% Grass cover, Good, HSG A
	199,027	90	Weighted Average
	26,814		13.47% Pervious Area
	172,213		86.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.2:

Runoff = 4.21 cfs @ 12.08 hrs, Volume= 0.280 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	24,425	61	>75% Grass cover, Good, HSG B
	32,999	98	Paved parking & roofs
	57,424	82	Weighted Average
	24,425		42.53% Pervious Area
	32,999		57.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S57:

Runoff = 2.71 cfs @ 12.07 hrs, Volume= 0.182 af, Depth> 2.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	7,797	49	
*	24,830	98	
	32,627	86	Weighted Average
	7,797		23.90% Pervious Area
	24,830		76.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 21.45 cfs @ 12.07 hrs, Volume= 1.489 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
26,090	39	>75% Grass cover, Good, HSG A
97,041	98	Paved parking, HSG A
105,786	98	Roofs, HSG A
228,917	91	Weighted Average
26,090		11.40% Pervious Area
202,827		88.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S7: Retail Core Loading

Runoff = 16.49 cfs @ 12.08 hrs, Volume= 1.091 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
82,052	39	>75% Grass cover, Good, HSG A
166,690	98	Paved parking, HSG A
248,742	79	Weighted Average
82,052		32.99% Pervious Area
166,690		67.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S8: Retail Core South Roof

Runoff = 22.79 cfs @ 12.07 hrs, Volume= 1.748 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
219,409	98	Roofs, HSG A
219,409		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S9: Retail Core North Roof

Runoff = 20.55 cfs @ 12.07 hrs, Volume= 1.576 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
197,875	98	Roofs, HSG A
197,875		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

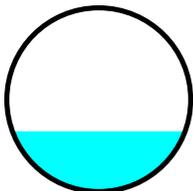
Summary for Reach 1R: 60"

Inflow Area = 53.465 ac, 86.94% Impervious, Inflow Depth > 0.76" for 10-Year event
 Inflow = 46.57 cfs @ 12.12 hrs, Volume= 3.389 af
 Outflow = 45.32 cfs @ 12.14 hrs, Volume= 3.386 af, Atten= 3%, Lag= 1.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 2
 Max. Velocity= 8.12 fps, Min. Travel Time= 1.0 min
 Avg. Velocity = 2.49 fps, Avg. Travel Time= 3.2 min

Peak Storage= 2,677 cf @ 12.14 hrs
 Average Depth at Peak Storage= 1.63'
 Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
 n= 0.014
 Length= 480.0' Slope= 0.0066 '/
 Inlet Invert= 42.00', Outlet Invert= 38.84'



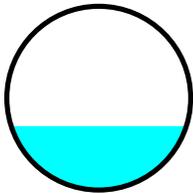
Summary for Reach L113: 72"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 2.17" for 10-Year event
Inflow = 128.50 cfs @ 12.16 hrs, Volume= 16.649 af
Outflow = 128.45 cfs @ 12.16 hrs, Volume= 16.647 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 14.75 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.36 fps, Avg. Travel Time= 0.3 min

Peak Storage= 835 cf @ 12.16 hrs
Average Depth at Peak Storage= 2.08'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



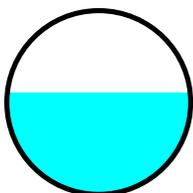
Summary for Reach L123:

Inflow Area = 16.607 ac, 63.51% Impervious, Inflow Depth > 2.46" for 10-Year event
Inflow = 42.12 cfs @ 12.10 hrs, Volume= 3.410 af
Outflow = 40.11 cfs @ 12.12 hrs, Volume= 3.402 af, Atten= 5%, Lag= 1.6 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.58 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 6.0 min

Peak Storage= 5,006 cf @ 12.12 hrs
Average Depth at Peak Storage= 2.22'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



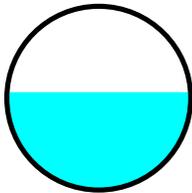
Summary for Reach L157:

Inflow Area = 7.969 ac, 67.61% Impervious, Inflow Depth > 2.54" for 10-Year event
Inflow = 25.14 cfs @ 12.09 hrs, Volume= 1.684 af
Outflow = 25.16 cfs @ 12.10 hrs, Volume= 1.683 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.71 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.30 fps, Avg. Travel Time= 1.8 min

Peak Storage= 937 cf @ 12.10 hrs
Average Depth at Peak Storage= 2.13'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



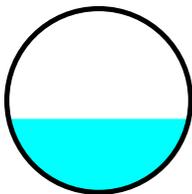
Summary for Reach L158:

Inflow Area = 11.377 ac, 61.95% Impervious, Inflow Depth > 2.30" for 10-Year event
Inflow = 28.18 cfs @ 12.10 hrs, Volume= 2.184 af
Outflow = 28.06 cfs @ 12.11 hrs, Volume= 2.182 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.00 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.19 fps, Avg. Travel Time= 1.9 min

Peak Storage= 1,188 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.60'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



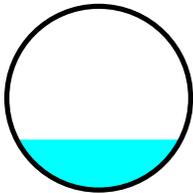
Summary for Reach L159:

Inflow Area = 2.328 ac, 45.53% Impervious, Inflow Depth > 1.63" for 10-Year event
Inflow = 1.84 cfs @ 12.88 hrs, Volume= 0.317 af
Outflow = 1.84 cfs @ 12.89 hrs, Volume= 0.317 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.64 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.44 fps, Avg. Travel Time= 0.8 min

Peak Storage= 49 cf @ 12.89 hrs
Average Depth at Peak Storage= 0.55'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/'
Inlet Invert= 41.90', Outlet Invert= 41.70'



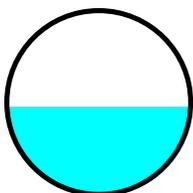
Summary for Reach L69: 60"

Inflow Area = 65.930 ac, 83.39% Impervious, Inflow Depth > 2.28" for 10-Year event
Inflow = 90.42 cfs @ 12.11 hrs, Volume= 12.524 af
Outflow = 90.52 cfs @ 12.11 hrs, Volume= 12.521 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.79 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.87 fps, Avg. Travel Time= 0.5 min

Peak Storage= 1,172 cf @ 12.11 hrs
Average Depth at Peak Storage= 2.38'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/'
Inlet Invert= 38.84', Outlet Invert= 38.00'



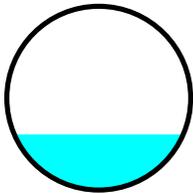
Summary for Reach L76:

Inflow Area = 5.299 ac, 67.71% Impervious, Inflow Depth > 2.53" for 10-Year event
Inflow = 16.76 cfs @ 12.08 hrs, Volume= 1.119 af
Outflow = 16.72 cfs @ 12.09 hrs, Volume= 1.117 af, Atten= 0%, Lag= 1.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.25 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.81 fps, Avg. Travel Time= 3.3 min

Peak Storage= 1,130 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.20'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



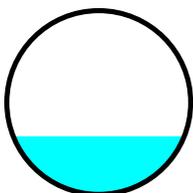
Summary for Reach L81:

Inflow Area = 18.047 ac, 64.32% Impervious, Inflow Depth > 2.49" for 10-Year event
Inflow = 44.64 cfs @ 12.12 hrs, Volume= 3.740 af
Outflow = 44.58 cfs @ 12.12 hrs, Volume= 3.740 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.37 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.79 fps, Avg. Travel Time= 0.7 min

Peak Storage= 641 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.58'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



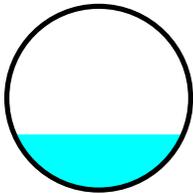
Summary for Reach P2: 78"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 2.17" for 10-Year event
Inflow = 128.45 cfs @ 12.16 hrs, Volume= 16.647 af
Outflow = 128.44 cfs @ 12.16 hrs, Volume= 16.647 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 15.28 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 5.54 fps, Avg. Travel Time= 0.1 min

Peak Storage= 210 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.95'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 653.15 cfs

78.0" Round Pipe
n= 0.014
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 2.17" for 10-Year event
Inflow = 128.44 cfs @ 12.16 hrs, Volume= 16.647 af
Outflow = 128.44 cfs @ 12.16 hrs, Volume= 16.647 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 10P: (new Pond)

Inflow Area = 27.738 ac, 88.94% Impervious, Inflow Depth > 3.48" for 10-Year event
Inflow = 112.49 cfs @ 12.07 hrs, Volume= 8.035 af
Outflow = 23.90 cfs @ 12.49 hrs, Volume= 8.028 af, Atten= 79%, Lag= 24.8 min
Discarded = 22.52 cfs @ 12.49 hrs, Volume= 7.991 af
Primary = 1.38 cfs @ 12.49 hrs, Volume= 0.037 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 49.92' @ 12.49 hrs Surf.Area= 61,050 sf Storage= 91,669 cf

Plug-Flow detention time= 24.5 min calculated for 8.028 af (100% of inflow)
Center-of-Mass det. time= 24.1 min (773.8 - 749.7)

3659-12003C-Proposed Conditions POA 2-01

Type III 24-hr 10-Year Rainfall=4.60"

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Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	150,150 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	257,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			793,650 cf Overall - 150,150 cf Embedded = 643,500 cf x 40.0% Voids
		407,550 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	11,550	0	0
48.00	11,550	11,550	11,550
49.00	11,550	11,550	23,100
50.00	11,550	11,550	34,650
51.00	11,550	11,550	46,200
52.00	11,550	11,550	57,750
53.00	11,550	11,550	69,300
53.25	11,550	2,888	72,188
60.00	11,550	77,963	150,150

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	61,050	0	0
48.00	61,050	61,050	61,050
49.00	61,050	61,050	122,100
50.00	61,050	61,050	183,150
51.00	61,050	61,050	244,200
52.00	61,050	61,050	305,250
53.00	61,050	61,050	366,300
53.25	61,050	15,263	381,563
60.00	61,050	412,088	793,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	15.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=22.52 cfs @ 12.49 hrs HW=49.92' (Free Discharge)

↑**1=Exfiltration** (Controls 22.52 cfs)

Primary OutFlow Max=1.33 cfs @ 12.49 hrs HW=49.92' (Free Discharge)

↑**2=Orifice/Grate** (Orifice Controls 1.33 cfs @ 2.21 fps)

Summary for Pond 11P: (new Pond)

Inflow Area = 14.149 ac, 95.65% Impervious, Inflow Depth > 3.88" for 10-Year event
 Inflow = 61.58 cfs @ 12.07 hrs, Volume= 4.580 af
 Outflow = 29.52 cfs @ 12.22 hrs, Volume= 4.577 af, Atten= 52%, Lag= 9.2 min
 Discarded = 8.65 cfs @ 12.22 hrs, Volume= 3.840 af
 Primary = 20.86 cfs @ 12.22 hrs, Volume= 0.736 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

3659-12003C-Proposed Conditions POA 2-01

Type III 24-hr 10-Year Rainfall=4.60"

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Peak Elev= 51.33' @ 12.22 hrs Surf.Area= 18,500 sf Storage= 42,080 cf

Plug-Flow detention time= 19.1 min calculated for 4.565 af (100% of inflow)
Center-of-Mass det. time= 18.8 min (751.3 - 732.5)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	50,050 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	76,180 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			240,500 cf Overall - 50,050 cf Embedded = 190,450 cf x 40.0% Voids
		126,230 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,850	0	0
48.00	3,850	3,850	3,850
49.00	3,850	3,850	7,700
50.00	3,850	3,850	11,550
51.00	3,850	3,850	15,400
52.00	3,850	3,850	19,250
53.00	3,850	3,850	23,100
54.00	3,850	3,850	26,950
54.50	3,850	1,925	28,875
60.00	3,850	21,175	50,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	18,500	0	0
48.00	18,500	18,500	18,500
49.00	18,500	18,500	37,000
50.00	18,500	18,500	55,500
51.00	18,500	18,500	74,000
52.00	18,500	18,500	92,500
53.00	18,500	18,500	111,000
54.00	18,500	18,500	129,500
54.50	18,500	9,250	138,750
60.00	18,500	101,750	240,500

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	18.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=8.65 cfs @ 12.22 hrs HW=51.31' (Free Discharge)
 ↑1=Exfiltration (Controls 8.65 cfs)

Primary OutFlow Max=20.44 cfs @ 12.22 hrs HW=51.31' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 20.44 cfs @ 4.58 fps)

Summary for Pond 42.1P:

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 2.17" for 10-Year event
 Inflow = 136.18 cfs @ 12.12 hrs, Volume= 16.650 af
 Outflow = 128.50 cfs @ 12.16 hrs, Volume= 16.649 af, Atten= 6%, Lag= 2.7 min
 Primary = 128.50 cfs @ 12.16 hrs, Volume= 16.649 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 40.93' @ 12.16 hrs Surf.Area= 8,080 sf Storage= 10,273 cf

Plug-Flow detention time= 0.6 min calculated for 16.608 af (100% of inflow)
 Center-of-Mass det. time= 0.6 min (810.6 - 810.0)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 1/1' Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=127.20 cfs @ 12.16 hrs HW=40.90' (Free Discharge)
 ↑**1=Culvert** (Barrel Controls 127.20 cfs @ 7.19 fps)

Summary for Pond 47P:

Inflow Area = 2.311 ac, 4.60% Impervious, Inflow Depth > 0.09" for 10-Year event
 Inflow = 0.04 cfs @ 14.66 hrs, Volume= 0.018 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 42.07' @ 20.00 hrs Surf.Area= 11,150 sf Storage= 790 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	243,835 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
42.00	10,588	0	0
43.00	18,319	14,454	14,454
44.00	25,630	21,975	36,428
45.00	30,580	28,105	64,533
46.00	36,447	33,514	98,047
50.00	36,447	145,788	243,835

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 52.1L: Secondary Flow from 52.1P

Inflow = 25.69 cfs @ 12.73 hrs, Volume= 6.479 af
 Primary = 25.69 cfs @ 12.73 hrs, Volume= 6.479 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

10-Year Secondary Outflow Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment S10.1: Retail Core South	Runoff Area=591,222 sf 95.05% Impervious Runoff Depth>4.68" Tc=5.0 min CN=95 Runoff=71.86 cfs 5.290 af
Subcatchment S10.2: South Site Drive	Runoff Area=18,117 sf 74.41% Impervious Runoff Depth>3.41" Tc=5.0 min CN=83 Runoff=1.77 cfs 0.118 af
Subcatchment S11.1: Retail Core North	Runoff Area=368,315 sf 93.92% Impervious Runoff Depth>4.56" Tc=5.0 min CN=94 Runoff=44.26 cfs 3.216 af
Subcatchment S11.2: North Site Drive	Runoff Area=116,724 sf 71.17% Impervious Runoff Depth>3.22" Tc=5.0 min CN=81 Runoff=10.74 cfs 0.718 af
Subcatchment S13:	Runoff Area=172,769 sf 64.10% Impervious Runoff Depth>3.12" Tc=5.0 min CN=80 Runoff=15.47 cfs 1.031 af
Subcatchment S14.1:	Runoff Area=146,796 sf 67.83% Impervious Runoff Depth>3.31" Tc=5.0 min CN=82 Runoff=13.86 cfs 0.930 af
Subcatchment S14.2:	Runoff Area=70,406 sf 70.08% Impervious Runoff Depth>3.41" Tc=5.0 min CN=83 Runoff=6.86 cfs 0.459 af
Subcatchment S35:	Runoff Area=58,042 sf 78.43% Impervious Runoff Depth>3.81" Tc=5.0 min CN=87 Runoff=6.20 cfs 0.423 af
Subcatchment S40:	Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>3.31" Tc=5.0 min CN=82 Runoff=10.98 cfs 0.737 af
Subcatchment S40.1:	Runoff Area=2.328 ac 45.53% Impervious Runoff Depth>2.26" Tc=63.2 min CN=71 Runoff=2.57 cfs 0.439 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>5.02" Tc=5.0 min CN=98 Runoff=17.35 cfs 1.339 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>2.75" Tc=5.0 min CN=76 Runoff=3.74 cfs 0.248 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>1.11" Tc=16.7 min CN=55 Runoff=1.80 cfs 0.187 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>3.61" Tc=5.0 min CN=85 Runoff=6.41 cfs 0.433 af
Subcatchment S42.1:	Runoff Area=75,003 sf 22.98% Impervious Runoff Depth>1.17" Flow Length=362' Tc=11.1 min CN=56 Runoff=1.89 cfs 0.169 af
Subcatchment S44:	Runoff Area=62,267 sf 92.33% Impervious Runoff Depth>4.56" Tc=5.0 min CN=94 Runoff=7.48 cfs 0.544 af

Subcatchment S47.1:	Runoff Area=100,677 sf 4.60% Impervious Runoff Depth>0.25" Flow Length=271' Tc=11.5 min CN=39 Runoff=0.21 cfs 0.049 af
Subcatchment S47.2:	Runoff Area=77,444 sf 75.42% Impervious Runoff Depth>3.40" Tc=18.7 min CN=83 Runoff=5.20 cfs 0.503 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>3.81" Tc=5.0 min CN=87 Runoff=14.52 cfs 0.991 af
Subcatchment S50:	Runoff Area=270,033 sf 6.86% Impervious Runoff Depth>0.91" Flow Length=1,000' Tc=24.1 min CN=52 Runoff=3.70 cfs 0.471 af
Subcatchment S55:	Runoff Area=199,027 sf 86.53% Impervious Runoff Depth>4.13" Tc=5.0 min CN=90 Runoff=22.52 cfs 1.571 af
Subcatchment S56.2:	Runoff Area=57,424 sf 57.47% Impervious Runoff Depth>3.31" Tc=5.0 min CN=82 Runoff=5.42 cfs 0.364 af
Subcatchment S57:	Runoff Area=32,627 sf 76.10% Impervious Runoff Depth>3.71" Tc=5.0 min CN=86 Runoff=3.41 cfs 0.232 af
Subcatchment S58:	Runoff Area=228,917 sf 88.60% Impervious Runoff Depth>4.23" Tc=5.0 min CN=91 Runoff=26.35 cfs 1.854 af
Subcatchment S7: Retail Core Loading	Runoff Area=248,742 sf 67.01% Impervious Runoff Depth>3.03" Tc=5.0 min CN=79 Runoff=21.66 cfs 1.440 af
Subcatchment S8: Retail Core South	Runoff Area=219,409 sf 100.00% Impervious Runoff Depth>5.02" Tc=5.0 min CN=98 Runoff=27.31 cfs 2.108 af
Subcatchment S9: Retail Core North	Runoff Area=197,875 sf 100.00% Impervious Runoff Depth>5.02" Tc=5.0 min CN=98 Runoff=24.63 cfs 1.901 af
Reach 1R: 60"	Avg. Flow Depth=2.05' Max Vel=9.11 fps Inflow=71.63 cfs 5.044 af 60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/' Capacity=196.22 cfs Outflow=68.87 cfs 5.041 af
Reach L113: 72"	Avg. Flow Depth=2.41' Max Vel=15.91 fps Inflow=169.46 cfs 23.464 af 72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/' Capacity=498.08 cfs Outflow=169.52 cfs 23.462 af
Reach L123:	Avg. Flow Depth=2.61' Max Vel=5.90 fps Inflow=53.86 cfs 4.399 af 48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/' Capacity=67.64 cfs Outflow=51.40 cfs 4.391 af
Reach L157:	Avg. Flow Depth=2.50' Max Vel=3.93 fps Inflow=32.45 cfs 2.190 af 48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/' Capacity=45.42 cfs Outflow=32.49 cfs 2.189 af
Reach L158:	Avg. Flow Depth=1.85' Max Vel=6.43 fps Inflow=36.61 cfs 2.875 af 48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/' Capacity=83.69 cfs Outflow=36.51 cfs 2.873 af
Reach L159:	Avg. Flow Depth=0.65' Max Vel=2.90 fps Inflow=2.57 cfs 0.439 af 24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/' Capacity=11.23 cfs Outflow=2.57 cfs 0.439 af
Reach L69: 60"	Avg. Flow Depth=2.92' Max Vel=10.62 fps Inflow=126.46 cfs 18.006 af 60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=126.63 cfs 18.003 af

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Type III 24-hr 25-Year Rainfall=5.50"

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Reach L76: Avg. Flow Depth=1.38' Max Vel=5.64 fps Inflow=21.62 cfs 1.455 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/' Capacity=84.95 cfs Outflow=21.59 cfs 1.453 af

Reach L81: Avg. Flow Depth=1.79' Max Vel=8.98 fps Inflow=57.16 cfs 4.824 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/' Capacity=207.41 cfs Outflow=57.10 cfs 4.823 af

Reach P2: 78" Avg. Flow Depth=2.26' Max Vel=16.51 fps Inflow=169.52 cfs 23.462 af
78.0" Round Pipe n=0.014 L=25.0' S=0.0180 '/' Capacity=653.15 cfs Outflow=169.54 cfs 23.461 af

Reach POA 2: POA 2 Inflow=169.54 cfs 23.461 af
Outflow=169.54 cfs 23.461 af

Pond 10P: (new Pond) Peak Elev=50.75' Storage=117,713 cf Inflow=137.85 cfs 9.946 af
Discarded=22.89 cfs 9.450 af Primary=10.69 cfs 0.487 af Outflow=33.59 cfs 9.938 af

Pond 11P: (new Pond) Peak Elev=51.96' Storage=48,148 cf Inflow=74.45 cfs 5.581 af
Discarded=8.76 cfs 4.385 af Primary=33.10 cfs 1.192 af Outflow=41.86 cfs 5.577 af

Pond 42.1P: Peak Elev=41.82' Storage=18,670 cf Inflow=186.33 cfs 23.465 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/' Outflow=169.46 cfs 23.464 af

Pond 47P: Peak Elev=42.19' Storage=2,122 cf Inflow=0.21 cfs 0.049 af
Outflow=0.00 cfs 0.000 af

r Secondary **Outflow** Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce Inflow=39.60 cfs 9.617 af
Primary=39.60 cfs 9.617 af

Total Runoff Area = 91.897 ac Runoff Volume = 27.767 af Average Runoff Depth = 3.63"
26.65% Pervious = 24.491 ac 73.35% Impervious = 67.407 ac

Summary for Subcatchment S10.1: Retail Core South

Runoff = 71.86 cfs @ 12.07 hrs, Volume= 5.290 af, Depth> 4.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
29,236	39	>75% Grass cover, Good, HSG A
463,066	98	Paved parking, HSG A
98,920	98	Roofs, HSG A
591,222	95	Weighted Average
29,236		4.95% Pervious Area
561,986		95.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S10.2: South Site Drive

Runoff = 1.77 cfs @ 12.07 hrs, Volume= 0.118 af, Depth> 3.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
4,636	39	>75% Grass cover, Good, HSG A
13,481	98	Paved parking, HSG A
18,117	83	Weighted Average
4,636		25.59% Pervious Area
13,481		74.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1: Retail Core North

Runoff = 44.26 cfs @ 12.07 hrs, Volume= 3.216 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (sf)	CN	Description
22,400	39	>75% Grass cover, Good, HSG A
324,581	98	Paved parking, HSG A
21,334	98	Roofs, HSG A
368,315	94	Weighted Average
22,400		6.08% Pervious Area
345,915		93.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.2: North Site Drive

Runoff = 10.74 cfs @ 12.08 hrs, Volume= 0.718 af, Depth> 3.22"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
33,650	39	>75% Grass cover, Good, HSG A
83,074	98	Paved parking, HSG A
116,724	81	Weighted Average
33,650		28.83% Pervious Area
83,074		71.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S13:

Runoff = 15.47 cfs @ 12.08 hrs, Volume= 1.031 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 62,018	49	
* 110,751	98	
172,769	80	Weighted Average
62,018		35.90% Pervious Area
110,751		64.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.1:

Runoff = 13.86 cfs @ 12.08 hrs, Volume= 0.930 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 47,226	49	
* 99,570	98	
146,796	82	Weighted Average
47,226		32.17% Pervious Area
99,570		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.2:

Runoff = 6.86 cfs @ 12.07 hrs, Volume= 0.459 af, Depth> 3.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 21,068	49	
* 49,338	98	
70,406	83	Weighted Average
21,068		29.92% Pervious Area
49,338		70.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S35:

Runoff = 6.20 cfs @ 12.07 hrs, Volume= 0.423 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 12,520	49	
* 45,522	98	
58,042	87	Weighted Average
12,520		21.57% Pervious Area
45,522		78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40:

Runoff = 10.98 cfs @ 12.08 hrs, Volume= 0.737 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 2.57 cfs @ 12.87 hrs, Volume= 0.439 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.268	49	
* 1.060	98	
2.328	71	Weighted Average
1.268		54.47% Pervious Area
1.060		45.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 17.35 cfs @ 12.07 hrs, Volume= 1.339 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 3.74 cfs @ 12.08 hrs, Volume= 0.248 af, Depth> 2.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 1.80 cfs @ 12.27 hrs, Volume= 0.187 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 6.41 cfs @ 12.07 hrs, Volume= 0.433 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 1.89 cfs @ 12.18 hrs, Volume= 0.169 af, Depth> 1.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 57,770	43	
* 17,233	98	
75,003	56	Weighted Average
57,770		77.02% Pervious Area
17,233		22.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0500	0.25		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
4.3	262	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
11.1	362	Total			

Summary for Subcatchment S44:

Runoff = 7.48 cfs @ 12.07 hrs, Volume= 0.544 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	4,774	49	
*	57,493	98	
	62,267	94	Weighted Average
	4,774		7.67% Pervious Area
	57,493		92.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47.1:

Runoff = 0.21 cfs @ 12.49 hrs, Volume= 0.049 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	96,047	36	
*	4,630	98	
	100,677	39	Weighted Average
	96,047		95.40% Pervious Area
	4,630		4.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0475	0.17		Sheet Flow, Sheet
					Grass: Dense n= 0.240 P2= 3.20"
1.4	171	0.0160	2.04		Shallow Concentrated Flow, Shallow Conc
					Unpaved Kv= 16.1 fps
11.5	271	Total			

Summary for Subcatchment S47.2:

Runoff = 5.20 cfs @ 12.26 hrs, Volume= 0.503 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	19,033	36	
*	58,411	98	
	77,444	83	Weighted Average
	19,033		24.58% Pervious Area
	58,411		75.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S49:

Runoff = 14.52 cfs @ 12.07 hrs, Volume= 0.991 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S50:

Runoff = 3.70 cfs @ 12.42 hrs, Volume= 0.471 af, Depth> 0.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 251,512	49	
* 18,521	98	
270,033	52	Weighted Average
251,512		93.14% Pervious Area
18,521		6.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0570	0.18		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
14.7	900	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
24.1	1,000	Total			

Summary for Subcatchment S55:

Runoff = 22.52 cfs @ 12.07 hrs, Volume= 1.571 af, Depth> 4.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	128,788	98	Roofs, HSG A
	43,425	98	Paved parking, HSG A
	26,814	39	>75% Grass cover, Good, HSG A
	199,027	90	Weighted Average
	26,814		13.47% Pervious Area
	172,213		86.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.2:

Runoff = 5.42 cfs @ 12.08 hrs, Volume= 0.364 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
	24,425	61	>75% Grass cover, Good, HSG B
	32,999	98	Paved parking & roofs
	57,424	82	Weighted Average
	24,425		42.53% Pervious Area
	32,999		57.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S57:

Runoff = 3.41 cfs @ 12.07 hrs, Volume= 0.232 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

	Area (sf)	CN	Description
*	7,797	49	
*	24,830	98	
	32,627	86	Weighted Average
	7,797		23.90% Pervious Area
	24,830		76.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 26.35 cfs @ 12.07 hrs, Volume= 1.854 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
26,090	39	>75% Grass cover, Good, HSG A
97,041	98	Paved parking, HSG A
105,786	98	Roofs, HSG A
228,917	91	Weighted Average
26,090		11.40% Pervious Area
202,827		88.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S7: Retail Core Loading

Runoff = 21.66 cfs @ 12.08 hrs, Volume= 1.440 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
82,052	39	>75% Grass cover, Good, HSG A
166,690	98	Paved parking, HSG A
248,742	79	Weighted Average
82,052		32.99% Pervious Area
166,690		67.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S8: Retail Core South Roof

Runoff = 27.31 cfs @ 12.07 hrs, Volume= 2.108 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
219,409	98	Roofs, HSG A
219,409		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S9: Retail Core North Roof

Runoff = 24.63 cfs @ 12.07 hrs, Volume= 1.901 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
197,875	98	Roofs, HSG A
197,875		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

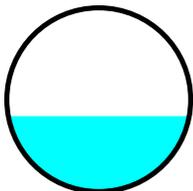
Summary for Reach 1R: 60"

Inflow Area = 53.465 ac, 86.94% Impervious, Inflow Depth > 1.13" for 25-Year event
 Inflow = 71.63 cfs @ 12.12 hrs, Volume= 5.044 af
 Outflow = 68.87 cfs @ 12.14 hrs, Volume= 5.041 af, Atten= 4%, Lag= 1.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 2
 Max. Velocity= 9.11 fps, Min. Travel Time= 0.9 min
 Avg. Velocity = 2.71 fps, Avg. Travel Time= 3.0 min

Peak Storage= 3,627 cf @ 12.14 hrs
 Average Depth at Peak Storage= 2.05'
 Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
 n= 0.014
 Length= 480.0' Slope= 0.0066 '/'
 Inlet Invert= 42.00', Outlet Invert= 38.84'



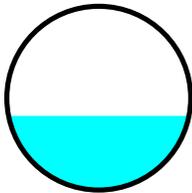
Summary for Reach L113: 72"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 3.06" for 25-Year event
Inflow = 169.46 cfs @ 12.18 hrs, Volume= 23.464 af
Outflow = 169.52 cfs @ 12.18 hrs, Volume= 23.462 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 15.91 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 5.89 fps, Avg. Travel Time= 0.3 min

Peak Storage= 1,021 cf @ 12.18 hrs
Average Depth at Peak Storage= 2.41'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



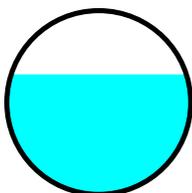
Summary for Reach L123:

Inflow Area = 16.607 ac, 63.51% Impervious, Inflow Depth > 3.18" for 25-Year event
Inflow = 53.86 cfs @ 12.10 hrs, Volume= 4.399 af
Outflow = 51.40 cfs @ 12.12 hrs, Volume= 4.391 af, Atten= 5%, Lag= 1.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.90 fps, Min. Travel Time= 2.0 min
Avg. Velocity = 2.08 fps, Avg. Travel Time= 5.6 min

Peak Storage= 6,075 cf @ 12.12 hrs
Average Depth at Peak Storage= 2.61'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



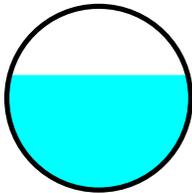
Summary for Reach L157:

Inflow Area = 7.969 ac, 67.61% Impervious, Inflow Depth > 3.30" for 25-Year event
Inflow = 32.45 cfs @ 12.09 hrs, Volume= 2.190 af
Outflow = 32.49 cfs @ 12.10 hrs, Volume= 2.189 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.93 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.38 fps, Avg. Travel Time= 1.7 min

Peak Storage= 1,141 cf @ 12.10 hrs
Average Depth at Peak Storage= 2.50'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



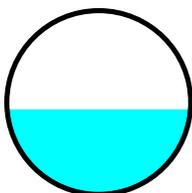
Summary for Reach L158:

Inflow Area = 11.377 ac, 61.95% Impervious, Inflow Depth > 3.03" for 25-Year event
Inflow = 36.61 cfs @ 12.09 hrs, Volume= 2.875 af
Outflow = 36.51 cfs @ 12.10 hrs, Volume= 2.873 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.43 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.32 fps, Avg. Travel Time= 1.8 min

Peak Storage= 1,442 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.85'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



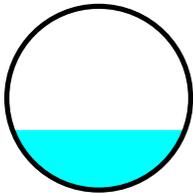
Summary for Reach L159:

Inflow Area = 2.328 ac, 45.53% Impervious, Inflow Depth > 2.26" for 25-Year event
Inflow = 2.57 cfs @ 12.87 hrs, Volume= 0.439 af
Outflow = 2.57 cfs @ 12.87 hrs, Volume= 0.439 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.90 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 0.8 min

Peak Storage= 62 cf @ 12.87 hrs
Average Depth at Peak Storage= 0.65'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/
Inlet Invert= 41.90', Outlet Invert= 41.70'



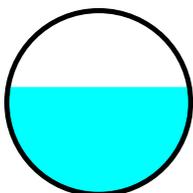
Summary for Reach L69: 60"

Inflow Area = 65.930 ac, 83.39% Impervious, Inflow Depth > 3.28" for 25-Year event
Inflow = 126.46 cfs @ 12.11 hrs, Volume= 18.006 af
Outflow = 126.63 cfs @ 12.12 hrs, Volume= 18.003 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.62 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.22 fps, Avg. Travel Time= 0.5 min

Peak Storage= 1,512 cf @ 12.12 hrs
Average Depth at Peak Storage= 2.92'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/
Inlet Invert= 38.84', Outlet Invert= 38.00'



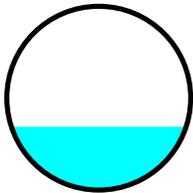
Summary for Reach L76:

Inflow Area = 5.299 ac, 67.71% Impervious, Inflow Depth > 3.29" for 25-Year event
Inflow = 21.62 cfs @ 12.08 hrs, Volume= 1.455 af
Outflow = 21.59 cfs @ 12.09 hrs, Volume= 1.453 af, Atten= 0%, Lag= 1.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.64 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.91 fps, Avg. Travel Time= 3.1 min

Peak Storage= 1,358 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.38'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



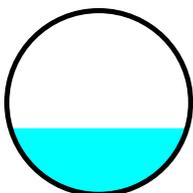
Summary for Reach L81:

Inflow Area = 18.047 ac, 64.32% Impervious, Inflow Depth > 3.21" for 25-Year event
Inflow = 57.16 cfs @ 12.12 hrs, Volume= 4.824 af
Outflow = 57.10 cfs @ 12.12 hrs, Volume= 4.823 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.98 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 0.7 min

Peak Storage= 766 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.79'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



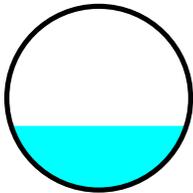
Summary for Reach P2: 78"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 3.06" for 25-Year event
Inflow = 169.52 cfs @ 12.18 hrs, Volume= 23.462 af
Outflow = 169.54 cfs @ 12.18 hrs, Volume= 23.461 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 16.51 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.08 fps, Avg. Travel Time= 0.1 min

Peak Storage= 256 cf @ 12.18 hrs
Average Depth at Peak Storage= 2.26'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 653.15 cfs

78.0" Round Pipe
n= 0.014
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 3.06" for 25-Year event
Inflow = 169.54 cfs @ 12.18 hrs, Volume= 23.461 af
Outflow = 169.54 cfs @ 12.18 hrs, Volume= 23.461 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 10P: (new Pond)

Inflow Area = 27.738 ac, 88.94% Impervious, Inflow Depth > 4.30" for 25-Year event
Inflow = 137.85 cfs @ 12.07 hrs, Volume= 9.946 af
Outflow = 33.59 cfs @ 12.45 hrs, Volume= 9.938 af, Atten= 76%, Lag= 22.7 min
Discarded = 22.89 cfs @ 12.45 hrs, Volume= 9.450 af
Primary = 10.69 cfs @ 12.45 hrs, Volume= 0.487 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 50.75' @ 12.45 hrs Surf.Area= 61,050 sf Storage= 117,713 cf

Plug-Flow detention time= 28.7 min calculated for 9.913 af (100% of inflow)
Center-of-Mass det. time= 28.3 min (773.6 - 745.4)

3659-12003C-Proposed Conditions POA 2-01

Type III 24-hr 25-Year Rainfall=5.50"

Prepared by {enter your company name here}

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Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	150,150 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	257,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			793,650 cf Overall - 150,150 cf Embedded = 643,500 cf x 40.0% Voids
		407,550 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	11,550	0	0
48.00	11,550	11,550	11,550
49.00	11,550	11,550	23,100
50.00	11,550	11,550	34,650
51.00	11,550	11,550	46,200
52.00	11,550	11,550	57,750
53.00	11,550	11,550	69,300
53.25	11,550	2,888	72,188
60.00	11,550	77,963	150,150

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	61,050	0	0
48.00	61,050	61,050	61,050
49.00	61,050	61,050	122,100
50.00	61,050	61,050	183,150
51.00	61,050	61,050	244,200
52.00	61,050	61,050	305,250
53.00	61,050	61,050	366,300
53.25	61,050	15,263	381,563
60.00	61,050	412,088	793,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	15.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=22.89 cfs @ 12.45 hrs HW=50.75' (Free Discharge)

↑**1=Exfiltration** (Controls 22.89 cfs)

Primary OutFlow Max=10.68 cfs @ 12.45 hrs HW=50.75' (Free Discharge)

↑**2=Orifice/Grate** (Orifice Controls 10.68 cfs @ 3.81 fps)

Summary for Pond 11P: (new Pond)

Inflow Area = 14.149 ac, 95.65% Impervious, Inflow Depth > 4.73" for 25-Year event
 Inflow = 74.45 cfs @ 12.07 hrs, Volume= 5.581 af
 Outflow = 41.86 cfs @ 12.19 hrs, Volume= 5.577 af, Atten= 44%, Lag= 7.4 min
 Discarded = 8.76 cfs @ 12.19 hrs, Volume= 4.385 af
 Primary = 33.10 cfs @ 12.19 hrs, Volume= 1.192 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

3659-12003C-Proposed Conditions POA 2-01

Type III 24-hr 25-Year Rainfall=5.50"

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Peak Elev= 51.96' @ 12.19 hrs Surf.Area= 18,500 sf Storage= 48,148 cf

Plug-Flow detention time= 18.5 min calculated for 5.577 af (100% of inflow)
Center-of-Mass det. time= 18.2 min (747.4 - 729.2)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	50,050 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	76,180 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			240,500 cf Overall - 50,050 cf Embedded = 190,450 cf x 40.0% Voids
		126,230 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,850	0	0
48.00	3,850	3,850	3,850
49.00	3,850	3,850	7,700
50.00	3,850	3,850	11,550
51.00	3,850	3,850	15,400
52.00	3,850	3,850	19,250
53.00	3,850	3,850	23,100
54.00	3,850	3,850	26,950
54.50	3,850	1,925	28,875
60.00	3,850	21,175	50,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	18,500	0	0
48.00	18,500	18,500	18,500
49.00	18,500	18,500	37,000
50.00	18,500	18,500	55,500
51.00	18,500	18,500	74,000
52.00	18,500	18,500	92,500
53.00	18,500	18,500	111,000
54.00	18,500	18,500	129,500
54.50	18,500	9,250	138,750
60.00	18,500	101,750	240,500

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	18.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=8.76 cfs @ 12.19 hrs HW=51.95' (Free Discharge)
 ↑**1=Exfiltration** (Controls 8.76 cfs)

Primary OutFlow Max=32.92 cfs @ 12.19 hrs HW=51.95' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 32.92 cfs @ 5.33 fps)

Summary for Pond 42.1P:

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 3.06" for 25-Year event
 Inflow = 186.33 cfs @ 12.12 hrs, Volume= 23.465 af
 Outflow = 169.46 cfs @ 12.18 hrs, Volume= 23.464 af, Atten= 9%, Lag= 3.5 min
 Primary = 169.46 cfs @ 12.18 hrs, Volume= 23.464 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 41.82' @ 12.18 hrs Surf.Area= 10,649 sf Storage= 18,670 cf

Plug-Flow detention time= 0.8 min calculated for 23.464 af (100% of inflow)
 Center-of-Mass det. time= 0.8 min (807.6 - 806.8)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 1/' Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=168.30 cfs @ 12.18 hrs HW=41.79' (Free Discharge)
 ↑**1=Culvert** (Barrel Controls 168.30 cfs @ 7.83 fps)

Summary for Pond 47P:

Inflow Area = 2.311 ac, 4.60% Impervious, Inflow Depth > 0.25" for 25-Year event
 Inflow = 0.21 cfs @ 12.49 hrs, Volume= 0.049 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 42.19' @ 20.00 hrs Surf.Area= 12,038 sf Storage= 2,122 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	243,835 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
42.00	10,588	0	0
43.00	18,319	14,454	14,454
44.00	25,630	21,975	36,428
45.00	30,580	28,105	64,533
46.00	36,447	33,514	98,047
50.00	36,447	145,788	243,835

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 52.1L: Secondary Flow from 52.1P

Inflow = 39.60 cfs @ 12.74 hrs, Volume= 9.617 af
 Primary = 39.60 cfs @ 12.74 hrs, Volume= 9.617 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

25-Year Secondary Outflow Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points
 Runoff by SCS TR-20 method, UH=SCS
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment S10.1: Retail Core South	Runoff Area=591,222 sf 95.05% Impervious Runoff Depth>5.77" Tc=5.0 min CN=95 Runoff=87.60 cfs 6.525 af
Subcatchment S10.2: South Site Drive	Runoff Area=18,117 sf 74.41% Impervious Runoff Depth>4.43" Tc=5.0 min CN=83 Runoff=2.27 cfs 0.153 af
Subcatchment S11.1: Retail Core North	Runoff Area=368,315 sf 93.92% Impervious Runoff Depth>5.65" Tc=5.0 min CN=94 Runoff=54.12 cfs 3.983 af
Subcatchment S11.2: North Site Drive	Runoff Area=116,724 sf 71.17% Impervious Runoff Depth>4.21" Tc=5.0 min CN=81 Runoff=14.01 cfs 0.941 af
Subcatchment S13:	Runoff Area=172,769 sf 64.10% Impervious Runoff Depth>4.11" Tc=5.0 min CN=80 Runoff=20.29 cfs 1.357 af
Subcatchment S14.1:	Runoff Area=146,796 sf 67.83% Impervious Runoff Depth>4.32" Tc=5.0 min CN=82 Runoff=17.99 cfs 1.213 af
Subcatchment S14.2:	Runoff Area=70,406 sf 70.08% Impervious Runoff Depth>4.43" Tc=5.0 min CN=83 Runoff=8.80 cfs 0.596 af
Subcatchment S35:	Runoff Area=58,042 sf 78.43% Impervious Runoff Depth>4.86" Tc=5.0 min CN=87 Runoff=7.80 cfs 0.540 af
Subcatchment S40:	Runoff Area=2.670 ac 67.42% Impervious Runoff Depth>4.32" Tc=5.0 min CN=82 Runoff=14.25 cfs 0.961 af
Subcatchment S40.1:	Runoff Area=2.328 ac 45.53% Impervious Runoff Depth>3.12" Tc=63.2 min CN=71 Runoff=3.57 cfs 0.606 af
Subcatchment S40.2:	Runoff Area=3.200 ac 100.00% Impervious Runoff Depth>6.12" Tc=5.0 min CN=98 Runoff=21.01 cfs 1.632 af
Subcatchment S41:	Runoff Area=1.080 ac 55.56% Impervious Runoff Depth>3.69" Tc=5.0 min CN=76 Runoff=4.99 cfs 0.332 af
Subcatchment S41.1:	Runoff Area=2.030 ac 14.78% Impervious Runoff Depth>1.72" Tc=16.7 min CN=55 Runoff=2.99 cfs 0.291 af
Subcatchment S42:	Runoff Area=1.440 ac 73.61% Impervious Runoff Depth>4.64" Tc=5.0 min CN=85 Runoff=8.15 cfs 0.557 af
Subcatchment S42.1:	Runoff Area=75,003 sf 22.98% Impervious Runoff Depth>1.81" Flow Length=362' Tc=11.1 min CN=56 Runoff=3.12 cfs 0.259 af
Subcatchment S44:	Runoff Area=62,267 sf 92.33% Impervious Runoff Depth>5.65" Tc=5.0 min CN=94 Runoff=9.15 cfs 0.673 af

Subcatchment S47.1:	Runoff Area=100,677 sf 4.60% Impervious Runoff Depth>0.55" Flow Length=271' Tc=11.5 min CN=39 Runoff=0.68 cfs 0.106 af
Subcatchment S47.2:	Runoff Area=77,444 sf 75.42% Impervious Runoff Depth>4.41" Tc=18.7 min CN=83 Runoff=6.69 cfs 0.653 af
Subcatchment S49:	Runoff Area=3.120 ac 76.60% Impervious Runoff Depth>4.86" Tc=5.0 min CN=87 Runoff=18.26 cfs 1.264 af
Subcatchment S50:	Runoff Area=270,033 sf 6.86% Impervious Runoff Depth>1.47" Flow Length=1,000' Tc=24.1 min CN=52 Runoff=6.53 cfs 0.758 af
Subcatchment S55:	Runoff Area=199,027 sf 86.53% Impervious Runoff Depth>5.20" Tc=5.0 min CN=90 Runoff=27.96 cfs 1.979 af
Subcatchment S56.2:	Runoff Area=57,424 sf 57.47% Impervious Runoff Depth>4.32" Tc=5.0 min CN=82 Runoff=7.04 cfs 0.474 af
Subcatchment S57:	Runoff Area=32,627 sf 76.10% Impervious Runoff Depth>4.75" Tc=5.0 min CN=86 Runoff=4.31 cfs 0.297 af
Subcatchment S58:	Runoff Area=228,917 sf 88.60% Impervious Runoff Depth>5.31" Tc=5.0 min CN=91 Runoff=32.57 cfs 2.325 af
Subcatchment S7: Retail Core Loading	Runoff Area=248,742 sf 67.01% Impervious Runoff Depth>4.00" Tc=5.0 min CN=79 Runoff=28.38 cfs 1.905 af
Subcatchment S8: Retail Core South	Runoff Area=219,409 sf 100.00% Impervious Runoff Depth>6.12" Tc=5.0 min CN=98 Runoff=33.07 cfs 2.569 af
Subcatchment S9: Retail Core North	Runoff Area=197,875 sf 100.00% Impervious Runoff Depth>6.12" Tc=5.0 min CN=98 Runoff=29.82 cfs 2.317 af
Reach 1R: 60"	Avg. Flow Depth=2.56' Max Vel=10.09 fps Inflow=105.62 cfs 7.593 af 60.0" Round Pipe n=0.014 L=480.0' S=0.0066 '/' Capacity=196.22 cfs Outflow=102.20 cfs 7.589 af
Reach L113: 72"	Avg. Flow Depth=2.85' Max Vel=17.22 fps Inflow=227.85 cfs 32.718 af 72.0" Round Pipe n=0.014 L=96.0' S=0.0160 '/' Capacity=498.08 cfs Outflow=227.87 cfs 32.715 af
Reach L123:	Avg. Flow Depth=3.17' Max Vel=6.13 fps Inflow=69.08 cfs 5.713 af 48.0" Round Pipe n=0.014 L=700.0' S=0.0026 '/' Capacity=67.64 cfs Outflow=65.76 cfs 5.703 af
Reach L157:	Avg. Flow Depth=3.03' Max Vel=4.10 fps Inflow=41.89 cfs 2.856 af 48.0" Round Pipe n=0.014 L=138.0' S=0.0012 '/' Capacity=45.42 cfs Outflow=41.89 cfs 2.855 af
Reach L158:	Avg. Flow Depth=2.16' Max Vel=6.87 fps Inflow=47.49 cfs 3.793 af 48.0" Round Pipe n=0.014 L=254.0' S=0.0039 '/' Capacity=83.69 cfs Outflow=47.41 cfs 3.790 af
Reach L159:	Avg. Flow Depth=0.77' Max Vel=3.17 fps Inflow=3.57 cfs 0.606 af 24.0" Round Pipe n=0.014 L=70.0' S=0.0029 '/' Capacity=11.23 cfs Outflow=3.56 cfs 0.606 af
Reach L69: 60"	Avg. Flow Depth=3.70' Max Vel=11.31 fps Inflow=176.46 cfs 25.447 af 60.0" Round Pipe n=0.014 L=127.0' S=0.0066 '/' Capacity=196.68 cfs Outflow=176.71 cfs 25.443 af

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Type III 24-hr 100-Year Rainfall=6.65"

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Reach L76: Avg. Flow Depth=1.58' Max Vel=6.05 fps Inflow=28.09 cfs 1.897 af
48.0" Round Pipe n=0.014 L=355.0' S=0.0041 '/ Capacity=84.95 cfs Outflow=27.88 cfs 1.895 af

Reach L81: Avg. Flow Depth=2.05' Max Vel=9.61 fps Inflow=73.05 cfs 6.260 af
60.0" Round Pipe n=0.014 L=121.0' S=0.0074 '/ Capacity=207.41 cfs Outflow=73.01 cfs 6.259 af

Reach P2: 78" Avg. Flow Depth=2.65' Max Vel=17.92 fps Inflow=227.87 cfs 32.715 af
78.0" Round Pipe n=0.014 L=25.0' S=0.0180 '/ Capacity=653.15 cfs Outflow=227.87 cfs 32.714 af

Reach POA 2: POA 2 Inflow=227.87 cfs 32.714 af
Outflow=227.87 cfs 32.714 af

Pond 10P: (new Pond) Peak Elev=51.61' Storage=144,557 cf Inflow=170.24 cfs 12.412 af
Discarded=23.28 cfs 10.974 af Primary=26.30 cfs 1.427 af Outflow=49.57 cfs 12.402 af

Pond 11P: (new Pond) Peak Elev=52.80' Storage=56,315 cf Inflow=90.84 cfs 6.865 af
Discarded=8.90 cfs 5.043 af Primary=45.66 cfs 1.818 af Outflow=54.56 cfs 6.860 af

Pond 42.1P: Peak Elev=43.11' Storage=34,331 cf Inflow=255.01 cfs 32.719 af
72.0" Round Culvert n=0.014 L=1.0' S=0.0100 '/ Outflow=227.85 cfs 32.718 af

Pond 47P: Peak Elev=42.38' Storage=4,609 cf Inflow=0.68 cfs 0.106 af
Outflow=0.00 cfs 0.000 af

Secondary ~~Link~~ Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce Inflow=49.44 cfs 13.615 af
Primary=49.44 cfs 13.615 af

Total Runoff Area = 91.897 ac Runoff Volume = 35.268 af Average Runoff Depth = 4.61"
26.65% Pervious = 24.491 ac 73.35% Impervious = 67.407 ac

Summary for Subcatchment S10.1: Retail Core South

Runoff = 87.60 cfs @ 12.07 hrs, Volume= 6.525 af, Depth> 5.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
29,236	39	>75% Grass cover, Good, HSG A
463,066	98	Paved parking, HSG A
98,920	98	Roofs, HSG A
591,222	95	Weighted Average
29,236		4.95% Pervious Area
561,986		95.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S10.2: South Site Drive

Runoff = 2.27 cfs @ 12.07 hrs, Volume= 0.153 af, Depth> 4.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
4,636	39	>75% Grass cover, Good, HSG A
13,481	98	Paved parking, HSG A
18,117	83	Weighted Average
4,636		25.59% Pervious Area
13,481		74.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.1: Retail Core North

Runoff = 54.12 cfs @ 12.07 hrs, Volume= 3.983 af, Depth> 5.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
22,400	39	>75% Grass cover, Good, HSG A
324,581	98	Paved parking, HSG A
21,334	98	Roofs, HSG A
368,315	94	Weighted Average
22,400		6.08% Pervious Area
345,915		93.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S11.2: North Site Drive

Runoff = 14.01 cfs @ 12.07 hrs, Volume= 0.941 af, Depth> 4.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
33,650	39	>75% Grass cover, Good, HSG A
83,074	98	Paved parking, HSG A
116,724	81	Weighted Average
33,650		28.83% Pervious Area
83,074		71.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S13:

Runoff = 20.29 cfs @ 12.07 hrs, Volume= 1.357 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 62,018	49	
* 110,751	98	
172,769	80	Weighted Average
62,018		35.90% Pervious Area
110,751		64.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.1:

Runoff = 17.99 cfs @ 12.07 hrs, Volume= 1.213 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	47,226	49	
*	99,570	98	
	146,796	82	Weighted Average
	47,226		32.17% Pervious Area
	99,570		67.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S14.2:

Runoff = 8.80 cfs @ 12.07 hrs, Volume= 0.596 af, Depth> 4.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	21,068	49	
*	49,338	98	
	70,406	83	Weighted Average
	21,068		29.92% Pervious Area
	49,338		70.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S35:

Runoff = 7.80 cfs @ 12.07 hrs, Volume= 0.540 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	12,520	49	
*	45,522	98	
	58,042	87	Weighted Average
	12,520		21.57% Pervious Area
	45,522		78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40:

Runoff = 14.25 cfs @ 12.07 hrs, Volume= 0.961 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.870	49	
* 1.800	98	
2.670	82	Weighted Average
0.870		32.58% Pervious Area
1.800		67.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S40.1:

Runoff = 3.57 cfs @ 12.86 hrs, Volume= 0.606 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.268	49	
* 1.060	98	
2.328	71	Weighted Average
1.268		54.47% Pervious Area
1.060		45.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
63.2					Direct Entry,

Summary for Subcatchment S40.2:

Runoff = 21.01 cfs @ 12.07 hrs, Volume= 1.632 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 3.200	98	
3.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41:

Runoff = 4.99 cfs @ 12.08 hrs, Volume= 0.332 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.460	49	
* 0.020	36	
* 0.600	98	
1.080	76	Weighted Average
0.480		44.44% Pervious Area
0.600		55.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S41.1:

Runoff = 2.99 cfs @ 12.26 hrs, Volume= 0.291 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 1.510	49	
* 0.220	36	
* 0.300	98	
2.030	55	Weighted Average
1.730		85.22% Pervious Area
0.300		14.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S42:

Runoff = 8.15 cfs @ 12.07 hrs, Volume= 0.557 af, Depth> 4.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.380	49	
* 1.060	98	
1.440	85	Weighted Average
0.380		26.39% Pervious Area
1.060		73.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S42.1:

Runoff = 3.12 cfs @ 12.17 hrs, Volume= 0.259 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 57,770	43	
* 17,233	98	
75,003	56	Weighted Average
57,770		77.02% Pervious Area
17,233		22.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0500	0.25		Sheet Flow, Sheet Grass: Short n= 0.150 P2= 3.20"
4.3	262	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
11.1	362	Total			

Summary for Subcatchment S44:

Runoff = 9.15 cfs @ 12.07 hrs, Volume= 0.673 af, Depth> 5.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	4,774	49	
*	57,493	98	
	62,267	94	Weighted Average
	4,774		7.67% Pervious Area
	57,493		92.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S47.1:

Runoff = 0.68 cfs @ 12.37 hrs, Volume= 0.106 af, Depth> 0.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	96,047	36	
*	4,630	98	
	100,677	39	Weighted Average
	96,047		95.40% Pervious Area
	4,630		4.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	100	0.0475	0.17		Sheet Flow, Sheet
					Grass: Dense n= 0.240 P2= 3.20"
1.4	171	0.0160	2.04		Shallow Concentrated Flow, Shallow Conc
					Unpaved Kv= 16.1 fps
11.5	271	Total			

Summary for Subcatchment S47.2:

Runoff = 6.69 cfs @ 12.25 hrs, Volume= 0.653 af, Depth> 4.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	19,033	36	
*	58,411	98	
	77,444	83	Weighted Average
	19,033		24.58% Pervious Area
	58,411		75.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7					Direct Entry,

Summary for Subcatchment S49:

Runoff = 18.26 cfs @ 12.07 hrs, Volume= 1.264 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.730	49	
* 2.390	98	
3.120	87	Weighted Average
0.730		23.40% Pervious Area
2.390		76.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S50:

Runoff = 6.53 cfs @ 12.39 hrs, Volume= 0.758 af, Depth> 1.47"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 251,512	49	
* 18,521	98	
270,033	52	Weighted Average
251,512		93.14% Pervious Area
18,521		6.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0570	0.18		Sheet Flow, Sheet Grass: Dense n= 0.240 P2= 3.20"
14.7	900	0.0040	1.02		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
24.1	1,000	Total			

Summary for Subcatchment S55:

Runoff = 27.96 cfs @ 12.07 hrs, Volume= 1.979 af, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	128,788	98	Roofs, HSG A
	43,425	98	Paved parking, HSG A
	26,814	39	>75% Grass cover, Good, HSG A
	199,027	90	Weighted Average
	26,814		13.47% Pervious Area
	172,213		86.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.2:

Runoff = 7.04 cfs @ 12.07 hrs, Volume= 0.474 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
	24,425	61	>75% Grass cover, Good, HSG B
	32,999	98	Paved parking & roofs
	57,424	82	Weighted Average
	24,425		42.53% Pervious Area
	32,999		57.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S57:

Runoff = 4.31 cfs @ 12.07 hrs, Volume= 0.297 af, Depth> 4.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

	Area (sf)	CN	Description
*	7,797	49	
*	24,830	98	
	32,627	86	Weighted Average
	7,797		23.90% Pervious Area
	24,830		76.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S58:

Runoff = 32.57 cfs @ 12.07 hrs, Volume= 2.325 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
26,090	39	>75% Grass cover, Good, HSG A
97,041	98	Paved parking, HSG A
105,786	98	Roofs, HSG A
228,917	91	Weighted Average
26,090		11.40% Pervious Area
202,827		88.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S7: Retail Core Loading

Runoff = 28.38 cfs @ 12.08 hrs, Volume= 1.905 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
82,052	39	>75% Grass cover, Good, HSG A
166,690	98	Paved parking, HSG A
248,742	79	Weighted Average
82,052		32.99% Pervious Area
166,690		67.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S8: Retail Core South Roof

Runoff = 33.07 cfs @ 12.07 hrs, Volume= 2.569 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
219,409	98	Roofs, HSG A
219,409		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S9: Retail Core North Roof

Runoff = 29.82 cfs @ 12.07 hrs, Volume= 2.317 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
197,875	98	Roofs, HSG A
197,875		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

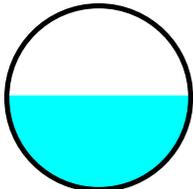
Summary for Reach 1R: 60"

Inflow Area = 53.465 ac, 86.94% Impervious, Inflow Depth > 1.70" for 100-Year event
 Inflow = 105.62 cfs @ 12.12 hrs, Volume= 7.593 af
 Outflow = 102.20 cfs @ 12.14 hrs, Volume= 7.589 af, Atten= 3%, Lag= 1.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 2
 Max. Velocity= 10.09 fps, Min. Travel Time= 0.8 min
 Avg. Velocity = 2.96 fps, Avg. Travel Time= 2.7 min

Peak Storage= 4,859 cf @ 12.14 hrs
 Average Depth at Peak Storage= 2.56'
 Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.22 cfs

60.0" Round Pipe
 n= 0.014
 Length= 480.0' Slope= 0.0066 '/'
 Inlet Invert= 42.00', Outlet Invert= 38.84'



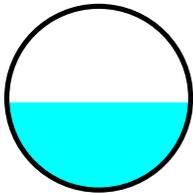
Summary for Reach L113: 72"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 4.27" for 100-Year event
Inflow = 227.85 cfs @ 12.21 hrs, Volume= 32.718 af
Outflow = 227.87 cfs @ 12.21 hrs, Volume= 32.715 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.22 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 6.48 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1,270 cf @ 12.21 hrs
Average Depth at Peak Storage= 2.85'
Bank-Full Depth= 6.00' Flow Area= 28.3 sf, Capacity= 498.08 cfs

72.0" Round Pipe
n= 0.014
Length= 96.0' Slope= 0.0160 '/'
Inlet Invert= 36.11', Outlet Invert= 34.57'



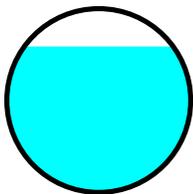
Summary for Reach L123:

Inflow Area = 16.607 ac, 63.51% Impervious, Inflow Depth > 4.13" for 100-Year event
Inflow = 69.08 cfs @ 12.09 hrs, Volume= 5.713 af
Outflow = 65.76 cfs @ 12.12 hrs, Volume= 5.703 af, Atten= 5%, Lag= 1.6 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 2.24 fps, Avg. Travel Time= 5.2 min

Peak Storage= 7,492 cf @ 12.12 hrs
Average Depth at Peak Storage= 3.17'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 67.64 cfs

48.0" Round Pipe
n= 0.014
Length= 700.0' Slope= 0.0026 '/'
Inlet Invert= 40.60', Outlet Invert= 38.80'



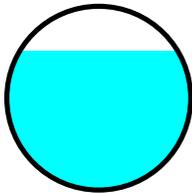
Summary for Reach L157:

Inflow Area = 7.969 ac, 67.61% Impervious, Inflow Depth > 4.30" for 100-Year event
Inflow = 41.89 cfs @ 12.09 hrs, Volume= 2.856 af
Outflow = 41.89 cfs @ 12.09 hrs, Volume= 2.855 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.10 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.47 fps, Avg. Travel Time= 1.6 min

Peak Storage= 1,409 cf @ 12.09 hrs
Average Depth at Peak Storage= 3.03'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 45.42 cfs

48.0" Round Pipe
n= 0.014
Length= 138.0' Slope= 0.0012 '/'
Inlet Invert= 41.86', Outlet Invert= 41.70'



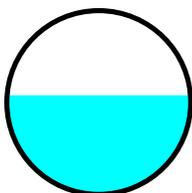
Summary for Reach L158:

Inflow Area = 11.377 ac, 61.95% Impervious, Inflow Depth > 4.00" for 100-Year event
Inflow = 47.49 cfs @ 12.09 hrs, Volume= 3.793 af
Outflow = 47.41 cfs @ 12.10 hrs, Volume= 3.790 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.87 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.48 fps, Avg. Travel Time= 1.7 min

Peak Storage= 1,753 cf @ 12.10 hrs
Average Depth at Peak Storage= 2.16'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 83.69 cfs

48.0" Round Pipe
n= 0.014
Length= 254.0' Slope= 0.0039 '/'
Inlet Invert= 41.60', Outlet Invert= 40.60'



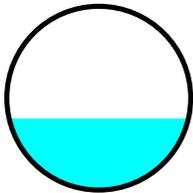
Summary for Reach L159:

Inflow Area = 2.328 ac, 45.53% Impervious, Inflow Depth > 3.12" for 100-Year event
Inflow = 3.57 cfs @ 12.86 hrs, Volume= 0.606 af
Outflow = 3.56 cfs @ 12.86 hrs, Volume= 0.606 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.17 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.65 fps, Avg. Travel Time= 0.7 min

Peak Storage= 79 cf @ 12.86 hrs
Average Depth at Peak Storage= 0.77'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 11.23 cfs

24.0" Round Pipe
n= 0.014
Length= 70.0' Slope= 0.0029 '/
Inlet Invert= 41.90', Outlet Invert= 41.70'



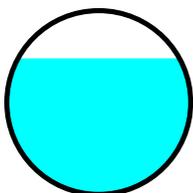
Summary for Reach L69: 60"

Inflow Area = 65.930 ac, 83.39% Impervious, Inflow Depth > 4.63" for 100-Year event
Inflow = 176.46 cfs @ 12.12 hrs, Volume= 25.447 af
Outflow = 176.71 cfs @ 12.12 hrs, Volume= 25.443 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 11.31 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.61 fps, Avg. Travel Time= 0.5 min

Peak Storage= 1,979 cf @ 12.12 hrs
Average Depth at Peak Storage= 3.70'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 196.68 cfs

60.0" Round Pipe
n= 0.014
Length= 127.0' Slope= 0.0066 '/
Inlet Invert= 38.84', Outlet Invert= 38.00'



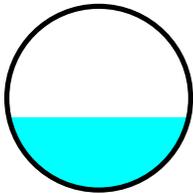
Summary for Reach L76:

Inflow Area = 5.299 ac, 67.71% Impervious, Inflow Depth > 4.30" for 100-Year event
Inflow = 28.09 cfs @ 12.07 hrs, Volume= 1.897 af
Outflow = 27.88 cfs @ 12.09 hrs, Volume= 1.895 af, Atten= 1%, Lag= 1.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.05 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 2.04 fps, Avg. Travel Time= 2.9 min

Peak Storage= 1,635 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.58'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 84.95 cfs

48.0" Round Pipe
n= 0.014
Length= 355.0' Slope= 0.0041 '/'
Inlet Invert= 43.30', Outlet Invert= 41.86'



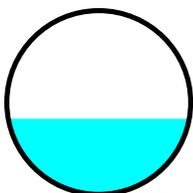
Summary for Reach L81:

Inflow Area = 18.047 ac, 64.32% Impervious, Inflow Depth > 4.16" for 100-Year event
Inflow = 73.05 cfs @ 12.11 hrs, Volume= 6.260 af
Outflow = 73.01 cfs @ 12.12 hrs, Volume= 6.259 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.61 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.25 fps, Avg. Travel Time= 0.6 min

Peak Storage= 917 cf @ 12.12 hrs
Average Depth at Peak Storage= 2.05'
Bank-Full Depth= 5.00' Flow Area= 19.6 sf, Capacity= 207.41 cfs

60.0" Round Pipe
n= 0.014
Length= 121.0' Slope= 0.0074 '/'
Inlet Invert= 38.80', Outlet Invert= 37.91'



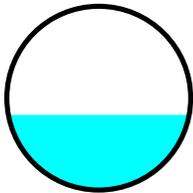
Summary for Reach P2: 78"

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 4.27" for 100-Year event
Inflow = 227.87 cfs @ 12.21 hrs, Volume= 32.715 af
Outflow = 227.87 cfs @ 12.21 hrs, Volume= 32.714 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 17.92 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.69 fps, Avg. Travel Time= 0.1 min

Peak Storage= 318 cf @ 12.21 hrs
Average Depth at Peak Storage= 2.65'
Bank-Full Depth= 6.50' Flow Area= 33.2 sf, Capacity= 653.15 cfs

78.0" Round Pipe
n= 0.014
Length= 25.0' Slope= 0.0180 '/'
Inlet Invert= 34.57', Outlet Invert= 34.12'



Summary for Reach POA 2: POA 2

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 4.27" for 100-Year event
Inflow = 227.87 cfs @ 12.21 hrs, Volume= 32.714 af
Outflow = 227.87 cfs @ 12.21 hrs, Volume= 32.714 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 10P: (new Pond)

Inflow Area = 27.738 ac, 88.94% Impervious, Inflow Depth > 5.37" for 100-Year event
Inflow = 170.24 cfs @ 12.07 hrs, Volume= 12.412 af
Outflow = 49.57 cfs @ 12.40 hrs, Volume= 12.402 af, Atten= 71%, Lag= 19.5 min
Discarded = 23.28 cfs @ 12.40 hrs, Volume= 10.974 af
Primary = 26.30 cfs @ 12.40 hrs, Volume= 1.427 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 51.61' @ 12.40 hrs Surf.Area= 61,050 sf Storage= 144,557 cf

Plug-Flow detention time= 29.9 min calculated for 12.402 af (100% of inflow)
Center-of-Mass det. time= 29.5 min (770.5 - 741.0)

3659-12003C-Proposed Conditions POA 2-01

Type III 24-hr 100-Year Rainfall=6.65"

Prepared by {enter your company name here}

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Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	150,150 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	257,400 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			793,650 cf Overall - 150,150 cf Embedded = 643,500 cf x 40.0% Voids
		407,550 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	11,550	0	0
48.00	11,550	11,550	11,550
49.00	11,550	11,550	23,100
50.00	11,550	11,550	34,650
51.00	11,550	11,550	46,200
52.00	11,550	11,550	57,750
53.00	11,550	11,550	69,300
53.25	11,550	2,888	72,188
60.00	11,550	77,963	150,150

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	61,050	0	0
48.00	61,050	61,050	61,050
49.00	61,050	61,050	122,100
50.00	61,050	61,050	183,150
51.00	61,050	61,050	244,200
52.00	61,050	61,050	305,250
53.00	61,050	61,050	366,300
53.25	61,050	15,263	381,563
60.00	61,050	412,088	793,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	15.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=23.28 cfs @ 12.40 hrs HW=51.61' (Free Discharge)

↑**1=Exfiltration** (Controls 23.28 cfs)

Primary OutFlow Max=26.27 cfs @ 12.40 hrs HW=51.61' (Free Discharge)

↑**2=Orifice/Grate** (Orifice Controls 26.27 cfs @ 4.95 fps)

Summary for Pond 11P: (new Pond)

Inflow Area = 14.149 ac, 95.65% Impervious, Inflow Depth > 5.82" for 100-Year event
 Inflow = 90.84 cfs @ 12.07 hrs, Volume= 6.865 af
 Outflow = 54.56 cfs @ 12.18 hrs, Volume= 6.860 af, Atten= 40%, Lag= 6.3 min
 Discarded = 8.90 cfs @ 12.18 hrs, Volume= 5.043 af
 Primary = 45.66 cfs @ 12.18 hrs, Volume= 1.818 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

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Type III 24-hr 100-Year Rainfall=6.65"

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Peak Elev= 52.80' @ 12.18 hrs Surf.Area= 18,500 sf Storage= 56,315 cf

Plug-Flow detention time= 18.3 min calculated for 6.843 af (100% of inflow)
Center-of-Mass det. time= 18.0 min (743.9 - 725.9)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	50,050 cf	Custom Stage Data (Prismatic) Listed below Inside #2
#2	47.00'	76,180 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			240,500 cf Overall - 50,050 cf Embedded = 190,450 cf x 40.0% Voids
		126,230 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,850	0	0
48.00	3,850	3,850	3,850
49.00	3,850	3,850	7,700
50.00	3,850	3,850	11,550
51.00	3,850	3,850	15,400
52.00	3,850	3,850	19,250
53.00	3,850	3,850	23,100
54.00	3,850	3,850	26,950
54.50	3,850	1,925	28,875
60.00	3,850	21,175	50,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	18,500	0	0
48.00	18,500	18,500	18,500
49.00	18,500	18,500	37,000
50.00	18,500	18,500	55,500
51.00	18,500	18,500	74,000
52.00	18,500	18,500	92,500
53.00	18,500	18,500	111,000
54.00	18,500	18,500	129,500
54.50	18,500	9,250	138,750
60.00	18,500	101,750	240,500

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	18.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	49.50'	36.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=8.90 cfs @ 12.18 hrs HW=52.78' (Free Discharge)
 ↑**1=Exfiltration** (Controls 8.90 cfs)

Primary OutFlow Max=45.35 cfs @ 12.18 hrs HW=52.78' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 45.35 cfs @ 6.42 fps)

Summary for Pond 42.1P:

Inflow Area = 91.897 ac, 73.35% Impervious, Inflow Depth > 4.27" for 100-Year event
 Inflow = 255.01 cfs @ 12.12 hrs, Volume= 32.719 af
 Outflow = 227.85 cfs @ 12.21 hrs, Volume= 32.718 af, Atten= 11%, Lag= 5.1 min
 Primary = 227.85 cfs @ 12.21 hrs, Volume= 32.718 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 43.11' @ 12.21 hrs Surf.Area= 13,580 sf Storage= 34,331 cf

Plug-Flow detention time= 1.1 min calculated for 32.718 af (100% of inflow)
 Center-of-Mass det. time= 1.0 min (806.2 - 805.2)

Volume	Invert	Avail.Storage	Storage Description
#1	36.10'	83,475 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.10	0	0	0
36.56	36	8	8
37.02	71	25	33
37.52	628	175	208
38.02	1,185	453	661
38.52	1,515	675	1,336
39.02	1,845	840	2,176
39.52	2,750	1,149	3,325
40.02	3,654	1,601	4,926
40.52	6,082	2,434	7,360
41.02	8,510	3,648	11,008
41.52	9,847	4,589	15,597
42.02	11,185	5,258	20,855
42.52	12,262	5,862	26,717
43.02	13,340	6,401	33,117
43.52	14,672	7,003	40,120
44.02	16,005	7,669	47,789
44.52	17,355	8,340	56,129
45.02	18,705	9,015	65,144
46.00	18,705	18,331	83,475

Device	Routing	Invert	Outlet Devices
#1	Primary	36.11'	72.0" Round Culvert L= 1.0' Ke= 0.500 Inlet / Outlet Invert= 36.11' / 36.10' S= 0.0100 1/1' Cc= 0.900 n= 0.014, Flow Area= 28.27 sf

Primary OutFlow Max=227.32 cfs @ 12.21 hrs HW=43.10' (Free Discharge)
 ↑1=Culvert (Barrel Controls 227.32 cfs @ 8.68 fps)

Summary for Pond 47P:

Inflow Area = 2.311 ac, 4.60% Impervious, Inflow Depth > 0.55" for 100-Year event
 Inflow = 0.68 cfs @ 12.37 hrs, Volume= 0.106 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 42.38' @ 20.00 hrs Surf.Area= 13,541 sf Storage= 4,609 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	243,835 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
42.00	10,588	0	0
43.00	18,319	14,454	14,454
44.00	25,630	21,975	36,428
45.00	30,580	28,105	64,533
46.00	36,447	33,514	98,047
50.00	36,447	145,788	243,835

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	165.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

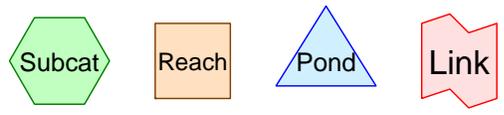
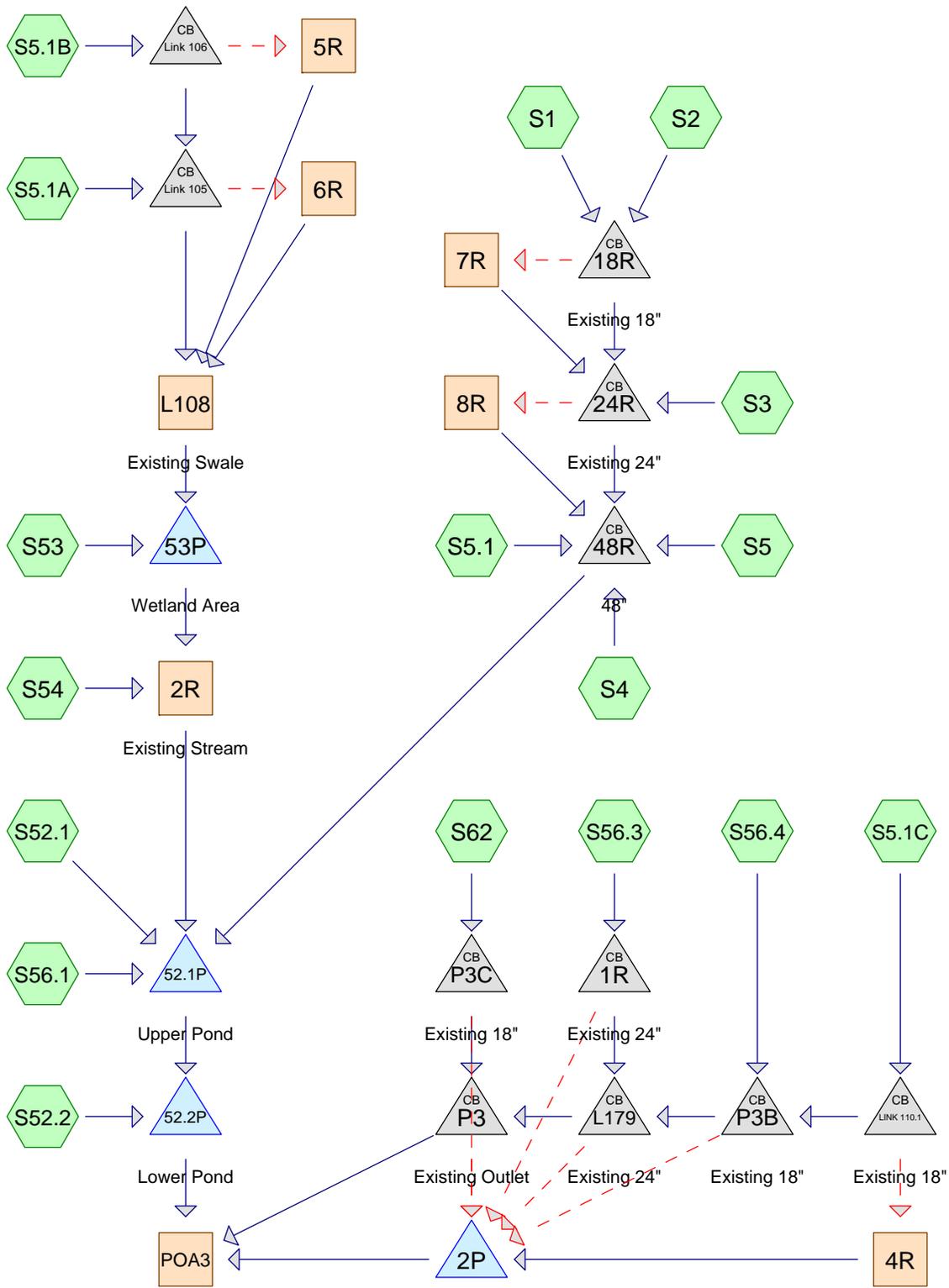
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 52.1L: Secondary Flow from 52.1P

Inflow = 49.44 cfs @ 12.61 hrs, Volume= 13.615 af
 Primary = 49.44 cfs @ 12.61 hrs, Volume= 13.615 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

100-Year Secondary Outflow Imported from 3659-12003C-Proposed Conditions POA 3-01~Pond 52.1P.hce



Routing Diagram for 3659-12003C-Proposed Conditions POA 3-01
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
9.794	43	(S1, S2)
0.530	65	(S1)
14.123	98	(S1, S2, S3, S4, S5, S5.1)
3.960	69	(S3, S4, S5.1)
10.494	49	(S4, S5)
0.710	60	(S5.1)
27.850	49	50-75% Grass cover, Fair, HSG A (S5.1A, S5.1B, S5.1C)
13.041	69	50-75% Grass cover, Fair, HSG B (S5.1C, S56.1, S56.3)
3.200	79	50-75% Grass cover, Fair, HSG C (S5.1B)
0.703	39	>75% Grass cover, Good, HSG A (S56.4)
1.174	98	Paved Areas & Roofs, HSG A (S52.1, S52.2)
11.581	98	Paved parking & roofs (S5.1A, S5.1B, S5.1C, S56.1, S56.3, S56.4, S62)
0.445	98	Water Surface, HSG A (S53, S54)
19.982	65	Woods/grass comb., Fair, HSG B (S52.1, S52.2, S53, S54)
117.587	66	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	39.611	39.611		S1, S2, S3, S4, S5, S5.1
27.850	13.041	3.200	0.000	0.000	44.091	50-75% Grass cover, Fair	S5.1A, S5.1B, S5.1C, S56.1, S56.3
0.703	0.000	0.000	0.000	0.000	0.703	>75% Grass cover, Good	S56.4
1.174	0.000	0.000	0.000	0.000	1.174	Paved Areas & Roofs	S52.1, S52.2
0.000	0.000	0.000	0.000	11.581	11.581	Paved parking & roofs	S5.1A, S5.1B, S5.1C, S56.1, S56.3, S56.4, S62
0.445	0.000	0.000	0.000	0.000	0.445	Water Surface	S53, S54
0.000	19.982	0.000	0.000	0.000	19.982	Woods/grass comb., Fair	S52.1, S52.2, S53, S54
30.172	33.023	3.200	0.000	51.192	117.587	TOTAL AREA	

Time span=0.00-20.00 hrs, dt=0.04 hrs, 501 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

- Subcatchment S1:** Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>0.04"
Tc=30.2 min CN=46 Runoff=0.07 cfs 0.029 af
- Subcatchment S2:** Runoff Area=218,770 sf 67.66% Impervious Runoff Depth>1.29"
Tc=14.8 min CN=80 Runoff=6.18 cfs 0.540 af
- Subcatchment S3:** Runoff Area=3.484 ac 76.46% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=91 Runoff=9.28 cfs 0.618 af
- Subcatchment S4:** Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>0.29"
Tc=25.6 min CN=58 Runoff=1.92 cfs 0.335 af
- Subcatchment S5:** Runoff Area=210,379 sf 80.46% Impervious Runoff Depth>1.87"
Tc=5.0 min CN=88 Runoff=11.53 cfs 0.753 af
- Subcatchment S5.1:** Runoff Area=3.325 ac 70.53% Impervious Runoff Depth>1.86"
Tc=16.7 min CN=88 Runoff=5.62 cfs 0.517 af
- Subcatchment S5.1A:** Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>0.21"
Tc=16.7 min CN=55 Runoff=1.40 cfs 0.265 af
- Subcatchment S5.1B:** Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>0.45"
Tc=25.4 min CN=63 Runoff=4.63 cfs 0.641 af
- Subcatchment S5.1C:** Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>0.70"
Tc=14.3 min CN=69 Runoff=10.62 cfs 1.019 af
- Subcatchment S52.1:** Runoff Area=471,416 sf 7.66% Impervious Runoff Depth>0.65"
Flow Length=1,830' Tc=19.7 min CN=68 Runoff=5.35 cfs 0.589 af
- Subcatchment S52.2:** Runoff Area=151,112 sf 9.97% Impervious Runoff Depth>0.65"
Flow Length=752' Tc=27.6 min CN=68 Runoff=1.50 cfs 0.188 af
- Subcatchment S53:** Runoff Area=217,375 sf 7.95% Impervious Runoff Depth>0.65"
Tc=15.8 min CN=68 Runoff=2.69 cfs 0.272 af
- Subcatchment S54:** Runoff Area=101,058 sf 2.07% Impervious Runoff Depth>0.57"
Tc=14.0 min CN=66 Runoff=1.08 cfs 0.110 af
- Subcatchment S56.1:** Runoff Area=113,139 sf 53.15% Impervious Runoff Depth>1.57"
Tc=5.0 min CN=84 Runoff=5.25 cfs 0.339 af
- Subcatchment S56.3:** Runoff Area=85,676 sf 82.51% Impervious Runoff Depth>2.31"
Tc=5.0 min CN=93 Runoff=5.58 cfs 0.379 af
- Subcatchment S56.4:** Runoff Area=62,965 sf 51.39% Impervious Runoff Depth>0.70"
Flow Length=626' Tc=15.1 min CN=69 Runoff=0.86 cfs 0.084 af

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Type III 24-hr 2-Year Rainfall=3.20"

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Subcatchment S62: Runoff Area=27,209 sf 100.00% Impervious Runoff Depth>2.83"
Tc=5.0 min CN=98 Runoff=1.98 cfs 0.147 af

Reach 2R: Existing Stream Avg. Flow Depth=0.28' Max Vel=3.53 fps Inflow=4.02 cfs 1.036 af
n=0.030 L=750.0' S=0.0373 '/ Capacity=208.76 cfs Outflow=4.00 cfs 1.030 af

Reach 4R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.030 L=105.0' S=0.0308 '/ Capacity=135.01 cfs Outflow=0.00 cfs 0.000 af

Reach 5R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.030 L=900.0' S=0.0289 '/ Capacity=20.61 cfs Outflow=0.00 cfs 0.000 af

Reach 6R: Avg. Flow Depth=0.23' Max Vel=4.60 fps Inflow=6.01 cfs 0.906 af
n=0.030 L=50.0' S=0.1600 '/ Capacity=48.49 cfs Outflow=6.01 cfs 0.906 af

Reach 7R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.030 L=615.0' S=0.0353 '/ Capacity=22.79 cfs Outflow=0.00 cfs 0.000 af

Reach 8R: Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.030 L=450.0' S=0.0423 '/ Capacity=24.94 cfs Outflow=0.00 cfs 0.000 af

Reach L108: Existing Swale Avg. Flow Depth=0.07' Max Vel=2.11 fps Inflow=6.01 cfs 0.906 af
n=0.030 L=774.0' S=0.0646 '/ Capacity=1,762.00 cfs Outflow=5.80 cfs 0.896 af

Reach POA3: Inflow=15.84 cfs 3.227 af
Outflow=15.84 cfs 3.227 af

Pond 1R: Existing 24" Peak Elev=44.97' Inflow=5.58 cfs 0.379 af
Primary=5.58 cfs 0.379 af Secondary=0.00 cfs 0.000 af Outflow=5.58 cfs 0.379 af

Pond 2P: Blue Hill Intersection Peak Elev=46.50' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Pond 18R: Existing 18" Peak Elev=108.68' Inflow=6.18 cfs 0.569 af
Primary=6.18 cfs 0.569 af Secondary=0.00 cfs 0.000 af Outflow=6.18 cfs 0.569 af

Pond 24R: Existing 24" Peak Elev=96.56' Inflow=13.24 cfs 1.187 af
Primary=13.24 cfs 1.187 af Secondary=0.00 cfs 0.000 af Outflow=13.24 cfs 1.187 af

Pond 48R: 48" Peak Elev=79.63' Inflow=28.35 cfs 2.792 af
48.0" Round Culvert n=0.014 L=1,000.0' S=0.0307 '/ Outflow=28.35 cfs 2.792 af

Pond 52.1P: Upper Pond Peak Elev=48.46' Storage=36,672 cf Inflow=35.78 cfs 4.749 af
Primary=10.96 cfs 1.796 af Secondary=10.14 cfs 2.685 af Outflow=20.93 cfs 4.481 af

Pond 52.2P: Lower Pond Peak Elev=48.00' Storage=36,004 cf Inflow=12.40 cfs 1.984 af
Outflow=4.25 cfs 1.597 af

Pond 53P: Wetland Area Peak Elev=79.34' Storage=13,603 cf Inflow=7.54 cfs 1.168 af
Outflow=3.76 cfs 0.925 af

Pond L179: Existing 24" Peak Elev=44.15' Inflow=14.20 cfs 1.482 af
Primary=14.20 cfs 1.482 af Secondary=0.00 cfs 0.000 af Outflow=14.20 cfs 1.482 af

Pond Link 105:

Peak Elev=140.43' Inflow=6.01 cfs 0.906 af
Primary=0.00 cfs 0.000 af Secondary=6.01 cfs 0.906 af Outflow=6.01 cfs 0.906 af

Pond Link 106:

Peak Elev=143.03' Inflow=4.63 cfs 0.641 af
Primary=4.63 cfs 0.641 af Secondary=0.00 cfs 0.000 af Outflow=4.63 cfs 0.641 af

Pond LINK 110.1: Existing 18"

Peak Elev=49.80' Inflow=10.62 cfs 1.019 af
Primary=10.62 cfs 1.019 af Secondary=0.00 cfs 0.000 af Outflow=10.62 cfs 1.019 af

Pond P3: Existing Outlet

Peak Elev=43.28' Inflow=15.21 cfs 1.629 af
Primary=15.21 cfs 1.629 af Secondary=0.00 cfs 0.000 af Outflow=15.21 cfs 1.629 af

Pond P3B: Existing 18"

Peak Elev=46.00' Inflow=11.48 cfs 1.103 af
Primary=11.48 cfs 1.103 af Secondary=0.00 cfs 0.000 af Outflow=11.48 cfs 1.103 af

Pond P3C: Existing 18"

Peak Elev=44.05' Inflow=1.98 cfs 0.147 af
Primary=1.98 cfs 0.147 af Secondary=0.00 cfs 0.000 af Outflow=1.98 cfs 0.147 af

Total Runoff Area = 117.587 ac Runoff Volume = 6.825 af Average Runoff Depth = 0.70"
76.76% Pervious = 90.264 ac 23.24% Impervious = 27.323 ac

Summary for Subcatchment S1:

Runoff = 0.07 cfs @ 15.41 hrs, Volume= 0.029 af, Depth> 0.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S2:

Runoff = 6.18 cfs @ 12.21 hrs, Volume= 0.540 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 70,760	43	
* 148,010	98	
218,770	80	Weighted Average
70,760		32.34% Pervious Area
148,010		67.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 9.28 cfs @ 12.08 hrs, Volume= 0.618 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 0.820	69	
* 2.664	98	
3.484	91	Weighted Average
0.820		23.54% Pervious Area
2.664		76.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 1.92 cfs @ 12.56 hrs, Volume= 0.335 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S5:

Runoff = 11.53 cfs @ 12.08 hrs, Volume= 0.753 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
* 41,115	49	
* 169,264	98	
210,379	88	Weighted Average
41,115		19.54% Pervious Area
169,264		80.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 5.62 cfs @ 12.23 hrs, Volume= 0.517 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.345	98	
3.325	88	Weighted Average
0.980		29.47% Pervious Area
2.345		70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1A:

Runoff = 1.40 cfs @ 12.50 hrs, Volume= 0.265 af, Depth> 0.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 4.63 cfs @ 12.46 hrs, Volume= 0.641 af, Depth> 0.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 10.62 cfs @ 12.22 hrs, Volume= 1.019 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52.1:

Runoff = 5.35 cfs @ 12.32 hrs, Volume= 0.589 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
435,325	65	Woods/grass comb., Fair, HSG B
* 36,091	98	Paved Areas & Roofs, HSG A
471,416	68	Weighted Average
435,325		92.34% Pervious Area
36,091		7.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.0800	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
7.4	1,730	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
19.7	1,830	Total			

Summary for Subcatchment S52.2:

Runoff = 1.50 cfs @ 12.45 hrs, Volume= 0.188 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (sf)	CN	Description
136,043	65	Woods/grass comb., Fair, HSG B
* 15,069	98	Paved Areas & Roofs, HSG A
151,112	68	Weighted Average
136,043		90.03% Pervious Area
15,069		9.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0140	0.07		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
2.8	652	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
27.6	752	Total			

Summary for Subcatchment S53:

Runoff = 2.69 cfs @ 12.25 hrs, Volume= 0.272 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
200,092	65	Woods/grass comb., Fair, HSG B
17,283	98	Water Surface, HSG A
217,375	68	Weighted Average
200,092		92.05% Pervious Area
17,283		7.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 1.08 cfs @ 12.23 hrs, Volume= 0.110 af, Depth> 0.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
98,969	65	Woods/grass comb., Fair, HSG B
2,089	98	Water Surface, HSG A
101,058	66	Weighted Average
98,969		97.93% Pervious Area
2,089		2.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S56.1:

Runoff = 5.25 cfs @ 12.08 hrs, Volume= 0.339 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
53,002	69	50-75% Grass cover, Fair, HSG B
60,137	98	Paved parking & roofs
113,139	84	Weighted Average
53,002		46.85% Pervious Area
60,137		53.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.3:

Runoff = 5.58 cfs @ 12.07 hrs, Volume= 0.379 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
14,981	69	50-75% Grass cover, Fair, HSG B
70,695	98	Paved parking & roofs
85,676	93	Weighted Average
14,981		17.49% Pervious Area
70,695		82.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.4:

Runoff = 0.86 cfs @ 12.24 hrs, Volume= 0.084 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

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Type III 24-hr 2-Year Rainfall=3.20"

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Area (sf)	CN	Description
30,607	39	>75% Grass cover, Good, HSG A
32,358	98	Paved parking & roofs
62,965	69	Weighted Average
30,607		48.61% Pervious Area
32,358		51.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0950	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
1.5	298	0.0440	3.38		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
2.1	228	0.0080	1.82		Shallow Concentrated Flow, Paved Paved Kv= 20.3 fps
15.1	626	Total			

Summary for Subcatchment S62:

Runoff = 1.98 cfs @ 12.07 hrs, Volume= 0.147 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
27,209	98	Paved parking & roofs
27,209		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 2R: Existing Stream

Inflow Area = 39.550 ac, 13.41% Impervious, Inflow Depth > 0.31" for 2-Year event
 Inflow = 4.02 cfs @ 12.96 hrs, Volume= 1.036 af
 Outflow = 4.00 cfs @ 13.00 hrs, Volume= 1.030 af, Atten= 0%, Lag= 2.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 3.53 fps, Min. Travel Time= 3.5 min
 Avg. Velocity = 2.45 fps, Avg. Travel Time= 5.1 min

Peak Storage= 851 cf @ 13.00 hrs
 Average Depth at Peak Storage= 0.28'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 208.76 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 ' / ' Top Width= 17.00'
 Length= 750.0' Slope= 0.0373 ' / '
 Inlet Invert= 79.00', Outlet Invert= 51.00'



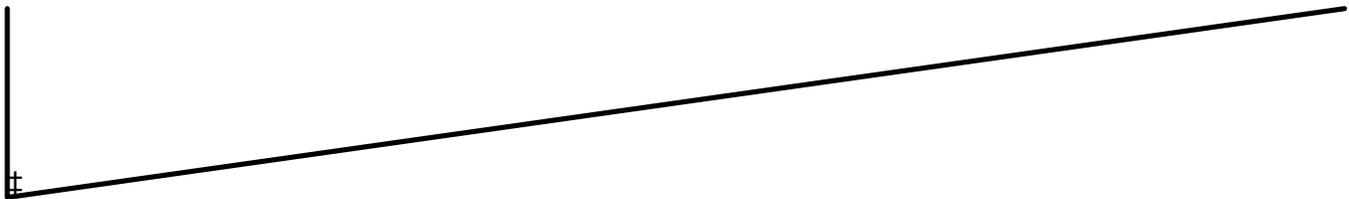
Summary for Reach 4R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 135.01 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 105.0' Slope= 0.0308 '/'
 Inlet Invert= 51.23', Outlet Invert= 48.00'



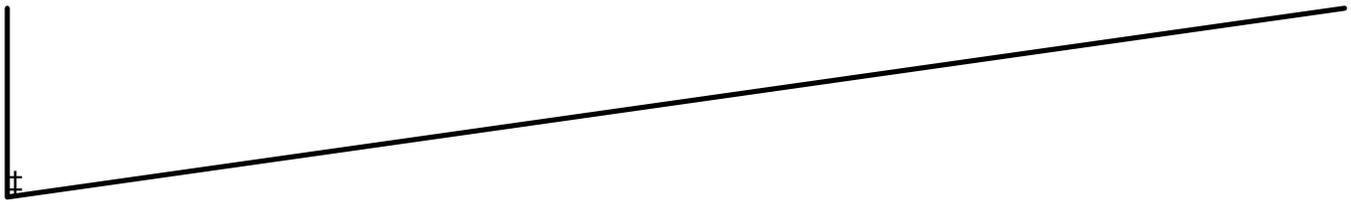
Summary for Reach 5R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



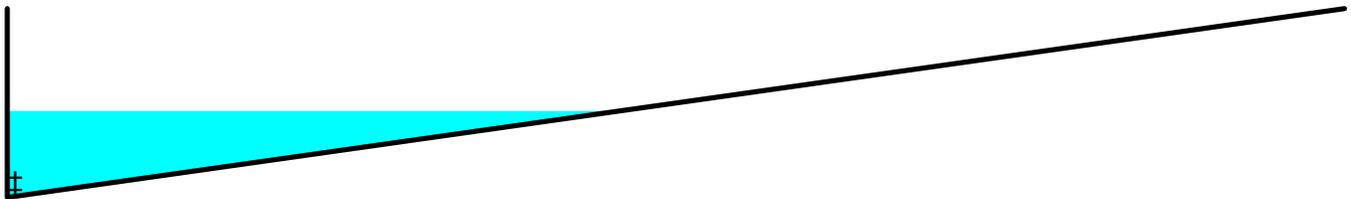
Summary for Reach 6R:

Inflow = 6.01 cfs @ 12.47 hrs, Volume= 0.906 af
 Outflow = 6.01 cfs @ 12.47 hrs, Volume= 0.906 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 4.60 fps, Min. Travel Time= 0.2 min
 Avg. Velocity = 2.98 fps, Avg. Travel Time= 0.3 min

Peak Storage= 65 cf @ 12.47 hrs
 Average Depth at Peak Storage= 0.23'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



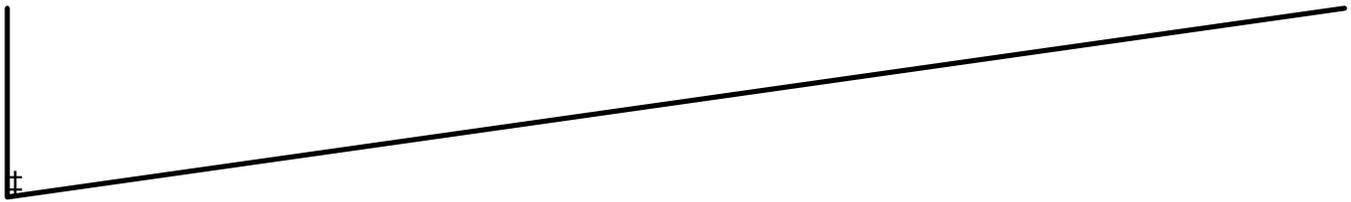
Summary for Reach 7R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 22.79 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 615.0' Slope= 0.0353 '/'
 Inlet Invert= 116.06', Outlet Invert= 94.33'



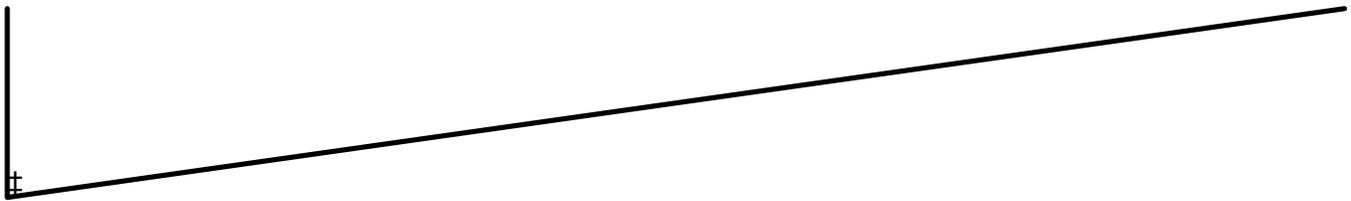
Summary for Reach 8R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 24.94 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 450.0' Slope= 0.0423 '/'
 Inlet Invert= 100.54', Outlet Invert= 81.50'



Summary for Reach L108: Existing Swale

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.34" for 2-Year event
 Inflow = 6.01 cfs @ 12.47 hrs, Volume= 0.906 af
 Outflow = 5.80 cfs @ 12.55 hrs, Volume= 0.896 af, Atten= 3%, Lag= 4.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 2.11 fps, Min. Travel Time= 6.1 min
 Avg. Velocity = 1.15 fps, Avg. Travel Time= 11.2 min

Peak Storage= 2,127 cf @ 12.55 hrs
 Average Depth at Peak Storage= 0.07'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



Summary for Reach POA3:

Inflow Area = 117.587 ac, 23.24% Impervious, Inflow Depth > 0.33" for 2-Year event
 Inflow = 15.84 cfs @ 12.20 hrs, Volume= 3.227 af
 Outflow = 15.84 cfs @ 12.20 hrs, Volume= 3.227 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Summary for Pond 1R: Existing 24"

Inflow Area = 1.967 ac, 82.51% Impervious, Inflow Depth > 2.31" for 2-Year event
 Inflow = 5.58 cfs @ 12.07 hrs, Volume= 0.379 af
 Outflow = 5.58 cfs @ 12.07 hrs, Volume= 0.379 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.58 cfs @ 12.07 hrs, Volume= 0.379 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.97' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 166.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 41.90' S= 0.0120 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.30'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.96 cfs @ 12.07 hrs HW=44.95' TW=43.67' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 4.96 cfs @ 4.29 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 2P: Blue Hill Intersection

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 46.50' @ 0.00 hrs Surf.Area= 10 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

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Volume	Invert	Avail.Storage	Storage Description
#1	46.50'	58,355 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.50	10	0	0
47.00	21,119	5,282	5,282
48.00	85,027	53,073	58,355

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 48.50 47.50 47.00 47.50 48.50

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=46.50' TW=0.00' (Dynamic Tailwater)
 ↑1=Curb (Controls 0.00 cfs)

Summary for Pond 18R: Existing 18"

Inflow Area = 14.042 ac, 26.48% Impervious, Inflow Depth > 0.49" for 2-Year event
 Inflow = 6.18 cfs @ 12.21 hrs, Volume= 0.569 af
 Outflow = 6.18 cfs @ 12.21 hrs, Volume= 0.569 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.18 cfs @ 12.21 hrs, Volume= 0.569 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 108.68' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	18.0" Round Culvert L= 428.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 107.40' / 94.80' S= 0.0294 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	116.06'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.13 cfs @ 12.21 hrs HW=108.67' TW=96.32' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 6.13 cfs @ 3.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=107.40' TW=116.06' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 24R: Existing 24"

Inflow Area = 17.526 ac, 36.41% Impervious, Inflow Depth > 0.81" for 2-Year event
 Inflow = 13.24 cfs @ 12.09 hrs, Volume= 1.187 af
 Outflow = 13.24 cfs @ 12.09 hrs, Volume= 1.187 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.24 cfs @ 12.09 hrs, Volume= 1.187 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

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Peak Elev= 96.56' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.80'	24.0" Round Culvert L= 350.0' Ke= 0.500 Inlet / Outlet Invert= 94.80' / 79.90' S= 0.0426 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	100.54'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.01 cfs @ 12.09 hrs HW=96.54' TW=79.61' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 13.01 cfs @ 4.49 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=94.80' TW=100.54' (Dynamic Tailwater)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 48R: 48"

Inflow Area = 39.611 ac, 35.65% Impervious, Inflow Depth > 0.85" for 2-Year event
 Inflow = 28.35 cfs @ 12.09 hrs, Volume= 2.792 af
 Outflow = 28.35 cfs @ 12.09 hrs, Volume= 2.792 af, Atten= 0%, Lag= 0.0 min
 Primary = 28.35 cfs @ 12.09 hrs, Volume= 2.792 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 79.63' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	77.70'	48.0" Round Culvert L= 1,000.0' Ke= 0.500 Inlet / Outlet Invert= 77.70' / 47.00' S= 0.0307 '/ Cc= 0.900 n= 0.014, Flow Area= 12.57 sf

Primary OutFlow Max=27.89 cfs @ 12.09 hrs HW=79.61' TW=47.95' (Dynamic Tailwater)

↑**1=Culvert** (Inlet Controls 27.89 cfs @ 4.71 fps)

Summary for Pond 52.1P: Upper Pond

Inflow Area = 92.581 ac, 23.37% Impervious, Inflow Depth > 0.62" for 2-Year event
 Inflow = 35.78 cfs @ 12.09 hrs, Volume= 4.749 af
 Outflow = 20.93 cfs @ 12.41 hrs, Volume= 4.481 af, Atten= 41%, Lag= 18.8 min
 Primary = 10.96 cfs @ 12.38 hrs, Volume= 1.796 af
 Secondary = 10.14 cfs @ 12.46 hrs, Volume= 2.685 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 48.46' @ 12.46 hrs Surf.Area= 27,022 sf Storage= 36,672 cf

Plug-Flow detention time= 50.3 min calculated for 4.472 af (94% of inflow)

Center-of-Mass det. time= 31.2 min (860.0 - 828.9)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	486,437 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	23,157	0	0
48.00	25,754	24,456	24,456
49.00	28,493	27,124	51,579
50.00	31,585	30,039	81,618
51.00	34,686	33,136	114,754
52.00	37,278	35,982	150,736
53.00	39,915	38,597	189,332
54.00	42,638	41,277	230,609
60.00	42,638	255,828	486,437

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	12.0" Vert. Orifice/Grate X 3.00 C= 0.600
#2	Primary	52.75'	40.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Secondary	49.50'	18.0" Vert. Orifice/Grate C= 0.600
#4	Secondary	47.00'	24.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=10.74 cfs @ 12.38 hrs HW=48.44' TW=47.54' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 10.74 cfs @ 4.56 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=10.13 cfs @ 12.46 hrs HW=48.46' (Free Discharge)

- 3=Orifice/Grate (Controls 0.00 cfs)
- 4=Orifice/Grate (Orifice Controls 10.13 cfs @ 4.12 fps)

Summary for Pond 52.2P: Lower Pond

Inflow Area = 96.050 ac, 22.89% Impervious, Inflow Depth > 0.25" for 2-Year event
 Inflow = 12.40 cfs @ 12.39 hrs, Volume= 1.984 af
 Outflow = 4.25 cfs @ 13.37 hrs, Volume= 1.597 af, Atten= 66%, Lag= 59.1 min
 Primary = 4.25 cfs @ 13.37 hrs, Volume= 1.597 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 48.00' @ 13.37 hrs Surf.Area= 37,282 sf Storage= 36,004 cf

Plug-Flow detention time= 141.2 min calculated for 1.594 af (80% of inflow)
 Center-of-Mass det. time= 88.4 min (920.6 - 832.2)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	569,961 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	34,856	0	0
48.00	37,286	36,071	36,071
49.00	39,702	38,494	74,565
50.00	42,069	40,886	115,451
51.00	45,629	43,849	159,300
60.00	45,629	410,661	569,961

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	18.0" Vert. Orifice/Grate C= 0.600
#2	Primary	50.00'	6.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	51.00'	15.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.25 cfs @ 13.37 hrs HW=48.00' TW=0.00' (Dynamic Tailwater)

- ↑1=Orifice/Grate (Orifice Controls 4.25 cfs @ 3.40 fps)
- 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: Wetland Area

Inflow Area = 37.230 ac, 14.12% Impervious, Inflow Depth > 0.38" for 2-Year event
 Inflow = 7.54 cfs @ 12.51 hrs, Volume= 1.168 af
 Outflow = 3.76 cfs @ 12.97 hrs, Volume= 0.925 af, Atten= 50%, Lag= 27.6 min
 Primary = 3.76 cfs @ 12.97 hrs, Volume= 0.925 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 79.34' @ 13.01 hrs Surf.Area= 14,353 sf Storage= 13,603 cf

Plug-Flow detention time= 99.3 min calculated for 0.925 af (79% of inflow)
 Center-of-Mass det. time= 44.2 min (914.0 - 869.9)

Volume	Invert	Avail.Storage	Storage Description
#1	77.00'	93,245 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
77.00	449	0	0
78.00	2,374	1,412	1,412
79.00	12,873	7,624	9,035
80.00	17,283	15,078	24,113
84.00	17,283	69,132	93,245

Device	Routing	Invert	Outlet Devices
#1	Primary	79.00'	14.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=3.70 cfs @ 12.97 hrs HW=79.33' TW=79.28' (Dynamic Tailwater)

- ↑1=Broad-Crested Rectangular Weir (Weir Controls 3.70 cfs @ 0.79 fps)

Summary for Pond L179: Existing 24"

Inflow Area = 20.912 ac, 22.55% Impervious, Inflow Depth > 0.85" for 2-Year event
 Inflow = 14.20 cfs @ 12.20 hrs, Volume= 1.482 af
 Outflow = 14.20 cfs @ 12.20 hrs, Volume= 1.482 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.20 cfs @ 12.20 hrs, Volume= 1.482 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.15' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.89'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=14.11 cfs @ 12.20 hrs HW=44.15' TW=43.28' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 14.11 cfs @ 4.49 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.34" for 2-Year event
 Inflow = 6.01 cfs @ 12.47 hrs, Volume= 0.906 af
 Outflow = 6.01 cfs @ 12.47 hrs, Volume= 0.906 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Secondary = 6.01 cfs @ 12.47 hrs, Volume= 0.906 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 140.43' @ 12.48 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=140.00' TW=132.00' (Dynamic Tailwater)
 ↑1=Culvert (Controls 0.00 cfs)

Secondary OutFlow Max=5.99 cfs @ 12.47 hrs HW=140.43' TW=140.23' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Weir Controls 5.99 cfs @ 1.76 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 0.45" for 2-Year event
 Inflow = 4.63 cfs @ 12.46 hrs, Volume= 0.641 af
 Outflow = 4.63 cfs @ 12.46 hrs, Volume= 0.641 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.63 cfs @ 12.46 hrs, Volume= 0.641 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 143.03' @ 12.46 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.62 cfs @ 12.46 hrs HW=143.03' TW=140.42' (Dynamic Tailwater)
 ↑**1=Culvert** (Inlet Controls 4.62 cfs @ 3.78 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.80' TW=158.00' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond LINK 110.1: Existing 18"

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 0.70" for 2-Year event
 Inflow = 10.62 cfs @ 12.22 hrs, Volume= 1.019 af
 Outflow = 10.62 cfs @ 12.22 hrs, Volume= 1.019 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.62 cfs @ 12.22 hrs, Volume= 1.019 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 49.80' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=10.22 cfs @ 12.22 hrs HW=49.60' TW=45.95' (Dynamic Tailwater)
 ↑**1=Culvert** (Outlet Controls 10.22 cfs @ 5.79 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=46.45' TW=51.23' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P3: Existing Outlet

Inflow Area = 21.537 ac, 24.80% Impervious, Inflow Depth > 0.91" for 2-Year event
 Inflow = 15.21 cfs @ 12.19 hrs, Volume= 1.629 af
 Outflow = 15.21 cfs @ 12.19 hrs, Volume= 1.629 af, Atten= 0%, Lag= 0.0 min
 Primary = 15.21 cfs @ 12.19 hrs, Volume= 1.629 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 43.28' @ 12.19 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.16 cfs @ 12.19 hrs HW=43.28' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Barrel Controls 15.16 cfs @ 5.52 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3B: Existing 18"

Inflow Area = 18.945 ac, 16.32% Impervious, Inflow Depth > 0.70" for 2-Year event
 Inflow = 11.48 cfs @ 12.23 hrs, Volume= 1.103 af
 Outflow = 11.48 cfs @ 12.23 hrs, Volume= 1.103 af, Atten= 0%, Lag= 0.0 min
 Primary = 11.48 cfs @ 12.23 hrs, Volume= 1.103 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 46.00' @ 12.23 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=11.37 cfs @ 12.23 hrs HW=45.96' TW=44.13' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 11.37 cfs @ 6.43 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.40' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3C: Existing 18"

Inflow Area = 0.625 ac, 100.00% Impervious, Inflow Depth > 2.83" for 2-Year event
 Inflow = 1.98 cfs @ 12.07 hrs, Volume= 0.147 af
 Outflow = 1.98 cfs @ 12.07 hrs, Volume= 0.147 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.98 cfs @ 12.07 hrs, Volume= 0.147 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.05' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	46.77'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.74 cfs @ 12.07 hrs HW=44.04' TW=43.04' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 1.74 cfs @ 3.41 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.38' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.04 hrs, 501 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

- Subcatchment S1:** Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>0.30"
Tc=30.2 min CN=46 Runoff=0.98 cfs 0.224 af
- Subcatchment S2:** Runoff Area=218,770 sf 67.66% Impervious Runoff Depth>2.37"
Tc=14.8 min CN=80 Runoff=11.38 cfs 0.991 af
- Subcatchment S3:** Runoff Area=3.484 ac 76.46% Impervious Runoff Depth>3.40"
Tc=5.0 min CN=91 Runoff=14.44 cfs 0.987 af
- Subcatchment S4:** Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>0.84"
Tc=25.6 min CN=58 Runoff=7.82 cfs 0.980 af
- Subcatchment S5:** Runoff Area=210,379 sf 80.46% Impervious Runoff Depth>3.10"
Tc=5.0 min CN=88 Runoff=18.69 cfs 1.248 af
- Subcatchment S5.1:** Runoff Area=3.325 ac 70.53% Impervious Runoff Depth>3.09"
Tc=16.7 min CN=88 Runoff=9.14 cfs 0.856 af
- Subcatchment S5.1A:** Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>0.69"
Tc=16.7 min CN=55 Runoff=7.51 cfs 0.880 af
- Subcatchment S5.1B:** Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>1.13"
Tc=25.4 min CN=63 Runoff=13.87 cfs 1.602 af
- Subcatchment S5.1C:** Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>1.53"
Tc=14.3 min CN=69 Runoff=25.34 cfs 2.227 af
- Subcatchment S52.1:** Runoff Area=471,416 sf 7.66% Impervious Runoff Depth>1.46"
Flow Length=1,830' Tc=19.7 min CN=68 Runoff=13.13 cfs 1.312 af
- Subcatchment S52.2:** Runoff Area=151,112 sf 9.97% Impervious Runoff Depth>1.45"
Flow Length=752' Tc=27.6 min CN=68 Runoff=3.65 cfs 0.419 af
- Subcatchment S53:** Runoff Area=217,375 sf 7.95% Impervious Runoff Depth>1.46"
Tc=15.8 min CN=68 Runoff=6.59 cfs 0.606 af
- Subcatchment S54:** Runoff Area=101,058 sf 2.07% Impervious Runoff Depth>1.33"
Tc=14.0 min CN=66 Runoff=2.88 cfs 0.256 af
- Subcatchment S56.1:** Runoff Area=113,139 sf 53.15% Impervious Runoff Depth>2.73"
Tc=5.0 min CN=84 Runoff=9.02 cfs 0.590 af
- Subcatchment S56.3:** Runoff Area=85,676 sf 82.51% Impervious Runoff Depth>3.61"
Tc=5.0 min CN=93 Runoff=8.47 cfs 0.592 af
- Subcatchment S56.4:** Runoff Area=62,965 sf 51.39% Impervious Runoff Depth>1.53"
Flow Length=626' Tc=15.1 min CN=69 Runoff=2.04 cfs 0.184 af

Subcatchment S62:	Runoff Area=27,209 sf	100.00% Impervious	Runoff Depth>4.16"
	Tc=5.0 min	CN=98	Runoff=2.87 cfs 0.217 af
Reach 2R: Existing Stream	Avg. Flow Depth=0.70'	Max Vel=5.81 fps	Inflow=22.37 cfs 3.065 af
	n=0.030 L=750.0'	S=0.0373 '/	Capacity=208.76 cfs Outflow=22.29 cfs 3.055 af
Reach 4R:	Avg. Flow Depth=0.42'	Max Vel=3.00 fps	Inflow=13.08 cfs 0.302 af
	n=0.030 L=105.0'	S=0.0308 '/	Capacity=135.01 cfs Outflow=13.09 cfs 0.302 af
Reach 5R:	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs 0.000 af
	n=0.030 L=900.0'	S=0.0289 '/	Capacity=20.61 cfs Outflow=0.00 cfs 0.000 af
Reach 6R:	Avg. Flow Depth=0.35'	Max Vel=6.14 fps	Inflow=19.01 cfs 2.438 af
	n=0.030 L=50.0'	S=0.1600 '/	Capacity=48.49 cfs Outflow=19.01 cfs 2.438 af
Reach 7R:	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs 0.000 af
	n=0.030 L=615.0'	S=0.0353 '/	Capacity=22.79 cfs Outflow=0.00 cfs 0.000 af
Reach 8R:	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs 0.000 af
	n=0.030 L=450.0'	S=0.0423 '/	Capacity=24.94 cfs Outflow=0.00 cfs 0.000 af
Reach L108: Existing Swale	Avg. Flow Depth=0.15'	Max Vel=3.46 fps	Inflow=20.94 cfs 2.481 af
	n=0.030 L=774.0'	S=0.0646 '/	Capacity=1,762.00 cfs Outflow=20.71 cfs 2.464 af
Reach POA3:			Inflow=28.06 cfs 6.387 af
			Outflow=28.06 cfs 6.387 af
Pond 1R: Existing 24"		Peak Elev=46.21'	Inflow=8.47 cfs 0.592 af
	Primary=8.47 cfs 0.592 af	Secondary=0.00 cfs 0.000 af	Outflow=8.47 cfs 0.592 af
Pond 2P: Blue Hill Intersection		Peak Elev=47.19'	Storage=10,435 cf Inflow=15.26 cfs 0.363 af
			Outflow=7.49 cfs 0.237 af
Pond 18R: Existing 18"		Peak Elev=109.96'	Inflow=11.43 cfs 1.215 af
	Primary=11.43 cfs 1.215 af	Secondary=0.00 cfs 0.000 af	Outflow=11.43 cfs 1.215 af
Pond 24R: Existing 24"		Peak Elev=97.93'	Inflow=22.12 cfs 2.202 af
	Primary=22.12 cfs 2.202 af	Secondary=0.00 cfs 0.000 af	Outflow=22.12 cfs 2.202 af
Pond 48R: 48"		Peak Elev=80.33'	Inflow=48.33 cfs 5.287 af
	48.0" Round Culvert n=0.014 L=1,000.0'	S=0.0307 '/	Outflow=48.33 cfs 5.287 af
Pond 52.1P: Upper Pond		Peak Elev=50.29'	Storage=90,811 cf Inflow=65.14 cfs 10.245 af
	Primary=16.03 cfs 3.399 af	Secondary=25.71 cfs 6.478 af	Outflow=41.49 cfs 9.877 af
Pond 52.2P: Lower Pond		Peak Elev=48.82'	Storage=67,477 cf Inflow=19.37 cfs 3.818 af
			Outflow=8.80 cfs 3.295 af
Pond 53P: Wetland Area		Peak Elev=79.91'	Storage=22,528 cf Inflow=25.73 cfs 3.071 af
			Outflow=21.00 cfs 2.808 af
Pond L179: Existing 24"		Peak Elev=45.87'	Inflow=20.35 cfs 2.639 af
	Primary=20.35 cfs 2.639 af	Secondary=0.00 cfs 0.000 af	Outflow=20.35 cfs 2.639 af

3659-12003C-Proposed Conditions POA 3-01

Type III 24-hr 10-Year Rainfall=4.60"

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Pond Link 105:

Peak Elev=141.33' Inflow=20.94 cfs 2.482 af
Primary=1.93 cfs 0.043 af Secondary=19.01 cfs 2.438 af Outflow=20.94 cfs 2.482 af

Pond Link 106:

Peak Elev=147.93' Inflow=13.87 cfs 1.602 af
Primary=13.87 cfs 1.602 af Secondary=0.00 cfs 0.000 af Outflow=13.87 cfs 1.602 af

Pond LINK 110.1: Existing 18"

Peak Elev=52.09' Inflow=25.34 cfs 2.227 af
Primary=12.28 cfs 1.925 af Secondary=13.08 cfs 0.302 af Outflow=25.34 cfs 2.227 af

Pond P3: Existing Outlet

Peak Elev=44.55' Inflow=23.06 cfs 2.855 af
Primary=23.06 cfs 2.855 af Secondary=0.00 cfs 0.000 af Outflow=23.06 cfs 2.855 af

Pond P3B: Existing 18"

Peak Elev=47.16' Inflow=14.31 cfs 2.109 af
Primary=13.47 cfs 2.047 af Secondary=5.88 cfs 0.062 af Outflow=14.31 cfs 2.109 af

Pond P3C: Existing 18"

Peak Elev=44.79' Inflow=2.87 cfs 0.217 af
Primary=2.87 cfs 0.217 af Secondary=0.00 cfs 0.000 af Outflow=2.87 cfs 0.217 af

Total Runoff Area = 117.587 ac Runoff Volume = 14.172 af Average Runoff Depth = 1.45"
76.76% Pervious = 90.264 ac 23.24% Impervious = 27.323 ac

Summary for Subcatchment S1:

Runoff = 0.98 cfs @ 12.69 hrs, Volume= 0.224 af, Depth> 0.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S2:

Runoff = 11.38 cfs @ 12.21 hrs, Volume= 0.991 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 70,760	43	
* 148,010	98	
218,770	80	Weighted Average
70,760		32.34% Pervious Area
148,010		67.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 14.44 cfs @ 12.07 hrs, Volume= 0.987 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 0.820	69	
* 2.664	98	
3.484	91	Weighted Average
0.820		23.54% Pervious Area
2.664		76.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 7.82 cfs @ 12.43 hrs, Volume= 0.980 af, Depth> 0.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S5:

Runoff = 18.69 cfs @ 12.08 hrs, Volume= 1.248 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 41,115	49	
* 169,264	98	
210,379	88	Weighted Average
41,115		19.54% Pervious Area
169,264		80.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 9.14 cfs @ 12.22 hrs, Volume= 0.856 af, Depth> 3.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.345	98	
3.325	88	Weighted Average
0.980		29.47% Pervious Area
2.345		70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1A:

Runoff = 7.51 cfs @ 12.30 hrs, Volume= 0.880 af, Depth> 0.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 13.87 cfs @ 12.40 hrs, Volume= 1.602 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 25.34 cfs @ 12.21 hrs, Volume= 2.227 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52.1:

Runoff = 13.13 cfs @ 12.29 hrs, Volume= 1.312 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
435,325	65	Woods/grass comb., Fair, HSG B
* 36,091	98	Paved Areas & Roofs, HSG A
471,416	68	Weighted Average
435,325		92.34% Pervious Area
36,091		7.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.0800	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
7.4	1,730	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
19.7	1,830	Total			

Summary for Subcatchment S52.2:

Runoff = 3.65 cfs @ 12.41 hrs, Volume= 0.419 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

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Type III 24-hr 10-Year Rainfall=4.60"

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Area (sf)	CN	Description
136,043	65	Woods/grass comb., Fair, HSG B
* 15,069	98	Paved Areas & Roofs, HSG A
151,112	68	Weighted Average
136,043		90.03% Pervious Area
15,069		9.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0140	0.07		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
2.8	652	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
27.6	752	Total			

Summary for Subcatchment S53:

Runoff = 6.59 cfs @ 12.23 hrs, Volume= 0.606 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
200,092	65	Woods/grass comb., Fair, HSG B
17,283	98	Water Surface, HSG A
217,375	68	Weighted Average
200,092		92.05% Pervious Area
17,283		7.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 2.88 cfs @ 12.21 hrs, Volume= 0.256 af, Depth> 1.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
98,969	65	Woods/grass comb., Fair, HSG B
2,089	98	Water Surface, HSG A
101,058	66	Weighted Average
98,969		97.93% Pervious Area
2,089		2.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S56.1:

Runoff = 9.02 cfs @ 12.08 hrs, Volume= 0.590 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
53,002	69	50-75% Grass cover, Fair, HSG B
60,137	98	Paved parking & roofs
113,139	84	Weighted Average
53,002		46.85% Pervious Area
60,137		53.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.3:

Runoff = 8.47 cfs @ 12.07 hrs, Volume= 0.592 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
14,981	69	50-75% Grass cover, Fair, HSG B
70,695	98	Paved parking & roofs
85,676	93	Weighted Average
14,981		17.49% Pervious Area
70,695		82.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.4:

Runoff = 2.04 cfs @ 12.22 hrs, Volume= 0.184 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
30,607	39	>75% Grass cover, Good, HSG A
32,358	98	Paved parking & roofs
62,965	69	Weighted Average
30,607		48.61% Pervious Area
32,358		51.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0950	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
1.5	298	0.0440	3.38		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
2.1	228	0.0080	1.82		Shallow Concentrated Flow, Paved Paved Kv= 20.3 fps
15.1	626	Total			

Summary for Subcatchment S62:

Runoff = 2.87 cfs @ 12.07 hrs, Volume= 0.217 af, Depth> 4.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
27,209	98	Paved parking & roofs
27,209		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 2R: Existing Stream

Inflow Area = 39.550 ac, 13.41% Impervious, Inflow Depth > 0.93" for 10-Year event
 Inflow = 22.37 cfs @ 12.55 hrs, Volume= 3.065 af
 Outflow = 22.29 cfs @ 12.57 hrs, Volume= 3.055 af, Atten= 0%, Lag= 1.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 5.81 fps, Min. Travel Time= 2.2 min
 Avg. Velocity= 3.07 fps, Avg. Travel Time= 4.1 min

Peak Storage= 2,878 cf @ 12.57 hrs
 Average Depth at Peak Storage= 0.70'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 208.76 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 ' / ' Top Width= 17.00'
 Length= 750.0' Slope= 0.0373 ' / '
 Inlet Invert= 79.00', Outlet Invert= 51.00'



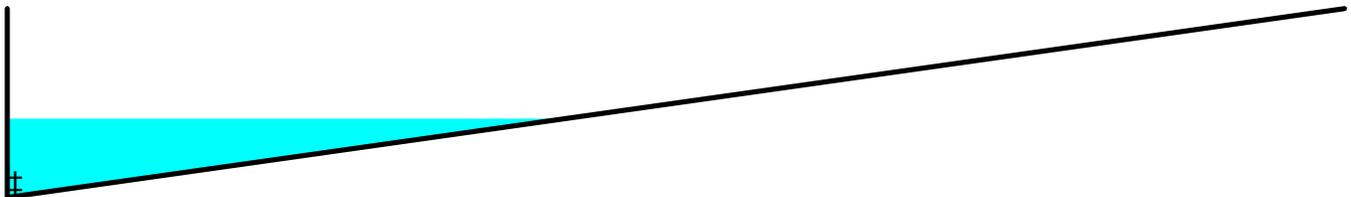
Summary for Reach 4R:

Inflow = 13.08 cfs @ 12.21 hrs, Volume= 0.302 af
 Outflow = 13.09 cfs @ 12.22 hrs, Volume= 0.302 af, Atten= 0%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 3.00 fps, Min. Travel Time= 0.6 min
 Avg. Velocity = 1.33 fps, Avg. Travel Time= 1.3 min

Peak Storage= 456 cf @ 12.22 hrs
 Average Depth at Peak Storage= 0.42'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 135.01 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 105.0' Slope= 0.0308 '/'
 Inlet Invert= 51.23', Outlet Invert= 48.00'



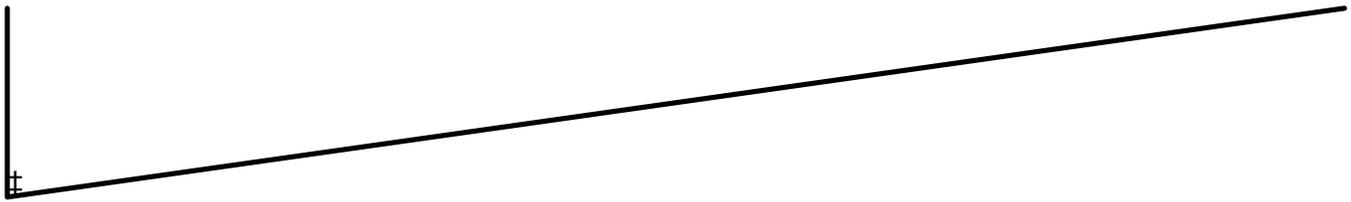
Summary for Reach 5R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



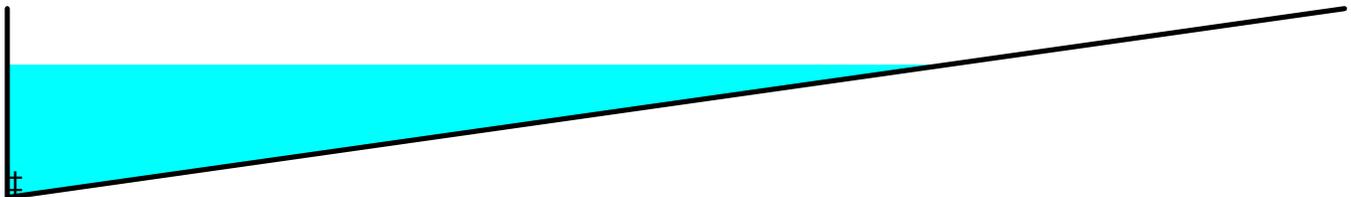
Summary for Reach 6R:

Inflow = 19.01 cfs @ 12.37 hrs, Volume= 2.438 af
 Outflow = 19.01 cfs @ 12.37 hrs, Volume= 2.438 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 6.14 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 3.59 fps, Avg. Travel Time= 0.2 min

Peak Storage= 155 cf @ 12.37 hrs
 Average Depth at Peak Storage= 0.35'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



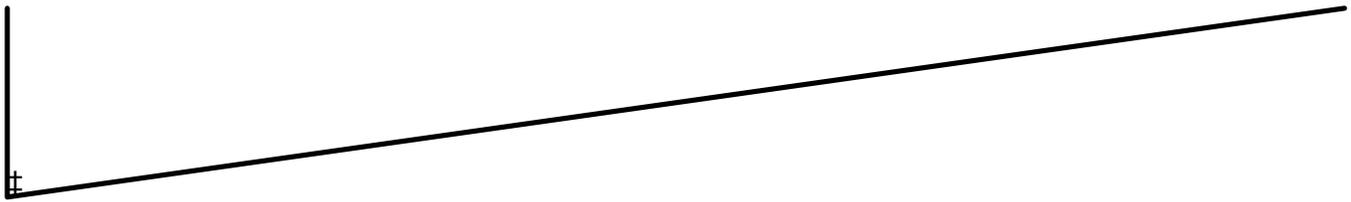
Summary for Reach 7R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 22.79 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 615.0' Slope= 0.0353 '/'
 Inlet Invert= 116.06', Outlet Invert= 94.33'



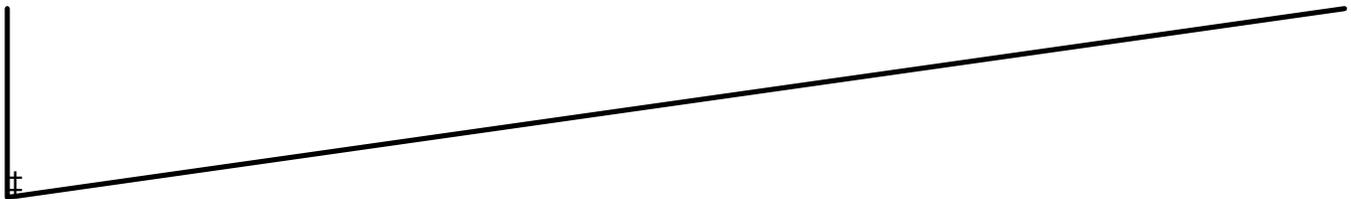
Summary for Reach 8R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 24.94 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 450.0' Slope= 0.0423 '/'
 Inlet Invert= 100.54', Outlet Invert= 81.50'



Summary for Reach L108: Existing Swale

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.92" for 10-Year event
 Inflow = 20.94 cfs @ 12.37 hrs, Volume= 2.481 af
 Outflow = 20.71 cfs @ 12.41 hrs, Volume= 2.464 af, Atten= 1%, Lag= 2.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 3.46 fps, Min. Travel Time= 3.7 min
 Avg. Velocity = 1.56 fps, Avg. Travel Time= 8.3 min

Peak Storage= 4,625 cf @ 12.41 hrs
 Average Depth at Peak Storage= 0.15'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



Summary for Reach POA3:

Inflow Area = 117.587 ac, 23.24% Impervious, Inflow Depth > 0.65" for 10-Year event
 Inflow = 28.06 cfs @ 12.36 hrs, Volume= 6.387 af
 Outflow = 28.06 cfs @ 12.36 hrs, Volume= 6.387 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Summary for Pond 1R: Existing 24"

Inflow Area = 1.967 ac, 82.51% Impervious, Inflow Depth > 3.61" for 10-Year event
 Inflow = 8.47 cfs @ 12.07 hrs, Volume= 0.592 af
 Outflow = 8.47 cfs @ 12.07 hrs, Volume= 0.592 af, Atten= 0%, Lag= 0.0 min
 Primary = 8.47 cfs @ 12.07 hrs, Volume= 0.592 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 46.21' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 166.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 41.90' S= 0.0120 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.30'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.77 cfs @ 12.07 hrs HW=45.85' TW=45.78' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 2.77 cfs @ 1.13 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 2P: Blue Hill Intersection

Inflow = 15.26 cfs @ 12.22 hrs, Volume= 0.363 af
 Outflow = 7.49 cfs @ 12.38 hrs, Volume= 0.237 af, Atten= 51%, Lag= 9.2 min
 Primary = 7.49 cfs @ 12.38 hrs, Volume= 0.237 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.19' @ 12.38 hrs Surf.Area= 33,235 sf Storage= 10,435 cf

Plug-Flow detention time= 29.9 min calculated for 0.236 af (65% of inflow)
 Center-of-Mass det. time= 26.6 min (761.8 - 735.2)

Volume	Invert	Avail.Storage	Storage Description
#1	46.50'	58,355 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.50	10	0	0
47.00	21,119	5,282	5,282
48.00	85,027	53,073	58,355

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 48.50 47.50 47.00 47.50 48.50

Primary OutFlow Max=7.39 cfs @ 12.38 hrs HW=47.19' TW=0.00' (Dynamic Tailwater)
 ↑1=Curb (Weir Controls 7.39 cfs @ 0.57 fps)

Summary for Pond 18R: Existing 18"

Inflow Area = 14.042 ac, 26.48% Impervious, Inflow Depth > 1.04" for 10-Year event
 Inflow = 11.43 cfs @ 12.21 hrs, Volume= 1.215 af
 Outflow = 11.43 cfs @ 12.21 hrs, Volume= 1.215 af, Atten= 0%, Lag= 0.0 min
 Primary = 11.43 cfs @ 12.21 hrs, Volume= 1.215 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 109.96' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	18.0" Round Culvert L= 428.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 107.40' / 94.80' S= 0.0294 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	116.06'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=11.36 cfs @ 12.21 hrs HW=109.93' TW=97.30' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 11.36 cfs @ 6.43 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=107.40' TW=116.06' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 24R: Existing 24"

Inflow Area = 17.526 ac, 36.41% Impervious, Inflow Depth > 1.51" for 10-Year event
 Inflow = 22.12 cfs @ 12.10 hrs, Volume= 2.202 af
 Outflow = 22.12 cfs @ 12.10 hrs, Volume= 2.202 af, Atten= 0%, Lag= 0.0 min
 Primary = 22.12 cfs @ 12.10 hrs, Volume= 2.202 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

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Peak Elev= 97.93' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.80'	24.0" Round Culvert L= 350.0' Ke= 0.500 Inlet / Outlet Invert= 94.80' / 79.90' S= 0.0426 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	100.54'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=21.75 cfs @ 12.10 hrs HW=97.87' TW=80.30' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 21.75 cfs @ 6.92 fps)**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=94.80' TW=100.54' (Dynamic Tailwater)↑**2=Orifice/Grate** (Controls 0.00 cfs)**Summary for Pond 48R: 48"**

Inflow Area = 39.611 ac, 35.65% Impervious, Inflow Depth > 1.60" for 10-Year event
 Inflow = 48.33 cfs @ 12.09 hrs, Volume= 5.287 af
 Outflow = 48.33 cfs @ 12.09 hrs, Volume= 5.287 af, Atten= 0%, Lag= 0.0 min
 Primary = 48.33 cfs @ 12.09 hrs, Volume= 5.287 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 80.33' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	77.70'	48.0" Round Culvert L= 1,000.0' Ke= 0.500 Inlet / Outlet Invert= 77.70' / 47.00' S= 0.0307 '/ Cc= 0.900 n= 0.014, Flow Area= 12.57 sf

Primary OutFlow Max=47.53 cfs @ 12.09 hrs HW=80.30' TW=48.59' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 47.53 cfs @ 5.49 fps)**Summary for Pond 52.1P: Upper Pond**

Inflow Area = 92.581 ac, 23.37% Impervious, Inflow Depth > 1.33" for 10-Year event
 Inflow = 65.14 cfs @ 12.10 hrs, Volume= 10.245 af
 Outflow = 41.49 cfs @ 12.69 hrs, Volume= 9.877 af, Atten= 36%, Lag= 35.4 min
 Primary = 16.03 cfs @ 12.58 hrs, Volume= 3.399 af
 Secondary = 25.71 cfs @ 12.73 hrs, Volume= 6.478 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 50.29' @ 12.73 hrs Surf.Area= 32,475 sf Storage= 90,811 cf

Plug-Flow detention time= 43.7 min calculated for 9.857 af (96% of inflow)

Center-of-Mass det. time= 31.0 min (849.1 - 818.2)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	486,437 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

3659-12003C-Proposed Conditions POA 3-01

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by {enter your company name here}

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	23,157	0	0
48.00	25,754	24,456	24,456
49.00	28,493	27,124	51,579
50.00	31,585	30,039	81,618
51.00	34,686	33,136	114,754
52.00	37,278	35,982	150,736
53.00	39,915	38,597	189,332
54.00	42,638	41,277	230,609
60.00	42,638	255,828	486,437

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	12.0" Vert. Orifice/Grate X 3.00 C= 0.600
#2	Primary	52.75'	40.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Secondary	49.50'	18.0" Vert. Orifice/Grate C= 0.600
#4	Secondary	47.00'	24.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=15.82 cfs @ 12.58 hrs HW=50.20' TW=48.25' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 15.82 cfs @ 6.71 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=25.70 cfs @ 12.73 hrs HW=50.29' (Free Discharge)

- 3=Orifice/Grate (Orifice Controls 2.83 cfs @ 3.02 fps)
- 4=Orifice/Grate (Orifice Controls 22.87 cfs @ 7.28 fps)

Summary for Pond 52.2P: Lower Pond

Inflow Area = 96.050 ac, 22.89% Impervious, Inflow Depth > 0.48" for 10-Year event
 Inflow = 19.37 cfs @ 12.49 hrs, Volume= 3.818 af
 Outflow = 8.80 cfs @ 13.57 hrs, Volume= 3.295 af, Atten= 55%, Lag= 64.7 min
 Primary = 8.80 cfs @ 13.57 hrs, Volume= 3.295 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 48.82' @ 13.57 hrs Surf.Area= 39,268 sf Storage= 67,477 cf

Plug-Flow detention time= 124.6 min calculated for 3.295 af (86% of inflow)
 Center-of-Mass det. time= 83.3 min (907.5 - 824.2)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	569,961 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	34,856	0	0
48.00	37,286	36,071	36,071
49.00	39,702	38,494	74,565
50.00	42,069	40,886	115,451
51.00	45,629	43,849	159,300
60.00	45,629	410,661	569,961

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	18.0" Vert. Orifice/Grate C= 0.600
#2	Primary	50.00'	6.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	51.00'	15.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=8.80 cfs @ 13.57 hrs HW=48.82' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 8.80 cfs @ 4.98 fps)
- 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: Wetland Area

Inflow Area = 37.230 ac, 14.12% Impervious, Inflow Depth > 0.99" for 10-Year event
 Inflow = 25.73 cfs @ 12.38 hrs, Volume= 3.071 af
 Outflow = 21.00 cfs @ 12.56 hrs, Volume= 2.808 af, Atten= 18%, Lag= 10.9 min
 Primary = 21.00 cfs @ 12.56 hrs, Volume= 2.808 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 79.91' @ 12.58 hrs Surf.Area= 16,874 sf Storage= 22,528 cf

Plug-Flow detention time= 46.4 min calculated for 2.803 af (91% of inflow)
 Center-of-Mass det. time= 19.9 min (864.1 - 844.2)

Volume	Invert	Avail.Storage	Storage Description
#1	77.00'	93,245 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
77.00	449	0	0
78.00	2,374	1,412	1,412
79.00	12,873	7,624	9,035
80.00	17,283	15,078	24,113
84.00	17,283	69,132	93,245

Device	Routing	Invert	Outlet Devices
#1	Primary	79.00'	14.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=20.78 cfs @ 12.56 hrs HW=79.91' TW=79.70' (Dynamic Tailwater)

- 1=Broad-Crested Rectangular Weir (Weir Controls 20.78 cfs @ 1.64 fps)

Summary for Pond L179: Existing 24"

Inflow Area = 20.912 ac, 22.55% Impervious, Inflow Depth > 1.51" for 10-Year event
 Inflow = 20.35 cfs @ 12.05 hrs, Volume= 2.639 af
 Outflow = 20.35 cfs @ 12.05 hrs, Volume= 2.639 af, Atten= 0%, Lag= 0.0 min
 Primary = 20.35 cfs @ 12.05 hrs, Volume= 2.639 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 45.87' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.89'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.05 cfs @ 12.05 hrs HW=45.46' TW=44.47' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 15.05 cfs @ 4.79 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 0.92" for 10-Year event
 Inflow = 20.94 cfs @ 12.37 hrs, Volume= 2.482 af
 Outflow = 20.94 cfs @ 12.37 hrs, Volume= 2.482 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.93 cfs @ 12.37 hrs, Volume= 0.043 af
 Secondary = 19.01 cfs @ 12.37 hrs, Volume= 2.438 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 141.33' @ 12.37 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.91 cfs @ 12.37 hrs HW=141.32' TW=132.15' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 1.91 cfs @ 2.58 fps)

Secondary OutFlow Max=18.98 cfs @ 12.37 hrs HW=141.32' TW=140.35' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 18.98 cfs @ 4.74 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 1.13" for 10-Year event
 Inflow = 13.87 cfs @ 12.40 hrs, Volume= 1.602 af
 Outflow = 13.87 cfs @ 12.40 hrs, Volume= 1.602 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.87 cfs @ 12.40 hrs, Volume= 1.602 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 147.93' @ 12.40 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.86 cfs @ 12.40 hrs HW=147.93' TW=141.32' (Dynamic Tailwater)
 ↑**1=Culvert** (Inlet Controls 13.86 cfs @ 11.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.80' TW=158.00' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond LINK 110.1: Existing 18"

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 1.53" for 10-Year event
 Inflow = 25.34 cfs @ 12.21 hrs, Volume= 2.227 af
 Outflow = 25.34 cfs @ 12.21 hrs, Volume= 2.227 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.28 cfs @ 12.20 hrs, Volume= 1.925 af
 Secondary = 13.08 cfs @ 12.21 hrs, Volume= 0.302 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 52.09' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=12.14 cfs @ 12.20 hrs HW=52.06' TW=46.92' (Dynamic Tailwater)
 ↑**1=Culvert** (Outlet Controls 12.14 cfs @ 6.87 fps)

Secondary OutFlow Max=12.63 cfs @ 12.21 hrs HW=52.07' TW=51.64' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Orifice Controls 12.63 cfs @ 3.16 fps)

Summary for Pond P3: Existing Outlet

Inflow Area = 21.537 ac, 24.80% Impervious, Inflow Depth > 1.59" for 10-Year event
 Inflow = 23.06 cfs @ 12.05 hrs, Volume= 2.855 af
 Outflow = 23.06 cfs @ 12.05 hrs, Volume= 2.855 af, Atten= 0%, Lag= 0.0 min
 Primary = 23.06 cfs @ 12.05 hrs, Volume= 2.855 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.55' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=22.48 cfs @ 12.05 hrs HW=44.45' TW=0.00' (Dynamic Tailwater)
 ↑**1=Culvert** (Barrel Controls 22.48 cfs @ 7.16 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=46.50' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P3B: Existing 18"

Inflow Area = 18.945 ac, 16.32% Impervious, Inflow Depth > 1.34" for 10-Year event
 Inflow = 14.31 cfs @ 12.21 hrs, Volume= 2.109 af
 Outflow = 14.31 cfs @ 12.21 hrs, Volume= 2.109 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.47 cfs @ 12.33 hrs, Volume= 2.047 af
 Secondary = 5.88 cfs @ 12.11 hrs, Volume= 0.062 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.16' @ 12.33 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.16 cfs @ 12.33 hrs HW=47.15' TW=44.71' (Dynamic Tailwater)
 ↑**1=Culvert** (Outlet Controls 13.16 cfs @ 7.45 fps)

Secondary OutFlow Max=0.00 cfs @ 12.11 hrs HW=46.71' TW=46.77' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P3C: Existing 18"

Inflow Area = 0.625 ac, 100.00% Impervious, Inflow Depth > 4.16" for 10-Year event
 Inflow = 2.87 cfs @ 12.07 hrs, Volume= 0.217 af
 Outflow = 2.87 cfs @ 12.07 hrs, Volume= 0.217 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.87 cfs @ 12.07 hrs, Volume= 0.217 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.79' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	46.77'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.62 cfs @ 12.07 hrs HW=44.70' TW=44.20' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 3.62 cfs @ 2.93 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.38' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.04 hrs, 501 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

- Subcatchment S1:** Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>0.57"
Tc=30.2 min CN=46 Runoff=2.49 cfs 0.427 af
- Subcatchment S2:** Runoff Area=218,770 sf 67.66% Impervious Runoff Depth>3.11"
Tc=14.8 min CN=80 Runoff=14.88 cfs 1.302 af
- Subcatchment S3:** Runoff Area=3.484 ac 76.46% Impervious Runoff Depth>4.23"
Tc=5.0 min CN=91 Runoff=17.73 cfs 1.229 af
- Subcatchment S4:** Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>1.30"
Tc=25.6 min CN=58 Runoff=12.91 cfs 1.510 af
- Subcatchment S5:** Runoff Area=210,379 sf 80.46% Impervious Runoff Depth>3.92"
Tc=5.0 min CN=88 Runoff=23.30 cfs 1.576 af
- Subcatchment S5.1:** Runoff Area=3.325 ac 70.53% Impervious Runoff Depth>3.90"
Tc=16.7 min CN=88 Runoff=11.41 cfs 1.082 af
- Subcatchment S5.1A:** Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>1.11"
Tc=16.7 min CN=55 Runoff=13.49 cfs 1.404 af
- Subcatchment S5.1B:** Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>1.66"
Tc=25.4 min CN=63 Runoff=21.07 cfs 2.351 af
- Subcatchment S5.1C:** Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>2.14"
Tc=14.3 min CN=69 Runoff=36.05 cfs 3.121 af
- Subcatchment S52.1:** Runoff Area=471,416 sf 7.66% Impervious Runoff Depth>2.05"
Flow Length=1,830' Tc=19.7 min CN=68 Runoff=18.85 cfs 1.853 af
- Subcatchment S52.2:** Runoff Area=151,112 sf 9.97% Impervious Runoff Depth>2.05"
Flow Length=752' Tc=27.6 min CN=68 Runoff=5.24 cfs 0.592 af
- Subcatchment S53:** Runoff Area=217,375 sf 7.95% Impervious Runoff Depth>2.06"
Tc=15.8 min CN=68 Runoff=9.47 cfs 0.856 af
- Subcatchment S54:** Runoff Area=101,058 sf 2.07% Impervious Runoff Depth>1.90"
Tc=14.0 min CN=66 Runoff=4.23 cfs 0.367 af
- Subcatchment S56.1:** Runoff Area=113,139 sf 53.15% Impervious Runoff Depth>3.51"
Tc=5.0 min CN=84 Runoff=11.49 cfs 0.759 af
- Subcatchment S56.3:** Runoff Area=85,676 sf 82.51% Impervious Runoff Depth>4.45"
Tc=5.0 min CN=93 Runoff=10.31 cfs 0.730 af
- Subcatchment S56.4:** Runoff Area=62,965 sf 51.39% Impervious Runoff Depth>2.14"
Flow Length=626' Tc=15.1 min CN=69 Runoff=2.92 cfs 0.258 af

Subcatchment S62:	Runoff Area=27,209 sf	100.00% Impervious	Runoff Depth>5.02"
	Tc=5.0 min	CN=98	Runoff=3.43 cfs 0.261 af
Reach 2R: Existing Stream	Avg. Flow Depth=0.91'	Max Vel=6.70 fps	Inflow=38.11 cfs 4.684 af
	n=0.030 L=750.0'	S=0.0373 '/	Capacity=208.76 cfs Outflow=37.99 cfs 4.672 af
Reach 4R:	Avg. Flow Depth=0.51'	Max Vel=3.46 fps	Inflow=22.90 cfs 0.646 af
	n=0.030 L=105.0'	S=0.0308 '/	Capacity=135.01 cfs Outflow=22.90 cfs 0.646 af
Reach 5R:	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs 0.000 af
	n=0.030 L=900.0'	S=0.0289 '/	Capacity=20.61 cfs Outflow=0.00 cfs 0.000 af
Reach 6R:	Avg. Flow Depth=0.39'	Max Vel=6.57 fps	Inflow=24.94 cfs 3.492 af
	n=0.030 L=50.0'	S=0.1600 '/	Capacity=48.49 cfs Outflow=24.94 cfs 3.492 af
Reach 7R:	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs 0.000 af
	n=0.030 L=615.0'	S=0.0353 '/	Capacity=22.79 cfs Outflow=0.00 cfs 0.000 af
Reach 8R:	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs 0.000 af
	n=0.030 L=450.0'	S=0.0423 '/	Capacity=24.94 cfs Outflow=0.00 cfs 0.000 af
Reach L108: Existing Swale	Avg. Flow Depth=0.19'	Max Vel=4.16 fps	Inflow=33.50 cfs 3.755 af
	n=0.030 L=774.0'	S=0.0646 '/	Capacity=1,762.00 cfs Outflow=33.21 cfs 3.734 af
Reach POA3:			Inflow=43.84 cfs 8.599 af
			Outflow=43.84 cfs 8.599 af
Pond 1R: Existing 24"		Peak Elev=46.42'	Inflow=10.31 cfs 0.730 af
	Primary=10.31 cfs 0.730 af	Secondary=0.00 cfs 0.000 af	Outflow=10.31 cfs 0.730 af
Pond 2P: Blue Hill Intersection		Peak Elev=47.29'	Storage=14,007 cf Inflow=27.13 cfs 0.773 af
			Outflow=21.26 cfs 0.646 af
Pond 18R: Existing 18"		Peak Elev=111.41'	Inflow=15.36 cfs 1.729 af
	Primary=15.36 cfs 1.729 af	Secondary=0.00 cfs 0.000 af	Outflow=15.36 cfs 1.729 af
Pond 24R: Existing 24"		Peak Elev=99.23'	Inflow=28.03 cfs 2.958 af
	Primary=28.03 cfs 2.958 af	Secondary=0.00 cfs 0.000 af	Outflow=28.03 cfs 2.958 af
Pond 48R: 48"		Peak Elev=80.80'	Inflow=62.65 cfs 7.126 af
	48.0" Round Culvert n=0.014 L=1,000.0'	S=0.0307 '/	Outflow=62.65 cfs 7.126 af
Pond 52.1P: Upper Pond		Peak Elev=51.74'	Storage=141,035 cf Inflow=101.31 cfs 14.410 af
	Primary=19.98 cfs 4.367 af	Secondary=39.62 cfs 9.616 af	Outflow=59.40 cfs 13.983 af
Pond 52.2P: Lower Pond		Peak Elev=49.34'	Storage=88,332 cf Inflow=24.61 cfs 4.959 af
			Outflow=10.74 cfs 4.356 af
Pond 53P: Wetland Area		Peak Elev=80.25'	Storage=28,405 cf Inflow=40.80 cfs 4.590 af
			Outflow=35.76 cfs 4.317 af
Pond L179: Existing 24"		Peak Elev=45.96'	Inflow=19.21 cfs 3.336 af
	Primary=19.21 cfs 3.336 af	Secondary=0.00 cfs 0.000 af	Outflow=19.21 cfs 3.336 af

Pond Link 105: Peak Elev=142.07' Inflow=33.50 cfs 3.755 af
Primary=8.56 cfs 0.263 af Secondary=24.94 cfs 3.492 af Outflow=33.50 cfs 3.755 af

Pond Link 106: Peak Elev=155.14' Inflow=21.07 cfs 2.351 af
Primary=21.07 cfs 2.351 af Secondary=0.00 cfs 0.000 af Outflow=21.07 cfs 2.351 af

Pond LINK 110.1: Existing 18" Peak Elev=53.14' Inflow=36.05 cfs 3.121 af
Primary=13.16 cfs 2.475 af Secondary=22.90 cfs 0.646 af Outflow=36.05 cfs 3.121 af

Pond P3: Existing Outlet Peak Elev=44.47' Inflow=22.62 cfs 3.598 af
Primary=22.62 cfs 3.598 af Secondary=0.00 cfs 0.000 af Outflow=22.62 cfs 3.598 af

Pond P3B: Existing 18" Peak Elev=47.30' Inflow=16.06 cfs 2.732 af
Primary=13.44 cfs 2.606 af Secondary=6.47 cfs 0.126 af Outflow=16.06 cfs 2.732 af

Pond P3C: Existing 18" Peak Elev=44.78' Inflow=3.43 cfs 0.261 af
Primary=3.43 cfs 0.261 af Secondary=0.00 cfs 0.000 af Outflow=3.43 cfs 0.261 af

Total Runoff Area = 117.587 ac Runoff Volume = 19.678 af Average Runoff Depth = 2.01"
76.76% Pervious = 90.264 ac 23.24% Impervious = 27.323 ac

Summary for Subcatchment S1:

Runoff = 2.49 cfs @ 12.59 hrs, Volume= 0.427 af, Depth> 0.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S2:

Runoff = 14.88 cfs @ 12.20 hrs, Volume= 1.302 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 70,760	43	
* 148,010	98	
218,770	80	Weighted Average
70,760		32.34% Pervious Area
148,010		67.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 17.73 cfs @ 12.07 hrs, Volume= 1.229 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.820	69	
* 2.664	98	
3.484	91	Weighted Average
0.820		23.54% Pervious Area
2.664		76.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 12.91 cfs @ 12.40 hrs, Volume= 1.510 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S5:

Runoff = 23.30 cfs @ 12.07 hrs, Volume= 1.576 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
* 41,115	49	
* 169,264	98	
210,379	88	Weighted Average
41,115		19.54% Pervious Area
169,264		80.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 11.41 cfs @ 12.22 hrs, Volume= 1.082 af, Depth> 3.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.345	98	
3.325	88	Weighted Average
0.980		29.47% Pervious Area
2.345		70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1A:

Runoff = 13.49 cfs @ 12.27 hrs, Volume= 1.404 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 21.07 cfs @ 12.38 hrs, Volume= 2.351 af, Depth> 1.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 36.05 cfs @ 12.21 hrs, Volume= 3.121 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52.1:

Runoff = 18.85 cfs @ 12.29 hrs, Volume= 1.853 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
435,325	65	Woods/grass comb., Fair, HSG B
* 36,091	98	Paved Areas & Roofs, HSG A
471,416	68	Weighted Average
435,325		92.34% Pervious Area
36,091		7.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.0800	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
7.4	1,730	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
19.7	1,830	Total			

Summary for Subcatchment S52.2:

Runoff = 5.24 cfs @ 12.40 hrs, Volume= 0.592 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
136,043	65	Woods/grass comb., Fair, HSG B
* 15,069	98	Paved Areas & Roofs, HSG A
151,112	68	Weighted Average
136,043		90.03% Pervious Area
15,069		9.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0140	0.07		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
2.8	652	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
27.6	752	Total			

Summary for Subcatchment S53:

Runoff = 9.47 cfs @ 12.23 hrs, Volume= 0.856 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
200,092	65	Woods/grass comb., Fair, HSG B
17,283	98	Water Surface, HSG A
217,375	68	Weighted Average
200,092		92.05% Pervious Area
17,283		7.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 4.23 cfs @ 12.20 hrs, Volume= 0.367 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
98,969	65	Woods/grass comb., Fair, HSG B
2,089	98	Water Surface, HSG A
101,058	66	Weighted Average
98,969		97.93% Pervious Area
2,089		2.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S56.1:

Runoff = 11.49 cfs @ 12.08 hrs, Volume= 0.759 af, Depth> 3.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
53,002	69	50-75% Grass cover, Fair, HSG B
60,137	98	Paved parking & roofs
113,139	84	Weighted Average
53,002		46.85% Pervious Area
60,137		53.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.3:

Runoff = 10.31 cfs @ 12.07 hrs, Volume= 0.730 af, Depth> 4.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
14,981	69	50-75% Grass cover, Fair, HSG B
70,695	98	Paved parking & roofs
85,676	93	Weighted Average
14,981		17.49% Pervious Area
70,695		82.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.4:

Runoff = 2.92 cfs @ 12.22 hrs, Volume= 0.258 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

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Type III 24-hr 25-Year Rainfall=5.50"

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Area (sf)	CN	Description
30,607	39	>75% Grass cover, Good, HSG A
32,358	98	Paved parking & roofs
62,965	69	Weighted Average
30,607		48.61% Pervious Area
32,358		51.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0950	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
1.5	298	0.0440	3.38		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
2.1	228	0.0080	1.82		Shallow Concentrated Flow, Paved Paved Kv= 20.3 fps
15.1	626	Total			

Summary for Subcatchment S62:

Runoff = 3.43 cfs @ 12.07 hrs, Volume= 0.261 af, Depth> 5.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
27,209	98	Paved parking & roofs
27,209		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 2R: Existing Stream

Inflow Area = 39.550 ac, 13.41% Impervious, Inflow Depth > 1.42" for 25-Year event
 Inflow = 38.11 cfs @ 12.47 hrs, Volume= 4.684 af
 Outflow = 37.99 cfs @ 12.50 hrs, Volume= 4.672 af, Atten= 0%, Lag= 1.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 6.70 fps, Min. Travel Time= 1.9 min
 Avg. Velocity= 3.27 fps, Avg. Travel Time= 3.8 min

Peak Storage= 4,248 cf @ 12.50 hrs
 Average Depth at Peak Storage= 0.91'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 208.76 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 ' / ' Top Width= 17.00'
 Length= 750.0' Slope= 0.0373 ' / '
 Inlet Invert= 79.00', Outlet Invert= 51.00'



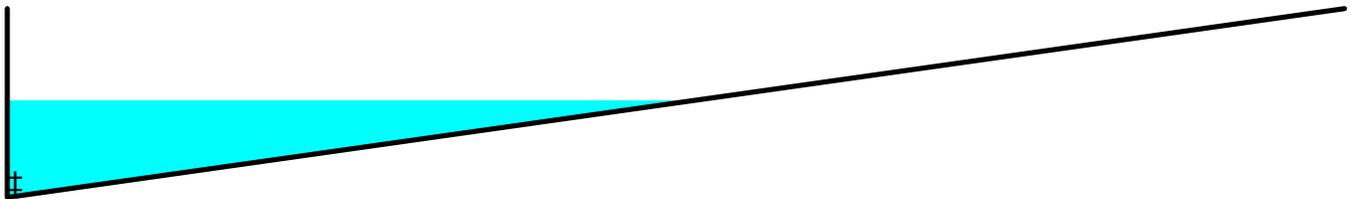
Summary for Reach 4R:

Inflow = 22.90 cfs @ 12.21 hrs, Volume= 0.646 af
 Outflow = 22.90 cfs @ 12.21 hrs, Volume= 0.646 af, Atten= 0%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 3.46 fps, Min. Travel Time= 0.5 min
 Avg. Velocity = 1.61 fps, Avg. Travel Time= 1.1 min

Peak Storage= 694 cf @ 12.21 hrs
 Average Depth at Peak Storage= 0.51'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 135.01 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 105.0' Slope= 0.0308 '/'
 Inlet Invert= 51.23', Outlet Invert= 48.00'



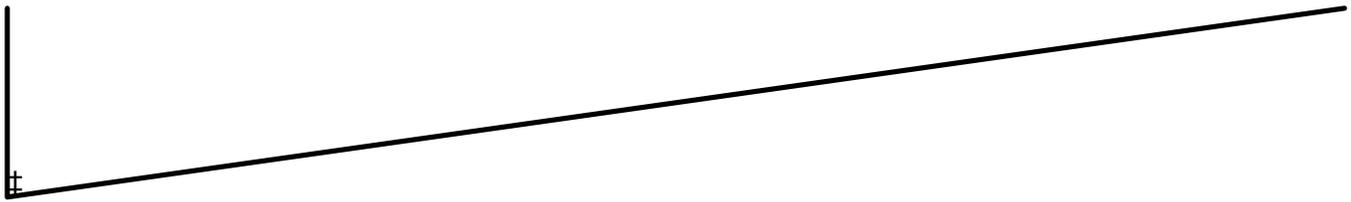
Summary for Reach 5R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



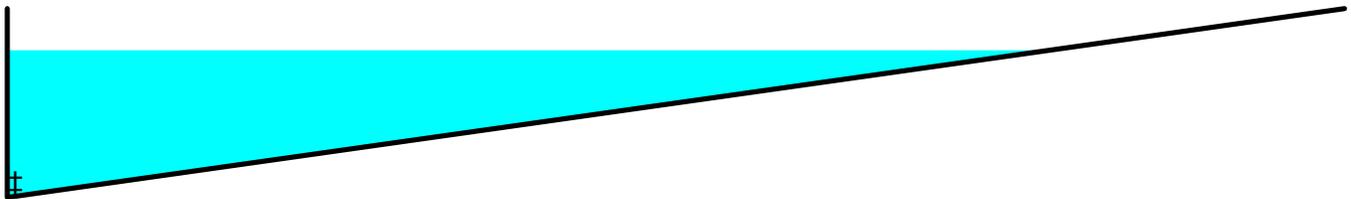
Summary for Reach 6R:

Inflow = 24.94 cfs @ 12.34 hrs, Volume= 3.492 af
 Outflow = 24.94 cfs @ 12.34 hrs, Volume= 3.492 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 6.57 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 3.83 fps, Avg. Travel Time= 0.2 min

Peak Storage= 190 cf @ 12.34 hrs
 Average Depth at Peak Storage= 0.39'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



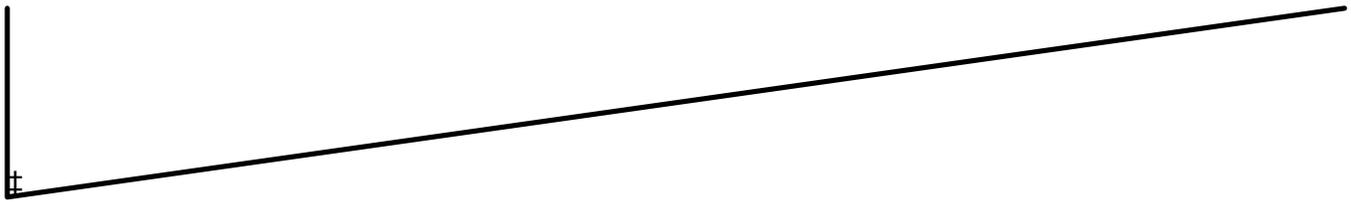
Summary for Reach 7R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 22.79 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 615.0' Slope= 0.0353 '/'
 Inlet Invert= 116.06', Outlet Invert= 94.33'



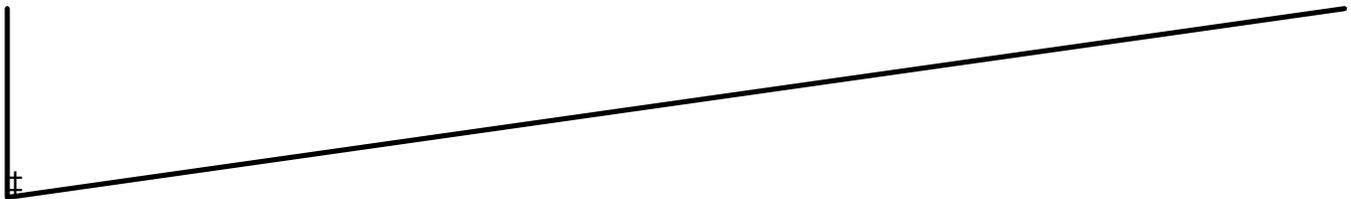
Summary for Reach 8R:

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
 Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 24.94 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 450.0' Slope= 0.0423 '/'
 Inlet Invert= 100.54', Outlet Invert= 81.50'



Summary for Reach L108: Existing Swale

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 1.40" for 25-Year event
 Inflow = 33.50 cfs @ 12.34 hrs, Volume= 3.755 af
 Outflow = 33.21 cfs @ 12.38 hrs, Volume= 3.734 af, Atten= 1%, Lag= 2.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 4.16 fps, Min. Travel Time= 3.1 min
 Avg. Velocity = 1.74 fps, Avg. Travel Time= 7.4 min

Peak Storage= 6,172 cf @ 12.38 hrs
 Average Depth at Peak Storage= 0.19'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



Summary for Reach POA3:

Inflow Area = 117.587 ac, 23.24% Impervious, Inflow Depth > 0.88" for 25-Year event
 Inflow = 43.84 cfs @ 12.31 hrs, Volume= 8.599 af
 Outflow = 43.84 cfs @ 12.31 hrs, Volume= 8.599 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Summary for Pond 1R: Existing 24"

Inflow Area = 1.967 ac, 82.51% Impervious, Inflow Depth > 4.45" for 25-Year event
 Inflow = 10.31 cfs @ 12.07 hrs, Volume= 0.730 af
 Outflow = 10.31 cfs @ 12.07 hrs, Volume= 0.730 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.31 cfs @ 12.07 hrs, Volume= 0.730 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 46.42' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 166.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 41.90' S= 0.0120 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.30'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.81 cfs @ 12.07 hrs HW=46.28' TW=45.92' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 7.81 cfs @ 2.63 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 2P: Blue Hill Intersection

Inflow = 27.13 cfs @ 12.19 hrs, Volume= 0.773 af
 Outflow = 21.26 cfs @ 12.30 hrs, Volume= 0.646 af, Atten= 22%, Lag= 6.5 min
 Primary = 21.26 cfs @ 12.30 hrs, Volume= 0.646 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.29' @ 12.30 hrs Surf.Area= 39,512 sf Storage= 14,007 cf

Plug-Flow detention time= 17.4 min calculated for 0.646 af (84% of inflow)
 Center-of-Mass det. time= 14.7 min (750.4 - 735.7)

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Type III 24-hr 25-Year Rainfall=5.50"

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Volume	Invert	Avail.Storage	Storage Description
#1	46.50'	58,355 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.50	10	0	0
47.00	21,119	5,282	5,282
48.00	85,027	53,073	58,355

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 48.50 47.50 47.00 47.50 48.50

Primary OutFlow Max=21.05 cfs @ 12.30 hrs HW=47.29' TW=0.00' (Dynamic Tailwater)
 ↑1=Curb (Weir Controls 21.05 cfs @ 0.70 fps)

Summary for Pond 18R: Existing 18"

Inflow Area = 14.042 ac, 26.48% Impervious, Inflow Depth > 1.48" for 25-Year event
 Inflow = 15.36 cfs @ 12.21 hrs, Volume= 1.729 af
 Outflow = 15.36 cfs @ 12.21 hrs, Volume= 1.729 af, Atten= 0%, Lag= 0.0 min
 Primary = 15.36 cfs @ 12.21 hrs, Volume= 1.729 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 111.41' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	18.0" Round Culvert L= 428.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 107.40' / 94.80' S= 0.0294 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	116.06'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.24 cfs @ 12.21 hrs HW=111.36' TW=98.29' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 15.24 cfs @ 8.63 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=107.40' TW=116.06' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 24R: Existing 24"

Inflow Area = 17.526 ac, 36.41% Impervious, Inflow Depth > 2.03" for 25-Year event
 Inflow = 28.03 cfs @ 12.10 hrs, Volume= 2.958 af
 Outflow = 28.03 cfs @ 12.10 hrs, Volume= 2.958 af, Atten= 0%, Lag= 0.0 min
 Primary = 28.03 cfs @ 12.10 hrs, Volume= 2.958 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

3659-12003C-Proposed Conditions POA 3-01

Type III 24-hr 25-Year Rainfall=5.50"

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Peak Elev= 99.23' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.80'	24.0" Round Culvert L= 350.0' Ke= 0.500 Inlet / Outlet Invert= 94.80' / 79.90' S= 0.0426 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	100.54'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=27.57 cfs @ 12.10 hrs HW=99.12' TW=80.77' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 27.57 cfs @ 8.78 fps)**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=94.80' TW=100.54' (Dynamic Tailwater)↑**2=Orifice/Grate** (Controls 0.00 cfs)**Summary for Pond 48R: 48"**

Inflow Area = 39.611 ac, 35.65% Impervious, Inflow Depth > 2.16" for 25-Year event
 Inflow = 62.65 cfs @ 12.10 hrs, Volume= 7.126 af
 Outflow = 62.65 cfs @ 12.10 hrs, Volume= 7.126 af, Atten= 0%, Lag= 0.0 min
 Primary = 62.65 cfs @ 12.10 hrs, Volume= 7.126 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 80.80' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	77.70'	48.0" Round Culvert L= 1,000.0' Ke= 0.500 Inlet / Outlet Invert= 77.70' / 47.00' S= 0.0307 '/ Cc= 0.900 n= 0.014, Flow Area= 12.57 sf

Primary OutFlow Max=61.62 cfs @ 12.10 hrs HW=80.77' TW=49.08' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 61.62 cfs @ 5.96 fps)**Summary for Pond 52.1P: Upper Pond**

Inflow Area = 92.581 ac, 23.37% Impervious, Inflow Depth > 1.87" for 25-Year event
 Inflow = 101.31 cfs @ 12.34 hrs, Volume= 14.410 af
 Outflow = 59.40 cfs @ 12.70 hrs, Volume= 13.983 af, Atten= 41%, Lag= 21.5 min
 Primary = 19.98 cfs @ 12.61 hrs, Volume= 4.367 af
 Secondary = 39.62 cfs @ 12.73 hrs, Volume= 9.616 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 51.74' @ 12.73 hrs Surf.Area= 36,597 sf Storage= 141,035 cf

Plug-Flow detention time= 43.4 min calculated for 13.955 af (97% of inflow)

Center-of-Mass det. time= 32.7 min (845.5 - 812.9)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	486,437 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

3659-12003C-Proposed Conditions POA 3-01

Type III 24-hr 25-Year Rainfall=5.50"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	23,157	0	0
48.00	25,754	24,456	24,456
49.00	28,493	27,124	51,579
50.00	31,585	30,039	81,618
51.00	34,686	33,136	114,754
52.00	37,278	35,982	150,736
53.00	39,915	38,597	189,332
54.00	42,638	41,277	230,609
60.00	42,638	255,828	486,437

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	12.0" Vert. Orifice/Grate X 3.00 C= 0.600
#2	Primary	52.75'	40.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Secondary	49.50'	18.0" Vert. Orifice/Grate C= 0.600
#4	Secondary	47.00'	24.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=19.78 cfs @ 12.61 hrs HW=51.64' TW=48.61' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 19.78 cfs @ 8.39 fps)
- 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=39.61 cfs @ 12.73 hrs HW=51.74' (Free Discharge)

- 3=Orifice/Grate (Orifice Controls 10.37 cfs @ 5.87 fps)
- 4=Orifice/Grate (Orifice Controls 29.24 cfs @ 9.31 fps)

Summary for Pond 52.2P: Lower Pond

Inflow Area = 96.050 ac, 22.89% Impervious, Inflow Depth > 0.62" for 25-Year event
 Inflow = 24.61 cfs @ 12.49 hrs, Volume= 4.959 af
 Outflow = 10.74 cfs @ 13.69 hrs, Volume= 4.356 af, Atten= 56%, Lag= 71.7 min
 Primary = 10.74 cfs @ 13.69 hrs, Volume= 4.356 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 49.34' @ 13.69 hrs Surf.Area= 40,514 sf Storage= 88,332 cf

Plug-Flow detention time= 126.1 min calculated for 4.356 af (88% of inflow)
 Center-of-Mass det. time= 87.8 min (907.3 - 819.4)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	569,961 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	34,856	0	0
48.00	37,286	36,071	36,071
49.00	39,702	38,494	74,565
50.00	42,069	40,886	115,451
51.00	45,629	43,849	159,300
60.00	45,629	410,661	569,961

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	18.0" Vert. Orifice/Grate C= 0.600
#2	Primary	50.00'	6.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	51.00'	15.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=10.74 cfs @ 13.69 hrs HW=49.34' TW=0.00' (Dynamic Tailwater)

- ↑1=Orifice/Grate (Orifice Controls 10.74 cfs @ 6.08 fps)
- 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: Wetland Area

Inflow Area = 37.230 ac, 14.12% Impervious, Inflow Depth > 1.48" for 25-Year event
 Inflow = 40.80 cfs @ 12.34 hrs, Volume= 4.590 af
 Outflow = 35.76 cfs @ 12.49 hrs, Volume= 4.317 af, Atten= 12%, Lag= 8.5 min
 Primary = 35.76 cfs @ 12.49 hrs, Volume= 4.317 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 80.25' @ 12.50 hrs Surf.Area= 17,283 sf Storage= 28,405 cf

Plug-Flow detention time= 35.2 min calculated for 4.317 af (94% of inflow)
 Center-of-Mass det. time= 15.5 min (850.4 - 834.8)

Volume	Invert	Avail.Storage	Storage Description
#1	77.00'	93,245 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
77.00	449	0	0
78.00	2,374	1,412	1,412
79.00	12,873	7,624	9,035
80.00	17,283	15,078	24,113
84.00	17,283	69,132	93,245

Device	Routing	Invert	Outlet Devices
#1	Primary	79.00'	14.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=35.41 cfs @ 12.49 hrs HW=80.25' TW=79.91' (Dynamic Tailwater)

- ↑1=Broad-Crested Rectangular Weir (Weir Controls 35.41 cfs @ 2.03 fps)

Summary for Pond L179: Existing 24"

Inflow Area = 20.912 ac, 22.55% Impervious, Inflow Depth > 1.91" for 25-Year event
 Inflow = 19.21 cfs @ 12.06 hrs, Volume= 3.336 af
 Outflow = 19.21 cfs @ 12.06 hrs, Volume= 3.336 af, Atten= 0%, Lag= 0.0 min
 Primary = 19.21 cfs @ 12.06 hrs, Volume= 3.336 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 45.96' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.89'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=18.16 cfs @ 12.06 hrs HW=45.86' TW=44.42' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 18.16 cfs @ 5.78 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 1.40" for 25-Year event
 Inflow = 33.50 cfs @ 12.34 hrs, Volume= 3.755 af
 Outflow = 33.50 cfs @ 12.34 hrs, Volume= 3.755 af, Atten= 0%, Lag= 0.0 min
 Primary = 8.56 cfs @ 12.34 hrs, Volume= 0.263 af
 Secondary = 24.94 cfs @ 12.34 hrs, Volume= 3.492 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 142.07' @ 12.34 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.49 cfs @ 12.34 hrs HW=142.06' TW=132.19' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 8.49 cfs @ 3.90 fps)

Secondary OutFlow Max=24.89 cfs @ 12.34 hrs HW=142.06' TW=140.39' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 24.89 cfs @ 6.22 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 1.66" for 25-Year event
 Inflow = 21.07 cfs @ 12.38 hrs, Volume= 2.351 af
 Outflow = 21.07 cfs @ 12.38 hrs, Volume= 2.351 af, Atten= 0%, Lag= 0.0 min
 Primary = 21.07 cfs @ 12.38 hrs, Volume= 2.351 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 155.14' @ 12.38 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=21.01 cfs @ 12.38 hrs HW=155.07' TW=142.04' (Dynamic Tailwater)
 ↑**1=Culvert** (Inlet Controls 21.01 cfs @ 17.12 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=141.80' TW=158.00' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond LINK 110.1: Existing 18"

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 2.14" for 25-Year event
 Inflow = 36.05 cfs @ 12.21 hrs, Volume= 3.121 af
 Outflow = 36.05 cfs @ 12.21 hrs, Volume= 3.121 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.16 cfs @ 12.20 hrs, Volume= 2.475 af
 Secondary = 22.90 cfs @ 12.21 hrs, Volume= 0.646 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 53.14' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.05 cfs @ 12.20 hrs HW=53.11' TW=47.18' (Dynamic Tailwater)
 ↑**1=Culvert** (Outlet Controls 13.05 cfs @ 7.38 fps)

Secondary OutFlow Max=22.59 cfs @ 12.21 hrs HW=53.12' TW=51.74' (Dynamic Tailwater)
 ↑**2=Orifice/Grate** (Orifice Controls 22.59 cfs @ 5.65 fps)

Summary for Pond P3: Existing Outlet

Inflow Area = 21.537 ac, 24.80% Impervious, Inflow Depth > 2.00" for 25-Year event
 Inflow = 22.62 cfs @ 12.07 hrs, Volume= 3.598 af
 Outflow = 22.62 cfs @ 12.07 hrs, Volume= 3.598 af, Atten= 0%, Lag= 0.0 min
 Primary = 22.62 cfs @ 12.07 hrs, Volume= 3.598 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.47' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=22.30 cfs @ 12.07 hrs HW=44.42' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Barrel Controls 22.30 cfs @ 7.10 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3B: Existing 18"

Inflow Area = 18.945 ac, 16.32% Impervious, Inflow Depth > 1.73" for 25-Year event
 Inflow = 16.06 cfs @ 12.20 hrs, Volume= 2.732 af
 Outflow = 16.06 cfs @ 12.20 hrs, Volume= 2.732 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.44 cfs @ 12.43 hrs, Volume= 2.606 af
 Secondary = 6.47 cfs @ 12.13 hrs, Volume= 0.126 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.30' @ 12.32 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.52 cfs @ 12.43 hrs HW=47.27' TW=44.69' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 13.52 cfs @ 7.65 fps)

Secondary OutFlow Max=0.00 cfs @ 12.13 hrs HW=46.99' TW=47.03' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3C: Existing 18"

Inflow Area = 0.625 ac, 100.00% Impervious, Inflow Depth > 5.02" for 25-Year event
 Inflow = 3.43 cfs @ 12.07 hrs, Volume= 0.261 af
 Outflow = 3.43 cfs @ 12.07 hrs, Volume= 0.261 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.43 cfs @ 12.07 hrs, Volume= 0.261 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.78' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	46.77'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.95 cfs @ 12.07 hrs HW=44.74' TW=44.43' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 2.95 cfs @ 2.31 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.38' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Time span=0.00-20.00 hrs, dt=0.04 hrs, 501 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

- Subcatchment S1:** Runoff Area=9.020 ac 3.55% Impervious Runoff Depth>1.01"
Tc=30.2 min CN=46 Runoff=5.28 cfs 0.756 af
- Subcatchment S2:** Runoff Area=218,770 sf 67.66% Impervious Runoff Depth>4.09"
Tc=14.8 min CN=80 Runoff=19.43 cfs 1.714 af
- Subcatchment S3:** Runoff Area=3.484 ac 76.46% Impervious Runoff Depth>5.31"
Tc=5.0 min CN=91 Runoff=21.92 cfs 1.541 af
- Subcatchment S4:** Runoff Area=13.930 ac 10.84% Impervious Runoff Depth>1.97"
Tc=25.6 min CN=58 Runoff=20.32 cfs 2.282 af
- Subcatchment S5:** Runoff Area=210,379 sf 80.46% Impervious Runoff Depth>4.97"
Tc=5.0 min CN=88 Runoff=29.16 cfs 2.001 af
- Subcatchment S5.1:** Runoff Area=3.325 ac 70.53% Impervious Runoff Depth>4.96"
Tc=16.7 min CN=88 Runoff=14.31 cfs 1.373 af
- Subcatchment S5.1A:** Runoff Area=15.250 ac 12.00% Impervious Runoff Depth>1.72"
Tc=16.7 min CN=55 Runoff=22.51 cfs 2.184 af
- Subcatchment S5.1B:** Runoff Area=16.990 ac 17.83% Impervious Runoff Depth>2.41"
Tc=25.4 min CN=63 Runoff=31.21 cfs 3.413 af
- Subcatchment S5.1C:** Runoff Area=17.500 ac 13.43% Impervious Runoff Depth>2.99"
Tc=14.3 min CN=69 Runoff=50.62 cfs 4.354 af
- Subcatchment S52.1:** Runoff Area=471,416 sf 7.66% Impervious Runoff Depth>2.88"
Flow Length=1,830' Tc=19.7 min CN=68 Runoff=26.68 cfs 2.601 af
- Subcatchment S52.2:** Runoff Area=151,112 sf 9.97% Impervious Runoff Depth>2.88"
Flow Length=752' Tc=27.6 min CN=68 Runoff=7.41 cfs 0.831 af
- Subcatchment S53:** Runoff Area=217,375 sf 7.95% Impervious Runoff Depth>2.89"
Tc=15.8 min CN=68 Runoff=13.41 cfs 1.201 af
- Subcatchment S54:** Runoff Area=101,058 sf 2.07% Impervious Runoff Depth>2.70"
Tc=14.0 min CN=66 Runoff=6.09 cfs 0.522 af
- Subcatchment S56.1:** Runoff Area=113,139 sf 53.15% Impervious Runoff Depth>4.53"
Tc=5.0 min CN=84 Runoff=14.66 cfs 0.981 af
- Subcatchment S56.3:** Runoff Area=85,676 sf 82.51% Impervious Runoff Depth>5.54"
Tc=5.0 min CN=93 Runoff=12.65 cfs 0.908 af
- Subcatchment S56.4:** Runoff Area=62,965 sf 51.39% Impervious Runoff Depth>2.98"
Flow Length=626' Tc=15.1 min CN=69 Runoff=4.10 cfs 0.360 af

Subcatchment S62: Runoff Area=27,209 sf 100.00% Impervious Runoff Depth>6.12"
Tc=5.0 min CN=98 Runoff=4.16 cfs 0.319 af

Reach 2R: Existing Stream Avg. Flow Depth=1.12' Max Vel=7.51 fps Inflow=58.35 cfs 7.008 af
n=0.030 L=750.0' S=0.0373 '/ Capacity=208.76 cfs Outflow=58.23 cfs 6.994 af

Reach 4R: Avg. Flow Depth=0.61' Max Vel=3.87 fps Inflow=35.64 cfs 1.166 af
n=0.030 L=105.0' S=0.0308 '/ Capacity=135.01 cfs Outflow=35.63 cfs 1.166 af

Reach 5R: Avg. Flow Depth=0.32' Max Vel=2.45 fps Inflow=7.74 cfs 0.155 af
n=0.030 L=900.0' S=0.0289 '/ Capacity=20.61 cfs Outflow=6.30 cfs 0.155 af

Reach 6R: Avg. Flow Depth=0.42' Max Vel=6.88 fps Inflow=30.05 cfs 4.807 af
n=0.030 L=50.0' S=0.1600 '/ Capacity=48.49 cfs Outflow=30.07 cfs 4.807 af

Reach 7R: Avg. Flow Depth=0.22' Max Vel=2.12 fps Inflow=3.64 cfs 0.043 af
n=0.030 L=615.0' S=0.0353 '/ Capacity=22.79 cfs Outflow=2.62 cfs 0.043 af

Reach 8R: Avg. Flow Depth=0.16' Max Vel=1.84 fps Inflow=2.12 cfs 0.012 af
n=0.030 L=450.0' S=0.0423 '/ Capacity=24.94 cfs Outflow=1.20 cfs 0.012 af

Reach L108: Existing Swale Avg. Flow Depth=0.24' Max Vel=4.79 fps Inflow=47.84 cfs 5.597 af
n=0.030 L=774.0' S=0.0646 '/ Capacity=1,762.00 cfs Outflow=47.74 cfs 5.572 af

Reach POA3: Inflow=65.37 cfs 12.068 af
Outflow=65.37 cfs 12.068 af

Pond 1R: Existing 24" Peak Elev=47.02' Inflow=12.65 cfs 0.908 af
Primary=11.69 cfs 0.898 af Secondary=2.97 cfs 0.010 af Outflow=12.65 cfs 0.908 af

Pond 2P: Blue Hill Intersection Peak Elev=47.37' Storage=17,469 cf Inflow=44.35 cfs 1.414 af
Outflow=39.81 cfs 1.287 af

Pond 18R: Existing 18" Peak Elev=116.36' Inflow=21.31 cfs 2.470 af
Primary=18.08 cfs 2.427 af Secondary=3.64 cfs 0.043 af Outflow=21.31 cfs 2.470 af

Pond 24R: Existing 24" Peak Elev=100.80' Inflow=35.96 cfs 4.011 af
Primary=33.85 cfs 3.999 af Secondary=2.12 cfs 0.012 af Outflow=35.96 cfs 4.011 af

Pond 48R: 48" Peak Elev=81.42' Inflow=80.11 cfs 9.668 af
48.0" Round Culvert n=0.014 L=1,000.0' S=0.0307 '/ Outflow=80.11 cfs 9.668 af

Pond 52.1P: Upper Pond Peak Elev=53.26' Storage=199,702 cf Inflow=153.46 cfs 20.245 af
Primary=61.13 cfs 6.129 af Secondary=49.44 cfs 13.613 af Outflow=110.57 cfs 19.741 af

Pond 52.2P: Lower Pond Peak Elev=50.38' Storage=131,751 cf Inflow=67.01 cfs 6.960 af
Outflow=18.36 cfs 6.255 af

Pond 53P: Wetland Area Peak Elev=80.62' Storage=34,757 cf Inflow=58.69 cfs 6.773 af
Outflow=54.84 cfs 6.486 af

Pond L179: Existing 24" Peak Elev=46.45' Inflow=21.36 cfs 4.207 af
Primary=21.36 cfs 4.207 af Secondary=0.00 cfs 0.000 af Outflow=21.36 cfs 4.207 af

Pond Link 105: Peak Elev=142.85' Inflow=45.90 cfs 5.442 af
Primary=15.85 cfs 0.635 af Secondary=30.05 cfs 4.807 af Outflow=45.90 cfs 5.442 af

Pond Link 106: Peak Elev=158.50' Inflow=31.21 cfs 3.413 af
Primary=23.60 cfs 3.258 af Secondary=7.74 cfs 0.155 af Outflow=31.21 cfs 3.413 af

Pond LINK 110.1: Existing 18" Peak Elev=55.25' Inflow=50.62 cfs 4.354 af
Primary=14.99 cfs 3.189 af Secondary=35.64 cfs 1.166 af Outflow=50.62 cfs 4.354 af

Pond P3: Existing Outlet Peak Elev=44.89' Inflow=25.09 cfs 4.526 af
Primary=25.09 cfs 4.526 af Secondary=0.00 cfs 0.000 af Outflow=25.09 cfs 4.526 af

Pond P3B: Existing 18" Peak Elev=47.51' Inflow=19.07 cfs 3.548 af
Primary=13.64 cfs 3.310 af Secondary=8.93 cfs 0.238 af Outflow=19.07 cfs 3.548 af

Pond P3C: Existing 18" Peak Elev=45.22' Inflow=4.16 cfs 0.319 af
Primary=4.16 cfs 0.319 af Secondary=0.00 cfs 0.000 af Outflow=4.16 cfs 0.319 af

Total Runoff Area = 117.587 ac Runoff Volume = 27.342 af Average Runoff Depth = 2.79"
76.76% Pervious = 90.264 ac 23.24% Impervious = 27.323 ac

Summary for Subcatchment S1:

Runoff = 5.28 cfs @ 12.53 hrs, Volume= 0.756 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 8.170	43	
* 0.530	65	
* 0.320	98	
9.020	46	Weighted Average
8.700		96.45% Pervious Area
0.320		3.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.2					Direct Entry,

Summary for Subcatchment S2:

Runoff = 19.43 cfs @ 12.20 hrs, Volume= 1.714 af, Depth> 4.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 70,760	43	
* 148,010	98	
218,770	80	Weighted Average
70,760		32.34% Pervious Area
148,010		67.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.8					Direct Entry,

Summary for Subcatchment S3:

Runoff = 21.92 cfs @ 12.07 hrs, Volume= 1.541 af, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 0.820	69	
* 2.664	98	
3.484	91	Weighted Average
0.820		23.54% Pervious Area
2.664		76.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S4:

Runoff = 20.32 cfs @ 12.39 hrs, Volume= 2.282 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
* 9.550	49	
* 2.870	69	
* 1.510	98	
13.930	58	Weighted Average
12.420		89.16% Pervious Area
1.510		10.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.6					Direct Entry,

Summary for Subcatchment S5:

Runoff = 29.16 cfs @ 12.07 hrs, Volume= 2.001 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
* 41,115	49	
* 169,264	98	
210,379	88	Weighted Average
41,115		19.54% Pervious Area
169,264		80.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S5.1:

Runoff = 14.31 cfs @ 12.22 hrs, Volume= 1.373 af, Depth> 4.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (ac)	CN	Description
* 0.270	69	
* 0.710	60	
* 2.345	98	
3.325	88	Weighted Average
0.980		29.47% Pervious Area
2.345		70.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1A:

Runoff = 22.51 cfs @ 12.25 hrs, Volume= 2.184 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
13.420	49	50-75% Grass cover, Fair, HSG A
1.830	98	Paved parking & roofs
15.250	55	Weighted Average
13.420		88.00% Pervious Area
1.830		12.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.7					Direct Entry,

Summary for Subcatchment S5.1B:

Runoff = 31.21 cfs @ 12.37 hrs, Volume= 3.413 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
10.760	49	50-75% Grass cover, Fair, HSG A
3.200	79	50-75% Grass cover, Fair, HSG C
3.030	98	Paved parking & roofs
16.990	63	Weighted Average
13.960		82.17% Pervious Area
3.030		17.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.4					Direct Entry,

Summary for Subcatchment S5.1C:

Runoff = 50.62 cfs @ 12.20 hrs, Volume= 4.354 af, Depth> 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (ac)	CN	Description
3.670	49	50-75% Grass cover, Fair, HSG A
11.480	69	50-75% Grass cover, Fair, HSG B
2.350	98	Paved parking & roofs
17.500	69	Weighted Average
15.150		86.57% Pervious Area
2.350		13.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3					Direct Entry,

Summary for Subcatchment S52.1:

Runoff = 26.68 cfs @ 12.28 hrs, Volume= 2.601 af, Depth> 2.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
435,325	65	Woods/grass comb., Fair, HSG B
* 36,091	98	Paved Areas & Roofs, HSG A
471,416	68	Weighted Average
435,325		92.34% Pervious Area
36,091		7.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	100	0.0800	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
7.4	1,730	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
19.7	1,830	Total			

Summary for Subcatchment S52.2:

Runoff = 7.41 cfs @ 12.39 hrs, Volume= 0.831 af, Depth> 2.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (sf)	CN	Description
136,043	65	Woods/grass comb., Fair, HSG B
* 15,069	98	Paved Areas & Roofs, HSG A
151,112	68	Weighted Average
136,043		90.03% Pervious Area
15,069		9.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.8	100	0.0140	0.07		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
2.8	652	0.0580	3.88		Shallow Concentrated Flow, Shallow Conc Unpaved Kv= 16.1 fps
27.6	752	Total			

Summary for Subcatchment S53:

Runoff = 13.41 cfs @ 12.22 hrs, Volume= 1.201 af, Depth> 2.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
200,092	65	Woods/grass comb., Fair, HSG B
17,283	98	Water Surface, HSG A
217,375	68	Weighted Average
200,092		92.05% Pervious Area
17,283		7.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.8					Direct Entry,

Summary for Subcatchment S54:

Runoff = 6.09 cfs @ 12.20 hrs, Volume= 0.522 af, Depth> 2.70"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
98,969	65	Woods/grass comb., Fair, HSG B
2,089	98	Water Surface, HSG A
101,058	66	Weighted Average
98,969		97.93% Pervious Area
2,089		2.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0					Direct Entry,

Summary for Subcatchment S56.1:

Runoff = 14.66 cfs @ 12.07 hrs, Volume= 0.981 af, Depth> 4.53"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
53,002	69	50-75% Grass cover, Fair, HSG B
60,137	98	Paved parking & roofs
113,139	84	Weighted Average
53,002		46.85% Pervious Area
60,137		53.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.3:

Runoff = 12.65 cfs @ 12.07 hrs, Volume= 0.908 af, Depth> 5.54"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
14,981	69	50-75% Grass cover, Fair, HSG B
70,695	98	Paved parking & roofs
85,676	93	Weighted Average
14,981		17.49% Pervious Area
70,695		82.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S56.4:

Runoff = 4.10 cfs @ 12.21 hrs, Volume= 0.360 af, Depth> 2.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

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Type III 24-hr 100-Year Rainfall=6.65"

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Area (sf)	CN	Description
30,607	39	>75% Grass cover, Good, HSG A
32,358	98	Paved parking & roofs
62,965	69	Weighted Average
30,607		48.61% Pervious Area
32,358		51.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0950	0.14		Sheet Flow, Sheet Woods: Light underbrush n= 0.400 P2= 3.20"
1.5	298	0.0440	3.38		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
2.1	228	0.0080	1.82		Shallow Concentrated Flow, Paved Paved Kv= 20.3 fps
15.1	626	Total			

Summary for Subcatchment S62:

Runoff = 4.16 cfs @ 12.07 hrs, Volume= 0.319 af, Depth> 6.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
27,209	98	Paved parking & roofs
27,209		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Reach 2R: Existing Stream

Inflow Area = 39.550 ac, 13.41% Impervious, Inflow Depth > 2.13" for 100-Year event
 Inflow = 58.35 cfs @ 12.44 hrs, Volume= 7.008 af
 Outflow = 58.23 cfs @ 12.46 hrs, Volume= 6.994 af, Atten= 0%, Lag= 1.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 7.51 fps, Min. Travel Time= 1.7 min
 Avg. Velocity= 3.48 fps, Avg. Travel Time= 3.6 min

Peak Storage= 5,816 cf @ 12.46 hrs
 Average Depth at Peak Storage= 1.12'
 Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 208.76 cfs

3.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 3.5 ' / ' Top Width= 17.00'
 Length= 750.0' Slope= 0.0373 ' / '
 Inlet Invert= 79.00', Outlet Invert= 51.00'



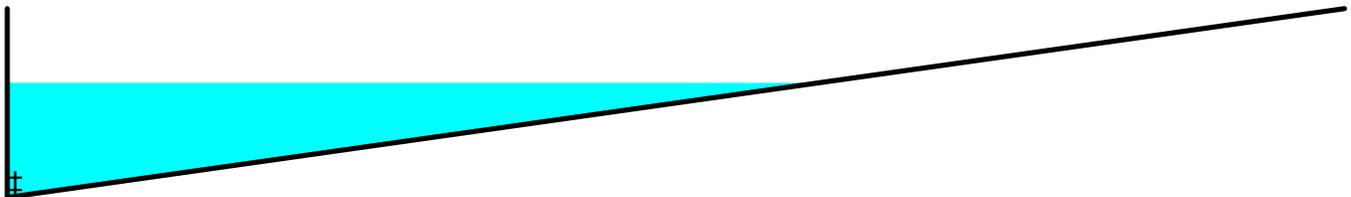
Summary for Reach 4R:

Inflow = 35.64 cfs @ 12.20 hrs, Volume= 1.166 af
 Outflow = 35.63 cfs @ 12.21 hrs, Volume= 1.166 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 3.87 fps, Min. Travel Time= 0.5 min
 Avg. Velocity = 1.89 fps, Avg. Travel Time= 0.9 min

Peak Storage= 966 cf @ 12.21 hrs
 Average Depth at Peak Storage= 0.61'
 Bank-Full Depth= 1.00' Flow Area= 25.0 sf, Capacity= 135.01 cfs

0.00' x 1.00' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 50.00'
 Length= 105.0' Slope= 0.0308 '/'
 Inlet Invert= 51.23', Outlet Invert= 48.00'



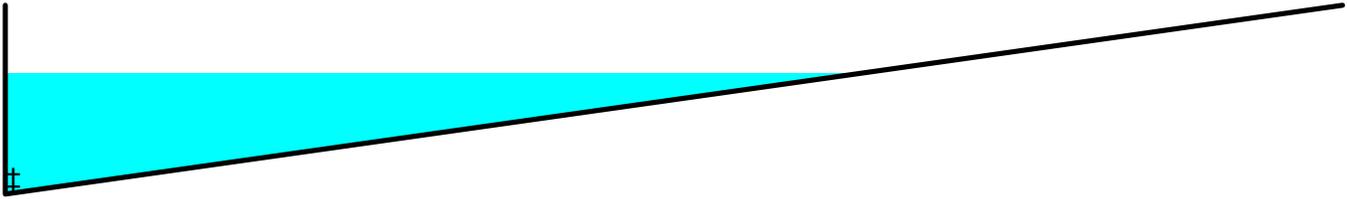
Summary for Reach 5R:

Inflow = 7.74 cfs @ 12.37 hrs, Volume= 0.155 af
 Outflow = 6.30 cfs @ 12.45 hrs, Volume= 0.155 af, Atten= 19%, Lag= 4.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 2.45 fps, Min. Travel Time= 6.1 min
 Avg. Velocity = 0.41 fps, Avg. Travel Time= 36.6 min

Peak Storage= 2,312 cf @ 12.45 hrs
 Average Depth at Peak Storage= 0.32'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 20.61 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 900.0' Slope= 0.0289 '/'
 Inlet Invert= 158.00', Outlet Invert= 132.00'



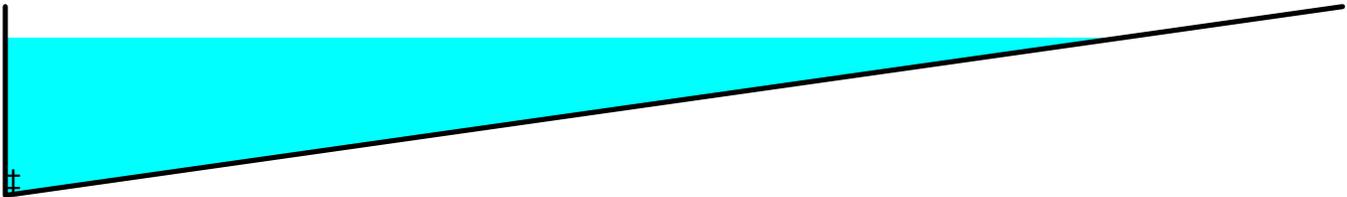
Summary for Reach 6R:

Inflow = 30.05 cfs @ 12.26 hrs, Volume= 4.807 af
 Outflow = 30.07 cfs @ 12.26 hrs, Volume= 4.807 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 6.88 fps, Min. Travel Time= 0.1 min
 Avg. Velocity = 4.06 fps, Avg. Travel Time= 0.2 min

Peak Storage= 218 cf @ 12.26 hrs
 Average Depth at Peak Storage= 0.42'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 48.49 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 50.0' Slope= 0.1600 '/'
 Inlet Invert= 140.00', Outlet Invert= 132.00'



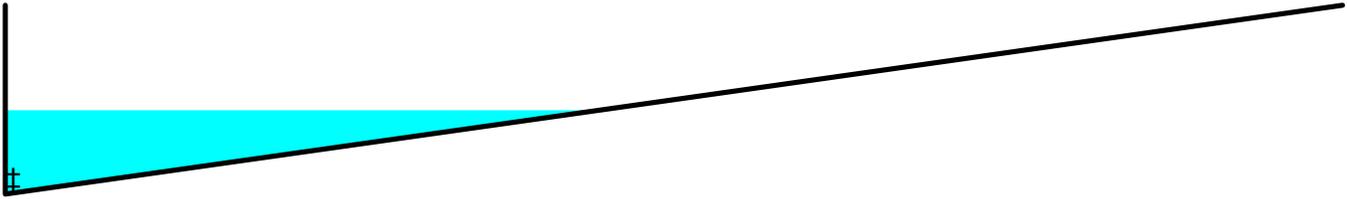
Summary for Reach 7R:

Inflow = 3.64 cfs @ 12.21 hrs, Volume= 0.043 af
 Outflow = 2.62 cfs @ 12.28 hrs, Volume= 0.043 af, Atten= 28%, Lag= 3.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 2.12 fps, Min. Travel Time= 4.8 min
 Avg. Velocity = 0.41 fps, Avg. Travel Time= 25.0 min

Peak Storage= 759 cf @ 12.28 hrs
 Average Depth at Peak Storage= 0.22'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 22.79 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 615.0' Slope= 0.0353 '/'
 Inlet Invert= 116.06', Outlet Invert= 94.33'



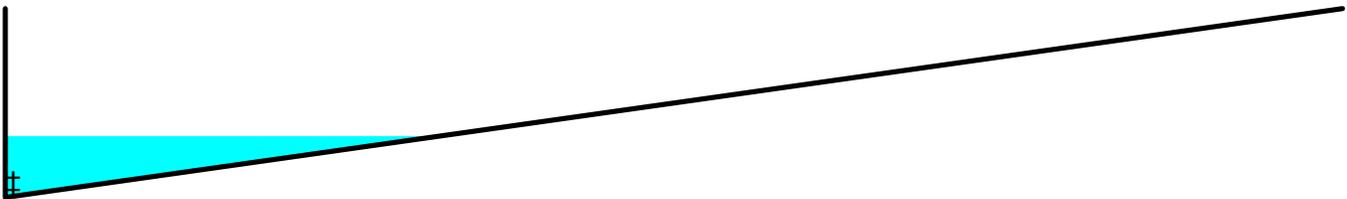
Summary for Reach 8R:

Inflow = 2.12 cfs @ 12.10 hrs, Volume= 0.012 af
 Outflow = 1.20 cfs @ 12.14 hrs, Volume= 0.012 af, Atten= 44%, Lag= 2.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 1.84 fps, Min. Travel Time= 4.1 min
 Avg. Velocity = 0.40 fps, Avg. Travel Time= 18.7 min

Peak Storage= 291 cf @ 12.14 hrs
 Average Depth at Peak Storage= 0.16'
 Bank-Full Depth= 0.50' Flow Area= 6.3 sf, Capacity= 24.94 cfs

0.00' x 0.50' deep channel, n= 0.030
 Side Slope Z-value= 0.0 50.0 '/' Top Width= 25.00'
 Length= 450.0' Slope= 0.0423 '/'
 Inlet Invert= 100.54', Outlet Invert= 81.50'



Summary for Reach L108: Existing Swale

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 2.08" for 100-Year event
 Inflow = 47.84 cfs @ 12.37 hrs, Volume= 5.597 af
 Outflow = 47.74 cfs @ 12.40 hrs, Volume= 5.572 af, Atten= 0%, Lag= 1.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Max. Velocity= 4.79 fps, Min. Travel Time= 2.7 min
 Avg. Velocity = 1.92 fps, Avg. Travel Time= 6.7 min

Peak Storage= 7,713 cf @ 12.40 hrs
 Average Depth at Peak Storage= 0.24'
 Bank-Full Depth= 2.00' Flow Area= 100.0 sf, Capacity= 1,762.00 cfs

40.00' x 2.00' deep channel, n= 0.030
 Side Slope Z-value= 5.0 '/' Top Width= 60.00'
 Length= 774.0' Slope= 0.0646 '/'
 Inlet Invert= 132.00', Outlet Invert= 82.00'



Summary for Reach POA3:

Inflow Area = 117.587 ac, 23.24% Impervious, Inflow Depth > 1.23" for 100-Year event
 Inflow = 65.37 cfs @ 12.26 hrs, Volume= 12.068 af
 Outflow = 65.37 cfs @ 12.26 hrs, Volume= 12.068 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Summary for Pond 1R: Existing 24"

Inflow Area = 1.967 ac, 82.51% Impervious, Inflow Depth > 5.54" for 100-Year event
 Inflow = 12.65 cfs @ 12.07 hrs, Volume= 0.908 af
 Outflow = 12.65 cfs @ 12.07 hrs, Volume= 0.908 af, Atten= 0%, Lag= 0.0 min
 Primary = 11.69 cfs @ 12.04 hrs, Volume= 0.898 af
 Secondary = 2.97 cfs @ 12.08 hrs, Volume= 0.010 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.02' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.90'	24.0" Round Culvert L= 166.0' Ke= 0.500 Inlet / Outlet Invert= 43.90' / 41.90' S= 0.0120 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.30'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.72 cfs @ 12.04 hrs HW=46.47' TW=46.39' (Dynamic Tailwater)
 ←1=Culvert (Outlet Controls 3.72 cfs @ 1.20 fps)

Secondary OutFlow Max=0.00 cfs @ 12.08 hrs HW=46.99' TW=47.10' (Dynamic Tailwater)
 ←2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 2P: Blue Hill Intersection

Inflow = 44.35 cfs @ 12.20 hrs, Volume= 1.414 af
 Outflow = 39.81 cfs @ 12.26 hrs, Volume= 1.287 af, Atten= 10%, Lag= 3.5 min
 Primary = 39.81 cfs @ 12.26 hrs, Volume= 1.287 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.37' @ 12.26 hrs Surf.Area= 44,763 sf Storage= 17,469 cf

Plug-Flow detention time= 12.2 min calculated for 1.287 af (91% of inflow)
 Center-of-Mass det. time= 10.3 min (745.9 - 735.6)

Volume	Invert	Avail.Storage	Storage Description
#1	46.50'	58,355 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.50	10	0	0
47.00	21,119	5,282	5,282
48.00	85,027	53,073	58,355

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	Curb, C= 3.27 Offset (feet) 0.00 140.50 231.95 323.40 493.00 Elev. (feet) 48.50 47.50 47.00 47.50 48.50

Primary OutFlow Max=39.15 cfs @ 12.26 hrs HW=47.37' TW=0.00' (Dynamic Tailwater)
 ↑1=Curb (Weir Controls 39.15 cfs @ 0.79 fps)

Summary for Pond 18R: Existing 18"

Inflow Area = 14.042 ac, 26.48% Impervious, Inflow Depth > 2.11" for 100-Year event
 Inflow = 21.31 cfs @ 12.22 hrs, Volume= 2.470 af
 Outflow = 21.31 cfs @ 12.22 hrs, Volume= 2.470 af, Atten= 0%, Lag= 0.0 min
 Primary = 18.08 cfs @ 12.34 hrs, Volume= 2.427 af
 Secondary = 3.64 cfs @ 12.21 hrs, Volume= 0.043 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 116.36' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	18.0" Round Culvert L= 428.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 107.40' / 94.80' S= 0.0294 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	116.06'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=18.12 cfs @ 12.34 hrs HW=116.25' TW=98.99' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 18.12 cfs @ 10.25 fps)

Secondary OutFlow Max=3.01 cfs @ 12.21 hrs HW=116.35' TW=116.25' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Weir Controls 3.01 cfs @ 1.31 fps)

Summary for Pond 24R: Existing 24"

Inflow Area = 17.526 ac, 36.41% Impervious, Inflow Depth > 2.75" for 100-Year event
 Inflow = 35.96 cfs @ 12.10 hrs, Volume= 4.011 af
 Outflow = 35.96 cfs @ 12.10 hrs, Volume= 4.011 af, Atten= 0%, Lag= 0.0 min
 Primary = 33.85 cfs @ 12.10 hrs, Volume= 3.999 af
 Secondary = 2.12 cfs @ 12.10 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

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Type III 24-hr 100-Year Rainfall=6.65"

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Peak Elev= 100.80' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	94.80'	24.0" Round Culvert L= 350.0' Ke= 0.500 Inlet / Outlet Invert= 94.80' / 79.90' S= 0.0426 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	100.54'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=33.57 cfs @ 12.10 hrs HW=100.72' TW=81.40' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 33.57 cfs @ 10.68 fps)**Secondary OutFlow** Max=1.47 cfs @ 12.10 hrs HW=100.72' TW=100.67' (Dynamic Tailwater)↑**2=Orifice/Grate** (Weir Controls 1.47 cfs @ 1.00 fps)**Summary for Pond 48R: 48"**

Inflow Area = 39.611 ac, 35.65% Impervious, Inflow Depth > 2.93" for 100-Year event
 Inflow = 80.11 cfs @ 12.10 hrs, Volume= 9.668 af
 Outflow = 80.11 cfs @ 12.10 hrs, Volume= 9.668 af, Atten= 0%, Lag= 0.0 min
 Primary = 80.11 cfs @ 12.10 hrs, Volume= 9.668 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 81.42' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	77.70'	48.0" Round Culvert L= 1,000.0' Ke= 0.500 Inlet / Outlet Invert= 77.70' / 47.00' S= 0.0307 '/ Cc= 0.900 n= 0.014, Flow Area= 12.57 sf

Primary OutFlow Max=79.54 cfs @ 12.10 hrs HW=81.40' TW=49.92' (Dynamic Tailwater)↑**1=Culvert** (Inlet Controls 79.54 cfs @ 6.55 fps)**Summary for Pond 52.1P: Upper Pond**

Inflow Area = 92.581 ac, 23.37% Impervious, Inflow Depth > 2.62" for 100-Year event
 Inflow = 153.46 cfs @ 12.32 hrs, Volume= 20.245 af
 Outflow = 110.57 cfs @ 12.60 hrs, Volume= 19.741 af, Atten= 28%, Lag= 16.6 min
 Primary = 61.13 cfs @ 12.60 hrs, Volume= 6.129 af
 Secondary = 49.44 cfs @ 12.60 hrs, Volume= 13.613 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 53.26' @ 12.60 hrs Surf.Area= 40,616 sf Storage= 199,702 cf

Plug-Flow detention time= 43.6 min calculated for 19.702 af (97% of inflow)

Center-of-Mass det. time= 34.5 min (841.9 - 807.5)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	486,437 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	23,157	0	0
48.00	25,754	24,456	24,456
49.00	28,493	27,124	51,579
50.00	31,585	30,039	81,618
51.00	34,686	33,136	114,754
52.00	37,278	35,982	150,736
53.00	39,915	38,597	189,332
54.00	42,638	41,277	230,609
60.00	42,638	255,828	486,437

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	12.0" Vert. Orifice/Grate X 3.00 C= 0.600
#2	Primary	52.75'	40.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Secondary	49.50'	18.0" Vert. Orifice/Grate C= 0.600
#4	Secondary	47.00'	24.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=60.45 cfs @ 12.60 hrs HW=53.26' TW=49.33' (Dynamic Tailwater)

1=Orifice/Grate (Orifice Controls 22.49 cfs @ 9.55 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 37.96 cfs @ 1.87 fps)

Secondary OutFlow Max=49.43 cfs @ 12.60 hrs HW=53.26' (Free Discharge)

3=Orifice/Grate (Orifice Controls 14.75 cfs @ 8.35 fps)

4=Orifice/Grate (Orifice Controls 34.68 cfs @ 11.04 fps)

Summary for Pond 52.2P: Lower Pond

Inflow Area = 96.050 ac, 22.89% Impervious, Inflow Depth > 0.87" for 100-Year event

Inflow = 67.01 cfs @ 12.59 hrs, Volume= 6.960 af

Outflow = 18.36 cfs @ 13.18 hrs, Volume= 6.255 af, Atten= 73%, Lag= 35.0 min

Primary = 18.36 cfs @ 13.18 hrs, Volume= 6.255 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs

Peak Elev= 50.38' @ 13.18 hrs Surf.Area= 43,426 sf Storage= 131,751 cf

Plug-Flow detention time= 127.4 min calculated for 6.242 af (90% of inflow)

Center-of-Mass det. time= 94.2 min (899.4 - 805.3)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	569,961 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	34,856	0	0
48.00	37,286	36,071	36,071
49.00	39,702	38,494	74,565
50.00	42,069	40,886	115,451
51.00	45,629	43,849	159,300
60.00	45,629	410,661	569,961

Device	Routing	Invert	Outlet Devices
#1	Primary	47.00'	18.0" Vert. Orifice/Grate C= 0.600
#2	Primary	50.00'	6.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#3	Primary	51.00'	15.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=18.36 cfs @ 13.18 hrs HW=50.38' TW=0.00' (Dynamic Tailwater)

- ↑1=Orifice/Grate (Orifice Controls 13.80 cfs @ 7.81 fps)
- 2=Sharp-Crested Rectangular Weir (Weir Controls 4.56 cfs @ 2.02 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: Wetland Area

Inflow Area = 37.230 ac, 14.12% Impervious, Inflow Depth > 2.18" for 100-Year event
 Inflow = 58.69 cfs @ 12.30 hrs, Volume= 6.773 af
 Outflow = 54.84 cfs @ 12.46 hrs, Volume= 6.486 af, Atten= 7%, Lag= 9.6 min
 Primary = 54.84 cfs @ 12.46 hrs, Volume= 6.486 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 80.62' @ 12.47 hrs Surf.Area= 17,283 sf Storage= 34,757 cf

Plug-Flow detention time= 27.5 min calculated for 6.486 af (96% of inflow)
 Center-of-Mass det. time= 13.0 min (839.3 - 826.3)

Volume	Invert	Avail.Storage	Storage Description
#1	77.00'	93,245 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
77.00	449	0	0
78.00	2,374	1,412	1,412
79.00	12,873	7,624	9,035
80.00	17,283	15,078	24,113
84.00	17,283	69,132	93,245

Device	Routing	Invert	Outlet Devices
#1	Primary	79.00'	14.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=54.54 cfs @ 12.46 hrs HW=80.61' TW=80.12' (Dynamic Tailwater)

- ↑1=Broad-Crested Rectangular Weir (Weir Controls 54.54 cfs @ 2.41 fps)

Summary for Pond L179: Existing 24"

Inflow Area = 20.912 ac, 22.55% Impervious, Inflow Depth > 2.41" for 100-Year event
 Inflow = 21.36 cfs @ 12.03 hrs, Volume= 4.207 af
 Outflow = 21.36 cfs @ 12.03 hrs, Volume= 4.207 af, Atten= 0%, Lag= 0.0 min
 Primary = 21.36 cfs @ 12.03 hrs, Volume= 4.207 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 46.45' @ 12.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.90'	24.0" Round Culvert L= 60.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 41.90' / 41.10' S= 0.0133 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	46.89'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=18.22 cfs @ 12.03 hrs HW=46.23' TW=44.78' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 18.22 cfs @ 5.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.90' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond Link 105:

Inflow Area = 32.240 ac, 15.07% Impervious, Inflow Depth > 2.03" for 100-Year event
 Inflow = 45.90 cfs @ 12.26 hrs, Volume= 5.442 af
 Outflow = 45.90 cfs @ 12.26 hrs, Volume= 5.442 af, Atten= 0%, Lag= 0.0 min
 Primary = 15.85 cfs @ 12.26 hrs, Volume= 0.635 af
 Secondary = 30.05 cfs @ 12.26 hrs, Volume= 4.807 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 142.85' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	140.75'	24.0" Round Culvert L= 350.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 140.75' / 132.70' S= 0.0230 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	140.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.71 cfs @ 12.26 hrs HW=142.83' TW=132.23' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 15.71 cfs @ 5.00 fps)

Secondary OutFlow Max=29.91 cfs @ 12.26 hrs HW=142.83' TW=140.42' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 29.91 cfs @ 7.48 fps)

Summary for Pond Link 106:

Inflow Area = 16.990 ac, 17.83% Impervious, Inflow Depth > 2.41" for 100-Year event
 Inflow = 31.21 cfs @ 12.37 hrs, Volume= 3.413 af
 Outflow = 31.21 cfs @ 12.37 hrs, Volume= 3.413 af, Atten= 0%, Lag= 0.0 min
 Primary = 23.60 cfs @ 12.50 hrs, Volume= 3.258 af
 Secondary = 7.74 cfs @ 12.37 hrs, Volume= 0.155 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 158.50' @ 12.39 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	141.80'	15.0" Round Culvert L= 5.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 141.80' / 141.50' S= 0.0600 '/ Cc= 0.900 n= 0.014, Flow Area= 1.23 sf
#2	Secondary	158.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=23.62 cfs @ 12.50 hrs HW=158.41' TW=142.37' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 23.62 cfs @ 19.25 fps)

Secondary OutFlow Max=7.24 cfs @ 12.37 hrs HW=158.49' TW=158.29' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Weir Controls 7.24 cfs @ 1.83 fps)

Summary for Pond LINK 110.1: Existing 18"

Inflow Area = 17.500 ac, 13.43% Impervious, Inflow Depth > 2.99" for 100-Year event
 Inflow = 50.62 cfs @ 12.20 hrs, Volume= 4.354 af
 Outflow = 50.62 cfs @ 12.20 hrs, Volume= 4.354 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.99 cfs @ 12.20 hrs, Volume= 3.189 af
 Secondary = 35.64 cfs @ 12.20 hrs, Volume= 1.166 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 55.25' @ 12.20 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	46.45'	18.0" Round Culvert L= 260.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 46.45' / 42.50' S= 0.0152 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	51.23'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=14.87 cfs @ 12.20 hrs HW=55.22' TW=47.50' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 14.87 cfs @ 8.42 fps)

Secondary OutFlow Max=35.43 cfs @ 12.20 hrs HW=55.22' TW=51.84' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 35.43 cfs @ 8.86 fps)

Summary for Pond P3: Existing Outlet

Inflow Area = 21.537 ac, 24.80% Impervious, Inflow Depth > 2.52" for 100-Year event
 Inflow = 25.09 cfs @ 12.04 hrs, Volume= 4.526 af
 Outflow = 25.09 cfs @ 12.04 hrs, Volume= 4.526 af, Atten= 0%, Lag= 0.0 min
 Primary = 25.09 cfs @ 12.04 hrs, Volume= 4.526 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 44.89' @ 12.04 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	24.0" Round Culvert L= 52.0' Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.66' S= 0.0085 '/ Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Secondary	45.79'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=24.77 cfs @ 12.04 hrs HW=44.83' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Barrel Controls 24.77 cfs @ 7.88 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.10' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P3B: Existing 18"

Inflow Area = 18.945 ac, 16.32% Impervious, Inflow Depth > 2.25" for 100-Year event
 Inflow = 19.07 cfs @ 12.20 hrs, Volume= 3.548 af
 Outflow = 19.07 cfs @ 12.20 hrs, Volume= 3.548 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.64 cfs @ 12.51 hrs, Volume= 3.310 af
 Secondary = 8.93 cfs @ 12.19 hrs, Volume= 0.238 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 47.51' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	42.40'	18.0" Round Culvert L= 63.0' Square-edged headwall, Ke= 0.500 Inlet / Outlet Invert= 42.40' / 41.90' S= 0.0079 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	45.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.76 cfs @ 12.51 hrs HW=47.29' TW=44.62' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 13.76 cfs @ 7.79 fps)

Secondary OutFlow Max=7.33 cfs @ 12.19 hrs HW=47.48' TW=47.33' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Orifice Controls 7.33 cfs @ 1.83 fps)

Summary for Pond P3C: Existing 18"

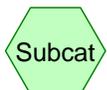
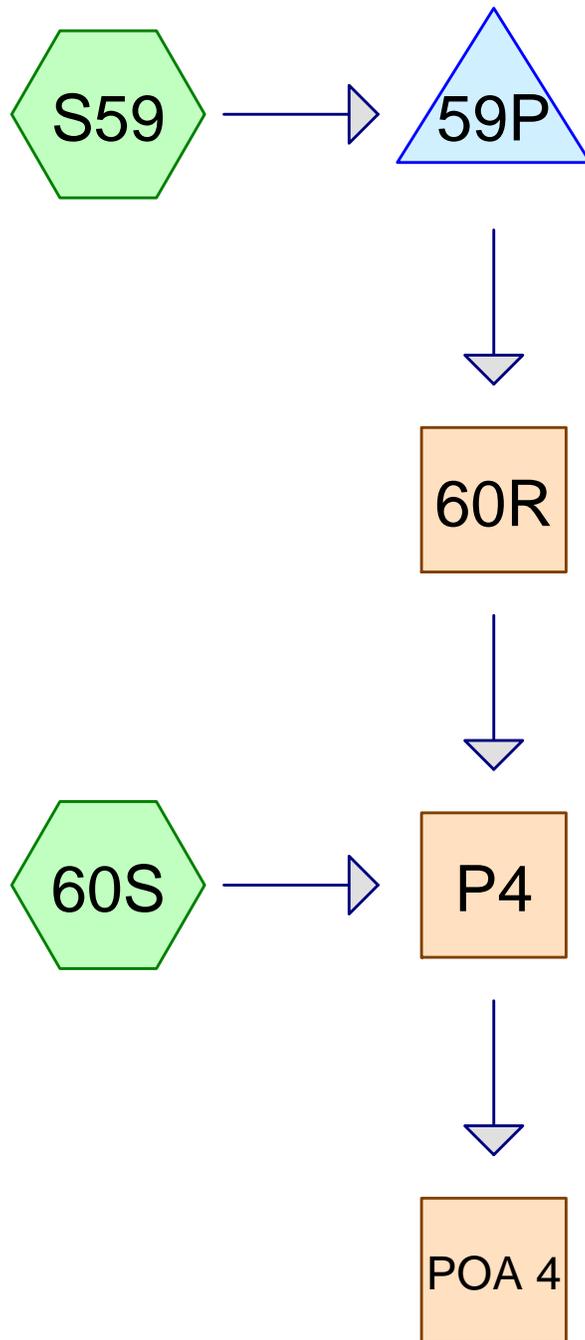
Inflow Area = 0.625 ac, 100.00% Impervious, Inflow Depth > 6.12" for 100-Year event
 Inflow = 4.16 cfs @ 12.07 hrs, Volume= 0.319 af
 Outflow = 4.16 cfs @ 12.07 hrs, Volume= 0.319 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.16 cfs @ 12.07 hrs, Volume= 0.319 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.04 hrs
 Peak Elev= 45.22' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	43.38'	18.0" Round Culvert L= 127.0' Ke= 0.500 Inlet / Outlet Invert= 43.38' / 41.20' S= 0.0172 '/ Cc= 0.900 n= 0.014, Flow Area= 1.77 sf
#2	Secondary	46.77'	30.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.29 cfs @ 12.07 hrs HW=45.15' TW=44.35' (Dynamic Tailwater)
 ↑1=Culvert (Outlet Controls 6.29 cfs @ 3.79 fps)

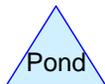
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=43.38' TW=46.50' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)



Subcat



Reach



Pond



Link

Routing Diagram for 3659-12003C-Proposed Conditions POA 4-01

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.301	39	>75% Grass cover, Good, HSG A (60S, S59)
11.898	98	Paved parking, HSG A (60S, S59)
2.473	98	Roofs, HSG A (S59)
18.671	84	TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
4.301	0.000	0.000	0.000	0.000	4.301	>75% Grass cover, Good	60S, S59
11.898	0.000	0.000	0.000	0.000	11.898	Paved parking	60S, S59
2.473	0.000	0.000	0.000	0.000	2.473	Roofs	S59
18.671	0.000	0.000	0.000	0.000	18.671	TOTAL AREA	

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Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 60S: Runoff Area=365,438 sf 67.38% Impervious Runoff Depth>1.23"
Tc=5.0 min CN=79 Runoff=12.99 cfs 0.862 af

Subcatchment S59: Runoff Area=447,887 sf 84.79% Impervious Runoff Depth>1.95"
Tc=5.0 min CN=89 Runoff=25.06 cfs 1.675 af

Reach 60R: Avg. Flow Depth=0.18' Max Vel=3.72 fps Inflow=0.65 cfs 0.024 af
36.0" Round Pipe n=0.012 L=719.0' S=0.0161 '/' Capacity=91.78 cfs Outflow=0.63 cfs 0.024 af

Reach P4: Avg. Flow Depth=1.21' Max Vel=3.55 fps Inflow=12.99 cfs 0.886 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/' Capacity=57.47 cfs Outflow=11.26 cfs 0.880 af

Reach POA 4: Inflow=11.26 cfs 0.880 af
Outflow=11.26 cfs 0.880 af

Pond 59P: Peak Elev=48.83' Storage=22,785 cf Inflow=25.06 cfs 1.675 af
Discarded=4.20 cfs 1.646 af Primary=0.65 cfs 0.024 af Outflow=4.85 cfs 1.671 af

Total Runoff Area = 18.671 ac Runoff Volume = 2.536 af Average Runoff Depth = 1.63"
23.03% Pervious = 4.301 ac 76.97% Impervious = 14.371 ac

Summary for Subcatchment 60S:

Runoff = 12.99 cfs @ 12.08 hrs, Volume= 0.862 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
119,218	39	>75% Grass cover, Good, HSG A
246,220	98	Paved parking, HSG A
0	98	Roofs, HSG A
365,438	79	Weighted Average
119,218		32.62% Pervious Area
246,220		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 25.06 cfs @ 12.07 hrs, Volume= 1.675 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (sf)	CN	Description
68,117	39	>75% Grass cover, Good, HSG A
272,053	98	Paved parking, HSG A
107,717	98	Roofs, HSG A
447,887	89	Weighted Average
68,117		15.21% Pervious Area
379,770		84.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

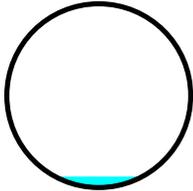
Summary for Reach 60R:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth = 0.03" for 2-Year event
Inflow = 0.65 cfs @ 12.52 hrs, Volume= 0.024 af
Outflow = 0.63 cfs @ 12.62 hrs, Volume= 0.024 af, Atten= 3%, Lag= 5.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.72 fps, Min. Travel Time= 3.2 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 6.0 min

Peak Storage= 122 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 91.78 cfs

36.0" Round Pipe
n= 0.012
Length= 719.0' Slope= 0.0161 '/'
Inlet Invert= 48.50', Outlet Invert= 36.90'



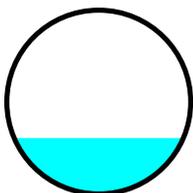
Summary for Reach P4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 0.57" for 2-Year event
Inflow = 12.99 cfs @ 12.08 hrs, Volume= 0.886 af
Outflow = 11.26 cfs @ 12.20 hrs, Volume= 0.880 af, Atten= 13%, Lag= 6.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.55 fps, Min. Travel Time= 3.9 min
Avg. Velocity = 1.50 fps, Avg. Travel Time= 9.3 min

Peak Storage= 2,686 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.21'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 0.57" for 2-Year event
Inflow = 11.26 cfs @ 12.20 hrs, Volume= 0.880 af
Outflow = 11.26 cfs @ 12.20 hrs, Volume= 0.880 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 59P:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth > 1.95" for 2-Year event
 Inflow = 25.06 cfs @ 12.07 hrs, Volume= 1.675 af
 Outflow = 4.85 cfs @ 12.52 hrs, Volume= 1.671 af, Atten= 81%, Lag= 26.6 min
 Discarded = 4.20 cfs @ 12.52 hrs, Volume= 1.646 af
 Primary = 0.65 cfs @ 12.52 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 48.83' @ 12.52 hrs Surf.Area= 21,120 sf Storage= 22,785 cf

Plug-Flow detention time= 37.9 min calculated for 1.671 af (100% of inflow)
 Center-of-Mass det. time= 37.0 min (814.3 - 777.3)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	87,360 cf	Custom Stage Data (Prismatic) Listed below x 2 Inside #2
#2	47.00'	74,880 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			274,560 cf Overall - 87,360 cf Embedded = 187,200 cf x 40.0% Voids
		162,240 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,360	0	0
48.00	3,360	3,360	3,360
49.00	3,360	3,360	6,720
50.00	3,360	3,360	10,080
51.00	3,360	3,360	13,440
52.00	3,360	3,360	16,800
52.50	3,360	1,680	18,480
60.00	3,360	25,200	43,680

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	21,120	0	0
48.00	21,120	21,120	21,120
49.00	21,120	21,120	42,240
50.00	21,120	21,120	63,360
51.00	21,120	21,120	84,480
52.00	21,120	21,120	105,600
52.50	21,120	10,560	116,160
60.00	21,120	158,400	274,560

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	8.270 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	48.50'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=4.20 cfs @ 12.52 hrs HW=48.82' (Free Discharge)
 ↳1=Exfiltration (Controls 4.20 cfs)

Primary OutFlow Max=0.64 cfs @ 12.52 hrs HW=48.82' (Free Discharge)
 ↳2=Orifice/Grate (Orifice Controls 0.64 cfs @ 1.94 fps)

3659-12003C-Proposed Conditions POA 4-01

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by {enter your company name here}

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Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 60S: Runoff Area=365,438 sf 67.38% Impervious Runoff Depth>2.29"
Tc=5.0 min CN=79 Runoff=24.22 cfs 1.602 af

Subcatchment S59: Runoff Area=447,887 sf 84.79% Impervious Runoff Depth>3.20"
Tc=5.0 min CN=89 Runoff=40.12 cfs 2.741 af

Reach 60R: Avg. Flow Depth=0.62' Max Vel=8.12 fps Inflow=8.51 cfs 0.488 af
36.0" Round Pipe n=0.012 L=719.0' S=0.0161 '/' Capacity=91.78 cfs Outflow=8.47 cfs 0.488 af

Reach P4: Avg. Flow Depth=1.74' Max Vel=4.27 fps Inflow=24.22 cfs 2.090 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/' Capacity=57.47 cfs Outflow=21.97 cfs 2.082 af

Reach POA 4: Inflow=21.97 cfs 2.082 af
Outflow=21.97 cfs 2.082 af

Pond 59P: Peak Elev=49.81' Storage=35,082 cf Inflow=40.12 cfs 2.741 af
Discarded=4.28 cfs 2.248 af Primary=8.51 cfs 0.488 af Outflow=12.80 cfs 2.736 af

Total Runoff Area = 18.671 ac Runoff Volume = 4.344 af Average Runoff Depth = 2.79"
23.03% Pervious = 4.301 ac 76.97% Impervious = 14.371 ac

Summary for Subcatchment 60S:

Runoff = 24.22 cfs @ 12.08 hrs, Volume= 1.602 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
119,218	39	>75% Grass cover, Good, HSG A
246,220	98	Paved parking, HSG A
0	98	Roofs, HSG A
365,438	79	Weighted Average
119,218		32.62% Pervious Area
246,220		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 40.12 cfs @ 12.07 hrs, Volume= 2.741 af, Depth> 3.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
68,117	39	>75% Grass cover, Good, HSG A
272,053	98	Paved parking, HSG A
107,717	98	Roofs, HSG A
447,887	89	Weighted Average
68,117		15.21% Pervious Area
379,770		84.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

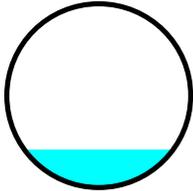
Summary for Reach 60R:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth = 0.57" for 10-Year event
Inflow = 8.51 cfs @ 12.38 hrs, Volume= 0.488 af
Outflow = 8.47 cfs @ 12.42 hrs, Volume= 0.488 af, Atten= 1%, Lag= 2.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.12 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 3.88 fps, Avg. Travel Time= 3.1 min

Peak Storage= 753 cf @ 12.40 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 91.78 cfs

36.0" Round Pipe
n= 0.012
Length= 719.0' Slope= 0.0161 '/'
Inlet Invert= 48.50', Outlet Invert= 36.90'



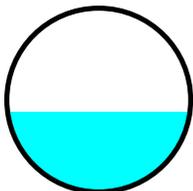
Summary for Reach P4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 1.34" for 10-Year event
Inflow = 24.22 cfs @ 12.08 hrs, Volume= 2.090 af
Outflow = 21.97 cfs @ 12.18 hrs, Volume= 2.082 af, Atten= 9%, Lag= 5.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.27 fps, Min. Travel Time= 3.3 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 7.9 min

Peak Storage= 4,378 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.74'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 1.34" for 10-Year event
Inflow = 21.97 cfs @ 12.18 hrs, Volume= 2.082 af
Outflow = 21.97 cfs @ 12.18 hrs, Volume= 2.082 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 59P:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth > 3.20" for 10-Year event
 Inflow = 40.12 cfs @ 12.07 hrs, Volume= 2.741 af
 Outflow = 12.80 cfs @ 12.38 hrs, Volume= 2.736 af, Atten= 68%, Lag= 18.2 min
 Discarded = 4.28 cfs @ 12.38 hrs, Volume= 2.248 af
 Primary = 8.51 cfs @ 12.38 hrs, Volume= 0.488 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 49.81' @ 12.38 hrs Surf.Area= 21,120 sf Storage= 35,082 cf

Plug-Flow detention time= 40.5 min calculated for 2.729 af (100% of inflow)
 Center-of-Mass det. time= 39.5 min (805.0 - 765.5)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	87,360 cf	Custom Stage Data (Prismatic) Listed below x 2 Inside #2
#2	47.00'	74,880 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			274,560 cf Overall - 87,360 cf Embedded = 187,200 cf x 40.0% Voids
		162,240 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,360	0	0
48.00	3,360	3,360	3,360
49.00	3,360	3,360	6,720
50.00	3,360	3,360	10,080
51.00	3,360	3,360	13,440
52.00	3,360	3,360	16,800
52.50	3,360	1,680	18,480
60.00	3,360	25,200	43,680

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	21,120	0	0
48.00	21,120	21,120	21,120
49.00	21,120	21,120	42,240
50.00	21,120	21,120	63,360
51.00	21,120	21,120	84,480
52.00	21,120	21,120	105,600
52.50	21,120	10,560	116,160
60.00	21,120	158,400	274,560

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	8.270 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	48.50'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=4.28 cfs @ 12.38 hrs HW=49.81' (Free Discharge)
 ↳1=Exfiltration (Controls 4.28 cfs)

Primary OutFlow Max=8.48 cfs @ 12.38 hrs HW=49.81' (Free Discharge)
 ↳2=Orifice/Grate (Orifice Controls 8.48 cfs @ 3.89 fps)

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 60S: Runoff Area=365,438 sf 67.38% Impervious Runoff Depth>3.03"
Tc=5.0 min CN=79 Runoff=31.81 cfs 2.116 af

Subcatchment S59: Runoff Area=447,887 sf 84.79% Impervious Runoff Depth>4.02"
Tc=5.0 min CN=89 Runoff=49.78 cfs 3.445 af

Reach 60R: Avg. Flow Depth=0.79' Max Vel=9.39 fps Inflow=14.07 cfs 0.865 af
36.0" Round Pipe n=0.012 L=719.0' S=0.0161 '/' Capacity=91.78 cfs Outflow=14.01 cfs 0.865 af

Reach P4: Avg. Flow Depth=2.11' Max Vel=4.68 fps Inflow=33.46 cfs 2.981 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/' Capacity=57.47 cfs Outflow=31.51 cfs 2.972 af

Reach POA 4: Inflow=31.51 cfs 2.972 af
Outflow=31.51 cfs 2.972 af

Pond 59P: Peak Elev=50.35' Storage=41,855 cf Inflow=49.78 cfs 3.445 af
Discarded=4.33 cfs 2.574 af Primary=14.07 cfs 0.865 af Outflow=18.40 cfs 3.439 af

Total Runoff Area = 18.671 ac Runoff Volume = 5.561 af Average Runoff Depth = 3.57"
23.03% Pervious = 4.301 ac 76.97% Impervious = 14.371 ac

Summary for Subcatchment 60S:

Runoff = 31.81 cfs @ 12.08 hrs, Volume= 2.116 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
119,218	39	>75% Grass cover, Good, HSG A
246,220	98	Paved parking, HSG A
0	98	Roofs, HSG A
365,438	79	Weighted Average
119,218		32.62% Pervious Area
246,220		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 49.78 cfs @ 12.07 hrs, Volume= 3.445 af, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.50"

Area (sf)	CN	Description
68,117	39	>75% Grass cover, Good, HSG A
272,053	98	Paved parking, HSG A
107,717	98	Roofs, HSG A
447,887	89	Weighted Average
68,117		15.21% Pervious Area
379,770		84.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

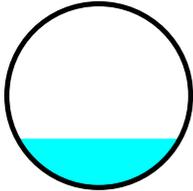
Summary for Reach 60R:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth = 1.01" for 25-Year event
Inflow = 14.07 cfs @ 12.32 hrs, Volume= 0.865 af
Outflow = 14.01 cfs @ 12.36 hrs, Volume= 0.865 af, Atten= 0%, Lag= 2.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.39 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 4.36 fps, Avg. Travel Time= 2.7 min

Peak Storage= 1,075 cf @ 12.33 hrs
Average Depth at Peak Storage= 0.79'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 91.78 cfs

36.0" Round Pipe
n= 0.012
Length= 719.0' Slope= 0.0161 '/'
Inlet Invert= 48.50', Outlet Invert= 36.90'



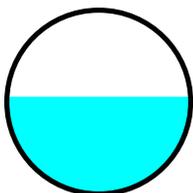
Summary for Reach P4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 1.92" for 25-Year event
Inflow = 33.46 cfs @ 12.10 hrs, Volume= 2.981 af
Outflow = 31.51 cfs @ 12.19 hrs, Volume= 2.972 af, Atten= 6%, Lag= 5.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.68 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 1.87 fps, Avg. Travel Time= 7.4 min

Peak Storage= 5,626 cf @ 12.14 hrs
Average Depth at Peak Storage= 2.11'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 1.91" for 25-Year event
Inflow = 31.51 cfs @ 12.19 hrs, Volume= 2.972 af
Outflow = 31.51 cfs @ 12.19 hrs, Volume= 2.972 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 59P:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth > 4.02" for 25-Year event
 Inflow = 49.78 cfs @ 12.07 hrs, Volume= 3.445 af
 Outflow = 18.40 cfs @ 12.32 hrs, Volume= 3.439 af, Atten= 63%, Lag= 14.8 min
 Discarded = 4.33 cfs @ 12.32 hrs, Volume= 2.574 af
 Primary = 14.07 cfs @ 12.32 hrs, Volume= 0.865 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 50.35' @ 12.32 hrs Surf.Area= 21,120 sf Storage= 41,855 cf

Plug-Flow detention time= 39.2 min calculated for 3.430 af (100% of inflow)
 Center-of-Mass det. time= 38.3 min (798.3 - 760.0)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	87,360 cf	Custom Stage Data (Prismatic) Listed below x 2 Inside #2
#2	47.00'	74,880 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			274,560 cf Overall - 87,360 cf Embedded = 187,200 cf x 40.0% Voids
		162,240 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,360	0	0
48.00	3,360	3,360	3,360
49.00	3,360	3,360	6,720
50.00	3,360	3,360	10,080
51.00	3,360	3,360	13,440
52.00	3,360	3,360	16,800
52.50	3,360	1,680	18,480
60.00	3,360	25,200	43,680

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	21,120	0	0
48.00	21,120	21,120	21,120
49.00	21,120	21,120	42,240
50.00	21,120	21,120	63,360
51.00	21,120	21,120	84,480
52.00	21,120	21,120	105,600
52.50	21,120	10,560	116,160
60.00	21,120	158,400	274,560

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	8.270 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	48.50'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=4.33 cfs @ 12.32 hrs HW=50.35' (Free Discharge)
 ↑1=Exfiltration (Controls 4.33 cfs)

Primary OutFlow Max=14.05 cfs @ 12.32 hrs HW=50.35' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 14.05 cfs @ 4.63 fps)

3659-12003C-Proposed Conditions POA 4-01

Type III 24-hr 100-Year Rainfall=6.65"

Prepared by {enter your company name here}

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Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 60S: Runoff Area=365,438 sf 67.38% Impervious Runoff Depth>4.00"
Tc=5.0 min CN=79 Runoff=41.70 cfs 2.798 af

Subcatchment S59: Runoff Area=447,887 sf 84.79% Impervious Runoff Depth>5.08"
Tc=5.0 min CN=89 Runoff=62.05 cfs 4.356 af

Reach 60R: Avg. Flow Depth=0.94' Max Vel=10.31 fps Inflow=19.48 cfs 1.391 af
36.0" Round Pipe n=0.012 L=719.0' S=0.0161 '/ Capacity=91.78 cfs Outflow=19.43 cfs 1.391 af

Reach P4: Avg. Flow Depth=2.74' Max Vel=5.10 fps Inflow=49.81 cfs 4.189 af
48.0" Round Pipe n=0.014 L=835.0' S=0.0019 '/ Capacity=57.47 cfs Outflow=46.51 cfs 4.178 af

Reach POA 4: Inflow=46.51 cfs 4.178 af
Outflow=46.51 cfs 4.178 af

Pond 59P: Peak Elev=51.16' Storage=51,890 cf Inflow=62.05 cfs 4.356 af
Discarded=4.40 cfs 2.957 af Primary=19.48 cfs 1.391 af Outflow=23.88 cfs 4.348 af

Total Runoff Area = 18.671 ac Runoff Volume = 7.154 af Average Runoff Depth = 4.60"
23.03% Pervious = 4.301 ac 76.97% Impervious = 14.371 ac

Summary for Subcatchment 60S:

Runoff = 41.70 cfs @ 12.08 hrs, Volume= 2.798 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
119,218	39	>75% Grass cover, Good, HSG A
246,220	98	Paved parking, HSG A
0	98	Roofs, HSG A
365,438	79	Weighted Average
119,218		32.62% Pervious Area
246,220		67.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment S59:

Runoff = 62.05 cfs @ 12.07 hrs, Volume= 4.356 af, Depth> 5.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.65"

Area (sf)	CN	Description
68,117	39	>75% Grass cover, Good, HSG A
272,053	98	Paved parking, HSG A
107,717	98	Roofs, HSG A
447,887	89	Weighted Average
68,117		15.21% Pervious Area
379,770		84.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

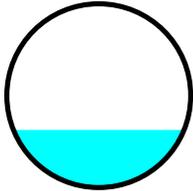
Summary for Reach 60R:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth = 1.62" for 100-Year event
Inflow = 19.48 cfs @ 12.30 hrs, Volume= 1.391 af
Outflow = 19.43 cfs @ 12.33 hrs, Volume= 1.391 af, Atten= 0%, Lag= 2.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.31 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 4.85 fps, Avg. Travel Time= 2.5 min

Peak Storage= 1,358 cf @ 12.31 hrs
Average Depth at Peak Storage= 0.94'
Bank-Full Depth= 3.00' Flow Area= 7.1 sf, Capacity= 91.78 cfs

36.0" Round Pipe
n= 0.012
Length= 719.0' Slope= 0.0161 '/'
Inlet Invert= 48.50', Outlet Invert= 36.90'



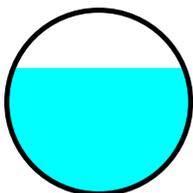
Summary for Reach P4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 2.69" for 100-Year event
Inflow = 49.81 cfs @ 12.10 hrs, Volume= 4.189 af
Outflow = 46.51 cfs @ 12.19 hrs, Volume= 4.178 af, Atten= 7%, Lag= 5.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.10 fps, Min. Travel Time= 2.7 min
Avg. Velocity = 2.00 fps, Avg. Travel Time= 7.0 min

Peak Storage= 7,664 cf @ 12.15 hrs
Average Depth at Peak Storage= 2.74'
Bank-Full Depth= 4.00' Flow Area= 12.6 sf, Capacity= 57.47 cfs

48.0" Round Pipe
n= 0.014
Length= 835.0' Slope= 0.0019 '/'
Inlet Invert= 36.90', Outlet Invert= 35.35'



Summary for Reach POA 4:

Inflow Area = 18.671 ac, 76.97% Impervious, Inflow Depth > 2.69" for 100-Year event
Inflow = 46.51 cfs @ 12.19 hrs, Volume= 4.178 af
Outflow = 46.51 cfs @ 12.19 hrs, Volume= 4.178 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 59P:

Inflow Area = 10.282 ac, 84.79% Impervious, Inflow Depth > 5.08" for 100-Year event
 Inflow = 62.05 cfs @ 12.07 hrs, Volume= 4.356 af
 Outflow = 23.88 cfs @ 12.30 hrs, Volume= 4.348 af, Atten= 62%, Lag= 13.7 min
 Discarded = 4.40 cfs @ 12.30 hrs, Volume= 2.957 af
 Primary = 19.48 cfs @ 12.30 hrs, Volume= 1.391 af

Routing by Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 51.16' @ 12.30 hrs Surf.Area= 21,120 sf Storage= 51,890 cf

Plug-Flow detention time= 38.5 min calculated for 4.348 af (100% of inflow)
 Center-of-Mass det. time= 37.6 min (792.0 - 754.4)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	87,360 cf	Custom Stage Data (Prismatic) Listed below x 2 Inside #2
#2	47.00'	74,880 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
			274,560 cf Overall - 87,360 cf Embedded = 187,200 cf x 40.0% Voids
		162,240 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	3,360	0	0
48.00	3,360	3,360	3,360
49.00	3,360	3,360	6,720
50.00	3,360	3,360	10,080
51.00	3,360	3,360	13,440
52.00	3,360	3,360	16,800
52.50	3,360	1,680	18,480
60.00	3,360	25,200	43,680

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	21,120	0	0
48.00	21,120	21,120	21,120
49.00	21,120	21,120	42,240
50.00	21,120	21,120	63,360
51.00	21,120	21,120	84,480
52.00	21,120	21,120	105,600
52.50	21,120	10,560	116,160
60.00	21,120	158,400	274,560

Device	Routing	Invert	Outlet Devices
#1	Discarded	47.00'	8.270 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'
#2	Primary	48.50'	24.0" Vert. Orifice/Grate C= 0.600

Discarded OutFlow Max=4.40 cfs @ 12.30 hrs HW=51.16' (Free Discharge)
 ↑1=Exfiltration (Controls 4.40 cfs)

Primary OutFlow Max=19.48 cfs @ 12.30 hrs HW=51.16' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 19.48 cfs @ 6.20 fps)

FlexTable: Catch Basin Table (3659-12003-StormCAD.stc)

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Inlet Drainage Area (acres)	Inlet C	Local Flow Time (min)	Flow (Known) (ft ³ /s)	System CA (acres)
CB-1	60.70	60.70	56.20	1.125	0.851	5.000	0.00	0.958
CB-2	60.40	60.40	56.40	0.069	0.980	5.000	0.00	0.067
CB-3	63.10	63.10	59.10	0.170	0.756	5.000	0.00	0.128
CB-4	63.10	63.10	59.10	0.210	0.740	5.000	0.00	0.155
CB-5	60.70	60.70	56.45	0.937	0.689	5.000	0.00	0.646
CB-6	57.85	57.85	54.50	0.849	0.849	5.000	0.00	0.720
CB-7	57.85	57.85	53.95	0.997	0.785	5.000	0.00	0.783
CB-8	60.00	60.00	55.50	0.962	0.903	5.000	0.00	0.869
CB-9	61.60	61.60	57.35	0.431	0.934	5.000	0.00	0.403
CB-10	57.60	57.60	53.60	0.313	0.941	5.000	0.00	0.294
CB-11	60.00	60.00	56.00	0.157	0.980	5.000	0.00	0.154
CB-12	60.00	60.00	55.90	0.142	0.955	5.000	0.00	0.136
CB-13	60.00	60.00	55.90	0.142	0.955	5.000	0.00	0.136
CB-14	60.00	60.00	55.90	0.151	0.957	5.000	0.00	0.144
CB-15	60.00	60.00	55.90	0.182	0.956	5.000	0.00	0.174
CB-16	60.00	60.00	54.70	0.175	0.975	5.000	0.00	0.171
CB-17	59.00	59.00	54.70	0.138	0.928	5.000	0.00	0.128
CB-18	59.00	59.00	54.40	0.114	0.965	5.000	0.00	0.110
CB-19	56.90	56.90	52.90	0.285	0.896	5.000	0.00	0.256
CB-20	56.80	56.80	52.80	0.250	0.896	5.000	0.00	0.224
CB-21	57.60	57.60	53.10	0.262	0.930	5.000	0.00	0.243
CB-22	55.00	55.00	51.00	0.330	0.885	5.000	0.00	0.292
CB-23	55.00	55.00	50.75	0.578	0.939	5.000	0.00	0.543
CB-24	58.10	58.10	54.00	0.285	0.948	5.000	0.00	0.270
CB-25	58.10	58.10	54.00	0.270	0.946	5.000	0.00	0.255
CB-26	56.90	56.90	52.65	0.474	0.953	5.000	0.00	0.451
CB-27	56.00	56.00	52.65	0.623	0.952	5.000	0.00	0.593
CB-28	58.20	58.20	54.10	0.279	0.947	5.000	0.00	0.264
CB-29	58.20	58.20	54.10	0.202	0.948	5.000	0.00	0.191
CB-30	56.90	56.90	52.65	0.568	0.963	5.000	0.00	0.547
CB-31	56.90	56.90	52.90	0.278	0.952	5.000	0.00	0.265
CB-32	58.20	58.20	51.30	0.196	0.975	5.000	0.00	0.191
CB-33	55.50	55.50	51.30	0.295	0.931	5.000	0.00	0.275
CB-34	54.80	54.80	50.80	0.554	0.935	5.000	0.00	0.519
CB-35	57.50	57.50	51.40	0.233	0.956	5.000	0.00	0.223
CB-36	54.30	54.30	50.30	0.288	0.935	5.000	0.00	0.269
CB-38	55.10	55.10	50.85	0.355	0.970	5.000	0.00	0.344
CB-39	59.00	59.00	53.05	0.391	0.970	5.000	0.00	0.379
CB-40	57.50	57.50	53.25	0.281	0.911	5.000	0.00	0.256
CB-41	55.90	55.90	51.40	1.058	0.960	5.000	0.00	1.016
CB-100	60.20	60.20	55.80	0.200	0.949	5.000	0.00	0.189
CB-101	60.20	60.20	55.80	0.178	0.948	5.000	0.00	0.169
CB-102	59.10	59.10	55.10	0.090	0.980	5.000	0.00	0.088
CB-200	57.00	57.00	52.75	0.444	0.946	5.000	0.00	0.420
CB-201	57.00	57.00	52.75	0.445	0.952	5.000	0.00	0.424
CB-202	56.50	56.50	51.50	2.764	0.960	5.000	0.00	2.654
CB-203	55.25	55.25	51.00	0.739	0.962	5.000	0.00	0.711
CB-300	58.00	58.00	54.00	0.048	0.736	5.000	0.00	0.036

FlexTable: Catch Basin Table (3659-12003-StormCAD.stc)

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Inlet Drainage Area (acres)	Inlet C	Local Flow Time (min)	Flow (Known) (ft ³ /s)	System CA (acres)
CB-301	59.00	59.00	54.60	0.358	0.972	5.000	0.00	0.348
CB-302	59.20	59.20	54.95	0.359	0.966	5.000	0.00	0.346
CB-400	55.25	55.25	51.00	0.809	0.961	5.000	0.00	0.778
CB-401	55.25	55.25	51.00	0.916	0.947	5.000	0.00	0.868
CB-500	58.00	58.00	53.75	0.376	0.970	5.000	0.00	0.365
CB-501	57.50	57.50	53.50	0.400	0.930	5.000	0.00	0.372
CB-502	57.00	57.00	52.75	0.494	0.959	5.000	0.00	0.474
CB-503	57.50	57.50	52.95	0.406	0.892	5.000	0.00	0.362
CB-504	62.50	62.50	57.55	0.587	0.696	5.000	0.00	0.408
CB-505	58.30	58.30	54.30	0.239	0.950	5.000	0.00	0.227
CB-506	58.50	58.50	54.50	0.188	0.938	5.000	0.00	0.177
CB-507	54.80	54.80	51.80	0.770	0.852	5.000	0.00	0.656
CB-508	56.75	56.75	52.25	0.065	0.969	5.000	0.00	0.063
CB-509	56.75	56.75	52.05	0.110	0.926	5.000	0.00	0.102
CB-510	53.75	53.75	49.70	0.509	0.857	5.000	0.00	0.436
CB-511	53.75	53.75	49.75	0.210	0.867	5.000	0.00	0.182
CB-600	101.60	101.60	97.25	0.474	0.922	5.000	0.00	0.437
CB-601	99.00	99.00	95.00	0.241	0.893	5.000	0.00	0.215
CB-602	96.75	96.75	92.25	1.244	0.653	5.000	0.00	0.812
CB-603	96.50	96.50	92.00	0.767	0.950	5.000	0.00	0.729
CB-604	101.90	101.90	97.90	0.290	0.926	5.000	0.00	0.269
CB-605	110.00	110.00	105.90	0.105	0.789	5.000	0.00	0.082
CB-606	110.00	110.00	105.90	0.135	0.757	5.000	0.00	0.102
CB-607	106.20	106.20	102.20	0.407	0.957	5.000	0.00	0.389
CB-608	105.80	105.80	101.80	0.397	0.813	5.000	0.00	0.323
CB-609	105.50	105.50	101.50	0.238	0.920	5.000	0.00	0.219
CB-610	68.25	68.25	63.30	0.097	0.980	5.000	0.00	0.095
CB-611	68.25	68.25	63.30	0.076	0.980	5.000	0.00	0.075
CB-612	62.60	62.60	58.60	0.370	0.727	5.000	0.00	0.269
CB-613	62.35	62.35	58.35	0.513	0.659	5.000	0.00	0.338
CB-614	59.20	59.20	55.20	0.115	0.886	5.000	0.00	0.102
CB-615	58.00	58.00	53.75	0.751	0.904	5.000	0.00	0.679
CB-616	57.50	57.50	53.50	0.218	0.930	5.000	0.00	0.202
CB-617	56.80	56.80	52.80	0.396	0.741	5.000	0.00	0.294
CB-618	56.80	56.80	52.80	0.229	0.980	5.000	0.00	0.224
CB-619	55.50	55.50	51.30	0.586	0.949	5.000	0.00	0.557
CB-620	56.00	56.00	51.30	0.883	0.944	5.000	0.00	0.834
CB-621	55.50	55.50	50.35	0.852	0.947	5.000	0.00	0.807
CB-622	55.50	55.50	50.35	0.569	0.943	5.000	0.00	0.537
CB-700	112.70	112.70	108.50	0.074	0.980	5.000	0.00	0.073
CB-701	112.70	112.70	108.50	0.096	0.935	5.000	0.00	0.089
CB-702	109.40	109.40	105.35	0.254	0.631	5.000	0.00	0.160
CB-703	109.40	109.40	105.35	0.053	0.849	5.000	0.00	0.045
CB-704	103.50	103.50	99.00	0.929	0.822	5.000	0.00	0.764
CB-705	103.50	103.50	99.25	0.681	0.952	5.000	0.00	0.649
CB-706	103.50	103.50	99.50	0.205	0.926	5.000	0.00	0.190
CB-707	91.00	91.00	86.10	0.406	0.842	5.000	0.00	0.342
CB-708	90.60	90.60	86.10	0.435	0.530	5.000	0.00	0.230

FlexTable: Catch Basin Table (3659-12003-StormCAD.stc)

Label	Elevation (Ground) (ft)	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Inlet Drainage Area (acres)	Inlet C	Local Flow Time (min)	Flow (Known) (ft ³ /s)	System CA (acres)
CB-709	81.50	81.50	77.15	0.315	0.805	5.000	0.00	0.254
CB-710	81.50	81.50	77.15	0.312	0.782	5.000	0.00	0.244
CB-711	67.50	67.50	63.35	0.087	0.500	5.000	0.00	0.044
CB-712	67.50	67.50	63.35	0.400	0.836	5.000	0.00	0.334
CB-713	60.90	60.90	56.90	0.410	0.682	5.000	0.00	0.279
CB-714	60.90	60.90	56.90	0.080	0.823	5.000	0.00	0.065
CB-715	61.00	61.00	57.00	0.069	0.834	5.000	0.00	0.058
CB-716	61.00	61.00	57.00	0.190	0.846	5.000	0.00	0.161
CB-717	55.00	55.00	51.00	0.207	0.838	5.000	0.00	0.173
CB-718	55.00	55.00	51.00	0.187	0.881	5.000	0.00	0.164
CB-719	57.75	57.75	53.75	0.187	0.500	5.000	0.00	0.093
CB-720	56.75	56.75	52.75	0.162	0.500	5.000	0.00	0.081
CB-900	53.80	53.80	49.30	0.367	0.952	5.000	0.00	0.350
CB-901	54.00	54.00	49.00	0.128	0.980	5.000	0.00	0.125
CB-1100	51.20	51.20	47.20	0.176	0.949	5.000	0.00	0.167
CB-1101	51.20	51.20	47.20	0.227	0.843	5.000	0.00	0.191
EF-601	110.00	110.00	92.10	(N/A)	(N/A)	5.000	51.48	0.000
EF-701	94.34	94.34	88.00	(N/A)	(N/A)	5.000	25.10	0.000
EF-702	87.92	87.92	83.00	(N/A)	(N/A)	5.000	25.95	0.000
IB-10P	56.80	56.80	49.50	(N/A)	(N/A)	5.000	11.53	0.000
IB-11P	58.50	58.50	49.50	(N/A)	(N/A)	5.000	30.92	0.000
RD-1	56.50	56.50	50.50	0.046	0.980	5.000	0.00	0.045
RD-2	57.50	57.50	51.00	0.521	0.980	5.000	0.00	0.511
RD-601	98.00	98.00	92.00	0.935	0.980	5.000	0.00	0.916
RD-602	98.00	98.00	92.00	0.730	0.980	5.000	0.00	0.716
RD-701	94.10	94.10	89.10	1.867	0.980	5.000	0.00	1.830
RD-701-703	61.50	61.50	51.85	0.923	0.980	5.000	0.00	0.905
RD-904	59.00	59.00	50.75	0.826	0.980	5.000	0.00	0.810
RD-1001-1003	63.00	63.00	59.45	0.638	0.980	5.000	0.00	0.626
RD-1004	63.50	63.50	58.55	0.388	0.980	5.000	0.00	0.381
RD-1005	64.00	64.00	58.00	0.803	0.980	5.000	0.00	0.787
RD-1006	64.50	64.50	57.25	3.192	0.980	5.000	0.00	3.128
RD-1007	63.50	63.50	57.00	0.595	0.980	5.000	0.00	0.583
RD-1008	63.50	63.50	57.00	0.595	0.980	5.000	0.00	0.583
RD-1009.1	63.50	63.50	56.00	1.624	0.980	5.000	0.00	1.592
RD-1009.2	63.50	63.50	54.45	1.083	0.980	5.000	0.00	1.061
RD-1009.3	63.50	63.50	55.30	0.541	0.980	5.000	0.00	0.531
RD-1010	58.00	58.00	51.10	1.716	0.894	5.000	0.00	1.535
RD-1011-1012	63.00	63.00	50.65	2.676	0.925	5.000	0.00	2.475
RD-1013	58.00	58.00	49.70	0.173	0.980	5.000	0.00	0.170
RD-1014	58.50	58.50	52.05	0.429	0.980	5.000	0.00	0.420

FlexTable: Manhole Table (3659-12003-StormCAD.stc)

Label	Elevation (Rim) (ft)	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Elevation (Invert in 1) (ft)	Elevation (Invert in 2) (ft)	Elevation (Invert in 3) (ft)	Elevation (Invert in 4) (ft)
DMH-1	63.50	63.50	55.20	56.20	56.20	56.15	55.30	(N/A)	(N/A)
DMH-2	63.80	63.80	54.70	55.83	55.83	59.00	54.80	(N/A)	(N/A)
DMH-3	63.80	63.80	53.80	54.78	54.78	59.00	53.90	(N/A)	(N/A)
DMH-4	63.50	63.50	53.15	54.12	54.12	53.25	(N/A)	(N/A)	(N/A)
DMH-5	62.75	62.75	51.45	53.28	53.28	52.25	51.45	(N/A)	(N/A)
DMH-6	61.30	61.30	56.00	56.89	56.89	56.10	(N/A)	(N/A)	(N/A)
DMH-7	58.50	58.50	53.70	55.01	55.01	54.25	53.80	53.70	(N/A)
DMH-8	61.30	61.30	52.65	53.95	53.95	52.65	(N/A)	(N/A)	(N/A)
DMH-9	61.00	61.00	51.95	53.43	53.43	57.00	55.20	52.05	(N/A)
DMH-10	62.00	62.00	50.10	51.93	51.93	50.10	(N/A)	(N/A)	(N/A)
DMH-11	57.50	57.50	49.25	51.25	51.25	53.50	49.35	(N/A)	(N/A)
DMH-12	59.80	59.80	54.95	55.76	55.76	55.05	55.80	55.80	(N/A)
DMH-13	59.80	59.80	53.90	54.82	54.82	54.00	55.80	55.80	(N/A)
DMH-14	58.60	58.60	53.10	54.11	54.11	54.60	54.60	53.20	(N/A)
DMH-15	58.20	58.20	52.05	53.26	53.26	52.80	54.20	52.15	(N/A)
DMH-16	57.50	57.50	51.65	52.73	52.73	52.70	51.75	(N/A)	(N/A)
DMH-17	56.90	56.90	49.15	51.11	51.11	49.25	52.90	51.35	(N/A)
DMH-18	56.25	56.25	48.70	50.89	50.89	50.65	50.85	48.80	(N/A)
DMH-19	57.90	57.90	53.35	54.13	54.13	53.90	53.90	(N/A)	(N/A)
DMH-20	56.50	56.50	52.45	53.50	53.50	52.55	52.55	(N/A)	(N/A)
DMH-21	57.50	57.50	52.20	53.30	53.30	53.25	52.30	(N/A)	(N/A)
DMH-22	58.00	58.00	53.60	54.27	54.27	54.00	54.00	(N/A)	(N/A)
DMH-23	57.00	57.00	52.45	53.34	53.34	52.55	52.80	(N/A)	(N/A)
DMH-24	57.70	57.70	51.15	52.53	52.53	53.45	51.25	52.30	(N/A)
DMH-25	55.20	55.20	50.65	52.17	52.17	50.75	51.20	51.20	(N/A)
DMH-26	55.10	55.10	50.40	52.10	52.10	51.10	50.50	50.50	(N/A)
DMH-27	54.70	54.70	49.40	51.44	51.44	50.70	50.15	50.15	49.50
DMH-28	56.85	56.85	48.20	50.63	50.63	48.20	48.20	(N/A)	(N/A)
DMH-29	57.20	57.20	52.95	53.81	53.81	53.20	52.95	(N/A)	(N/A)
DMH-30	56.60	56.60	47.65	50.28	50.28	51.25	52.35	50.80	47.75
DMH-31	57.00	57.00	47.15	49.77	49.77	47.25	(N/A)	(N/A)	(N/A)
DMH-100	59.90	59.90	55.60	56.31	56.31	55.90	55.90	(N/A)	(N/A)
DMH-101	58.80	58.80	54.30	55.01	55.01	54.65	54.80	(N/A)	(N/A)
DMH-102	58.40	58.40	54.05	54.74	54.74	54.15	(N/A)	(N/A)	(N/A)
DMH-200	56.90	56.90	50.70	52.52	52.52	50.80	51.30	52.55	52.60
DMH-201	57.90	57.90	50.55	52.31	52.31	50.65	(N/A)	(N/A)	(N/A)
DMH-300	58.50	58.50	53.80	54.42	54.42	54.50	53.90	(N/A)	(N/A)
DMH-301	59.75	59.75	53.25	54.20	54.20	54.45	53.35	(N/A)	(N/A)
DMH-302	58.00	58.00	52.05	52.98	52.98	53.00	(N/A)	(N/A)	(N/A)
DMH-400	55.85	55.85	50.80	51.94	51.94	50.90	50.90	(N/A)	(N/A)
DMH-401	55.90	55.90	49.90	51.83	51.83	50.75	(N/A)	(N/A)	(N/A)
DMH-500	57.60	57.60	53.25	54.16	54.16	53.60	53.35	(N/A)	(N/A)
DMH-501	56.80	56.80	51.80	52.89	52.89	52.80	52.50	52.55	(N/A)
DMH-502	58.50	58.50	52.70	53.54	53.54	54.45	54.10	54.25	(N/A)
DMH-503	58.00	58.00	51.15	52.01	52.01	51.25	51.25	51.25	(N/A)
DMH-504	57.50	57.50	50.45	51.54	51.54	50.55	52.55	(N/A)	(N/A)
DMH-505	56.50	56.50	50.00	51.44	51.44	51.45	50.10	(N/A)	(N/A)
DMH-506	54.00	54.00	49.35	50.94	50.94	49.70	49.45	49.45	(N/A)

FlexTable: Manhole Table (3659-12003-StormCAD.stc)

Label	Elevation (Rim) (ft)	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Elevation (Invert in 1) (ft)	Elevation (Invert in 2) (ft)	Elevation (Invert in 3) (ft)	Elevation (Invert in 4) (ft)
DMH-507	53.90	53.90	49.20	50.78	50.78	49.30	(N/A)	(N/A)	(N/A)
DMH-508	54.00	54.00	48.70	50.29	50.29	48.80	(N/A)	(N/A)	(N/A)
DMH-600	101.30	101.30	92.00	94.21	94.21	92.10	97.05	(N/A)	(N/A)
DMH-601	99.40	99.40	90.50	92.85	92.85	91.85	94.80	91.70	(N/A)
DMH-602	96.90	96.90	89.80	92.33	92.33	91.85	91.50	89.90	(N/A)
DMH-603	102.50	102.50	88.70	91.33	91.33	97.75	88.80	91.85	(N/A)
DMH-604	109.80	109.80	104.90	105.37	105.37	105.80	105.80	(N/A)	(N/A)
DMH-605	108.60	108.60	87.70	90.34	90.34	87.80	104.60	(N/A)	(N/A)
DMH-606	106.00	106.00	101.20	101.96	101.96	101.30	101.35	(N/A)	(N/A)
DMH-607	106.70	106.70	84.60	87.33	87.33	101.00	102.05	86.80	(N/A)
DMH-608	89.40	89.40	73.80	76.53	76.53	82.40	(N/A)	(N/A)	(N/A)
DMH-609	78.90	78.90	68.35	71.07	71.07	71.90	(N/A)	(N/A)	(N/A)
DMH-610	74.00	74.00	61.95	64.67	64.67	67.00	(N/A)	(N/A)	(N/A)
DMH-611	67.20	67.20	52.55	55.29	55.29	63.20	63.20	60.20	(N/A)
DMH-612	57.80	57.80	49.90	52.74	52.74	50.00	(N/A)	(N/A)	(N/A)
DMH-613	63.35	63.35	58.05	58.63	58.63	58.15	(N/A)	(N/A)	(N/A)
DMH-614	62.40	62.40	57.40	58.22	58.22	58.30	57.50	(N/A)	(N/A)
DMH-615	59.75	59.75	54.80	55.61	55.61	55.05	(N/A)	(N/A)	(N/A)
DMH-616	58.80	58.80	53.60	54.46	54.46	53.70	54.70	(N/A)	(N/A)
DMH-617	57.90	57.90	52.25	53.34	53.34	53.20	53.40	53.80	(N/A)
DMH-618	57.00	57.00	49.55	52.62	52.62	52.75	52.65	52.00	49.65
DMH-619	57.20	57.20	49.45	52.52	52.52	49.55	(N/A)	(N/A)	(N/A)
DMH-620	56.10	56.10	51.20	52.23	52.23	51.30	51.30	(N/A)	(N/A)
DMH-621	56.10	56.10	50.15	51.51	51.51	50.25	50.25	50.25	(N/A)
DMH-622	57.25	57.25	49.65	51.00	51.00	49.75	(N/A)	(N/A)	(N/A)
DMH-700	112.40	112.40	105.75	106.19	106.19	108.40	108.40	(N/A)	(N/A)
DMH-701	109.25	109.25	101.90	102.53	102.53	105.25	105.25	105.25	(N/A)
DMH-702	103.80	103.80	98.80	99.66	99.66	98.90	(N/A)	(N/A)	(N/A)
DMH-703	103.80	103.80	98.10	99.13	99.13	99.15	98.20	(N/A)	(N/A)
DMH-704	103.50	103.50	92.15	93.36	93.36	99.40	97.70	99.50	(N/A)
DMH-705	94.00	94.00	85.90	87.56	87.56	89.00	89.00	(N/A)	(N/A)
DMH-706	90.00	90.00	82.40	84.09	84.09	86.00	86.00	84.00	(N/A)
DMH-707	87.20	87.20	77.70	80.33	80.33	80.70	80.70	81.70	(N/A)
DMH-708	84.00	84.00	74.60	77.23	77.23	77.00	(N/A)	(N/A)	(N/A)
DMH-709	81.00	81.00	69.85	72.53	72.53	77.00	77.00	74.00	(N/A)
DMH-710	75.80	75.80	61.80	64.47	64.47	68.80	(N/A)	(N/A)	(N/A)
DMH-711	67.20	67.20	58.00	60.71	60.71	63.20	63.20	60.00	(N/A)
DMH-712	61.10	61.10	56.70	57.29	57.29	56.80	56.80	(N/A)	(N/A)
DMH-713	63.50	63.50	51.00	55.04	55.04	56.20	56.50	(N/A)	(N/A)
DMH-714	61.00	61.00	50.50	53.25	53.25	56.85	56.85	51.00	(N/A)
DMH-715	57.10	57.10	48.10	50.85	50.85	48.60	(N/A)	(N/A)	(N/A)
DMH-716	55.50	55.50	50.50	51.43	51.43	50.85	50.85	(N/A)	(N/A)
DMH-717	58.50	58.50	53.55	53.87	53.87	53.65	(N/A)	(N/A)	(N/A)
DMH-718	57.50	57.50	52.00	52.42	52.42	52.70	52.70	(N/A)	(N/A)
DMH-719	55.60	55.60	47.60	50.54	50.54	47.70	50.55	51.60	(N/A)
DMH-720	56.60	56.60	47.50	50.29	50.29	47.60	(N/A)	(N/A)	(N/A)
DMH-900	57.80	57.80	51.65	52.60	52.60	51.75	(N/A)	(N/A)	(N/A)
DMH-901	54.50	54.50	50.50	51.65	51.65	50.60	50.60	(N/A)	(N/A)

FlexTable: Manhole Table (3659-12003-StormCAD.stc)

Label	Elevation (Rim) (ft)	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Hydraulic Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Elevation (Invert in 1) (ft)	Elevation (Invert in 2) (ft)	Elevation (Invert in 3) (ft)	Elevation (Invert in 4) (ft)
DMH-902	54.00	54.00	49.40	50.53	50.53	49.50	(N/A)	(N/A)	(N/A)
DMH-903	54.00	54.00	49.20	50.33	50.33	49.30	(N/A)	(N/A)	(N/A)
DMH-904	55.50	55.50	48.05	49.12	49.12	48.15	(N/A)	(N/A)	(N/A)
DMH-905	62.00	62.00	56.50	56.50	56.50	(N/A)	(N/A)	(N/A)	(N/A)
DMH-906	60.10	60.10	55.50	55.50	55.50	55.60	(N/A)	(N/A)	(N/A)
DMH-907	60.20	60.20	47.65	48.76	48.76	54.60	47.75	(N/A)	(N/A)
DMH-1000	62.60	62.60	59.35	60.60	60.60	59.35	(N/A)	(N/A)	(N/A)
DMH-1001	63.40	63.40	58.40	59.95	59.95	58.50	58.40	(N/A)	(N/A)
DMH-1002	63.60	63.60	57.95	59.68	59.68	57.95	(N/A)	(N/A)	(N/A)
DMH-1003	63.75	63.75	57.55	59.30	59.30	57.55	(N/A)	(N/A)	(N/A)
DMH-1004	61.50	61.50	56.85	59.02	59.02	56.85	56.85	56.85	(N/A)
DMH-1005	63.70	63.70	55.05	57.03	57.03	55.05	(N/A)	(N/A)	(N/A)
DMH-1006	62.90	62.90	54.30	56.13	56.13	54.30	(N/A)	(N/A)	(N/A)
DMH-1007	62.70	62.70	57.80	57.80	57.80	(N/A)	(N/A)	(N/A)	(N/A)
DMH-1008	62.95	62.95	56.85	56.85	56.85	56.95	(N/A)	(N/A)	(N/A)
DMH-1009	63.80	63.80	55.75	55.75	55.75	55.85	(N/A)	(N/A)	(N/A)
DMH-1010	64.00	64.00	53.25	55.08	55.08	53.25	53.25	(N/A)	(N/A)
DMH-1011	62.40	62.40	53.05	54.85	54.85	53.05	(N/A)	(N/A)	(N/A)
DMH-1012	62.50	62.50	51.85	53.56	53.56	51.85	(N/A)	(N/A)	(N/A)
DMH-1013	62.50	62.50	50.60	52.33	52.33	50.60	(N/A)	(N/A)	(N/A)
DMH-1014	59.80	59.80	53.80	55.77	55.77	55.80	(N/A)	(N/A)	(N/A)
DMH-1015	58.65	58.65	53.50	55.10	55.10	54.15	53.50	(N/A)	(N/A)
DMH-1016	59.40	59.40	52.75	54.21	54.21	55.15	52.75	(N/A)	(N/A)
DMH-1017	63.00	63.00	52.00	53.59	53.59	56.90	52.00	(N/A)	(N/A)
DMH-1018	62.95	62.95	51.50	53.29	53.29	56.75	51.50	(N/A)	(N/A)
DMH-1019	64.50	64.50	50.80	52.57	52.57	50.80	(N/A)	(N/A)	(N/A)
DMH-1020	62.50	62.50	49.55	51.27	51.27	49.55	(N/A)	(N/A)	(N/A)
DMH-1021	62.50	62.50	48.20	50.19	50.19	49.50	48.20	(N/A)	(N/A)
DMH-1022	59.20	59.20	47.15	49.12	49.12	47.15	(N/A)	(N/A)	(N/A)
DMH-1023	57.00	57.00	50.90	51.99	51.99	51.00	(N/A)	(N/A)	(N/A)
DMH-1024	55.80	55.80	49.80	51.55	51.55	50.50	50.50	(N/A)	(N/A)
DMH-1025	57.80	57.80	48.45	50.05	50.05	48.55	49.45	(N/A)	(N/A)
DMH-1026	58.40	58.40	47.15	48.74	48.74	48.00	(N/A)	(N/A)	(N/A)
DMH-1100	58.50	58.50	49.35	51.15	51.15	49.45	(N/A)	(N/A)	(N/A)
DMH-1101	57.10	57.10	48.35	50.15	50.15	48.45	(N/A)	(N/A)	(N/A)
DMH-1102	56.85	56.85	49.35	50.43	50.43	49.45	(N/A)	(N/A)	(N/A)
DMH-1103	57.00	57.00	47.10	48.18	48.18	49.05	(N/A)	(N/A)	(N/A)
DMH-1104	51.60	51.60	46.90	47.50	47.50	47.00	47.00	(N/A)	(N/A)
DMH-1105	51.30	51.30	45.20	46.37	46.37	45.30	46.85	(N/A)	(N/A)
DMH-1106	57.10	57.10	43.80	45.80	45.80	46.75	43.90	(N/A)	(N/A)
DMH-1200	67.50	67.50	49.45	49.45	49.45	(N/A)	(N/A)	(N/A)	(N/A)
DMH-1201	57.10	57.10	47.30	47.30	47.30	47.40	(N/A)	(N/A)	(N/A)

FlexTable: Outfall Table (3659-12003-StormCAD.stc)

Label	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Depth (ft)	Hydraulic Grade Line (ft)
DMH-908	53.00	48.15	0.00	48.15
EDMH-500	52.90	47.30	0.00	47.30
EDMH-900	53.17	48.70	0.00	48.70
EDMH-1100	52.98	42.00	0.00	42.00
EFES-1200	50.00	47.18	0.00	47.18
FES-601	49.00	49.00	0.00	49.00
FES-602	49.00	49.00	0.00	49.00
FES-701	47.00	47.00	0.00	47.00
OF-1	55.90	47.00	0.00	47.00
OF-101	58.55	53.80	0.00	53.80
OF-201	57.00	50.30	0.00	50.30
OF-301	56.00	51.75	0.00	51.75
OF-401	56.50	49.70	0.00	49.70
OF-901	58.85	47.00	0.00	47.00
OF-1001	58.70	47.00	0.00	47.00
OF-1002	57.50	47.00	0.00	47.00
OF-1003	56.50	51.65	0.00	51.65

Conduit FlexTable: Combined Pipe/Node Report (3659-12003-StormCAD.stc)

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Diameter (in)	Upstream Inlet Area (acres)	System Drainage Area (acres)	System CA (acres)	Length (Scaled) (ft)	Slope (ft/ft)	Total Flow (ft³/s)	Capacity (Full Flow) (ft³/s)	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
EP-701	EF-701	88.00	DMH-707	80.70	24.0	(N/A)	0.000	0.000	167.0	0.044	25.10	47.30	94.34	89.76	87.20	81.74	4.34	4.50	15.28
EP-702	EF-702	83.00	DMH-707	80.70	24.0	(N/A)	0.000	0.000	152.4	0.015	25.95	27.83	87.92	84.79	87.20	82.23	2.92	4.50	10.06
EP-1200	DMH-1201	47.30	EFES-1200	47.18	12.0	(N/A)	0.000	0.000	417.4	0.000	0.00	0.60	57.10	47.30	50.00	47.18	8.80	1.82	0.00
P-1	CB-1	56.20	DMH-1	55.30	18.0	1.125	1.125	0.958	175.2	0.005	5.79	7.53	60.70	57.19	63.50	56.23	3.00	6.70	4.70
P-2	CB-2	56.40	DMH-1	56.15	12.0	0.069	0.069	0.067	44.9	0.006	0.41	2.66	60.40	56.66	63.50	56.41	3.00	6.35	2.45
P-3	DMH-1	55.20	DMH-2	54.80	18.0	(N/A)	1.194	1.025	72.9	0.005	6.08	7.78	63.50	56.20	63.80	55.83	6.80	7.50	4.87
P-4	CB-3	59.10	DMH-2	59.00	12.0	0.170	0.170	0.128	18.0	0.006	0.78	2.66	63.10	59.47	63.80	59.37	3.00	3.80	2.94
P-5	DMH-2	54.70	DMH-3	53.90	18.0	(N/A)	1.363	1.154	162.0	0.005	6.78	7.38	63.80	55.83	63.80	54.91	7.60	8.40	4.74
P-6	CB-4	59.10	DMH-3	59.00	12.0	0.210	0.210	0.155	18.0	0.006	0.94	2.66	63.10	59.51	63.80	59.41	3.00	3.80	3.09
P-7	DMH-3	53.80	DMH-4	53.25	24.0	(N/A)	1.573	1.309	109.3	0.005	7.55	16.07	63.80	54.78	63.50	54.21	8.00	8.25	5.03
P-8	DMH-4	53.15	DMH-5	52.25	24.0	(N/A)	1.573	1.309	182.2	0.005	7.46	15.91	63.50	54.12	62.75	53.28	8.35	8.50	4.98
P-9	CB-5	56.45	DMH-6	56.10	15.0	0.937	0.937	0.646	67.0	0.005	3.90	4.67	60.70	57.32	61.30	56.90	3.00	3.95	4.26
P-10	DMH-6	56.00	DMH-7	54.25	15.0	(N/A)	0.937	0.646	353.9	0.005	3.87	4.54	61.30	56.89	58.50	55.05	4.05	3.00	4.16
P-11	CB-6	54.50	DMH-7	53.70	15.0	0.849	0.849	0.720	165.9	0.005	4.35	4.48	57.85	55.77	58.50	55.01	2.10	3.55	3.55
P-12	CB-7	53.95	DMH-7	53.80	18.0	0.997	0.997	0.783	35.0	0.004	4.73	6.88	57.85	55.06	58.50	55.01	2.40	3.20	4.20
P-13	DMH-7	53.70	DMH-8	52.65	24.0	(N/A)	2.783	2.148	207.7	0.005	12.30	16.07	58.50	55.01	61.30	53.95	2.80	6.65	5.64
P-14	DMH-8	52.65	DMH-9	52.05	24.0	(N/A)	2.783	2.148	122.1	0.005	12.05	15.86	61.30	53.95	61.00	53.43	6.65	6.95	5.55
P-15	CB-8	55.50	DMH-9	55.20	18.0	0.962	0.962	0.869	60.0	0.005	5.26	7.43	60.00	56.43	61.00	56.08	3.00	4.30	4.56
P-16	CB-9	57.36	DMH-9	57.00	12.0	0.431	0.431	0.403	69.5	0.005	2.43	2.55	61.60	58.14	61.00	57.67	3.24	3.00	3.70
P-17	DMH-9	51.95	DMH-5	51.45	30.0	(N/A)	4.176	3.420	95.2	0.005	18.94	29.76	61.00	53.43	62.75	53.28	6.55	8.80	6.42
P-18	DMH-5	51.45	DMH-10	50.10	30.0	(N/A)	5.749	4.729	265.7	0.005	25.96	29.22	62.75	53.28	62.00	51.93	8.80	9.40	6.73
P-19	DMH-10	50.10	DMH-11	49.35	30.0	(N/A)	5.749	4.729	153.5	0.005	25.37	28.62	62.00	51.93	57.50	51.25	9.40	5.65	6.59
P-20	CB-10	53.60	DMH-11	53.50	12.0	0.313	0.313	0.294	24.1	0.004	1.78	2.30	57.60	54.25	57.50	54.07	3.00	3.00	3.23
P-21	DMH-11	49.35	DMH-17	49.25	30.0	(N/A)	6.062	5.023	22.2	0.005	26.57	27.65	57.50	51.25	56.90	51.11	5.65	5.15	6.42
P-22	CB-11	56.00	DMH-12	55.05	12.0	0.157	0.157	0.154	192.1	0.005	0.93	2.51	60.00	56.42	59.80	55.76	3.00	3.75	2.95
P-23	CB-12	55.90	DMH-12	55.80	12.0	0.142	0.142	0.136	21.1	0.005	0.82	2.46	60.00	56.30	59.80	56.18	3.10	3.00	2.82
P-24	CB-13	55.90	DMH-12	55.80	12.0	0.142	0.142	0.136	14.4	0.007	0.82	3.01	60.00	56.28	59.80	56.16	3.10	3.00	3.27
P-25	DMH-12	54.95	DMH-13	54.00	12.0	(N/A)	0.442	0.426	190.0	0.005	2.49	2.52	59.80	55.76	59.80	54.82	3.85	4.80	3.66
P-26	CB-14	55.90	DMH-13	55.80	12.0	0.151	0.151	0.144	21.1	0.005	0.87	2.46	60.00	56.31	59.80	56.19	3.10	3.00	2.86
P-27	CB-15	55.90	DMH-13	55.80	12.0	0.182	0.182	0.174	14.4	0.007	1.05	3.01	60.00	56.33	59.80	56.21	3.10	3.00	3.49
P-28	DMH-13	53.90	DMH-14	53.20	15.0	(N/A)	0.774	0.744	130.0	0.005	4.22	4.74	59.80	54.82	58.60	54.11	4.65	4.15	4.36
P-29	CB-16	54.70	DMH-14	54.60	12.0	0.175	0.175	0.171	21.1	0.005	1.03	2.46	60.00	55.15	58.60	55.03	4.30	3.00	2.99
P-30	CB-17	54.70	DMH-14	54.60	12.0	0.138	0.138	0.128	14.4	0.007	0.78	3.01	59.00	55.07	58.60	54.95	3.30	3.00	3.21
P-31	DMH-14	53.10	DMH-15	52.15	18.0	(N/A)	1.088	1.043	193.1	0.005	5.82	7.37	58.60	54.11	58.20	53.26	4.00	4.55	4.62
P-32	CB-18	54.40	DMH-15	54.20	12.0	0.114	0.114	0.110	42.6	0.005	0.67	2.43	59.00	54.76	58.20	54.54	3.60	3.00	2.64
P-33	CB-19	52.90	DMH-15	52.80	12.0	0.285	0.285	0.256	18.9	0.005	1.55	2.58	56.90	53.46	58.20	53.33	3.00	4.40	3.44
P-34	DMH-15	52.05	DMH-16	51.75	18.0	(N/A)	1.487	1.409	56.0	0.005	7.67	7.69	58.20	53.26	57.50	52.82	4.65	4.25	4.96
P-35	CB-20	52.80	DMH-16	52.70	12.0	0.250	0.250	0.224	18.9	0.005	1.35	2.58	56.80	53.31	57.50	53.19	3.00	3.80	3.33
P-36	DMH-16	51.65	DMH-17	51.35	24.0	(N/A)	1.737	1.632	64.5	0.005	8.83	15.49	57.50	52.73	56.90	52.41	3.85	3.55	5.09
P-37	CB-21	53.10	DMH-17	52.90	12.0	0.262	0.262	0.243	38.0	0.005	1.47	2.58	57.60	53.64	56.90	53.41	3.50	3.00	3.40
P-38	DMH-17	49.15	DMH-18	48.80	36.0	(N/A)	8.061	6.899	65.4	0.005	36.42	48.94	56.90	51.11	56.25	50.89	4.75	4.45	7.59
P-39	CB-22	51.00	DMH-18	50.85	12.0	0.330	0.330	0.292	31.9	0.005	1.77	2.44	55.00	51.63	56.25	51.42	3.00	4.40	3.38
P-40	CB-23	50.75	DMH-18	50.65	15.0	0.578	0.578	0.543	21.0	0.005	3.28	4.46	55.00	51.54	56.25	51.38	3.00	4.35	3.97
P-41	DMH-18	48.70	DMH-28	48.20	36.0	(N/A)	8.969	7.734	93.4	0.005	40.62	48.90	56.25	50.89	56.85	50.63	4.55	5.65	7.57
P-42	CB-24	54.00	DMH-19	53.90	12.0	0.285	0.285	0.270	21.1	0.005	1.63	2.46	58.10	54.59	57.90	54.44	3.10	3.00	3.35
P-43	CB-25	54.00	DMH-19	53.90	12.0	0.270	0.270	0.255	14.4	0.007	1.54	3.01	58.10	54.53	57.90	54.41	3.10	3.00	3.86
P-44	DMH-19	53.35	DMH-21	53.25	15.0	(N/A)	0.555	0.525	22.5	0.005	3.17	4.35	57.90	54.13	57.50	53.97	3.30	3.00	3.87

Conduit FlexTable: Combined Pipe/Node Report (3659-12003-StormCAD.stc)

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Diameter (in)	Upstream Inlet Area (acres)	System Drainage Area (acres)	System CA (acres)	Length (Scaled) (ft)	Slope (ft/ft)	Total Flow (ft³/s)	Capacity (Full Flow) (ft³/s)	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
P-45	CB-26	52.65	DMH-20	52.55	15.0	0.474	0.474	0.451	21.1	0.005	2.73	4.46	56.90	53.53	56.50	53.50	3.00	2.70	3.81
P-46	CB-27	52.65	DMH-20	52.55	15.0	0.623	0.623	0.593	14.6	0.007	3.59	5.27	56.00	53.52	56.50	53.50	2.10	2.70	4.62
P-47	DMH-20	52.45	DMH-21	52.30	18.0	(N/A)	1.097	1.044	30.1	0.005	6.30	7.43	56.50	53.50	57.50	53.30	2.55	3.70	4.71
P-48	DMH-21	52.20	DMH-24	51.25	24.0	(N/A)	1.651	1.570	190.0	0.005	9.43	16.00	57.50	53.30	57.70	52.53	3.30	4.45	5.30
P-49	CB-28	54.10	DMH-22	54.00	12.0	0.279	0.279	0.264	21.1	0.005	1.60	2.46	58.20	54.68	58.00	54.54	3.10	3.00	3.33
P-50	CB-29	54.10	DMH-22	54.00	12.0	0.202	0.202	0.191	14.4	0.007	1.16	3.01	58.20	54.55	58.00	54.43	3.10	3.00	3.58
P-51	DMH-22	53.60	DMH-24	53.45	15.0	(N/A)	0.481	0.456	22.5	0.007	2.75	5.33	58.00	54.27	57.70	54.09	3.15	3.00	4.38
P-52	CB-30	52.65	DMH-23	52.55	15.0	0.568	0.568	0.547	21.1	0.005	3.31	4.46	56.90	53.45	57.00	53.34	3.00	3.20	3.98
P-53	CB-31	52.90	DMH-23	52.80	12.0	0.278	0.278	0.265	14.6	0.007	1.60	2.91	56.90	53.44	57.00	53.34	3.00	3.20	3.79
P-54	DMH-23	52.45	DMH-24	52.30	18.0	(N/A)	0.846	0.811	30.1	0.005	4.89	7.43	57.00	53.34	57.70	53.15	3.05	3.90	4.49
P-55	DMH-24	51.15	DMH-26	50.50	30.0	(N/A)	2.978	2.837	130.0	0.005	16.72	29.00	57.70	52.53	55.10	52.10	4.05	2.10	6.12
P-56	CB-32	51.30	DMH-25	51.20	12.0	0.196	0.196	0.191	21.1	0.005	1.15	2.46	58.20	52.19	55.20	52.17	5.90	3.00	3.08
P-57	CB-33	51.30	DMH-25	51.20	12.0	0.295	0.295	0.275	14.4	0.007	1.66	3.01	55.50	52.19	55.20	52.17	3.20	3.00	3.93
P-58	CB-34	50.85	DMH-25	50.75	15.0	0.554	0.554	0.519	19.0	0.005	3.14	4.69	54.80	52.22	55.20	52.17	2.70	3.20	2.56
P-59	DMH-25	50.65	DMH-26	50.50	18.0	(N/A)	1.045	0.984	22.5	0.007	5.93	8.67	55.20	52.17	55.10	52.10	3.05	3.10	3.36
P-60	CB-35	51.40	DMH-26	51.10	12.0	0.233	0.233	0.223	47.8	0.006	1.35	2.82	57.50	52.15	55.10	52.10	5.10	3.00	3.55
P-61	DMH-26	50.40	DMH-27	49.50	30.0	(N/A)	4.257	4.044	178.4	0.005	23.57	29.16	55.10	52.10	54.70	51.44	2.20	2.70	6.61
P-62	CB-36	50.30	DMH-27	50.15	12.0	0.288	0.288	0.269	25.1	0.006	1.63	2.76	54.30	51.50	54.70	51.44	3.00	3.55	2.07
P-64	CB-38	50.85	DMH-27	50.70	12.0	0.355	0.355	0.344	27.4	0.006	2.08	2.66	55.10	51.54	54.70	51.44	3.25	3.00	3.74
P-65	DMH-27	49.40	DMH-28	48.20	30.0	(N/A)	4.945	4.702	242.0	0.005	27.00	28.88	54.70	51.44	56.85	50.63	2.80	6.15	6.69
P-66	DMH-28	48.20	DMH-30	47.75	48.0	(N/A)	13.915	12.436	86.5	0.005	64.80	103.90	56.85	50.63	56.60	50.28	4.65	4.85	8.72
P-67	CB-39	53.05	DMH-29	52.95	15.0	0.391	0.391	0.379	21.1	0.005	2.29	4.46	59.00	53.84	57.20	53.81	4.70	3.00	3.66
P-68	CB-40	53.25	DMH-29	53.20	12.0	0.281	0.281	0.256	14.4	0.004	1.55	2.13	57.50	53.87	57.20	53.81	3.25	3.00	2.96
P-69	DMH-29	52.95	DMH-30	52.35	15.0	(N/A)	0.672	0.635	109.2	0.006	3.83	4.79	57.20	53.81	56.60	53.14	3.00	3.00	4.23
P-70	CB-41	51.40	DMH-30	51.25	18.0	1.058	1.058	1.016	29.1	0.005	6.14	7.55	55.90	52.47	56.60	52.21	3.00	3.85	4.46
P-71	DMH-30	47.65	DMH-31	47.25	48.0	(N/A)	16.166	14.599	83.5	0.005	75.60	99.12	56.60	50.28	57.00	49.87	4.95	5.75	8.68
P-72	DMH-31	47.15	OF-1	47.00	48.0	(N/A)	16.166	14.599	25.0	0.006	75.15	111.26	57.00	49.77	55.90	49.47	5.85	4.90	9.51
P-100	CB-100	56.00	DMH-100	55.90	12.0	0.200	0.200	0.189	21.3	0.005	1.15	2.46	60.20	56.48	59.90	56.35	3.20	3.00	3.08
P-101	CB-101	56.00	DMH-100	55.90	12.0	0.178	0.178	0.169	21.3	0.005	1.02	2.46	60.20	56.45	59.90	56.32	3.20	3.00	2.98
P-102	DMH-100	55.60	DMH-101	54.80	12.0	(N/A)	0.378	0.358	161.4	0.005	2.16	2.51	59.90	56.31	58.80	55.43	3.30	3.00	3.60
P-103	CB-102	55.10	DMH-101	54.65	12.0	0.090	0.090	0.088	77.5	0.006	0.53	2.72	59.10	55.40	58.80	55.01	3.00	3.15	2.69
P-104	DMH-101	54.30	DMH-102	54.15	15.0	(N/A)	0.467	0.446	34.0	0.004	2.62	4.29	58.80	55.01	58.40	54.80	3.25	3.00	3.67
P-105	DMH-102	54.05	OF-101	53.80	15.0	(N/A)	0.467	0.446	47.0	0.005	2.61	4.71	58.40	54.74	58.55	54.45	3.10	3.50	3.73
P-200	CB-200	52.75	DMH-200	52.60	15.0	0.444	0.444	0.420	30.1	0.005	2.54	4.57	57.00	53.42	56.90	53.24	3.00	3.05	3.82
P-201	CB-201	52.75	DMH-200	52.55	15.0	0.445	0.445	0.424	41.5	0.005	2.56	4.51	57.00	53.42	56.90	53.19	3.00	3.10	3.79
P-202	CB-202	51.50	DMH-200	51.30	24.0	2.764	2.764	2.654	34.2	0.006	16.05	17.35	56.50	53.01	56.90	52.74	3.00	3.60	6.27
P-203	CB-203	51.00	DMH-200	50.80	15.0	0.739	0.739	0.711	42.3	0.005	4.30	4.46	55.25	52.71	56.90	52.52	3.00	4.85	3.50
P-204	DMH-200	50.70	DMH-201	50.65	30.0	(N/A)	4.393	4.210	11.9	0.004	25.30	26.48	56.90	52.52	57.90	52.36	3.70	4.75	6.14
P-205	DMH-201	50.55	OF-201	50.30	30.0	(N/A)	4.393	4.210	40.0	0.006	25.27	32.43	57.90	52.31	57.00	52.01	4.85	4.20	6.83
P-300	CB-300	54.00	DMH-300	53.90	12.0	0.048	0.048	0.036	20.6	0.005	0.22	2.46	58.00	54.42	58.50	54.42	3.00	3.60	1.92
P-301	CB-301	54.60	DMH-300	54.50	12.0	0.358	0.358	0.348	14.0	0.007	2.10	3.01	59.00	55.22	58.50	55.12	3.40	3.00	4.15
P-302	DMH-300	53.80	DMH-301	53.35	15.0	(N/A)	0.406	0.383	87.0	0.005	2.31	4.65	58.50	54.42	59.75	54.20	3.45	5.15	3.78
P-303	CB-302	54.95	DMH-301	54.45	15.0	0.359	0.359	0.346	97.1	0.005	2.10	4.64	59.20	55.54	59.75	55.03	3.00	4.05	3.68
P-304	DMH-301	53.25	DMH-302	53.00	15.0	(N/A)	0.765	0.730	48.5	0.005	4.34	4.61	59.75	54.20	58.00	53.84	5.25	3.75	4.27
P-305	DMH-302	52.05	OF-301	51.75	15.0	(N/A)	0.765	0.730	48.0	0.006	4.31	5.11	58.00	52.98	56.00	52.59	4.70	3.00	4.40
P-400	CB-400	51.00	DMH-400	50.90	15.0	0.809	0.809	0.778	12.2	0.008	4.70	5.90	55.25	51.96	55.85	51.94	3.00	3.70	5.34
P-401	CB-401	51.00	DMH-400	50.90	15.0	0.916	0.916	0.868	12.2	0.008	5.25	5.90	55.25	51.98	55.85	51.94	3.00	3.70	5.43

Conduit FlexTable: Combined Pipe/Node Report (3659-12003-StormCAD.stc)

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Diameter (in)	Upstream Inlet Area (acres)	System Drainage Area (acres)	System CA (acres)	Length (Scaled) (ft)	Slope (ft/ft)	Total Flow (ft³/s)	Capacity (Full Flow) (ft³/s)	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
P-402	DMH-400	50.80	DMH-401	50.75	24.0	(N/A)	1.725	1.645	10.0	0.005	9.94	16.00	55.85	51.94	55.90	51.88	3.05	3.15	5.36
P-403	DMH-401	50.65	OF-401	50.50	24.0	(N/A)	1.725	1.645	25.8	0.006	9.93	17.18	55.90	51.83	56.50	51.63	3.25	4.00	5.17
P-500	CB-500	53.75	DMH-500	53.60	12.0	0.376	0.376	0.365	35.8	0.004	2.21	2.30	58.00	54.50	57.60	54.24	3.25	3.00	3.33
P-501	CB-501	53.50	DMH-500	53.35	12.0	0.400	0.400	0.372	33.0	0.005	2.25	2.40	57.50	54.29	57.60	54.16	3.00	3.25	3.48
P-502	DMH-500	53.25	DMH-501	52.55	15.0	(N/A)	0.776	0.737	116.0	0.006	4.43	5.02	57.60	54.16	56.80	53.40	3.10	3.00	4.62
P-503	CB-502	52.75	DMH-501	52.50	15.0	0.494	0.494	0.474	47.0	0.005	2.87	4.71	57.00	53.45	56.80	53.18	3.00	3.05	4.02
P-504	CB-503	52.95	DMH-501	52.80	12.0	0.406	0.406	0.362	33.0	0.005	2.19	2.40	57.50	53.68	56.80	53.43	3.55	3.00	3.47
P-505	DMH-501	51.80	DMH-505	51.45	24.0	(N/A)	1.676	1.573	67.0	0.005	9.33	16.35	56.80	52.89	56.50	52.53	3.00	3.05	5.38
P-506	CB-504	57.55	DMH-502	54.25	12.0	0.587	0.587	0.408	330.8	0.010	2.47	3.56	62.50	58.22	58.50	54.86	3.95	3.25	4.89
P-507	CB-505	54.30	DMH-502	54.10	12.0	0.239	0.239	0.227	39.0	0.005	1.37	2.55	58.30	54.82	58.50	54.60	3.00	3.40	3.31
P-508	CB-506	54.50	DMH-502	54.45	12.0	0.188	0.188	0.177	8.9	0.006	1.07	2.66	58.50	54.94	58.50	54.88	3.00	3.05	3.20
P-509	DMH-502	52.70	DMH-504	52.55	18.0	(N/A)	1.013	0.812	23.1	0.007	4.73	8.48	58.50	53.54	57.50	53.35	4.30	3.45	4.93
P-510	CB-507	51.80	DMH-503	51.25	15.0	0.770	0.770	0.656	111.7	0.005	3.97	4.53	54.80	52.71	58.00	52.06	1.75	5.50	4.16
P-511	CB-508	52.25	DMH-503	51.25	12.0	0.065	0.065	0.063	204.5	0.005	0.38	2.49	56.75	52.51	58.00	52.01	3.50	5.75	2.30
P-512	CB-509	52.05	DMH-503	51.25	12.0	0.110	0.110	0.102	157.0	0.005	0.62	2.54	56.75	52.39	58.00	52.01	3.70	5.75	2.67
P-513	DMH-503	51.15	DMH-504	50.55	18.0	(N/A)	0.945	0.821	115.4	0.005	4.73	7.59	58.00	52.01	57.50	51.54	5.35	5.45	4.53
P-514	DMH-504	50.45	DMH-505	50.10	24.0	(N/A)	1.959	1.633	65.3	0.005	9.28	16.60	57.50	51.54	56.50	51.44	5.05	4.40	5.43
P-515	DMH-505	50.00	DMH-506	49.45	30.0	(N/A)	3.635	3.206	110.4	0.005	18.10	29.00	56.50	51.44	54.00	50.94	4.00	2.05	6.23
P-516	CB-510	49.70	DMH-506	49.45	15.0	0.509	0.509	0.436	45.9	0.005	2.64	4.76	53.75	51.02	54.00	50.94	2.80	3.30	2.15
P-517	CB-511	49.75	DMH-506	49.70	12.0	0.210	0.210	0.182	19.5	0.003	1.10	1.83	53.75	50.96	54.00	50.94	3.00	3.30	1.40
P-518	DMH-506	49.35	DMH-507	49.30	30.0	(N/A)	4.355	3.824	10.0	0.005	21.37	29.00	54.00	50.94	53.90	50.87	2.15	2.10	6.46
P-519	DMH-507	49.20	DMH-508	48.80	30.0	(N/A)	4.355	3.824	78.3	0.005	21.36	29.37	53.90	50.78	54.00	50.37	2.20	2.70	6.53
P-520	DMH-508	48.70	EDMH-500	47.30	30.0	(N/A)	4.355	3.824	283.2	0.005	21.21	28.85	54.00	50.29	52.90	48.87	2.80	3.10	6.42
P-600	CB-600	97.25	DMH-600	97.05	15.0	0.474	0.474	0.437	39.8	0.005	2.64	4.57	101.60	97.93	101.30	97.70	3.10	3.00	3.86
P-601	EF-601	93.00	DMH-600	92.10	48.0	(N/A)	0.000	0.000	179.1	0.005	51.48	101.85	110.00	95.15	101.30	94.11	13.00	5.20	8.13
P-602	DMH-600	92.00	DMH-601	91.70	48.0	(N/A)	0.474	0.437	53.0	0.006	54.09	108.06	101.30	94.21	99.40	93.73	5.30	3.70	8.60
P-603	CB-601	95.00	DMH-601	94.80	12.0	0.241	0.241	0.215	35.8	0.006	1.30	2.66	99.00	95.49	99.40	95.28	3.00	3.60	3.37
P-604	DMH-601	90.50	DMH-602	89.90	48.0	(N/A)	1.650	1.569	124.0	0.005	60.83	99.91	99.40	92.85	96.90	92.33	4.90	3.00	8.34
P-605	CB-602	92.25	DMH-602	91.50	18.0	1.244	1.244	0.812	153.0	0.005	4.91	7.35	96.75	93.15	96.90	92.35	3.00	3.90	4.46
P-606	CB-603	92.00	DMH-602	91.85	18.0	0.767	0.767	0.729	29.0	0.005	4.41	7.55	96.50	92.82	96.90	92.66	3.00	3.55	4.44
P-607	DMH-602	89.80	DMH-603	88.80	48.0	(N/A)	3.661	3.109	200.0	0.005	69.86	101.57	96.90	92.33	102.50	91.33	3.10	9.70	8.71
P-608	CB-604	97.90	DMH-603	97.75	12.0	0.290	0.290	0.269	29.0	0.005	1.62	2.56	101.90	98.48	102.50	98.29	3.00	3.75	3.45
P-609	DMH-603	88.70	DMH-605	87.80	48.0	(N/A)	4.681	4.094	176.8	0.005	75.38	102.42	102.50	91.33	108.60	90.35	9.80	16.80	8.91
P-610	CB-605	105.90	DMH-604	105.80	12.0	0.105	0.105	0.082	19.1	0.005	0.50	2.58	110.00	106.20	109.80	106.09	3.10	3.00	2.54
P-611	CB-606	105.90	DMH-604	105.80	12.0	0.135	0.135	0.102	19.1	0.005	0.62	2.58	110.00	106.23	109.80	106.13	3.10	3.00	2.71
P-612	DMH-604	104.90	DMH-605	104.60	12.0	(N/A)	0.240	0.185	64.0	0.005	1.11	2.44	109.80	105.37	108.60	105.04	3.90	3.00	3.04
P-613	DMH-605	87.70	DMH-607	86.80	48.0	(N/A)	4.921	4.278	177.2	0.005	76.18	102.42	108.60	90.34	106.70	89.37	16.90	15.90	8.93
P-614	CB-607	102.20	DMH-607	102.05	12.0	0.407	0.407	0.389	31.7	0.005	2.35	2.44	106.20	102.96	106.70	102.71	3.00	3.65	3.54
P-615	CB-608	101.80	DMH-606	101.35	12.0	0.397	0.397	0.323	91.2	0.005	1.95	2.51	105.80	102.46	106.00	101.96	3.00	3.65	3.53
P-616	CB-609	101.50	DMH-606	101.30	12.0	0.238	0.238	0.219	37.7	0.005	1.32	2.58	105.50	102.02	106.00	101.96	3.00	3.70	3.31
P-617	DMH-606	101.20	DMH-607	101.00	15.0	(N/A)	0.635	0.542	37.5	0.005	3.23	4.69	106.00	101.96	106.70	101.72	3.55	4.45	4.12
P-618	DMH-607	84.60	DMH-608	82.40	48.0	(N/A)	5.963	5.209	147.2	0.015	81.23	175.72	106.70	87.33	89.40	84.39	18.10	3.00	13.71
P-619	DMH-608	73.80	DMH-609	71.90	48.0	(N/A)	5.963	5.209	126.3	0.015	81.05	176.38	89.40	76.53	78.90	73.90	11.60	3.00	13.74
P-620	DMH-609	68.35	DMH-610	67.00	48.0	(N/A)	5.963	5.209	88.6	0.015	80.90	176.90	78.90	71.07	74.00	69.05	6.55	3.00	13.76
P-621	DMH-610	61.95	DMH-611	60.20	48.0	(N/A)	5.963	5.209	116.7	0.015	80.79	175.67	74.00	64.67	67.20	62.21	8.05	3.00	13.69
P-622	CB-610	63.30	DMH-611	63.20	12.0	0.097	0.097	0.095	23.6	0.004	0.57	2.30	68.25	63.64	67.20	63.52	3.95	3.00	2.43
P-623	CB-611	63.30	DMH-611	63.20	12.0	0.076	0.076	0.075	23.9	0.004	0.45	2.30	68.25	63.60	67.20	63.48	3.95	3.00	2.27

Conduit FlexTable: Combined Pipe/Node Report (3659-12003-StormCAD.stc)

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Diameter (in)	Upstream Inlet Area (acres)	System Drainage Area (acres)	System CA (acres)	Length (Scaled) (ft)	Slope (ft/ft)	Total Flow (ft ³ /s)	Capacity (Full Flow) (ft ³ /s)	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
P-624	DMH-611	52.55	DMH-612	50.00	48.0	(N/A)	6.136	5.379	172.1	0.015	81.60	174.89	67.20	55.29	57.80	52.74	10.65	3.80	13.68
P-625	DMH-612	49.90	DMH-618	49.65	48.0	(N/A)	6.136	5.379	53.2	0.005	81.38	98.65	57.80	52.74	57.00	52.62	3.90	3.35	8.77
P-626	CB-612	58.60	DMH-613	58.15	12.0	0.370	0.370	0.269	83.3	0.005	1.63	2.62	62.60	59.17	63.35	58.69	3.00	4.20	3.52
P-627	DMH-613	58.05	DMH-614	57.50	12.0	(N/A)	0.370	0.269	110.5	0.005	1.61	2.52	63.35	58.63	62.40	58.22	4.30	3.90	3.40
P-628	CB-613	58.35	DMH-614	58.30	12.0	0.513	0.513	0.338	9.3	0.006	2.04	2.66	62.35	59.00	62.40	58.91	3.00	3.10	3.73
P-629	DMH-614	57.40	DMH-615	55.05	12.0	(N/A)	0.883	0.607	235.4	0.010	3.56	3.56	62.40	58.22	59.75	55.86	4.00	3.70	5.17
P-630	DMH-615	54.80	DMH-617	53.80	12.0	(N/A)	0.883	0.607	104.3	0.010	3.47	3.49	59.75	55.61	57.90	54.60	3.95	3.10	5.07
P-631	CB-614	55.20	DMH-616	54.70	12.0	0.115	0.115	0.102	98.4	0.005	0.61	2.54	59.20	55.53	58.80	55.03	3.00	3.10	2.66
P-632	CB-615	53.75	DMH-616	53.70	15.0	0.751	0.751	0.679	10.0	0.005	4.11	4.57	58.00	54.64	58.80	54.52	3.00	3.85	4.21
P-633	DMH-616	53.60	DMH-617	53.20	18.0	(N/A)	0.866	0.781	80.9	0.005	4.63	7.38	58.80	54.46	57.90	54.03	3.70	3.20	4.41
P-634	CB-616	53.50	DMH-617	53.40	12.0	0.218	0.218	0.202	18.3	0.006	1.22	2.66	57.50	53.98	57.90	53.87	3.00	3.50	3.31
P-635	DMH-617	52.25	DMH-618	52.00	24.0	(N/A)	1.966	1.590	52.9	0.005	9.00	15.54	57.90	53.34	57.00	53.07	3.65	3.00	5.13
P-636	CB-617	52.80	DMH-618	52.65	12.0	0.396	0.396	0.294	31.2	0.005	1.78	2.48	56.80	53.43	57.00	53.22	3.00	3.35	3.43
P-637	CB-618	52.80	DMH-618	52.75	12.0	0.229	0.229	0.224	11.4	0.005	1.36	2.40	56.80	53.33	57.00	53.24	3.00	3.25	3.15
P-638	DMH-618	49.70	DMH-619	49.55	48.0	(N/A)	8.727	7.487	25.0	0.006	92.96	111.26	57.00	52.62	57.20	52.52	3.30	3.65	9.91
P-639	DMH-619	49.45	FES-601	49.00	48.0	(N/A)	8.727	7.487	94.9	0.005	92.90	98.86	57.20	52.52	49.00	51.92	3.75	-4.00	8.94
P-640	CB-619	51.40	DMH-620	51.30	15.0	0.586	0.586	0.557	16.8	0.006	3.37	4.95	55.50	52.26	56.10	52.23	2.85	3.55	4.34
P-641	CB-620	51.40	DMH-620	51.30	18.0	0.883	0.883	0.834	16.8	0.006	5.04	8.06	56.00	52.26	56.10	52.23	3.10	3.30	4.81
P-642	DMH-620	51.20	DMH-621	50.25	24.0	(N/A)	1.469	1.390	190.0	0.005	8.39	16.00	56.10	52.23	56.10	51.51	2.90	3.85	5.15
P-643	CB-621	50.35	DMH-621	50.25	18.0	0.852	0.852	0.807	16.8	0.006	4.88	8.06	55.50	51.53	56.10	51.51	3.65	4.35	4.78
P-644	CB-622	50.35	DMH-621	50.25	15.0	0.569	0.569	0.537	16.8	0.006	3.24	4.95	55.50	51.55	56.10	51.51	3.90	4.60	4.30
P-645	DMH-621	50.15	DMH-622	49.75	30.0	(N/A)	2.890	2.734	83.2	0.005	16.18	28.47	56.10	51.51	57.25	51.10	3.45	5.00	5.99
P-646	DMH-622	49.65	FES-602	49.00	30.0	(N/A)	2.890	2.734	131.9	0.005	16.06	28.78	57.25	51.00	49.00	50.33	5.10	-2.50	6.02
P-700	CB-700	108.50	DMH-700	108.40	12.0	0.074	0.074	0.073	19.1	0.005	0.44	2.58	112.70	108.78	112.40	108.67	3.20	3.00	2.45
P-701	CB-701	108.50	DMH-700	108.40	12.0	0.096	0.096	0.089	19.1	0.005	0.54	2.58	112.70	108.81	112.40	108.71	3.20	3.00	2.60
P-702	DMH-700	105.75	DMH-701	105.25	12.0	(N/A)	0.170	0.162	104.3	0.005	0.98	2.47	112.40	106.19	109.25	105.66	5.65	3.00	2.96
P-703	CB-702	105.35	DMH-701	105.25	12.0	0.254	0.254	0.160	19.1	0.005	0.97	2.58	109.40	105.77	109.25	105.66	3.05	3.00	3.06
P-704	CB-703	105.35	DMH-701	105.25	12.0	0.053	0.053	0.045	19.1	0.005	0.27	2.58	109.40	105.57	109.25	105.46	3.05	3.00	2.13
P-705	DMH-701	101.90	DMH-704	99.50	12.0	(N/A)	0.477	0.367	240.4	0.010	2.17	3.56	109.25	102.53	103.50	100.06	6.35	3.00	4.76
P-706	CB-704	99.00	DMH-702	98.90	18.0	0.929	0.929	0.764	20.5	0.005	4.62	7.25	103.50	99.87	103.80	99.73	3.00	3.40	4.35
P-707	DMH-702	98.80	DMH-703	98.20	18.0	(N/A)	0.929	0.764	124.0	0.005	4.61	7.31	103.80	99.66	103.80	99.13	3.50	4.10	4.37
P-708	CB-705	99.25	DMH-703	99.15	15.0	0.681	0.681	0.649	20.5	0.005	3.92	4.46	103.50	100.14	103.80	99.95	3.00	3.40	4.10
P-709	DMH-703	98.10	DMH-704	97.70	24.0	(N/A)	1.610	1.412	76.0	0.005	8.39	16.41	103.80	99.13	103.50	98.71	3.70	3.80	5.25
P-710	CB-706	99.50	DMH-704	99.40	12.0	0.205	0.205	0.190	19.1	0.005	1.15	2.58	103.50	99.97	103.50	99.85	3.00	3.10	3.19
P-711	DMH-704	92.15	DMH-705	89.00	24.0	(N/A)	2.292	1.969	213.3	0.015	11.32	27.51	103.50	93.36	94.00	89.89	9.35	3.00	8.33
P-712	DMH-705	85.90	DMH-706	84.00	24.0	(N/A)	4.159	3.799	125.8	0.015	21.54	27.78	94.00	87.56	90.00	85.32	6.10	4.00	9.76
P-713	CB-707	86.10	DMH-706	86.00	12.0	0.406	0.406	0.342	17.4	0.006	2.07	2.73	91.00	86.75	90.00	86.61	3.90	3.00	3.82
P-714	CB-708	86.10	DMH-706	86.00	12.0	0.435	0.435	0.230	17.6	0.006	1.39	2.66	90.60	86.61	90.00	86.50	3.50	3.00	3.42
P-715	DMH-706	82.40	DMH-707	81.70	30.0	(N/A)	4.999	4.371	69.8	0.010	24.60	41.01	90.00	84.09	87.20	83.12	5.10	3.00	8.73
P-716	DMH-707	77.70	DMH-708	77.00	48.0	(N/A)	4.999	4.371	68.9	0.010	75.54	144.67	87.20	80.33	84.00	79.18	5.50	3.00	11.64
P-717	DMH-708	74.60	DMH-709	74.00	48.0	(N/A)	4.999	4.371	59.7	0.010	75.45	143.64	84.00	77.23	81.00	76.20	5.40	3.00	11.57
P-718	CB-709	77.15	DMH-709	77.00	12.0	0.315	0.315	0.254	18.4	0.008	1.53	3.25	81.50	77.68	81.00	77.48	3.35	3.00	4.08
P-719	CB-710	77.15	DMH-709	77.00	12.0	0.312	0.312	0.244	18.4	0.008	1.48	3.25	81.50	77.67	81.00	77.47	3.35	3.00	4.04
P-720	DMH-709	69.85	DMH-710	68.80	48.0	(N/A)	5.626	4.869	107.1	0.010	78.15	142.29	81.00	72.53	75.80	70.99	7.15	3.00	11.59
P-721	DMH-710	61.80	DMH-711	60.00	48.0	(N/A)	5.626	4.869	180.9	0.010	78.01	143.24	75.80	64.47	67.20	62.13	10.00	3.20	11.64
P-722	CB-711	63.35	DMH-711	63.20	12.0	0.087	0.087	0.044	18.2	0.008	0.26	3.25	67.50	63.56	67.20	63.39	3.15	3.00	2.49
P-723	CB-712	63.35	DMH-711	63.20	12.0	0.400	0.400	0.334	18.4	0.008	2.02	3.25	67.50	63.96	67.20	63.77	3.15	3.00	4.36

Conduit FlexTable: Combined Pipe/Node Report (3659-12003-StormCAD.stc)

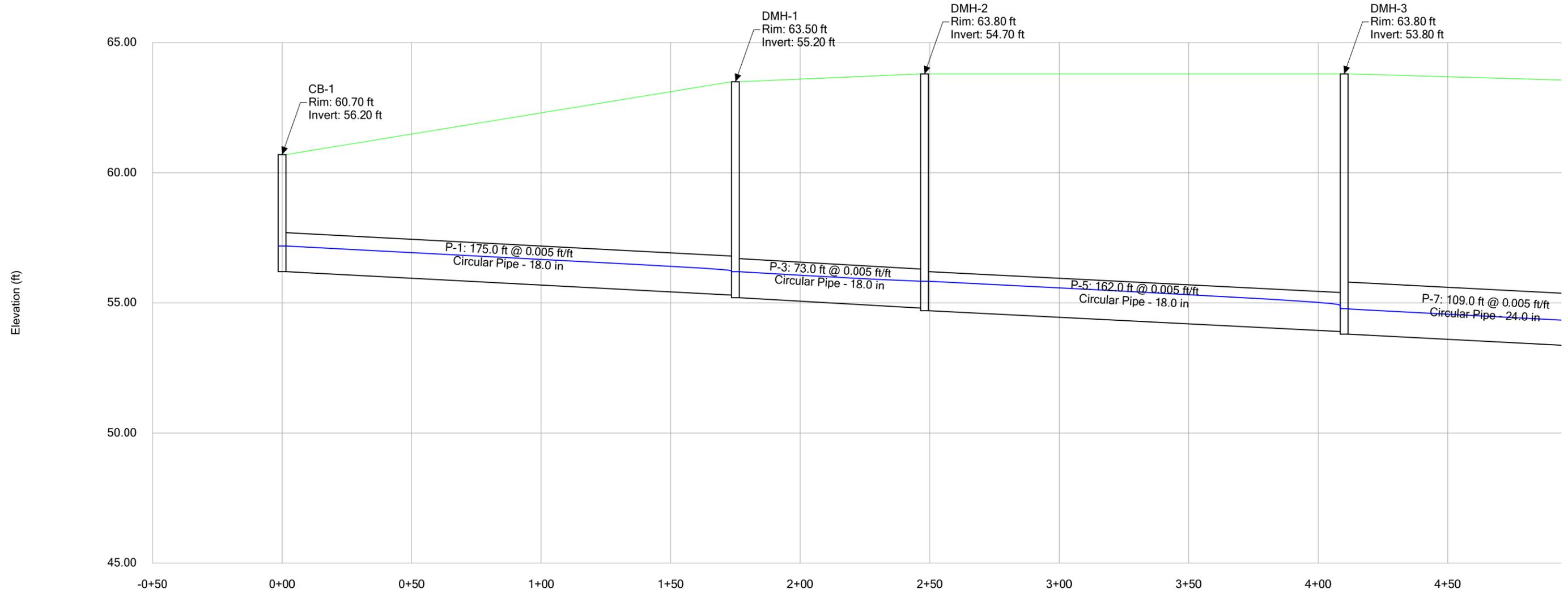
Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Diameter (in)	Upstream Inlet Area (acres)	System Drainage Area (acres)	System CA (acres)	Length (Scaled) (ft)	Slope (ft/ft)	Total Flow (ft ³ /s)	Capacity (Full Flow) (ft ³ /s)	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
P-724	DMH-711	58.00	DMH-713	56.50	48.0	(N/A)	6.113	5.247	150.5	0.010	79.84	143.16	67.20	60.71	63.50	58.68	5.20	3.00	11.70
P-725	CB-713	56.90	DMH-712	56.80	12.0	0.410	0.410	0.279	14.8	0.007	1.69	2.91	60.90	57.45	61.10	57.35	3.00	3.30	3.84
P-726	CB-714	56.90	DMH-712	56.80	12.0	0.080	0.080	0.065	14.8	0.007	0.40	2.91	60.90	57.28	61.10	57.29	3.00	3.30	2.59
P-727	DMH-712	56.70	DMH-713	56.20	15.0	(N/A)	0.489	0.345	97.5	0.005	2.08	4.64	61.10	57.29	63.50	56.78	3.15	6.05	3.68
P-728	DMH-713	52.30	DMH-714	51.00	48.0	(N/A)	6.602	5.591	130.6	0.010	81.50	143.09	63.50	55.04	61.00	53.22	7.20	6.00	11.76
P-729	CB-715	57.00	DMH-714	56.85	12.0	0.069	0.069	0.058	18.2	0.008	0.35	3.25	61.00	57.24	61.00	57.07	3.00	3.15	2.70
P-730	CB-716	57.00	DMH-714	56.85	12.0	0.190	0.190	0.161	18.4	0.008	0.97	3.25	61.00	57.41	61.00	57.22	3.00	3.15	3.62
P-731	DMH-714	50.50	DMH-715	48.60	48.0	(N/A)	6.861	5.809	192.0	0.010	82.48	142.89	61.00	53.25	57.10	50.80	6.50	4.50	11.78
P-732	DMH-715	48.10	DMH-719	47.70	48.0	(N/A)	6.861	5.809	40.1	0.010	82.18	143.64	57.10	50.85	55.60	50.54	5.00	3.90	11.81
P-733	CB-717	51.00	DMH-716	50.85	12.0	0.207	0.207	0.173	18.4	0.008	1.05	3.25	55.00	51.43	55.50	51.43	3.00	3.65	3.69
P-734	CB-718	51.00	DMH-716	50.85	12.0	0.187	0.187	0.164	18.4	0.008	0.99	3.25	55.00	51.42	55.50	51.43	3.00	3.65	3.64
P-735	DMH-716	50.75	DMH-719	50.55	12.0	(N/A)	0.393	0.338	40.1	0.005	2.04	2.52	55.50	51.43	55.60	51.16	3.75	4.05	3.57
P-736	CB-719	53.75	DMH-717	53.65	12.0	0.187	0.187	0.093	23.4	0.004	0.57	2.35	57.75	54.08	58.50	53.96	3.00	3.85	2.46
P-737	DMH-717	53.55	DMH-718	52.70	12.0	(N/A)	0.187	0.093	165.6	0.005	0.56	2.55	58.50	53.87	57.50	53.01	3.95	3.80	2.60
P-738	CB-720	52.75	DMH-718	52.70	12.0	0.162	0.162	0.081	10.0	0.005	0.49	2.52	56.75	53.05	57.50	52.99	3.00	3.80	2.49
P-739	DMH-718	52.00	DMH-719	51.60	12.0	(N/A)	0.349	0.175	41.2	0.010	1.02	3.52	57.50	52.42	55.60	51.97	4.50	3.00	3.87
P-740	DMH-719	47.75	DMH-720	47.60	48.0	(N/A)	7.603	6.322	18.5	0.008	84.86	127.62	55.60	50.54	56.60	50.17	3.85	5.00	10.87
P-741	DMH-720	47.50	FES-701	47.00	48.0	(N/A)	7.603	6.322	52.4	0.010	84.82	140.85	56.60	50.29	47.00	49.39	5.10	-4.00	11.73
P-900	DMH-900	51.65	DMH-901	50.60	18.0	(N/A)	0.923	0.905	209.4	0.005	5.46	7.45	57.80	52.60	54.50	51.65	4.65	2.40	4.60
P-901	DMH-901	50.50	DMH-902	49.50	24.0	(N/A)	1.750	1.715	197.7	0.005	10.10	16.08	54.50	51.65	54.00	50.64	2.00	2.50	5.41
P-902	DMH-902	49.40	DMH-903	49.30	24.0	(N/A)	1.750	1.715	17.2	0.006	9.90	17.35	54.00	50.53	54.00	50.38	2.60	2.70	5.70
P-903	DMH-903	49.25	DMH-904	48.15	24.0	(N/A)	1.750	1.715	217.9	0.005	9.88	16.07	54.00	50.33	55.50	49.22	2.75	5.35	5.38
P-904	DMH-904	48.05	DMH-907	47.75	24.0	(N/A)	1.750	1.715	57.2	0.005	9.66	16.41	55.50	49.12	60.20	48.86	5.45	10.45	5.33
P-905	DMH-905	56.50	DMH-906	55.60	12.0	(N/A)	0.000	0.000	182.1	0.005	0.00	2.51	62.00	56.50	60.10	55.60	4.50	3.50	0.00
P-906	DMH-906	55.50	DMH-907	54.60	12.0	(N/A)	0.000	0.000	175.1	0.005	0.00	2.55	60.10	55.50	60.20	54.60	3.60	4.60	0.00
P-907	DMH-907	47.65	OF-901	47.00	24.0	(N/A)	1.750	1.715	125.0	0.005	9.61	16.31	60.20	48.76	58.85	48.10	10.55	9.85	5.40
P-908	CB-900	49.30	EDMH-900	49.05	12.0	0.367	0.367	0.350	45.5	0.005	2.12	2.63	53.80	49.98	53.17	49.67	3.50	3.12	3.72
P-909	CB-901	49.00	DMH-908	48.90	12.0	0.128	0.128	0.125	13.7	0.007	0.76	3.01	54.00	49.36	53.00	49.24	4.00	3.10	3.19
P-1000	DMH-1000	59.35	DMH-1001	58.40	15.0	(N/A)	0.638	0.626	190.5	0.005	3.78	4.57	62.60	60.60	63.40	59.95	2.00	3.75	3.08
P-1001	DMH-1001	58.40	DMH-1002	57.95	18.0	(N/A)	1.027	1.006	86.7	0.005	5.88	7.55	63.40	59.95	63.60	59.68	3.50	4.15	3.33
P-1002	DMH-1002	57.95	DMH-1004	56.85	18.0	(N/A)	1.027	1.006	217.0	0.005	5.80	7.48	63.60	59.68	61.50	59.02	4.15	3.15	3.28
P-1003	DMH-1003	57.55	DMH-1004	56.85	18.0	(N/A)	0.803	0.787	141.1	0.005	4.71	7.40	63.75	59.30	61.50	59.02	4.70	3.15	2.67
P-1004	DMH-1004	56.85	DMH-1005	55.05	30.0	(N/A)	5.023	4.922	448.3	0.004	27.31	26.00	61.50	59.02	63.70	57.03	2.15	6.15	6.00
P-1005	DMH-1005	55.05	DMH-1006	54.30	30.0	(N/A)	5.023	4.922	176.1	0.004	26.14	26.77	63.70	57.03	62.90	56.13	6.15	6.10	6.22
P-1006	DMH-1006	54.30	DMH-1010	53.25	30.0	(N/A)	5.023	4.922	210.1	0.005	25.69	29.00	62.90	56.13	64.00	55.08	6.10	8.25	6.67
P-1007	DMH-1007	57.80	DMH-1008	56.95	12.0	(N/A)	0.000	0.000	166.2	0.005	0.00	2.55	62.70	57.80	62.95	56.95	3.90	5.00	0.00
P-1008	DMH-1008	56.85	DMH-1009	55.85	12.0	(N/A)	0.000	0.000	201.9	0.005	0.00	2.51	62.95	56.85	63.80	55.85	5.10	6.95	0.00
P-1009	DMH-1009	55.75	DMH-1010	53.25	12.0	(N/A)	0.000	0.000	498.9	0.005	0.00	2.52	63.80	55.75	64.00	55.08	7.05	9.75	0.00
P-1010	DMH-1010	53.25	DMH-1011	53.05	30.0	(N/A)	5.023	4.922	41.8	0.005	25.20	28.30	64.00	55.08	62.40	54.85	8.25	6.85	6.52
P-1011	DMH-1011	53.05	DMH-1012	51.85	30.0	(N/A)	5.023	4.922	242.0	0.005	25.09	28.88	62.40	54.85	62.50	53.56	6.85	8.15	6.63
P-1012	DMH-1012	51.85	DMH-1013	50.60	30.0	(N/A)	5.023	4.922	230.0	0.005	24.52	30.24	62.50	53.56	62.50	52.33	8.15	9.40	6.86
P-1013	DMH-1013	50.60	DMH-1021	49.50	30.0	(N/A)	5.023	4.922	218.2	0.005	23.99	29.13	62.50	52.33	62.50	51.17	9.40	10.50	6.63
P-1014	DMH-1014	54.65	DMH-1015	53.50	24.0	(N/A)	1.624	1.592	231.9	0.005	9.61	15.93	59.80	55.77	58.65	55.10	3.15	3.15	5.31
P-1015	DMH-1015	53.50	DMH-1016	52.75	24.0	(N/A)	2.707	2.653	151.4	0.005	15.64	15.94	58.65	55.10	59.40	54.21	3.15	4.65	5.78
P-1016	DMH-1016	52.75	DMH-1017	52.00	30.0	(N/A)	3.249	3.184	151.0	0.005	18.51	28.91	59.40	54.21	63.00	53.59	4.15	8.50	6.25
P-1017	DMH-1017	52.00	DMH-1018	51.50	30.0	(N/A)	3.844	3.767	95.6	0.005	21.60	29.60	63.00	53.59	62.95	53.29	8.50	8.95	6.58
P-1018	DMH-1018	51.50	DMH-1019	50.80	30.0	(N/A)	4.439	4.350	141.6	0.005	24.74	28.80	62.95	53.29	64.50	52.57	8.95	11.20	6.60

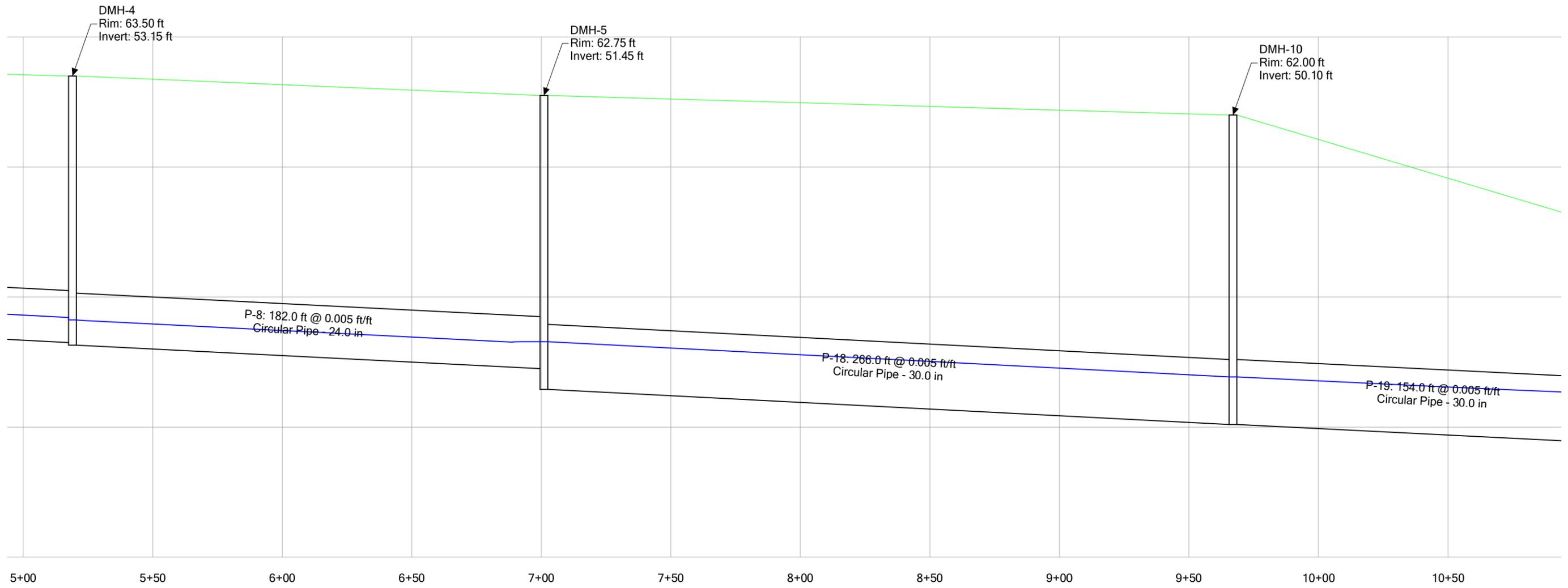
Conduit FlexTable: Combined Pipe/Node Report (3659-12003-StormCAD.stc)

Label	Start Node	Invert (Upstream) (ft)	Stop Node	Invert (Downstream) (ft)	Diameter (in)	Upstream Inlet Area (acres)	System Drainage Area (acres)	System CA (acres)	Length (Scaled) (ft)	Slope (ft/ft)	Total Flow (ft ³ /s)	Capacity (Full Flow) (ft ³ /s)	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Cover (Start) (ft)	Cover (Stop) (ft)	Velocity (Average) (ft/s)
P-1019	DMH-1019	50.80	DMH-1020	49.55	30.0	(N/A)	4.439	4.350	254.3	0.005	24.45	28.77	64.50	52.57	62.50	51.27	11.20	10.45	6.58
P-1020	DMH-1020	49.55	DMH-1021	48.20	30.0	(N/A)	4.439	4.350	267.4	0.005	23.91	29.16	62.50	51.27	62.50	50.19	10.45	11.80	6.63
P-1021	DMH-1021	48.20	DMH-1022	47.15	48.0	(N/A)	9.461	9.272	211.0	0.005	44.22	101.32	62.50	50.19	59.20	49.00	10.30	8.05	7.79
P-1022	DMH-1022	47.15	OF-1001	47.00	48.0	(N/A)	9.461	9.272	20.0	0.007	43.42	124.39	59.20	49.12	58.70	48.76	8.05	7.70	9.02
P-1023	DMH-1023	50.90	DMH-1024	50.50	24.0	(N/A)	1.716	1.535	76.9	0.005	9.26	16.30	57.00	51.99	55.80	51.58	4.10	3.30	5.36
P-1024	DMH-1024	49.80	DMH-1025	48.55	30.0	(N/A)	4.393	4.010	254.7	0.005	24.01	28.72	55.80	51.55	57.80	50.22	3.50	6.75	6.55
P-1025	DMH-1025	48.45	DMH-1026	48.00	36.0	(N/A)	4.566	4.179	86.6	0.005	24.51	47.97	57.80	50.05	58.40	49.52	6.35	7.40	6.82
P-1026	DMH-1026	47.15	OF-1002	47.00	36.0	(N/A)	4.566	4.179	20.0	0.007	24.34	57.76	58.40	48.74	57.50	48.43	8.25	7.50	7.82
P-1100	IB-11P	49.50	DMH-1100	49.45	36.0	(N/A)	0.000	0.000	10.0	0.005	30.92	47.16	58.50	51.30	58.50	51.23	6.00	6.05	7.12
P-1101	DMH-1100	49.35	DMH-1101	48.45	36.0	(N/A)	0.000	0.000	180.5	0.005	30.92	47.16	58.50	51.15	57.10	50.22	6.15	5.65	7.12
P-1102	DMH-1101	48.35	DMH-1106	46.75	36.0	(N/A)	0.000	0.000	320.3	0.005	30.92	47.16	57.10	50.15	57.10	48.52	5.75	7.35	7.12
P-1103	IB-10P	49.50	DMH-1102	49.45	36.0	(N/A)	0.000	0.000	10.0	0.005	11.53	47.16	56.80	50.58	56.85	50.48	4.30	4.40	5.51
P-1104	DMH-1102	49.35	DMH-1103	49.05	36.0	(N/A)	0.000	0.000	60.1	0.005	11.53	47.16	56.85	50.43	57.00	50.13	4.50	4.95	5.36
P-1105	DMH-1103	47.10	DMH-1105	45.30	36.0	(N/A)	0.000	0.000	357.0	0.005	11.53	47.36	57.00	48.18	51.30	46.31	6.90	3.00	5.53
P-1106	CB-1100	47.20	DMH-1104	47.00	12.0	0.176	0.176	0.167	36.7	0.005	1.01	2.62	51.20	47.63	51.60	47.50	3.00	3.60	3.12
P-1107	CB-1101	47.20	DMH-1104	47.00	12.0	0.227	0.227	0.191	40.4	0.005	1.16	2.52	51.20	47.68	51.60	47.50	3.00	3.60	3.14
P-1108	DMH-1104	46.90	DMH-1105	46.85	15.0	(N/A)	0.402	0.358	10.0	0.005	2.15	4.57	51.60	47.50	51.30	47.43	3.45	3.20	3.67
P-1109	DMH-1105	45.20	DMH-1106	43.90	36.0	(N/A)	0.402	0.358	257.7	0.005	13.61	47.34	51.30	46.37	57.10	45.80	3.10	10.20	5.79
P-1110	DMH-1106	43.80	EDMH-1100	43.40	48.0	(N/A)	0.402	0.358	80.1	0.005	44.48	101.57	57.10	45.80	52.98	45.25	9.30	5.58	7.81
P-1200	DMH-1200	49.45	DMH-1201	47.40	30.0	(N/A)	0.000	0.000	208.2	0.010	0.00	40.72	67.50	49.45	57.10	47.40	15.55	7.20	0.00
RL-1	RD-1	50.50	DMH-27	50.15	12.0	0.046	0.046	0.045	69.3	0.005	0.27	2.54	56.50	51.45	54.70	51.44	5.00	3.55	2.11
RL-2	RD-2	51.00	DMH-30	50.80	18.0	0.521	0.521	0.511	36.0	0.006	3.09	7.83	57.50	51.67	56.60	51.52	5.00	4.30	4.06
RL-601	RD-601	92.00	DMH-601	91.85	18.0	0.935	0.935	0.916	31.6	0.005	5.54	7.19	98.00	92.99	99.40	92.85	4.50	6.05	4.49
RL-602	RD-602	92.00	DMH-603	91.85	15.0	0.730	0.730	0.716	31.6	0.005	4.33	4.42	98.00	92.96	102.50	92.69	4.75	9.40	4.11
RL-701	RD-701	89.10	DMH-705	89.00	24.0	1.867	1.867	1.830	17.0	0.006	11.07	17.35	94.10	90.29	94.00	90.16	3.00	3.00	5.85
RL-701-703	RD-701-703	51.85	DMH-900	51.75	18.0	0.923	0.923	0.905	20.3	0.005	5.47	7.43	61.50	52.80	57.80	52.65	8.15	4.55	4.60
RL-904	RD-904	50.75	DMH-901	50.60	18.0	0.826	0.826	0.810	26.9	0.006	4.90	7.83	59.00	51.68	54.50	51.65	6.75	2.40	4.68
RL-1001-1003	RD-1001-1003	59.45	DMH-1000	59.35	15.0	0.638	0.638	0.626	13.0	0.008	3.78	5.67	63.00	60.64	62.60	60.60	2.30	2.00	4.94
RL-1004	RD-1004	58.55	DMH-1001	58.50	12.0	0.388	0.388	0.381	10.5	0.005	2.30	2.52	63.50	59.99	63.40	59.95	3.95	3.90	2.93
RL-1005	RD-1005	58.00	DMH-1003	57.55	18.0	0.803	0.803	0.787	87.7	0.005	4.76	7.51	64.00	59.48	63.75	59.30	4.50	4.70	4.50
RL-1006	RD-1006	57.25	DMH-1004	56.85	30.0	3.192	3.192	3.128	79.0	0.005	18.92	29.18	64.50	59.10	61.50	59.02	4.75	2.15	6.32
RL-1007	RD-1007	57.00	DMH-1018	56.75	15.0	0.595	0.595	0.583	47.6	0.005	3.53	4.66	63.50	57.81	62.95	57.51	5.25	4.95	4.17
RL-1008	RD-1008	57.00	DMH-1017	56.90	15.0	0.595	0.595	0.583	20.0	0.005	3.53	4.57	63.50	57.82	63.00	57.66	5.25	4.85	4.11
RL-1009.1	RD-1009.1	56.00	DMH-1014	55.80	24.0	1.624	1.624	1.592	25.3	0.008	9.63	20.23	63.50	57.11	59.80	56.79	5.50	2.00	6.36
RL-1009.2	RD-1009.2	54.45	DMH-1015	54.15	18.0	1.083	1.083	1.061	58.7	0.005	6.42	7.49	63.50	55.52	58.65	55.13	7.55	3.00	4.76
RL-1009.3	RD-1009.3	55.30	DMH-1016	55.15	15.0	0.541	0.541	0.531	21.3	0.007	3.21	5.46	63.50	56.02	59.40	55.84	6.95	3.00	4.63
RL-1010	RD-1010	51.10	DMH-1023	51.00	24.0	1.716	1.716	1.535	21.9	0.005	9.28	15.25	58.00	52.23	57.00	52.09	4.90	4.00	5.09
RL-1011-1012	RD-1011-1012	50.65	DMH-1024	50.50	24.0	2.676	2.676	2.475	27.0	0.006	14.97	16.86	63.00	52.11	55.80	51.89	10.35	3.30	6.06
RL-1013	RD-1013	49.70	DMH-1025	49.45	12.0	0.173	0.173	0.170	51.8	0.005	1.03	2.47	58.00	50.15	57.80	50.05	7.30	7.35	3.00
RL-1014	RD-1014	52.05	OF-1003	51.65	15.0	0.429	0.429	0.420	84.0	0.005	2.54	4.46	58.50	52.73	56.50	52.29	5.20	3.60	3.75

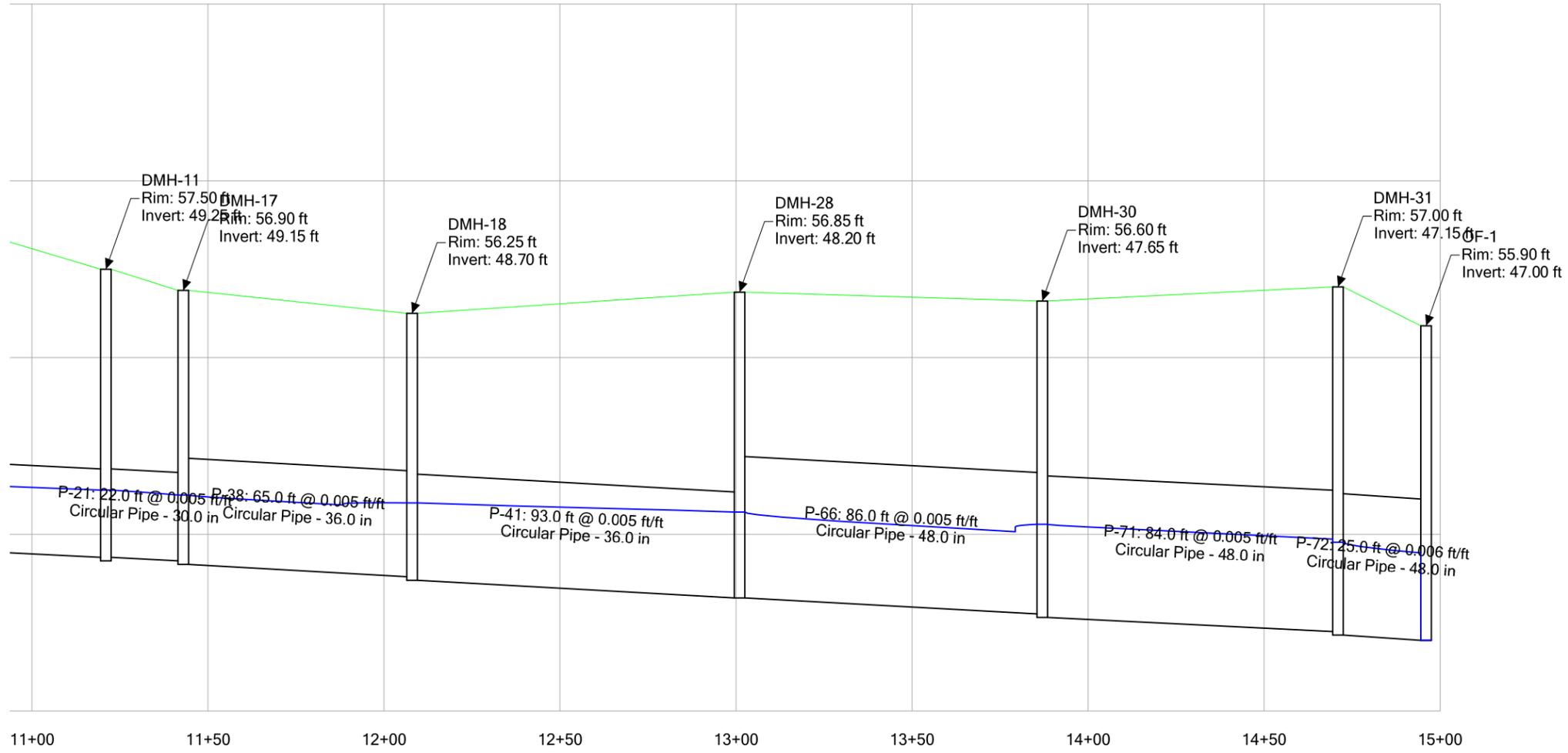
Profile Report

Engineering Profile - 00-Series (3659-12003-StormCAD.stc)



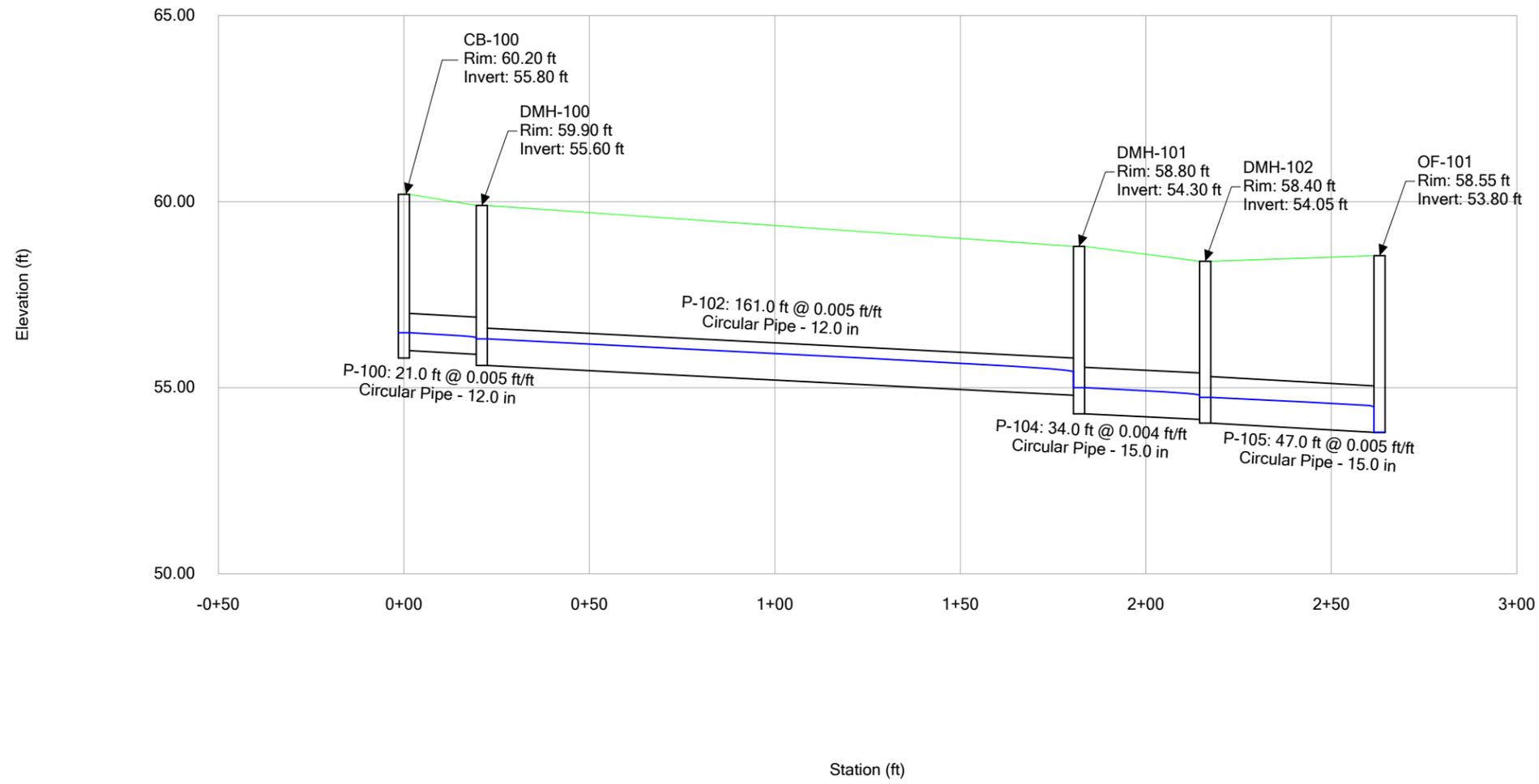


Station (ft)



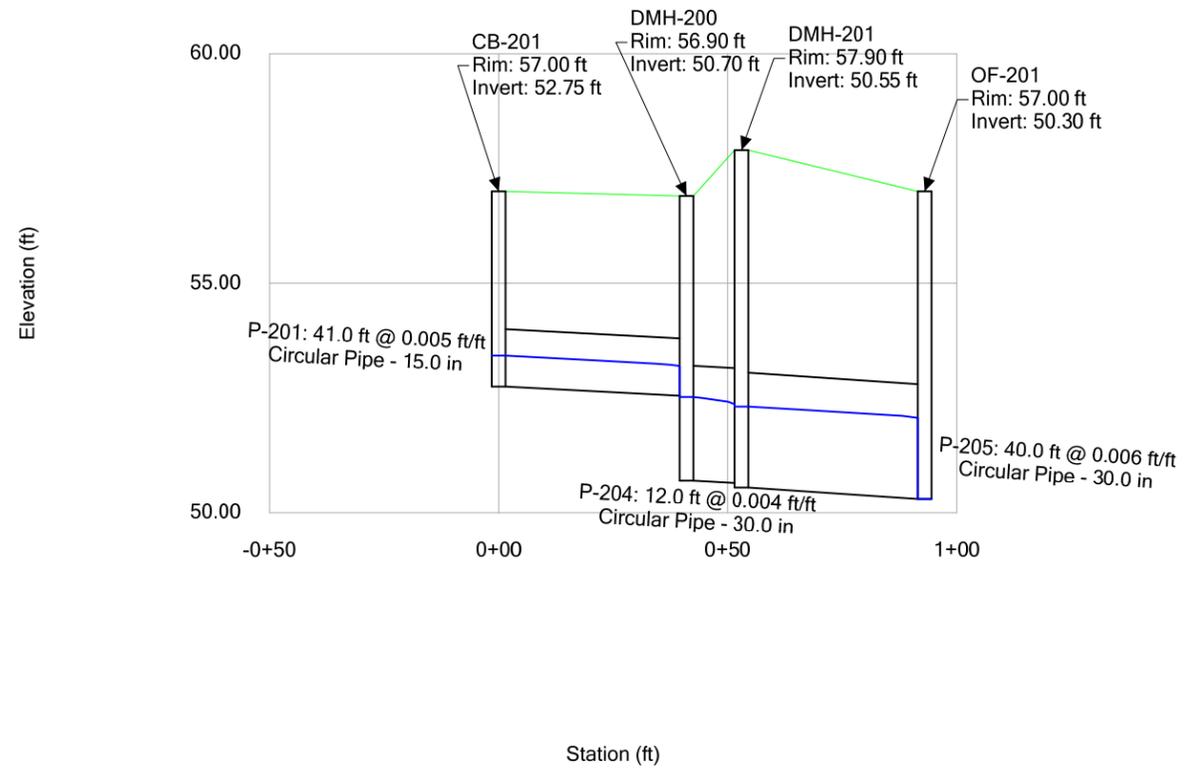
Profile Report

Engineering Profile - 100-Series (3659-12003-StormCAD.stc)



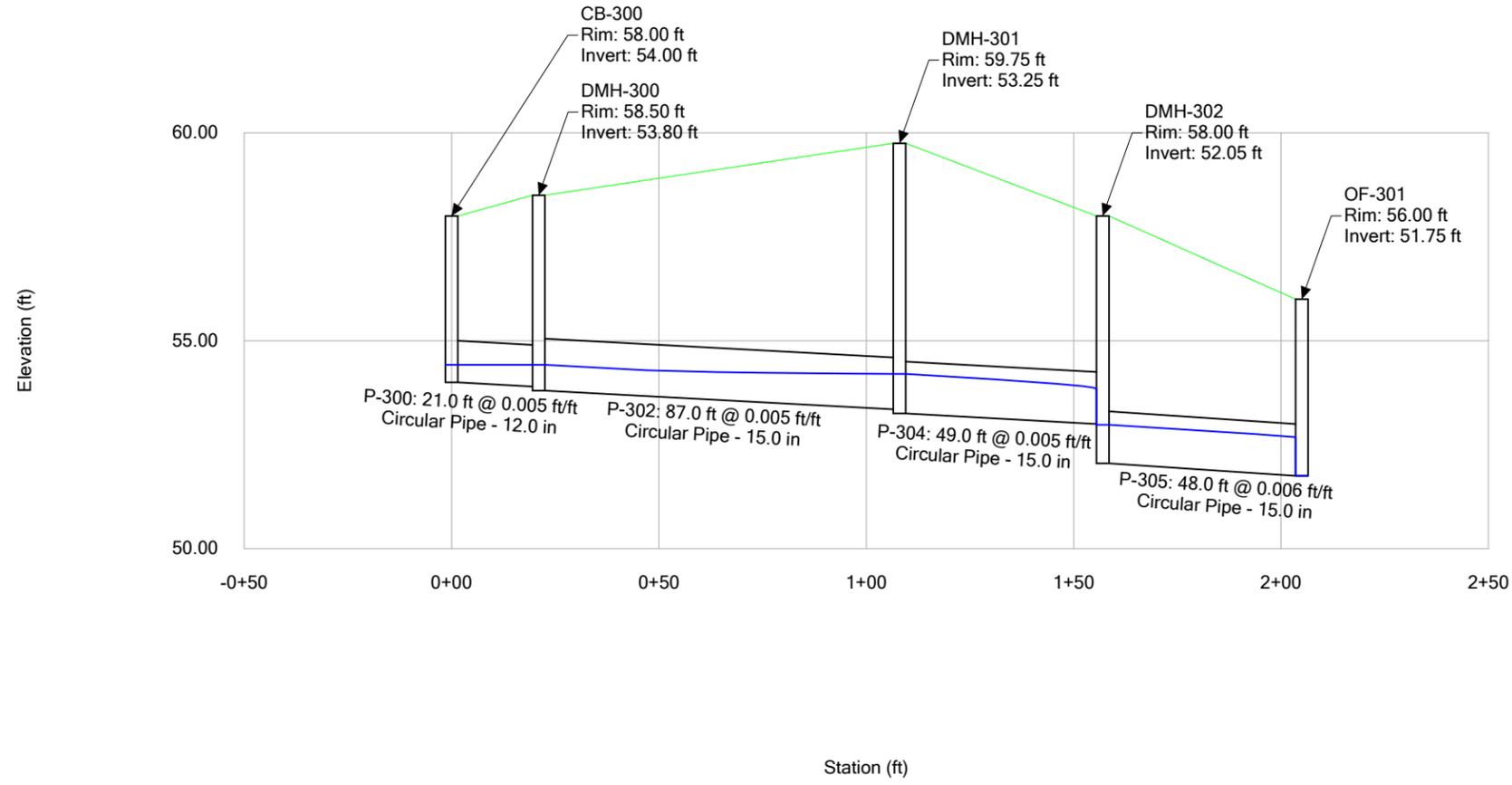
Profile Report

Engineering Profile - 200-Series (3659-12003-StormCAD.stc)



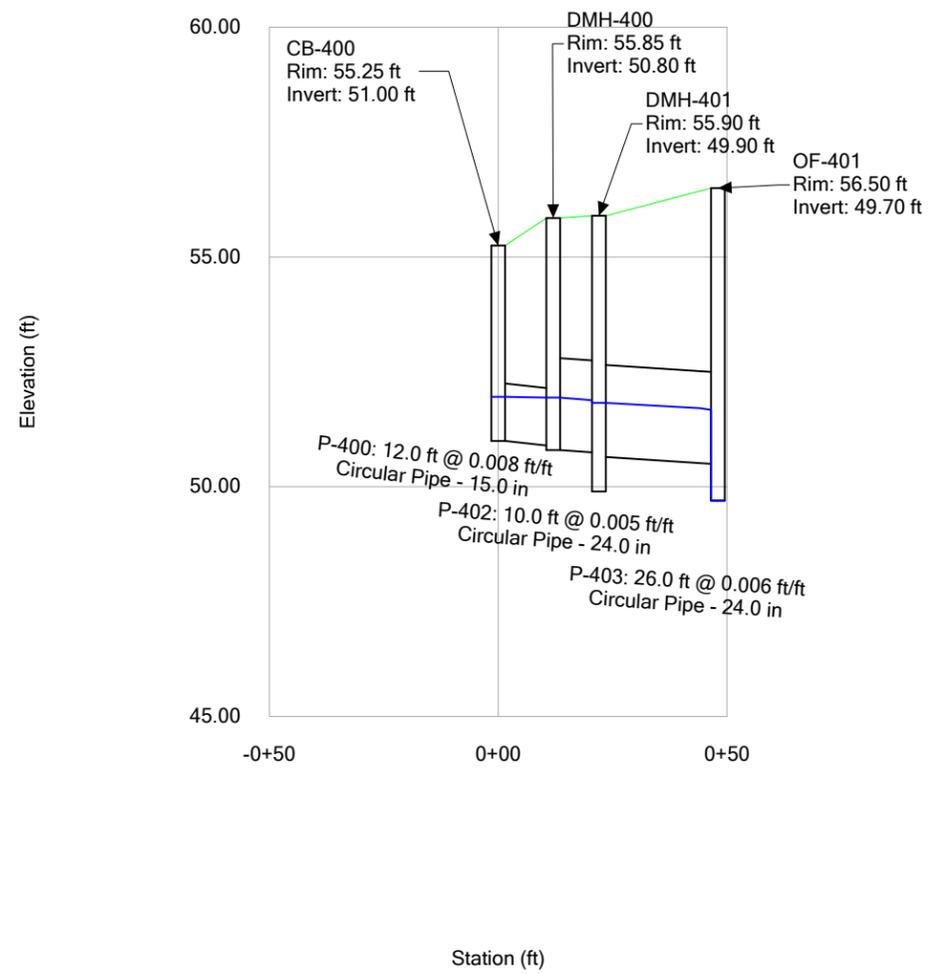
Profile Report

Engineering Profile - 300-Series (3659-12003-StormCAD.stc)



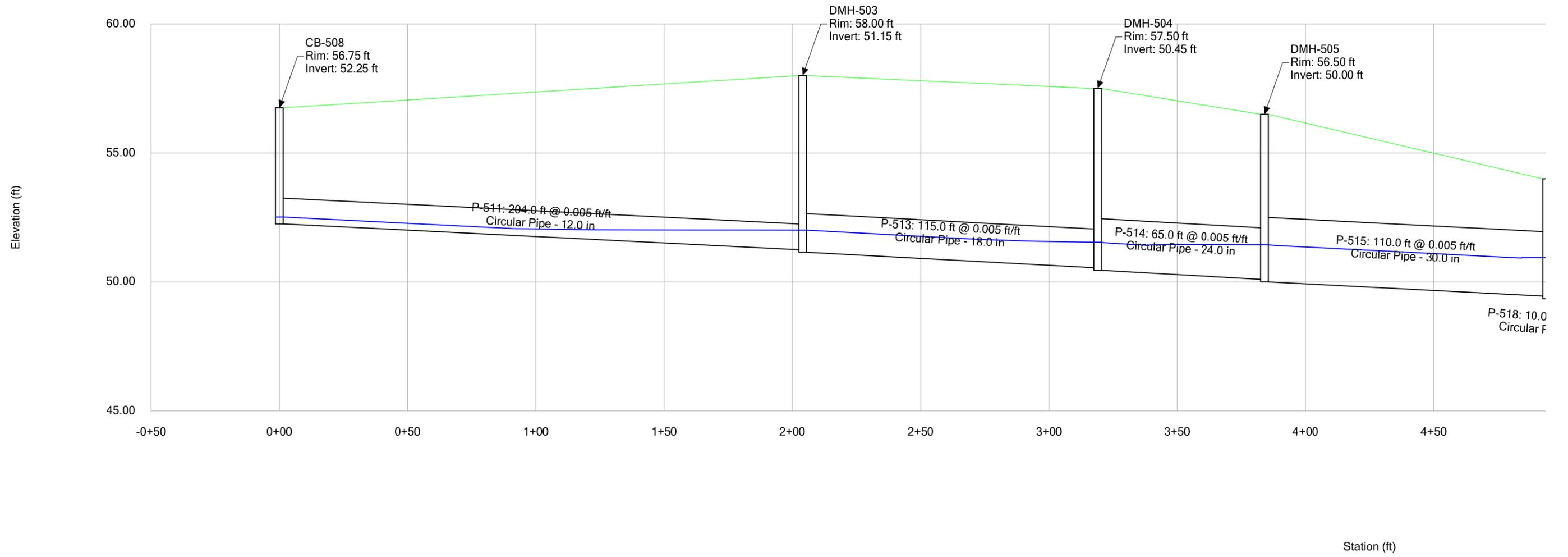
Profile Report

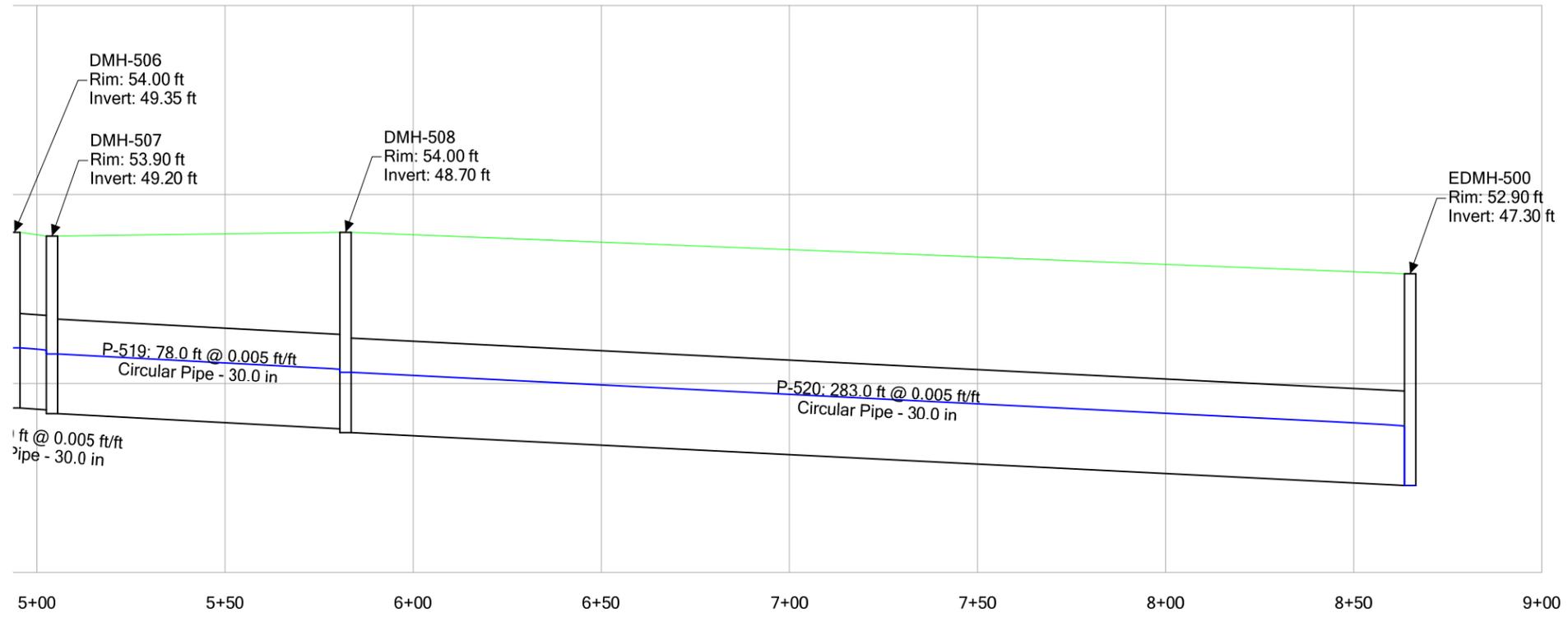
Engineering Profile - 400-Series (3659-12003-StormCAD.stc)



Profile Report

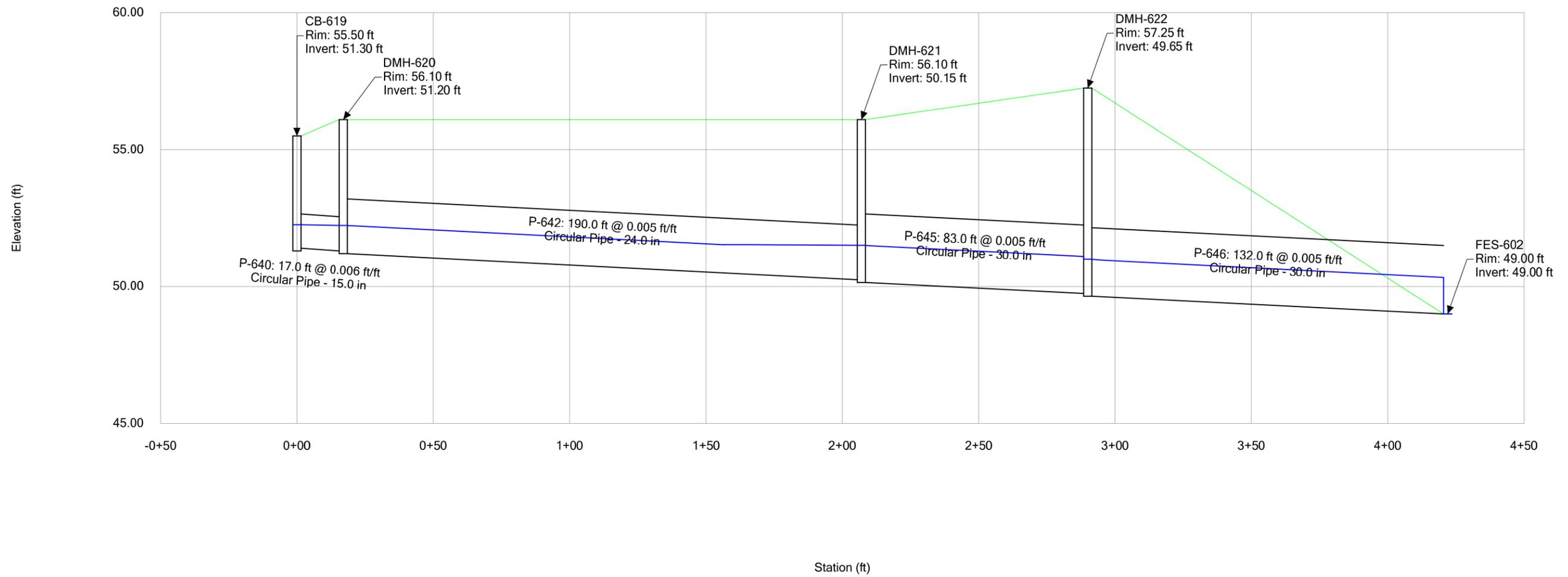
Engineering Profile - 500-Series (3659-12003-StormCAD.stc)





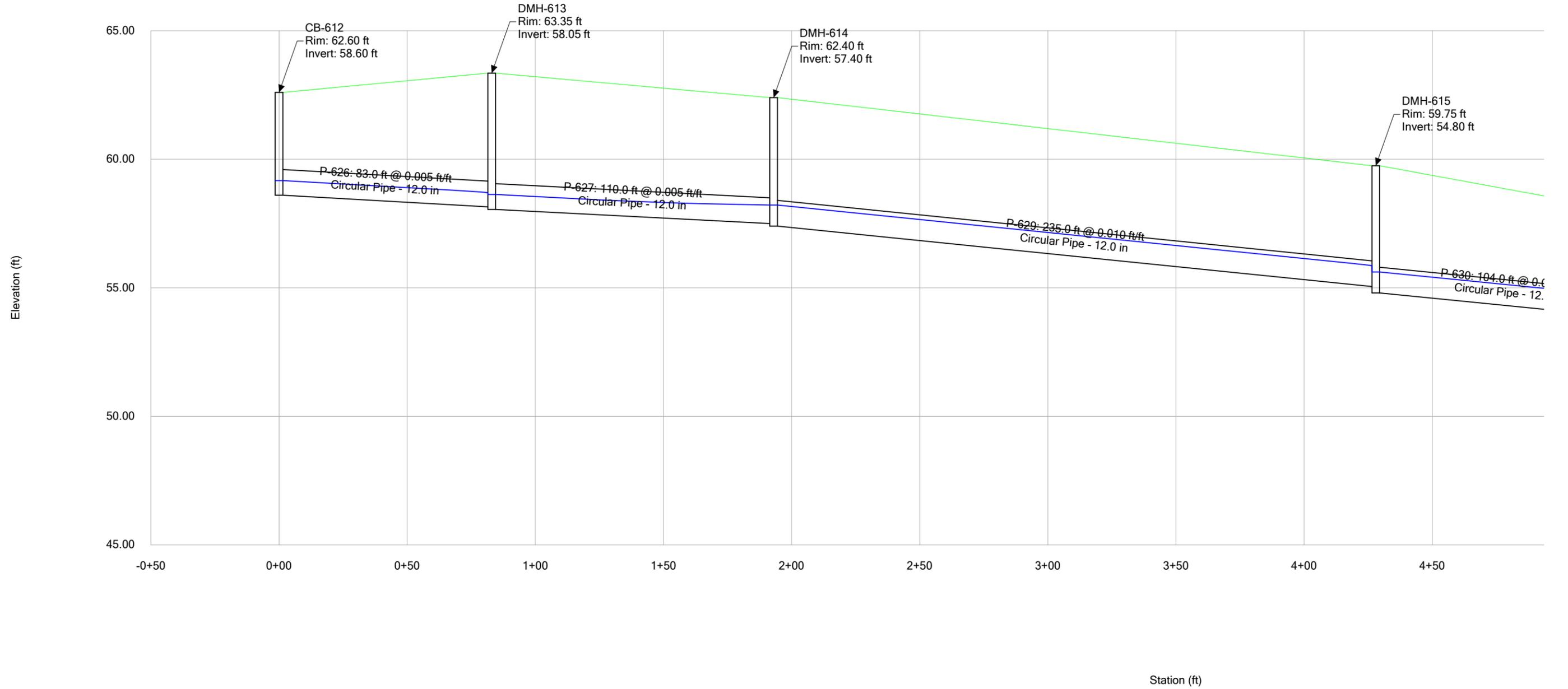
Profile Report

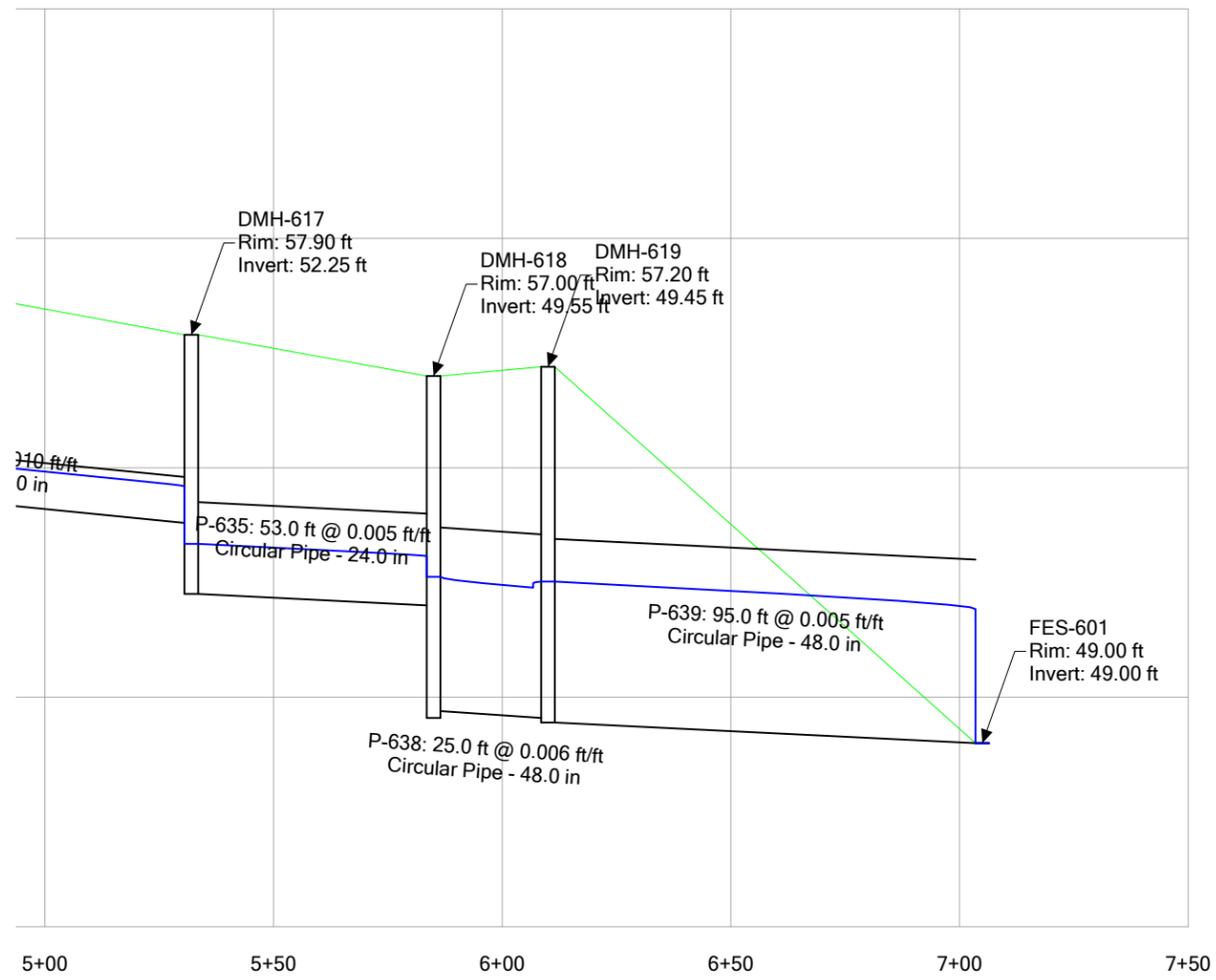
Engineering Profile - 600-Series (40-46 Parcel) (3659-12003-StormCAD.stc)



Profile Report

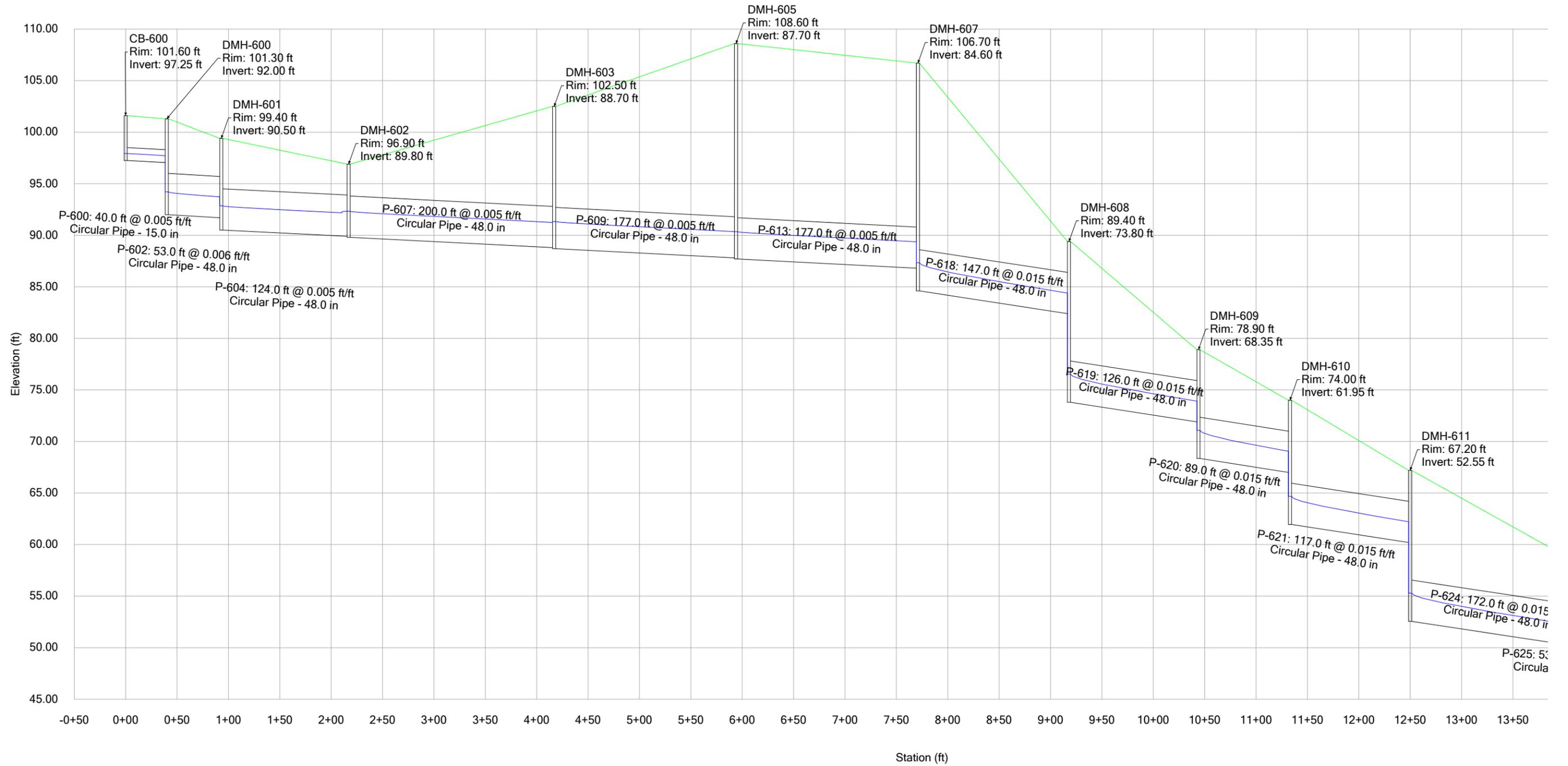
Engineering Profile - 600-Series (Loading) (3659-12003-StormCAD.stc)

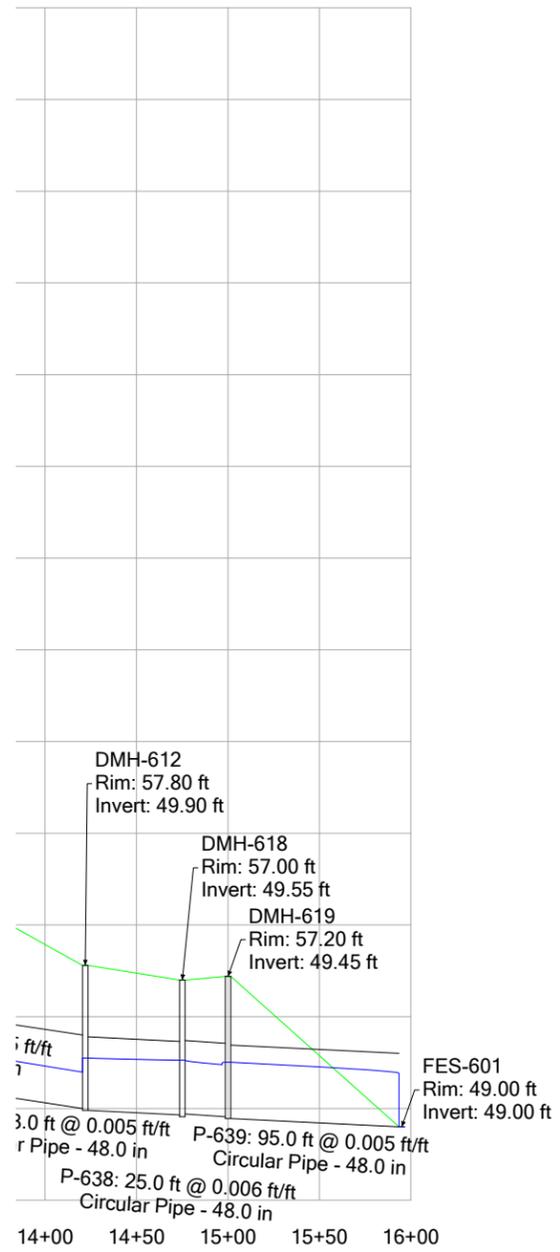




Profile Report

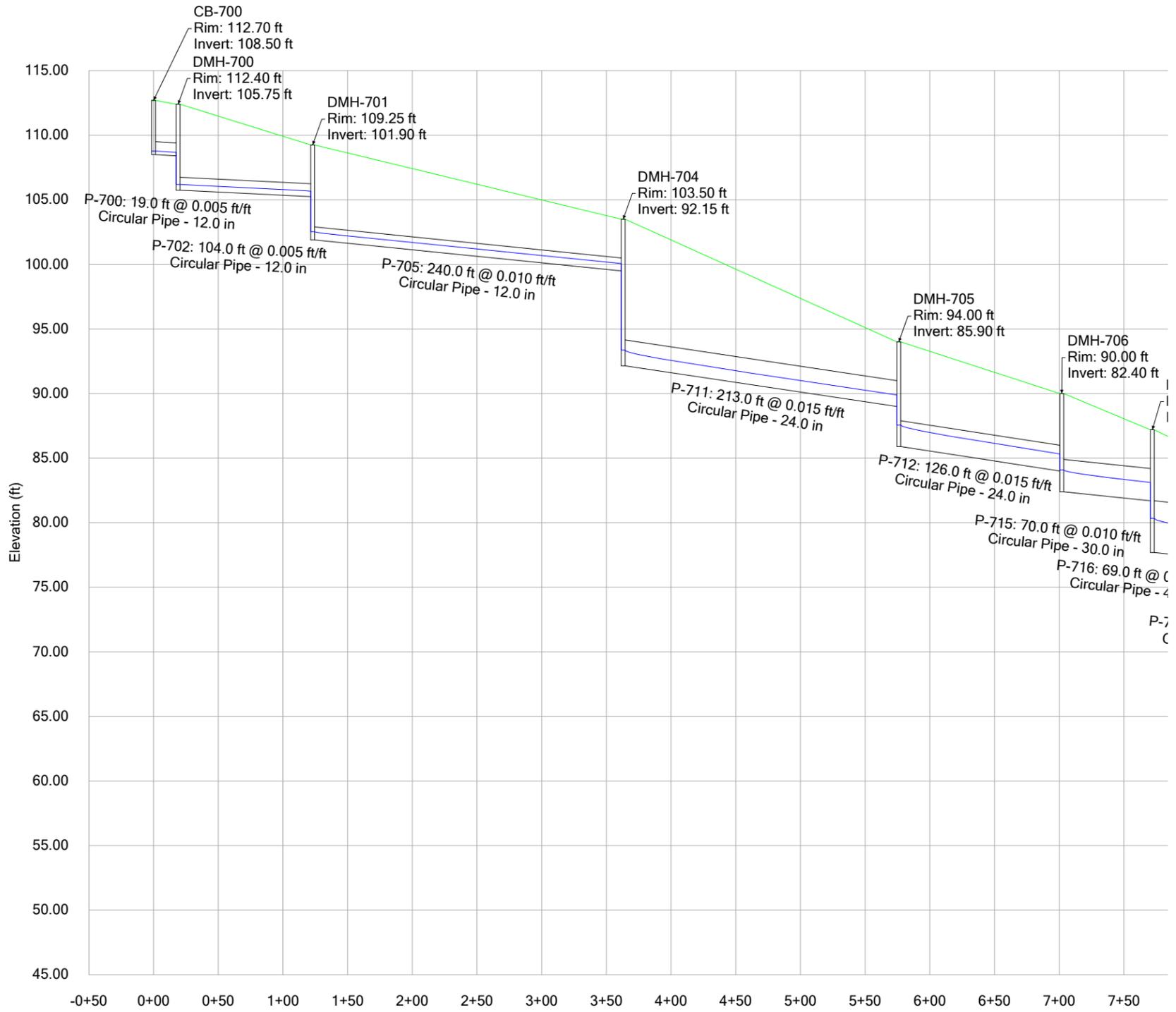
Engineering Profile - 600-Series (Office) (3659-12003-StormCAD.stc)

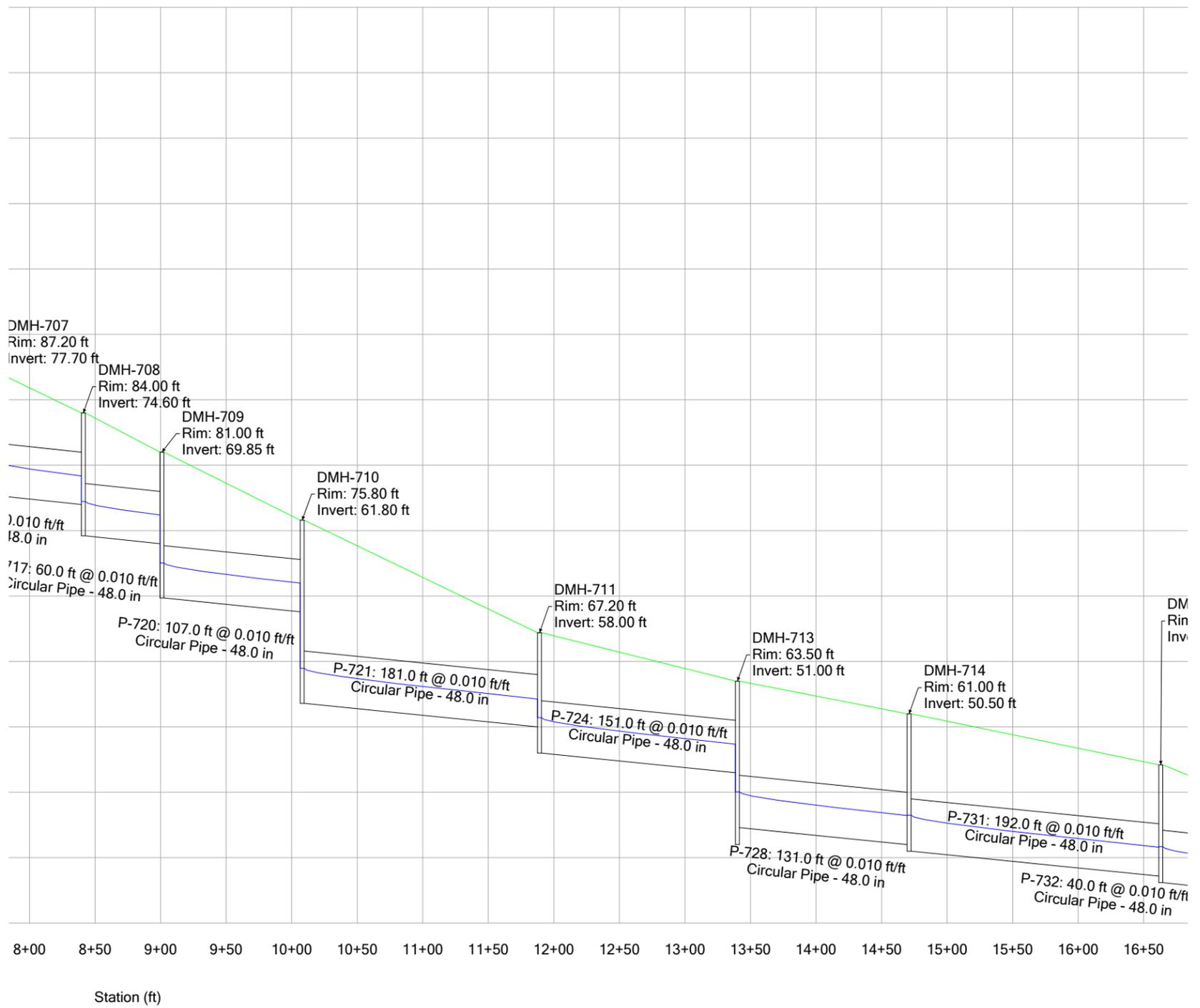




Profile Report

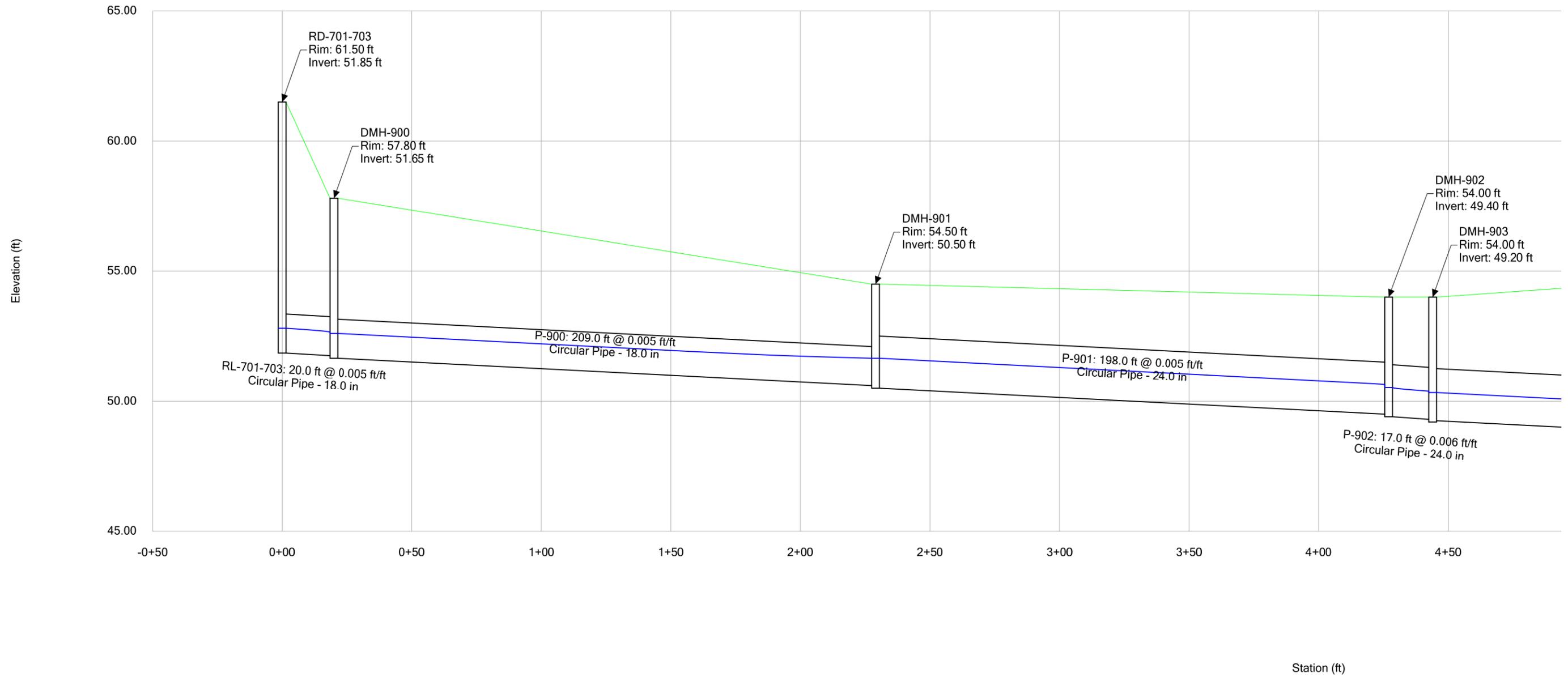
Engineering Profile - 700-Series (3659-12003-StormCAD.stc)

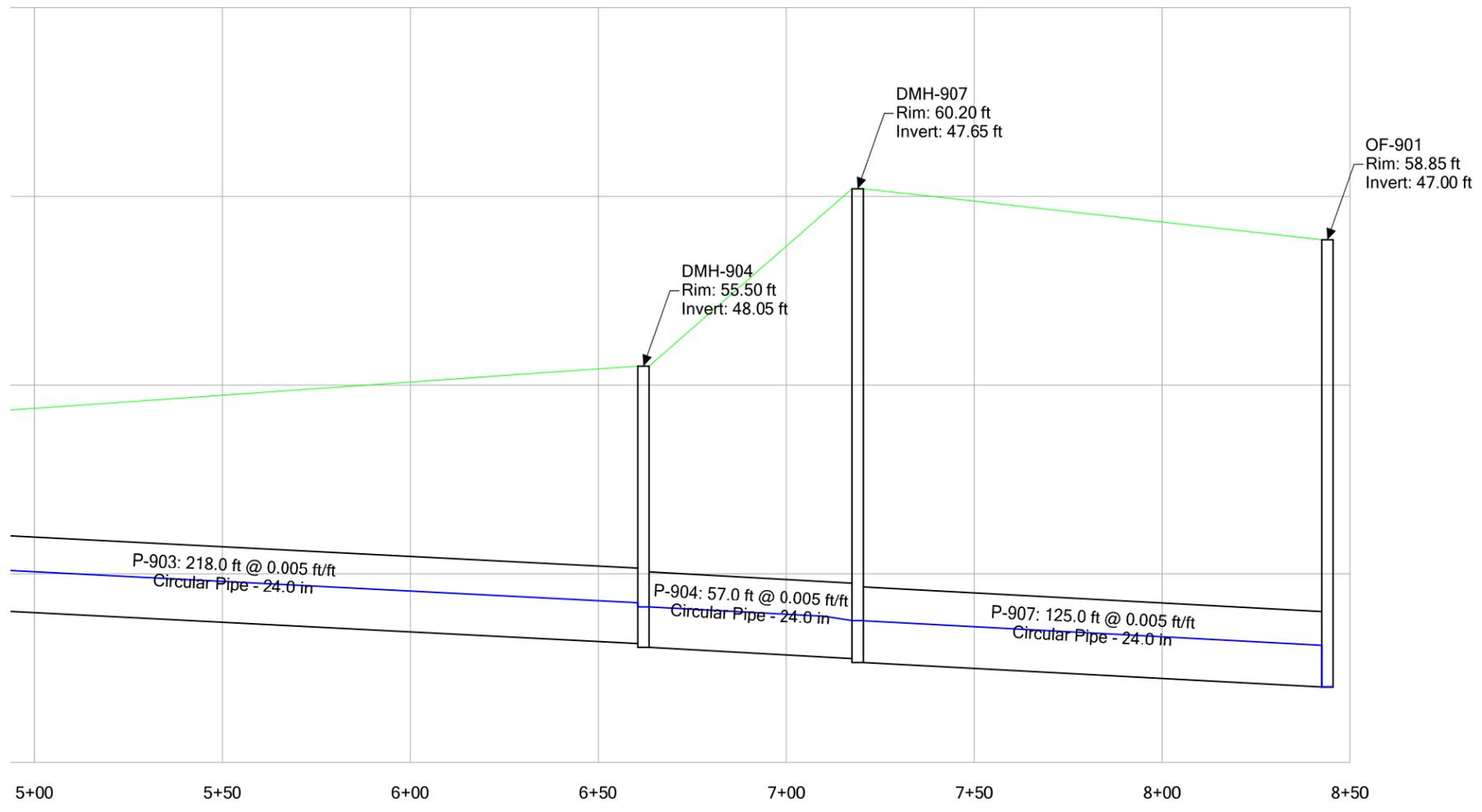




Profile Report

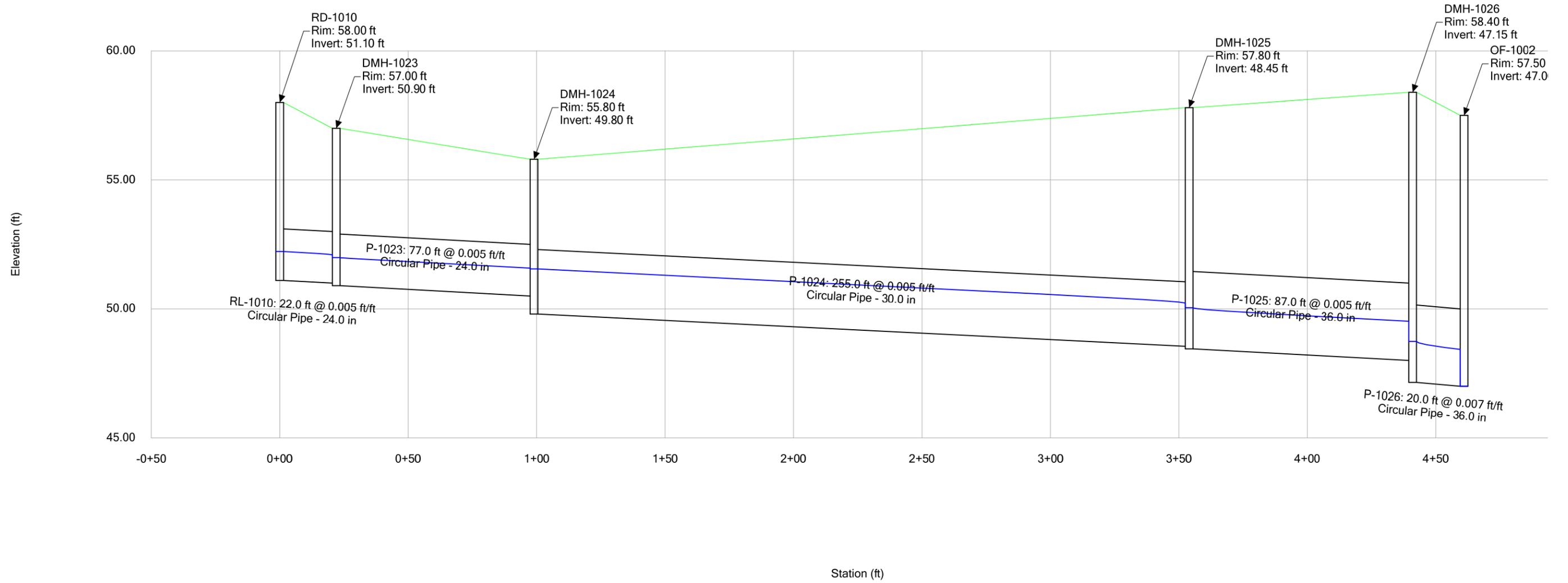
Engineering Profile - 900-Series (3659-12003-StormCAD.stc)





Profile Report

Engineering Profile - 1000-Series (Residential) (3659-12003-StormCAD.stc)



ft
0 ft

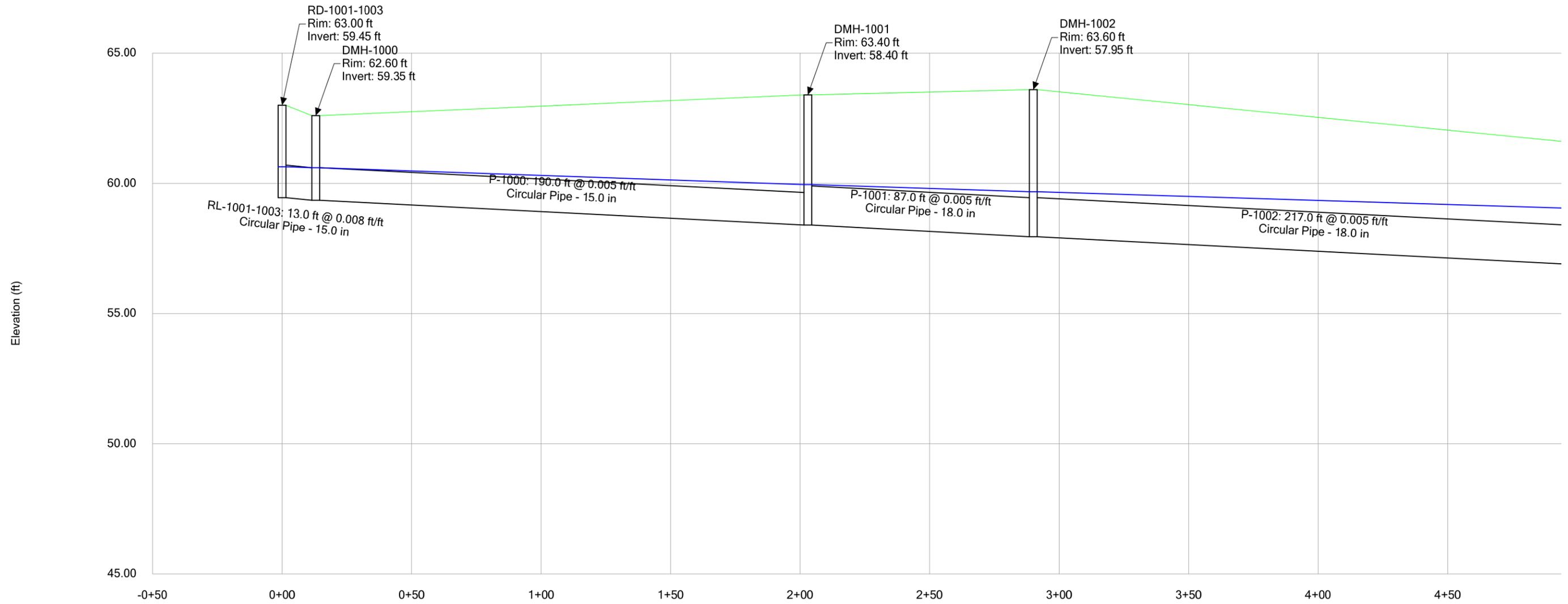
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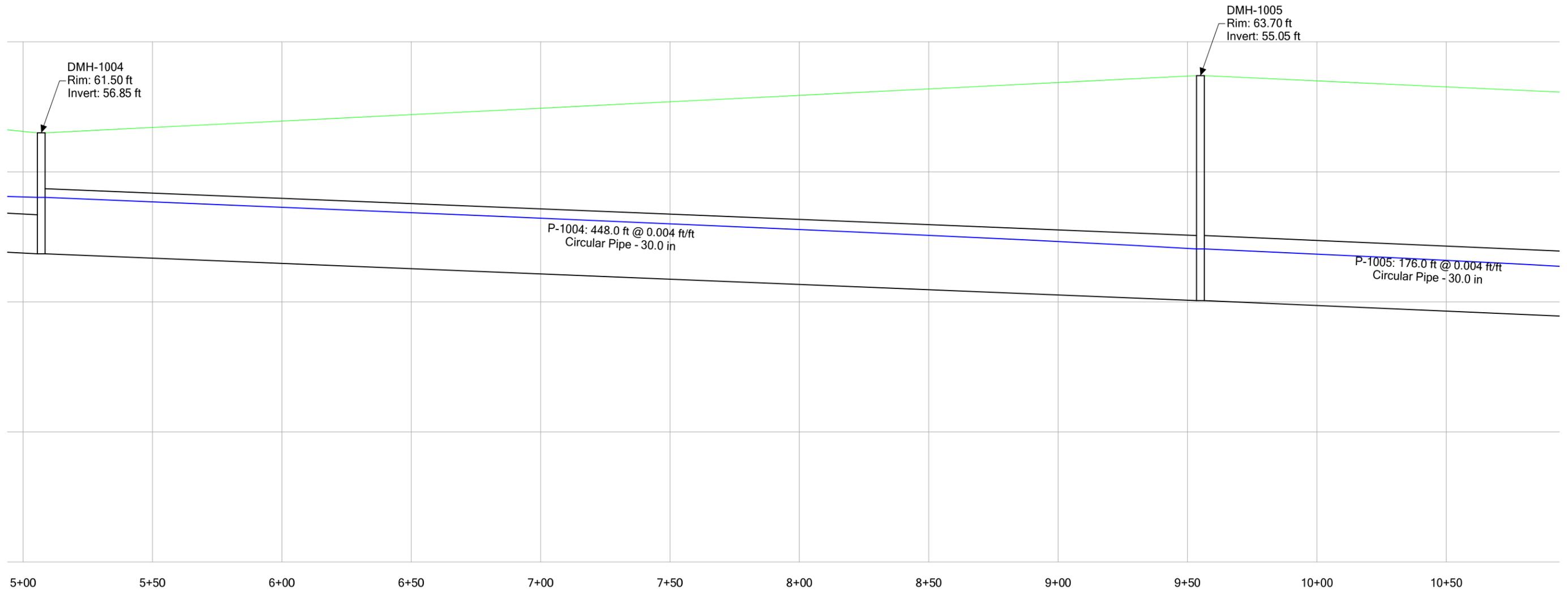
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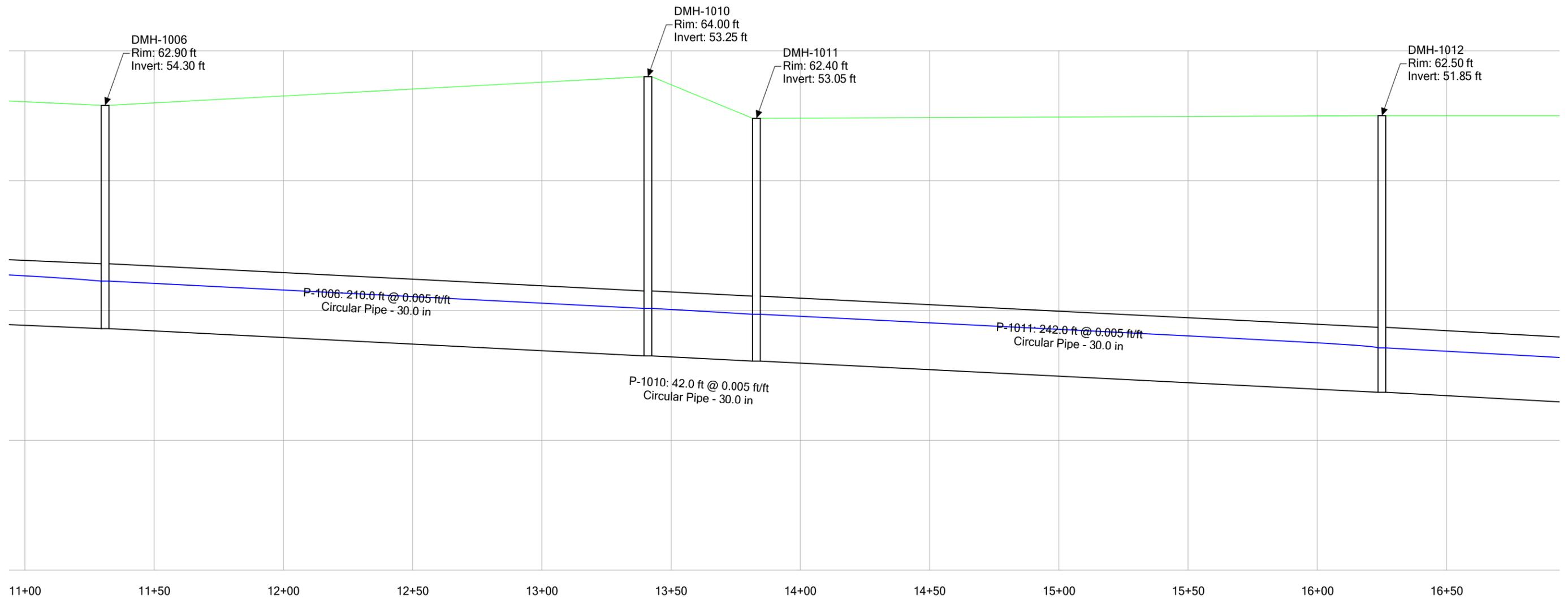
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Profile Report

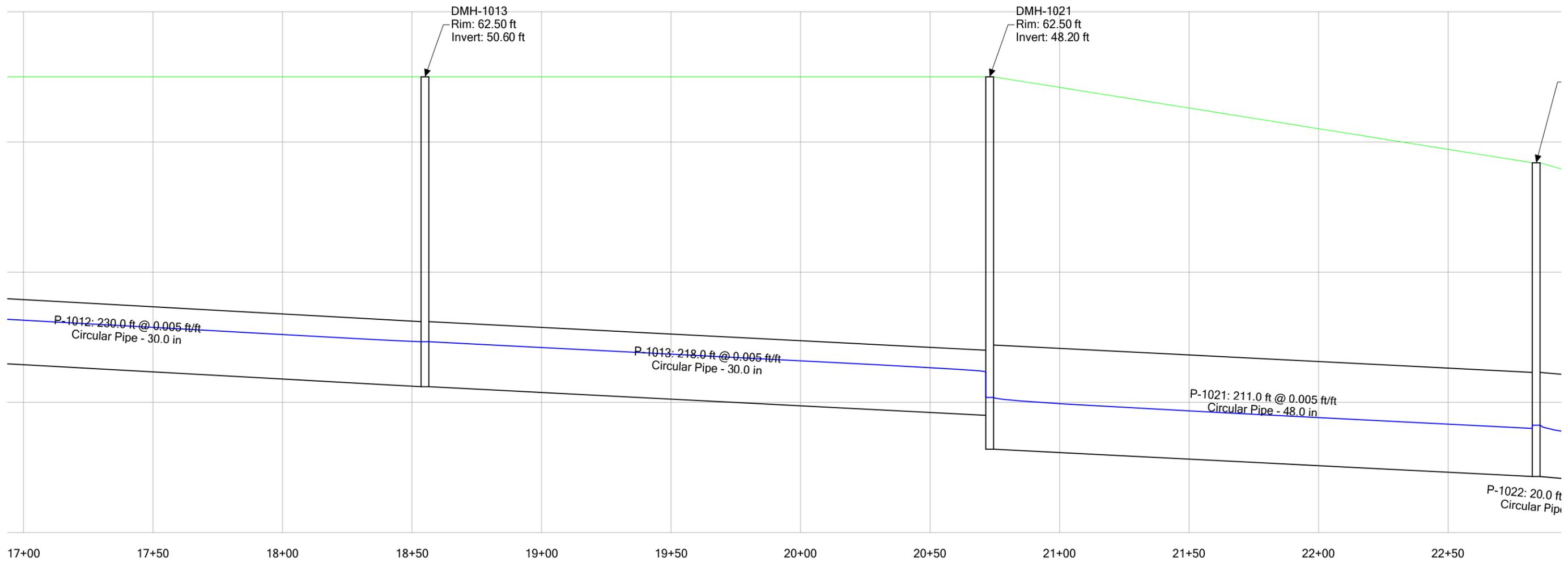
Engineering Profile - 1000-Series (Retail) (3659-12003-StormCAD.stc)

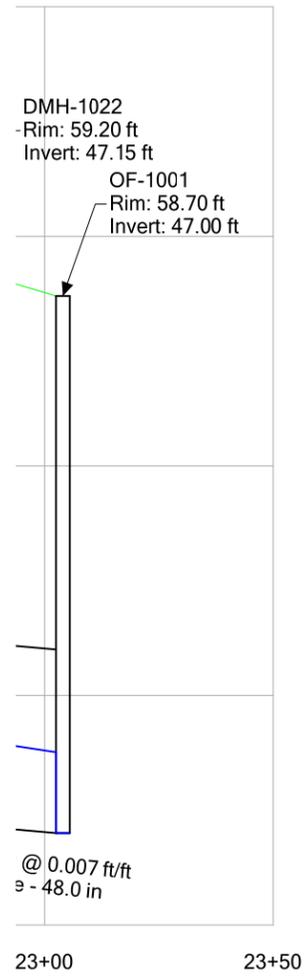






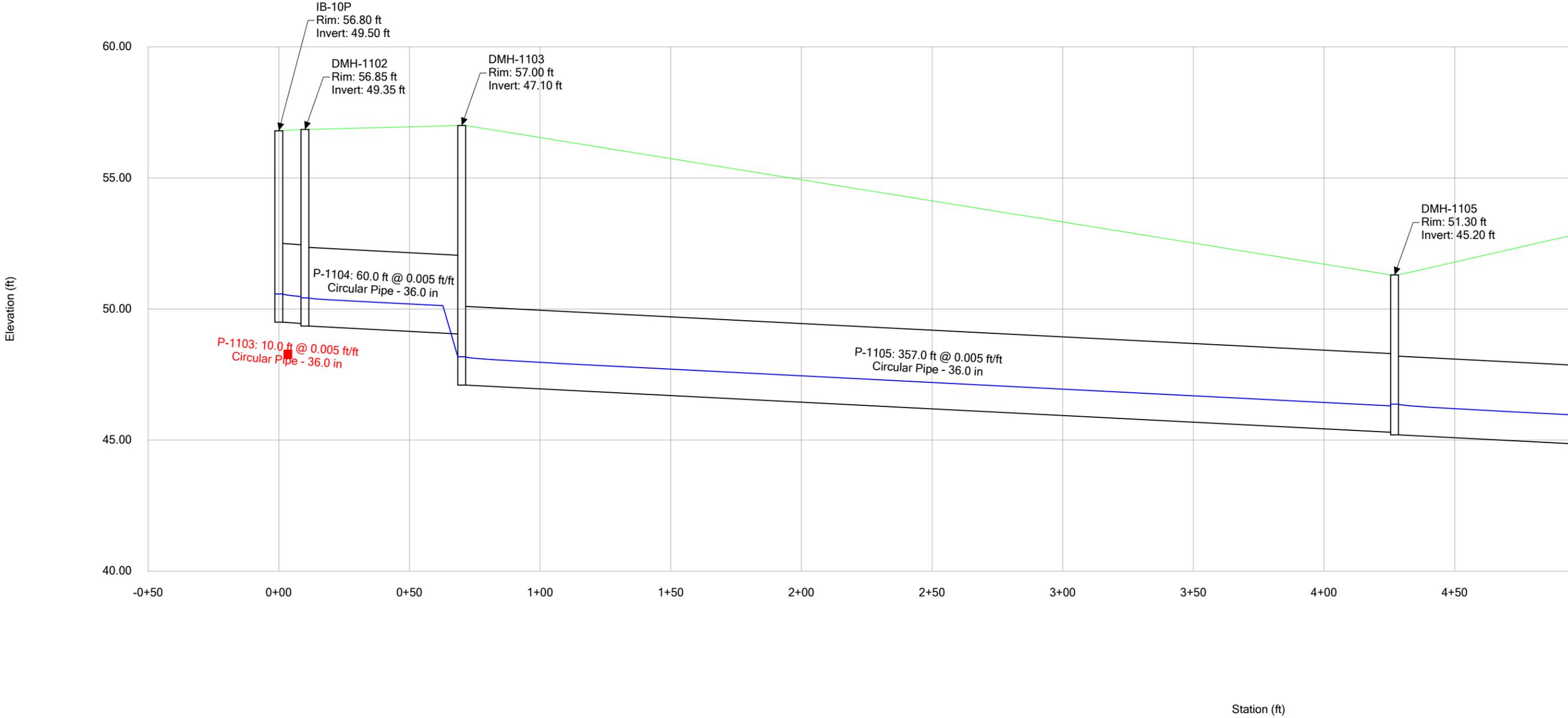
Station (ft)

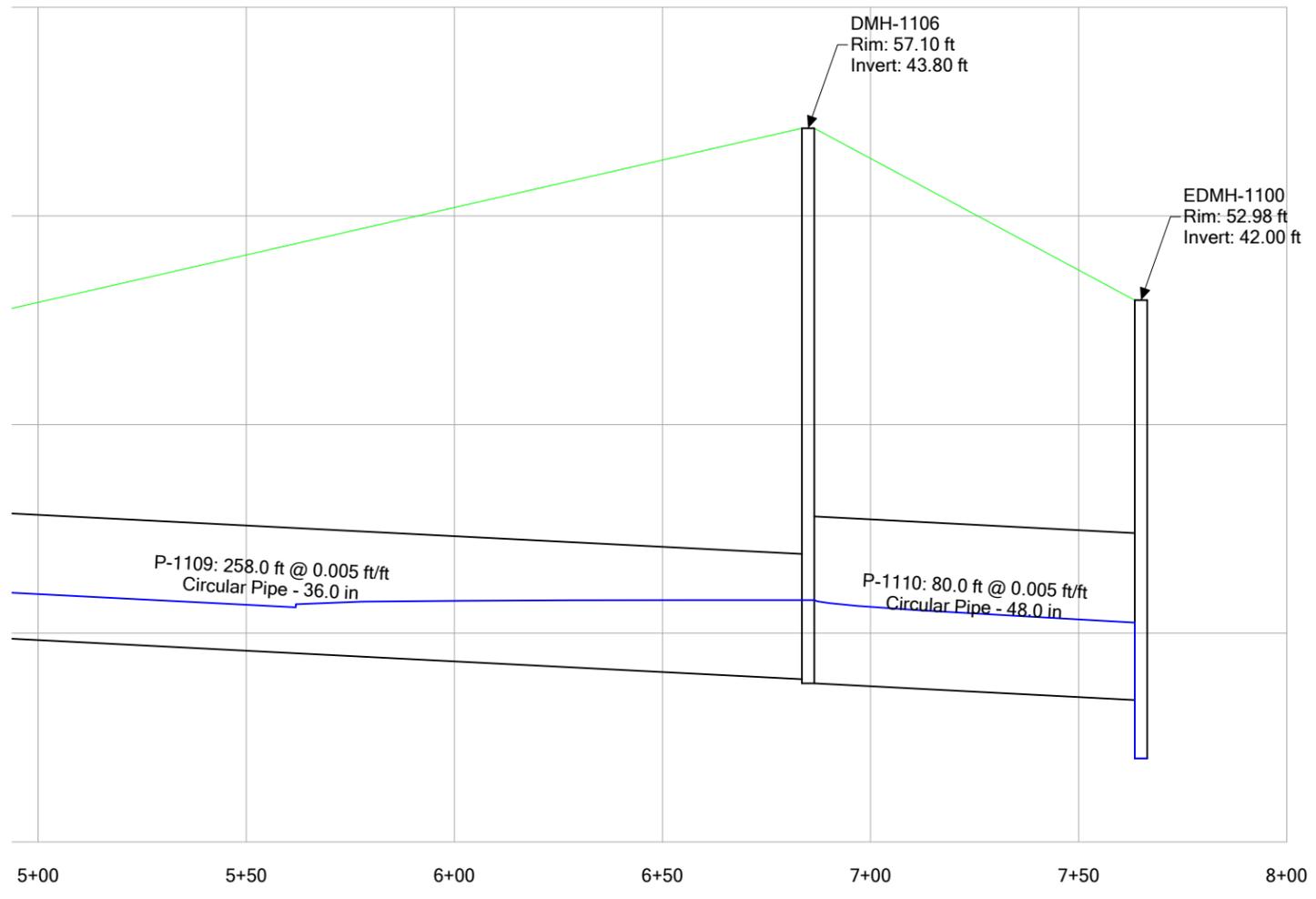




Profile Report

Engineering Profile - 1100-Series (IFB-10) (3659-12003-StormCAD.stc)





Profile Report

Engineering Profile - 1000-Series (IFB-11) (3659-12003-StormCAD.stc)

