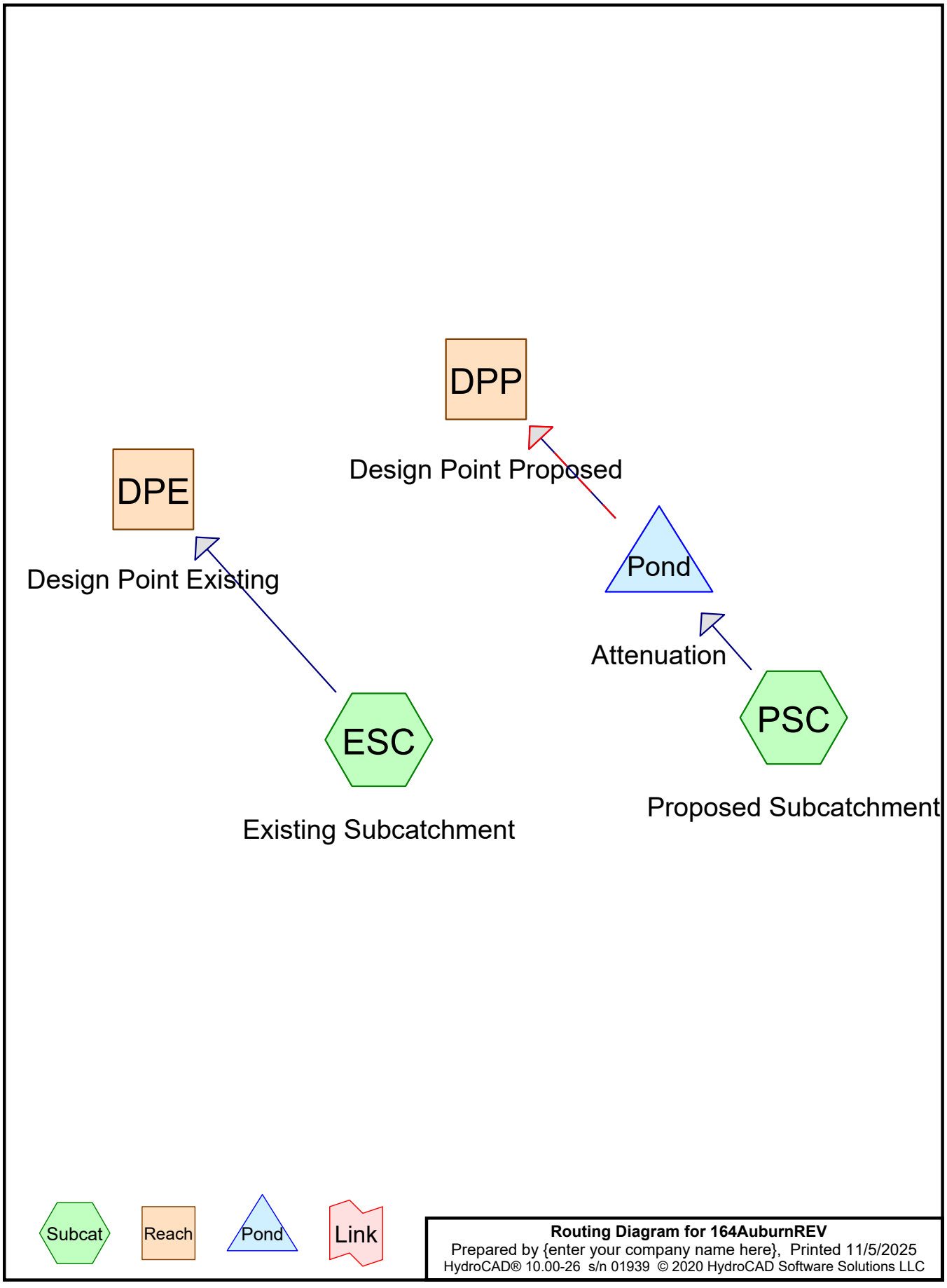


Routing Diagram for 164AuburnREV
Prepared by {enter your company name here}, Printed 11/5/2025
HydroCAD® 10.00-26 s/n 01939 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.461	74	>75% Grass cover, Good, HSG C (PSC)
0.841	70	Brush, Fair, HSG C (ESC)
0.019	98	Existing Concrete Pad (ESC)
0.399	98	Paved parking & Roof, HSG C (PSC)
1.720	**78**	**TOTAL AREA**

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	0.461	0.000	0.000	0.461	>75% Grass cover, Good	PSC
0.000	0.000	0.841	0.000	0.000	0.841	Brush, Fair	ESC
0.000	0.000	0.000	0.000	0.019	0.019	Existing Concrete Pad	ESC
0.000	0.000	0.399	0.000	0.000	0.399	Paved parking & Roof	PSC
0.000	**0.000**	**1.701**	**0.000**	**0.019**	**1.720**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	Pond	944.20	944.00	18.0	0.0111	0.013	3.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment ESC: Existing Subcatchment Runoff Area=37,462 sf 2.20% Impervious Runoff Depth>0.22"
Flow Length=231' Tc=18.2 min CN=71 Runoff=0.17 cfs 0.016 af

Subcatchment PSC: Proposed Runoff Area=37,462 sf 46.39% Impervious Runoff Depth>0.72"
Tc=6.0 min CN=85 Runoff=1.18 cfs 0.051 af

Reach DPE: Design Point Existing Inflow=0.17 cfs 0.016 af
Outflow=0.17 cfs 0.016 af

Reach DPP: Design Point Proposed Inflow=0.16 cfs 0.051 af
Outflow=0.16 cfs 0.051 af

Pond Pond: Attenuation Peak Elev=945.21' Storage=792 cf Inflow=1.18 cfs 0.051 af
Primary=0.16 cfs 0.051 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.051 af

Total Runoff Area = 1.720 ac Runoff Volume = 0.067 af Average Runoff Depth = 0.47"
75.71% Pervious = 1.302 ac 24.29% Impervious = 0.418 ac

Summary for Subcatchment ESC: Existing Subcatchment

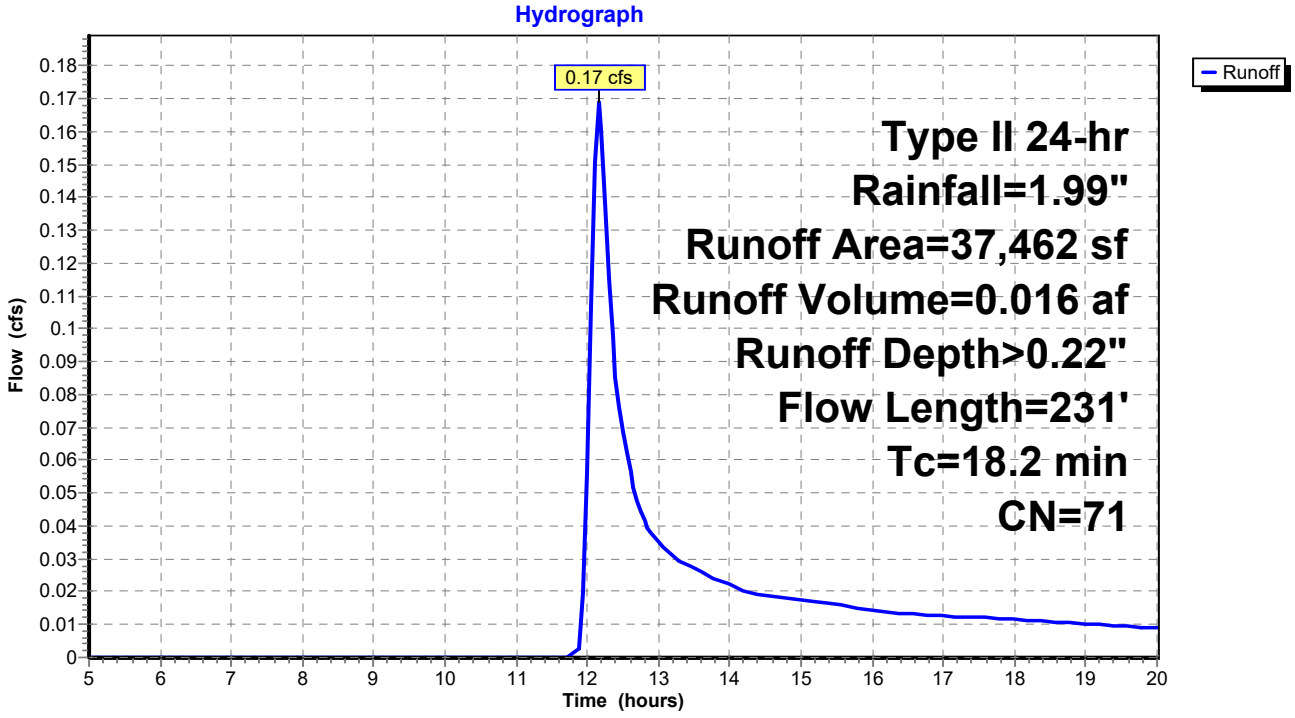
Runoff = 0.17 cfs @ 12.16 hrs, Volume= 0.016 af, Depth> 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=1.99"

	Area (sf)	CN	Description
	36,638	70	Brush, Fair, HSG C
*	824	98	Existing Concrete Pad
	37,462	71	Weighted Average
	36,638		97.80% Pervious Area
	824		2.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0150	0.10		**Sheet Flow, First 100' Flowpath** Grass: Dense n= 0.240 P2= 2.70"
0.8	131	0.0330	2.72		**Shallow Concentrated Flow, Balance of Longest Flowpath** Grassed Waterway Kv= 15.0 fps
18.2	231	Total			

Subcatchment ESC: Existing Subcatchment



Summary for Subcatchment PSC: Proposed Subcatchment

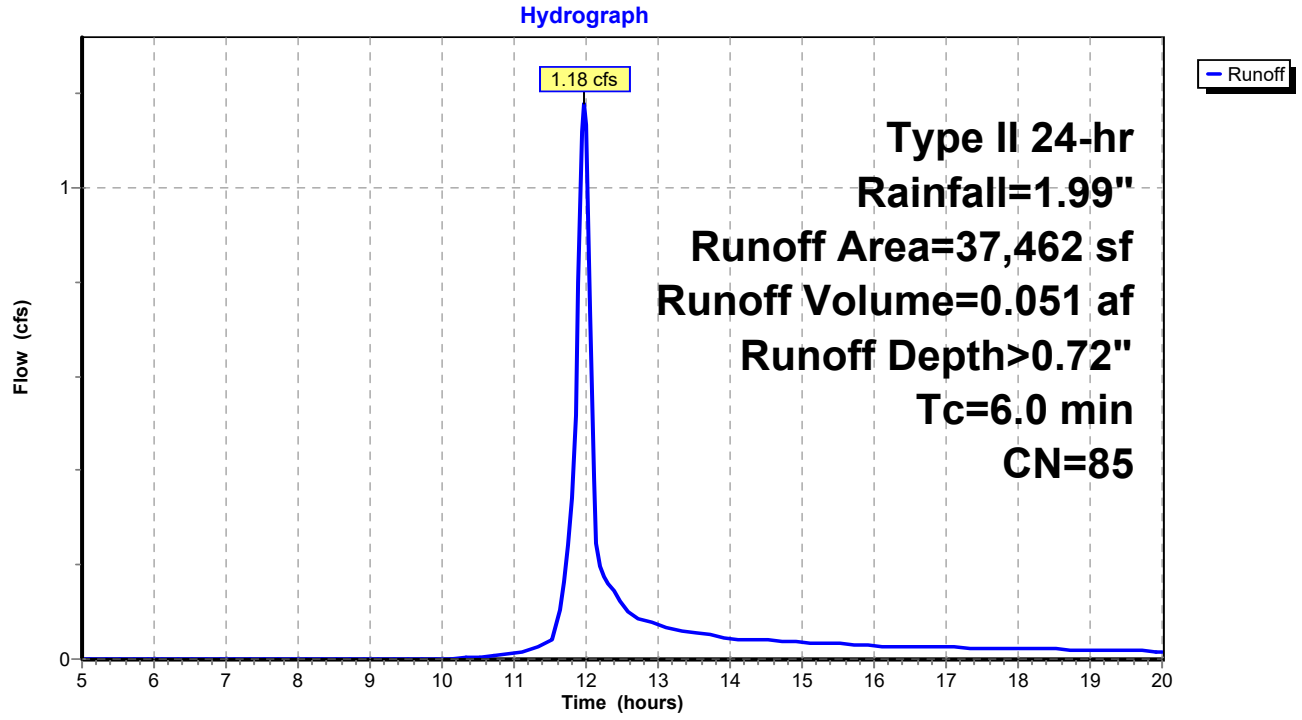
Runoff = 1.18 cfs @ 11.98 hrs, Volume= 0.051 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=1.99"

	Area (sf)	CN	Description
*	17,377	98	Paved parking & Roof, HSG C
	20,085	74	>75% Grass cover, Good, HSG C
	37,462	85	Weighted Average
	20,085		53.61% Pervious Area
	17,377		46.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Min Minimum**

Subcatchment PSC: Proposed Subcatchment



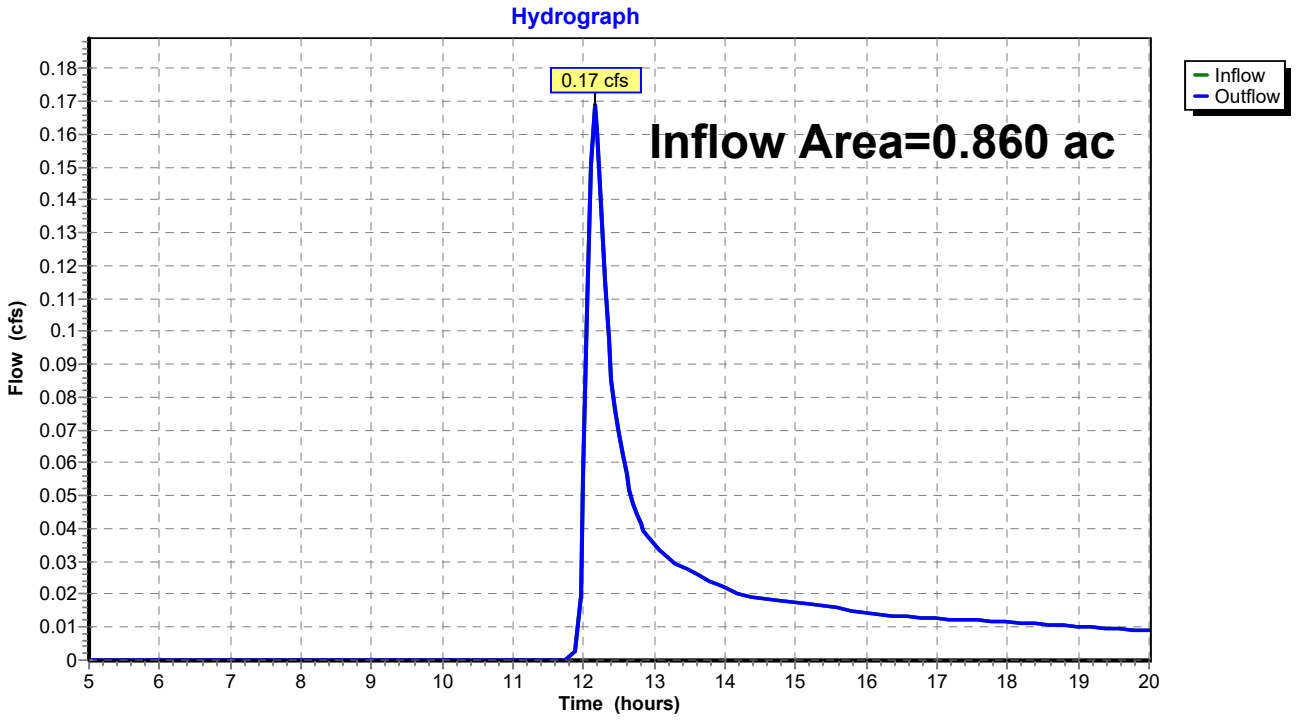
Summary for Reach DPE: Design Point Existing

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.860 ac, 2.20% Impervious, Inflow Depth > 0.22"
Inflow = 0.17 cfs @ 12.16 hrs, Volume= 0.016 af
Outflow = 0.17 cfs @ 12.16 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DPE: Design Point Existing



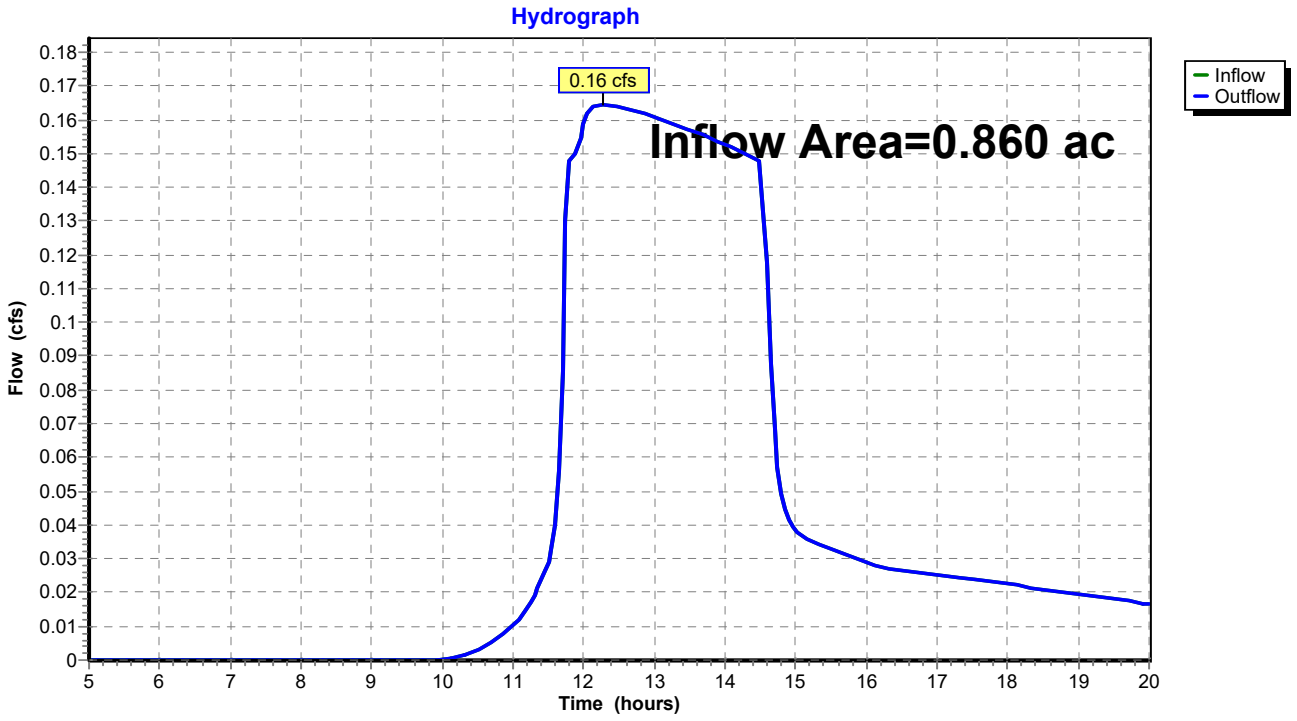
Summary for Reach DPP: Design Point Proposed

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.860 ac, 46.39% Impervious, Inflow Depth > 0.72"
Inflow = 0.16 cfs @ 12.29 hrs, Volume= 0.051 af
Outflow = 0.16 cfs @ 12.29 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DPP: Design Point Proposed



Summary for Pond Pond: Attenuation

[44] Hint: Outlet device #2 is below defined storage

Inflow Area = 0.860 ac, 46.39% Impervious, Inflow Depth > 0.72"
Inflow = 1.18 cfs @ 11.98 hrs, Volume= 0.051 af
Outflow = 0.16 cfs @ 12.29 hrs, Volume= 0.051 af, Atten= 86%, Lag= 18.6 min
Primary = 0.16 cfs @ 12.29 hrs, Volume= 0.051 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 945.21' @ 12.29 hrs Surf.Area= 3,959 sf Storage= 792 cf

Plug-Flow detention time= 38.0 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 36.9 min (836.5 - 799.7)

Volume	Invert	Avail.Storage	Storage Description
#1	945.00'	5,473 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

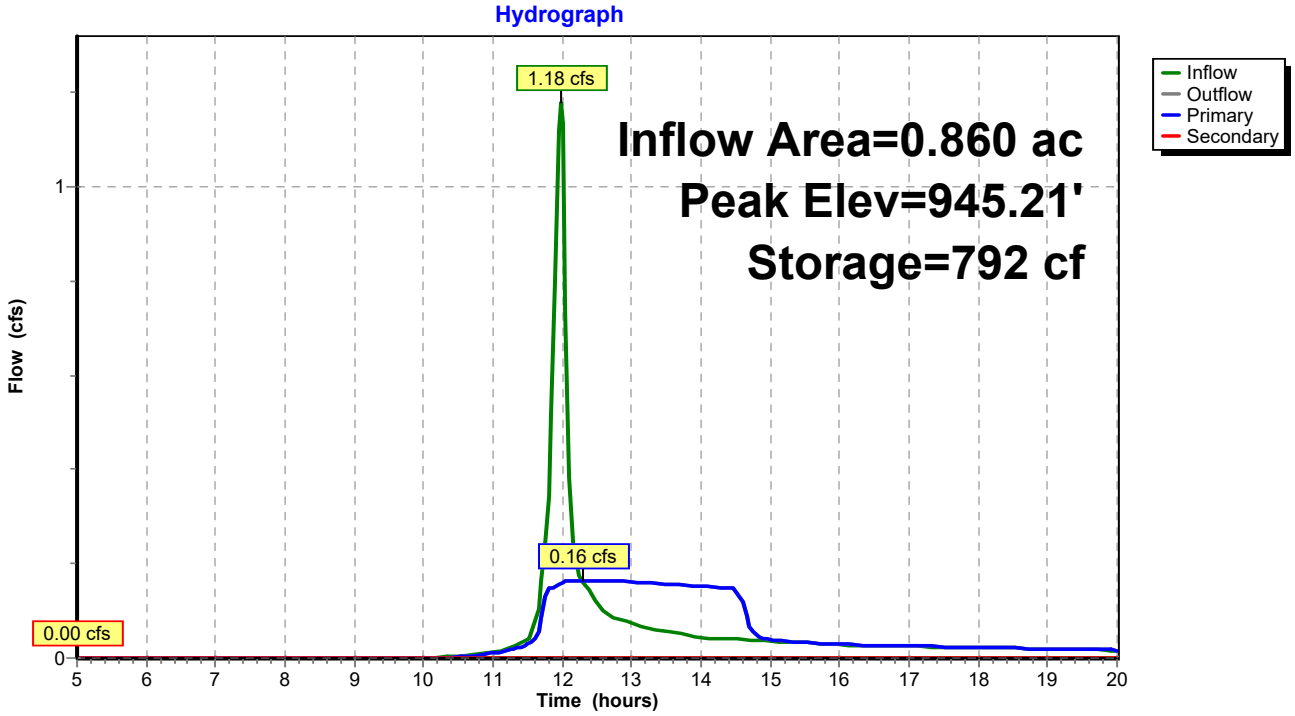
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
945.00	3,740	0	0
946.00	4,804	4,272	4,272
946.50	0	1,201	5,473

Device	Routing	Invert	Outlet Devices
#1	Secondary	945.65'	**12.0' long x 4.0' 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Primary	944.20'	**3.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 944.20' / 944.00' S= 0.0111 '/' Cc= 0.900 n= 0.013, Flow Area= 0.05 sf

Primary OutFlow Max=0.16 cfs @ 12.29 hrs HW=945.21' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 0.16 cfs @ 3.35 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=945.00' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond Pond: Attenuation



164AuburnREV

Prepared by {enter your company name here}

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.461	74	>75% Grass cover, Good, HSG C (PSC)
0.841	70	Brush, Fair, HSG C (ESC)
0.019	98	Existing Concrete Pad (ESC)
0.399	98	Paved parking & Roof, HSG C (PSC)
1.720	**78**	**TOTAL AREA**

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	0.461	0.000	0.000	0.461	>75% Grass cover, Good	PSC
0.000	0.000	0.841	0.000	0.000	0.841	Brush, Fair	ESC
0.000	0.000	0.000	0.000	0.019	0.019	Existing Concrete Pad	ESC
0.000	0.000	0.399	0.000	0.000	0.399	Paved parking & Roof	PSC
0.000	**0.000**	**1.701**	**0.000**	**0.019**	**1.720**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	Pond	944.20	944.00	18.0	0.0111	0.013	3.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment ESC: Existing Subcatchment Runoff Area=37,462 sf 2.20% Impervious Runoff Depth>0.89"
Flow Length=231' Tc=18.2 min CN=71 Runoff=0.94 cfs 0.064 af

Subcatchment PSC: Proposed Runoff Area=37,462 sf 46.39% Impervious Runoff Depth>1.79"
Tc=6.0 min CN=85 Runoff=2.84 cfs 0.128 af

Reach DPE: Design Point Existing Inflow=0.94 cfs 0.064 af
Outflow=0.94 cfs 0.064 af

Reach DPP: Design Point Proposed Inflow=0.20 cfs 0.128 af
Outflow=0.20 cfs 0.128 af

Pond Pond: Attenuation Peak Elev=945.64' Storage=2,591 cf Inflow=2.84 cfs 0.128 af
Primary=0.20 cfs 0.128 af Secondary=0.00 cfs 0.000 af Outflow=0.20 cfs 0.128 af

Total Runoff Area = 1.720 ac Runoff Volume = 0.192 af Average Runoff Depth = 1.34"
75.71% Pervious = 1.302 ac 24.29% Impervious = 0.418 ac

Summary for Subcatchment ESC: Existing Subcatchment

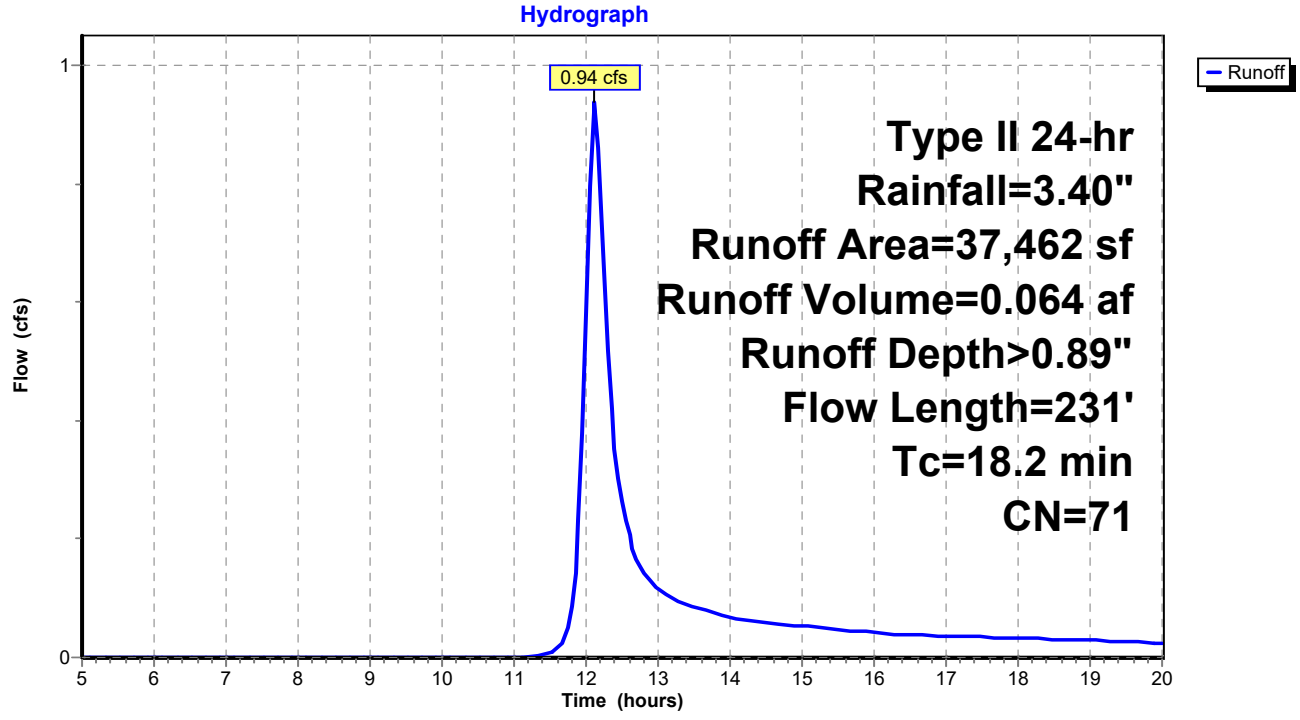
Runoff = 0.94 cfs @ 12.12 hrs, Volume= 0.064 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.40"

	Area (sf)	CN	Description
	36,638	70	Brush, Fair, HSG C
*	824	98	Existing Concrete Pad
	37,462	71	Weighted Average
	36,638		97.80% Pervious Area
	824		2.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0150	0.10		**Sheet Flow, First 100' Flowpath** Grass: Dense n= 0.240 P2= 2.70"
0.8	131	0.0330	2.72		**Shallow Concentrated Flow, Balance of Longest Flowpath** Grassed Waterway Kv= 15.0 fps
18.2	231	Total			

Subcatchment ESC: Existing Subcatchment



Summary for Subcatchment PSC: Proposed Subcatchment

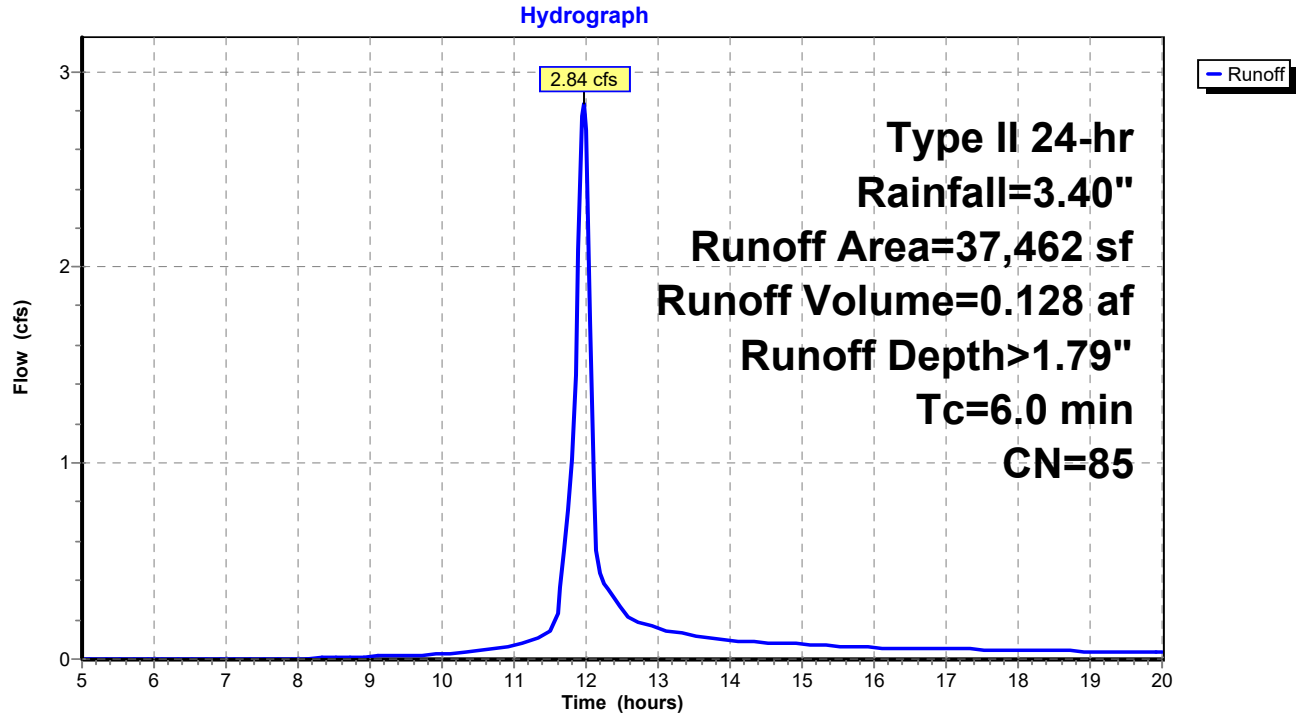
Runoff = 2.84 cfs @ 11.97 hrs, Volume= 0.128 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.40"

	Area (sf)	CN	Description
*	17,377	98	Paved parking & Roof, HSG C
	20,085	74	>75% Grass cover, Good, HSG C
	37,462	85	Weighted Average
	20,085		53.61% Pervious Area
	17,377		46.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Min Minimum**

Subcatchment PSC: Proposed Subcatchment



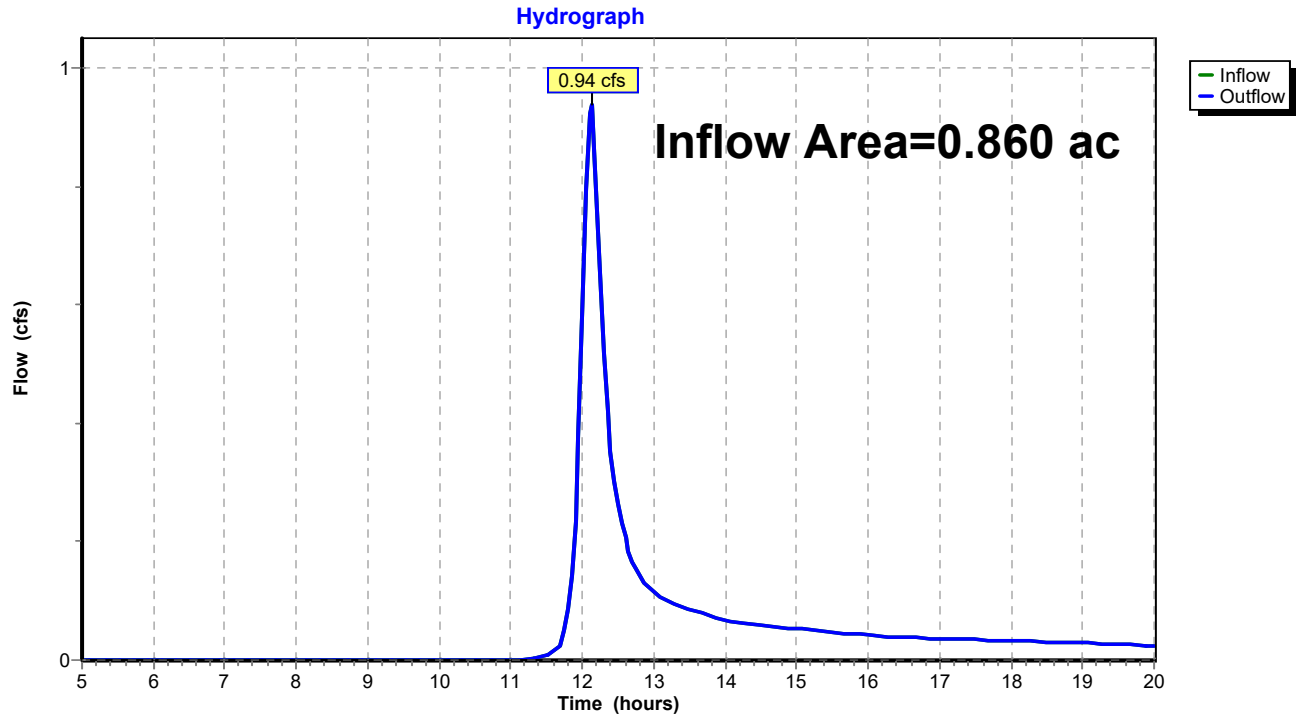
Summary for Reach DPE: Design Point Existing

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.860 ac, 2.20% Impervious, Inflow Depth > 0.89"
Inflow = 0.94 cfs @ 12.12 hrs, Volume= 0.064 af
Outflow = 0.94 cfs @ 12.12 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DPE: Design Point Existing



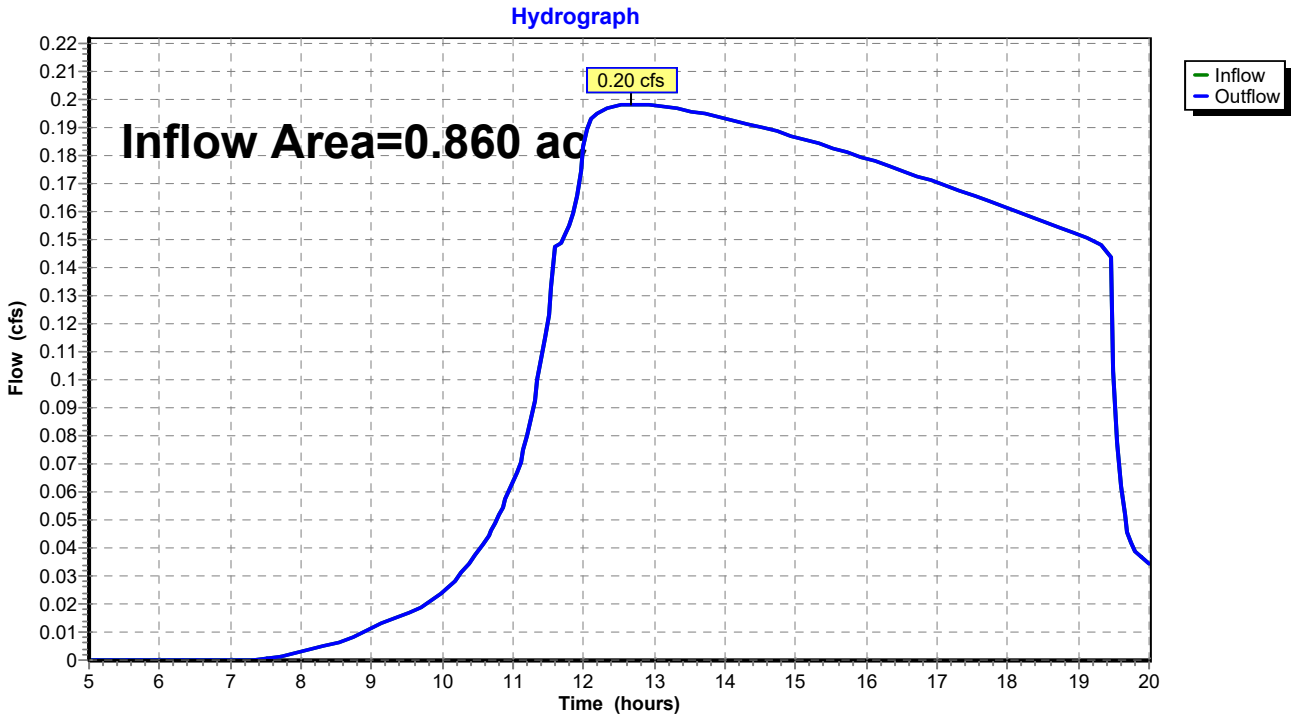
Summary for Reach DPP: Design Point Proposed

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.860 ac, 46.39% Impervious, Inflow Depth > 1.78"
Inflow = 0.20 cfs @ 12.66 hrs, Volume= 0.128 af
Outflow = 0.20 cfs @ 12.66 hrs, Volume= 0.128 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DPP: Design Point Proposed



Summary for Pond Pond: Attenuation

[44] Hint: Outlet device #2 is below defined storage

Inflow Area = 0.860 ac, 46.39% Impervious, Inflow Depth > 1.79"
Inflow = 2.84 cfs @ 11.97 hrs, Volume= 0.128 af
Outflow = 0.20 cfs @ 12.66 hrs, Volume= 0.128 af, Atten= 93%, Lag= 41.6 min
Primary = 0.20 cfs @ 12.66 hrs, Volume= 0.128 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 945.64' @ 12.66 hrs Surf.Area= 4,416 sf Storage= 2,591 cf

Plug-Flow detention time= 125.9 min calculated for 0.128 af (100% of inflow)
Center-of-Mass det. time= 124.9 min (905.2 - 780.3)

Volume	Invert	Avail.Storage	Storage Description
#1	945.00'	5,473 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

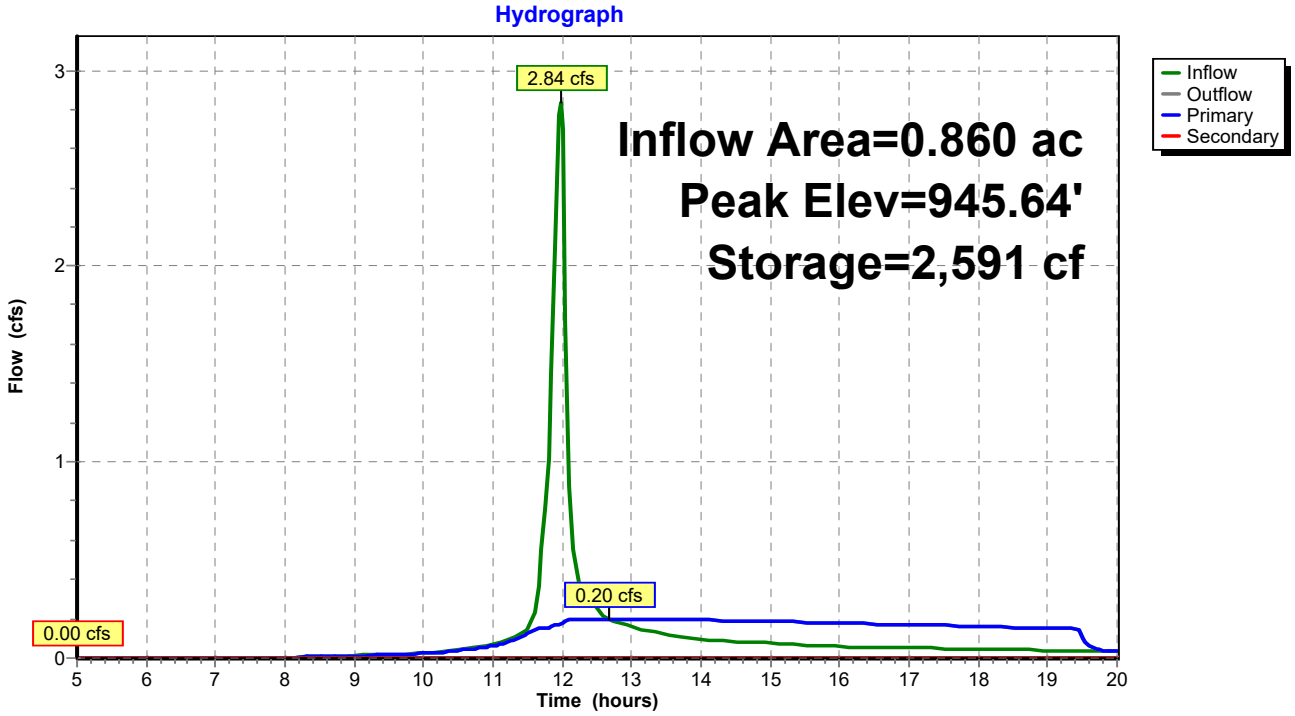
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
945.00	3,740	0	0
946.00	4,804	4,272	4,272
946.50	0	1,201	5,473

Device	Routing	Invert	Outlet Devices
#1	Secondary	945.65'	**12.0' long x 4.0' 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Primary	944.20'	**3.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 944.20' / 944.00' S= 0.0111 '/' Cc= 0.900 n= 0.013, Flow Area= 0.05 sf

Primary OutFlow Max=0.20 cfs @ 12.66 hrs HW=945.64' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 0.20 cfs @ 4.03 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=945.00' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond Pond: Attenuation



164AuburnREV

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.461	74	>75% Grass cover, Good, HSG C (PSC)
0.841	70	Brush, Fair, HSG C (ESC)
0.019	98	Existing Concrete Pad (ESC)
0.399	98	Paved parking & Roof, HSG C (PSC)
1.720	**78**	**TOTAL AREA**

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	0.461	0.000	0.000	0.461	>75% Grass cover, Good	PSC
0.000	0.000	0.841	0.000	0.000	0.841	Brush, Fair	ESC
0.000	0.000	0.000	0.000	0.019	0.019	Existing Concrete Pad	ESC
0.000	0.000	0.399	0.000	0.000	0.399	Paved parking & Roof	PSC
0.000	**0.000**	**1.701**	**0.000**	**0.019**	**1.720**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	Pond	944.20	944.00	18.0	0.0111	0.013	3.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment ESC: Existing Subcatchment Runoff Area=37,462 sf 2.20% Impervious Runoff Depth>2.53"
Flow Length=231' Tc=18.2 min CN=71 Runoff=2.76 cfs 0.181 af

Subcatchment PSC: Proposed Runoff Area=37,462 sf 46.39% Impervious Runoff Depth>3.87"
Tc=6.0 min CN=85 Runoff=5.89 cfs 0.278 af

Reach DPE: Design Point Existing Inflow=2.76 cfs 0.181 af
Outflow=2.76 cfs 0.181 af

Reach DPP: Design Point Proposed Inflow=4.22 cfs 0.257 af
Outflow=4.22 cfs 0.257 af

Pond Pond: Attenuation Peak Elev=945.92' Storage=3,872 cf Inflow=5.89 cfs 0.278 af
Primary=0.22 cfs 0.163 af Secondary=4.00 cfs 0.094 af Outflow=4.22 cfs 0.257 af

Total Runoff Area = 1.720 ac Runoff Volume = 0.459 af Average Runoff Depth = 3.20"
75.71% Pervious = 1.302 ac 24.29% Impervious = 0.418 ac

Summary for Subcatchment ESC: Existing Subcatchment

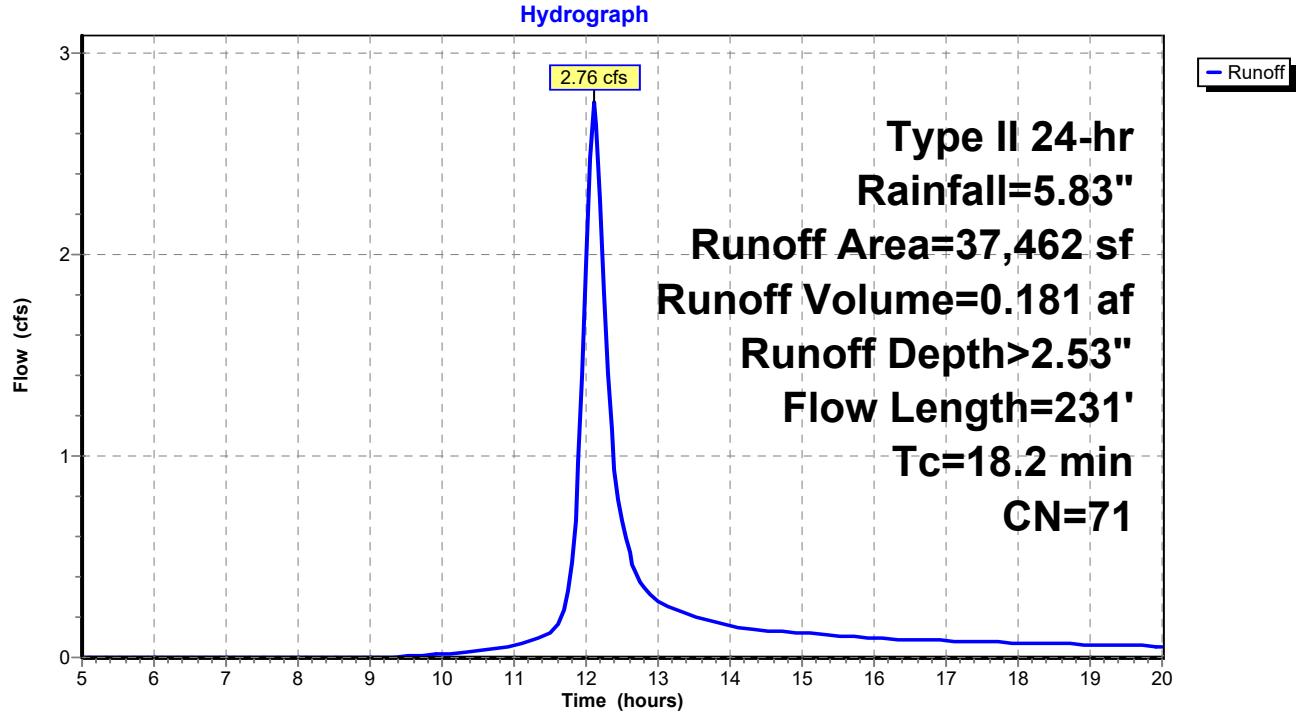
Runoff = 2.76 cfs @ 12.11 hrs, Volume= 0.181 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.83"

	Area (sf)	CN	Description
	36,638	70	Brush, Fair, HSG C
*	824	98	Existing Concrete Pad
	37,462	71	Weighted Average
	36,638		97.80% Pervious Area
	824		2.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0150	0.10		**Sheet Flow, First 100' Flowpath** Grass: Dense n= 0.240 P2= 2.70"
0.8	131	0.0330	2.72		**Shallow Concentrated Flow, Balance of Longest Flowpath** Grassed Waterway Kv= 15.0 fps
18.2	231	Total			

Subcatchment ESC: Existing Subcatchment



Summary for Subcatchment PSC: Proposed Subcatchment

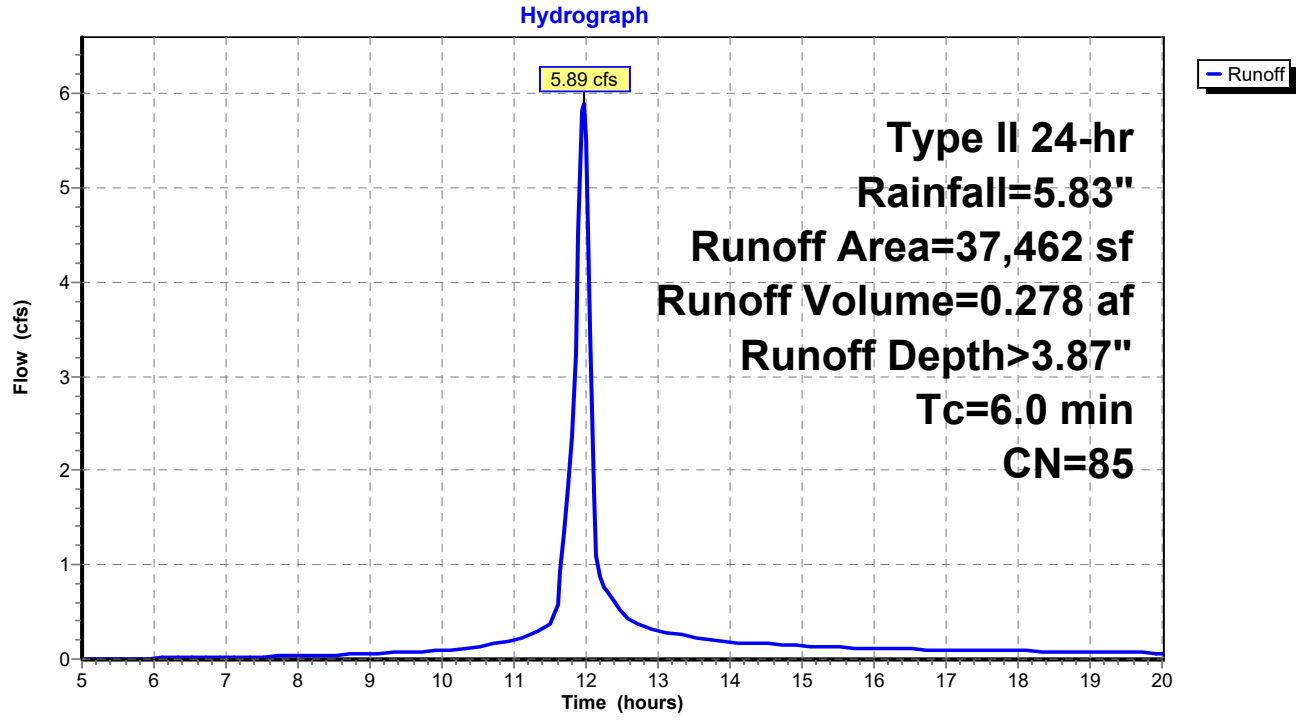
Runoff = 5.89 cfs @ 11.97 hrs, Volume= 0.278 af, Depth> 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.83"

	Area (sf)	CN	Description
*	17,377	98	Paved parking & Roof, HSG C
	20,085	74	>75% Grass cover, Good, HSG C
	37,462	85	Weighted Average
	20,085		53.61% Pervious Area
	17,377		46.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 6 Min Minimum**

Subcatchment PSC: Proposed Subcatchment



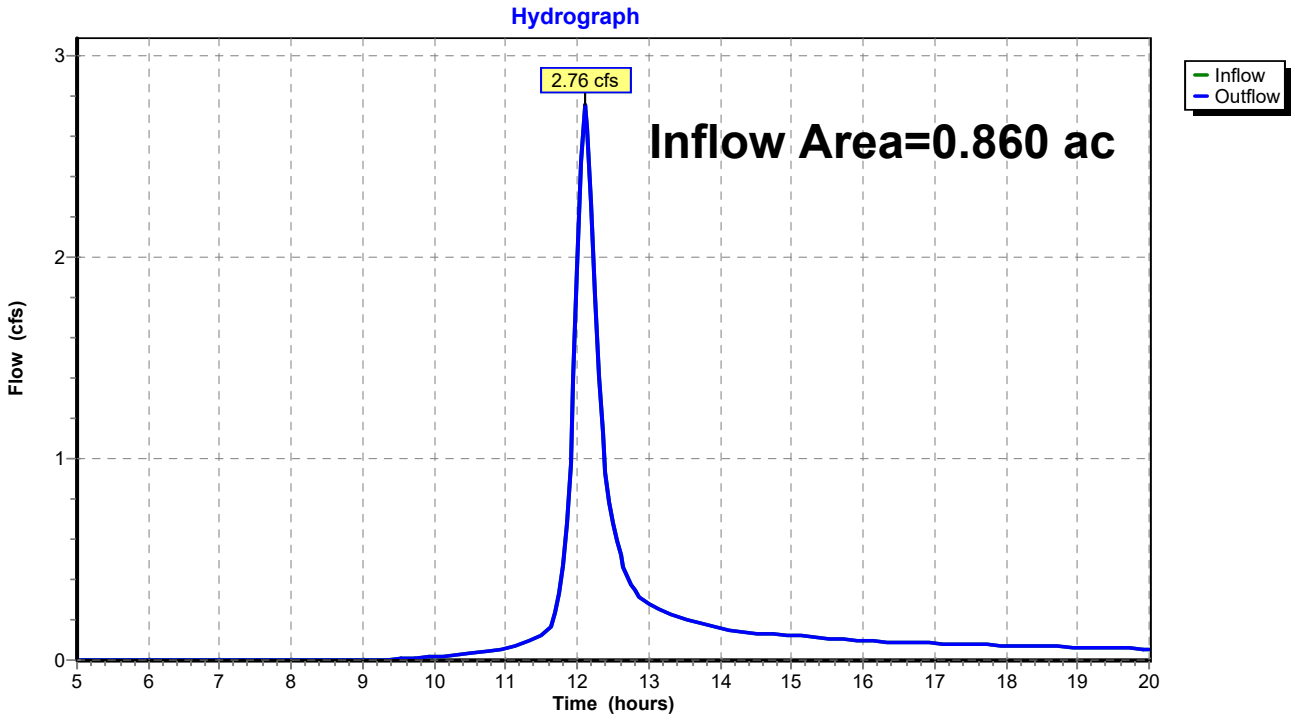
Summary for Reach DPE: Design Point Existing

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.860 ac, 2.20% Impervious, Inflow Depth > 2.53"
Inflow = 2.76 cfs @ 12.11 hrs, Volume= 0.181 af
Outflow = 2.76 cfs @ 12.11 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DPE: Design Point Existing



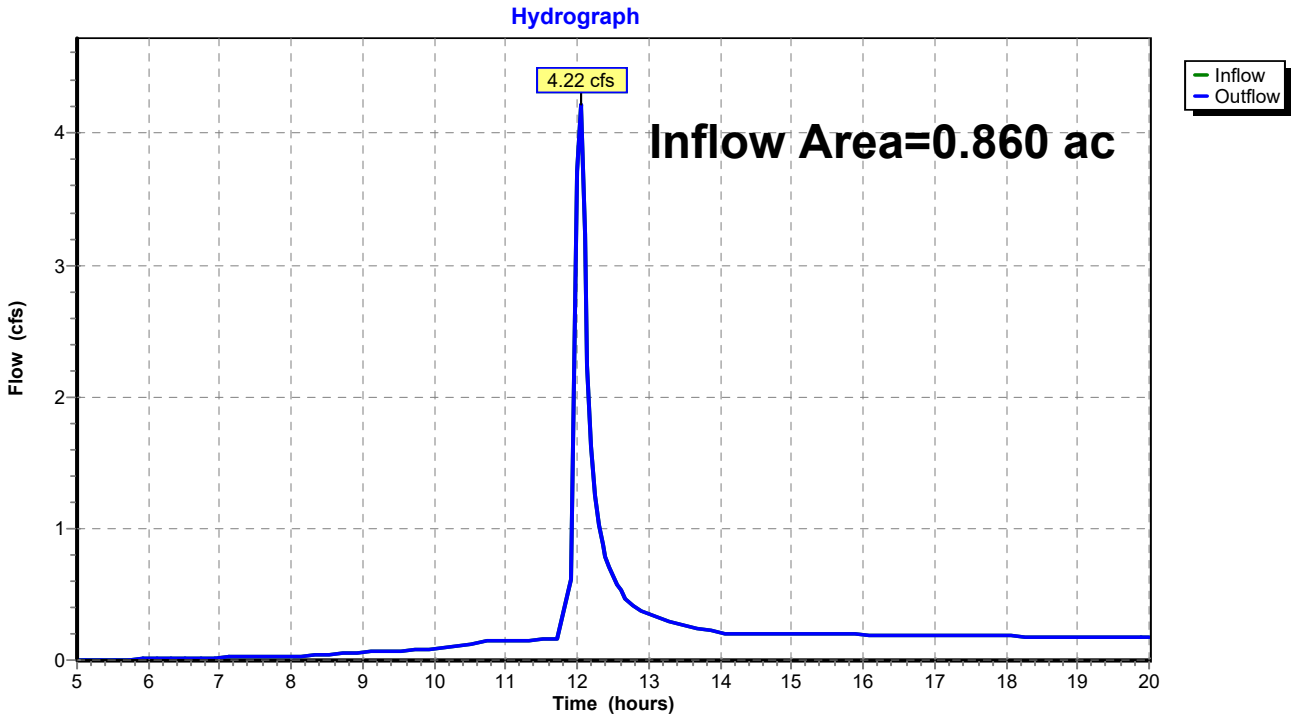
Summary for Reach DPP: Design Point Proposed

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.860 ac, 46.39% Impervious, Inflow Depth > 3.58"
Inflow = 4.22 cfs @ 12.04 hrs, Volume= 0.257 af
Outflow = 4.22 cfs @ 12.04 hrs, Volume= 0.257 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DPP: Design Point Proposed



Summary for Pond Pond: Attenuation

[44] Hint: Outlet device #2 is below defined storage

Inflow Area = 0.860 ac, 46.39% Impervious, Inflow Depth > 3.87"
Inflow = 5.89 cfs @ 11.97 hrs, Volume= 0.278 af
Outflow = 4.22 cfs @ 12.04 hrs, Volume= 0.257 af, Atten= 28%, Lag= 4.5 min
Primary = 0.22 cfs @ 12.04 hrs, Volume= 0.163 af
Secondary = 4.00 cfs @ 12.04 hrs, Volume= 0.094 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 945.92' @ 12.04 hrs Surf.Area= 4,715 sf Storage= 3,872 cf

Plug-Flow detention time= 89.5 min calculated for 0.257 af (93% of inflow)
Center-of-Mass det. time= 62.1 min (824.7 - 762.6)

Volume	Invert	Avail.Storage	Storage Description
#1	945.00'	5,473 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

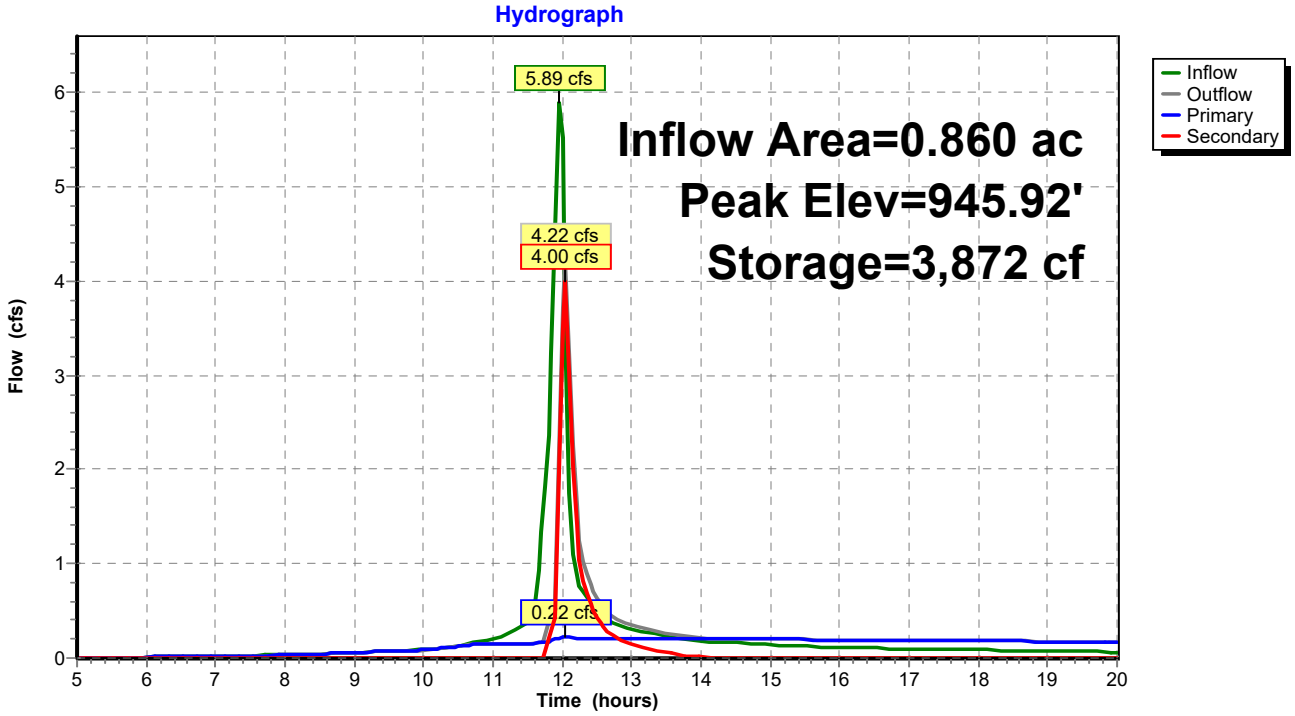
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
945.00	3,740	0	0
946.00	4,804	4,272	4,272
946.50	0	1,201	5,473

Device	Routing	Invert	Outlet Devices
#1	Secondary	945.65'	**12.0' long x 4.0' 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Primary	944.20'	**3.0" Round Culvert** L= 18.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 944.20' / 944.00' S= 0.0111 '/' Cc= 0.900 n= 0.013, Flow Area= 0.05 sf

Primary OutFlow Max=0.22 cfs @ 12.04 hrs HW=945.91' (Free Discharge)
↑—**2=Culvert** (Barrel Controls 0.22 cfs @ 4.42 fps)

Secondary OutFlow Max=3.90 cfs @ 12.04 hrs HW=945.91' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 3.90 cfs @ 1.24 fps)

Pond Pond: Attenuation



Existing Subcatchment (ESC)
Existing Site Conditions - Area = 37,462-SF (0.86-AC)

Surface Conditions & Soils:
100% OaA, Ovid - Hydrologic Soil Group (HSG) C

Runoff Curve Number = 74, Brush/Weed/Grass Mix, Fair Soils

Overland Stormwater Runoff - Longest Flowpath =231lf +/-
Sheet Flow, Dense Grass - 100 LF @ S = 1.5% avg +/-
Shallow Conc. Flow, Grassed Waterway - 131 LF @ S = 3.3% avg +/-

To Design Point - (DPE)

Runoff Rates and Volumes

	1 yr	10 yr	100 yr
	1.99"/24 hr	3.40"/24 hr	5.83"/24 hr
Existing	0.170 cfs	0.940 cfs	2.760 cfs
	0.016 af	0.064 af	0.181 af
Proposed	0.160 cfs	0.200cfs	4.220cfs (*5.890 cfs)
	0.051 af	0.128 af	0.257 af
			*Without Attenuation

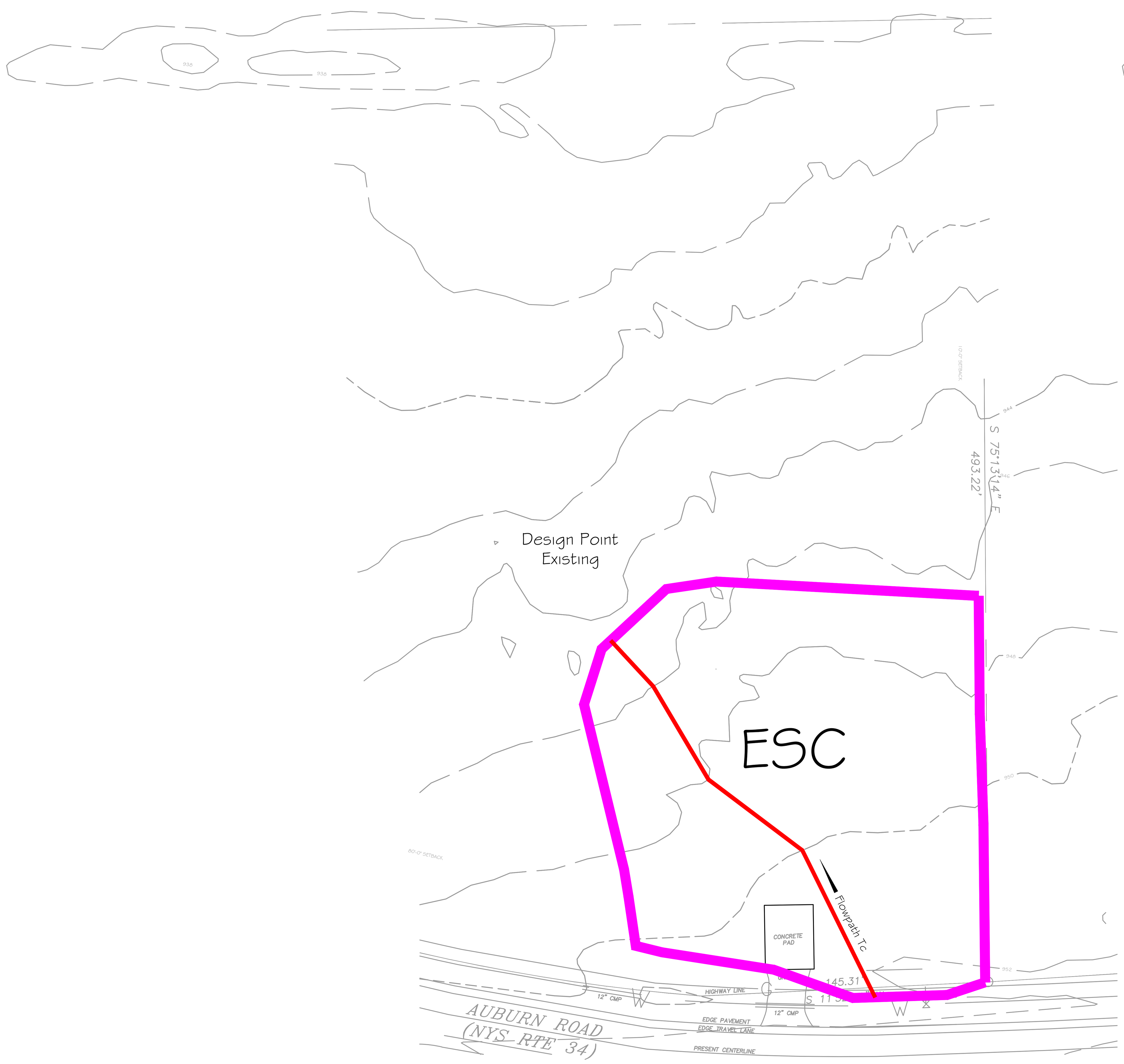
Proposed Subcatchment (PSC)
Proposed Site Conditions - Area = 37,462-SF (0.86-AC)

Surface Conditions & Soils:
100% OaA, Ovid - Hydrologic Soil Group (HSG) C

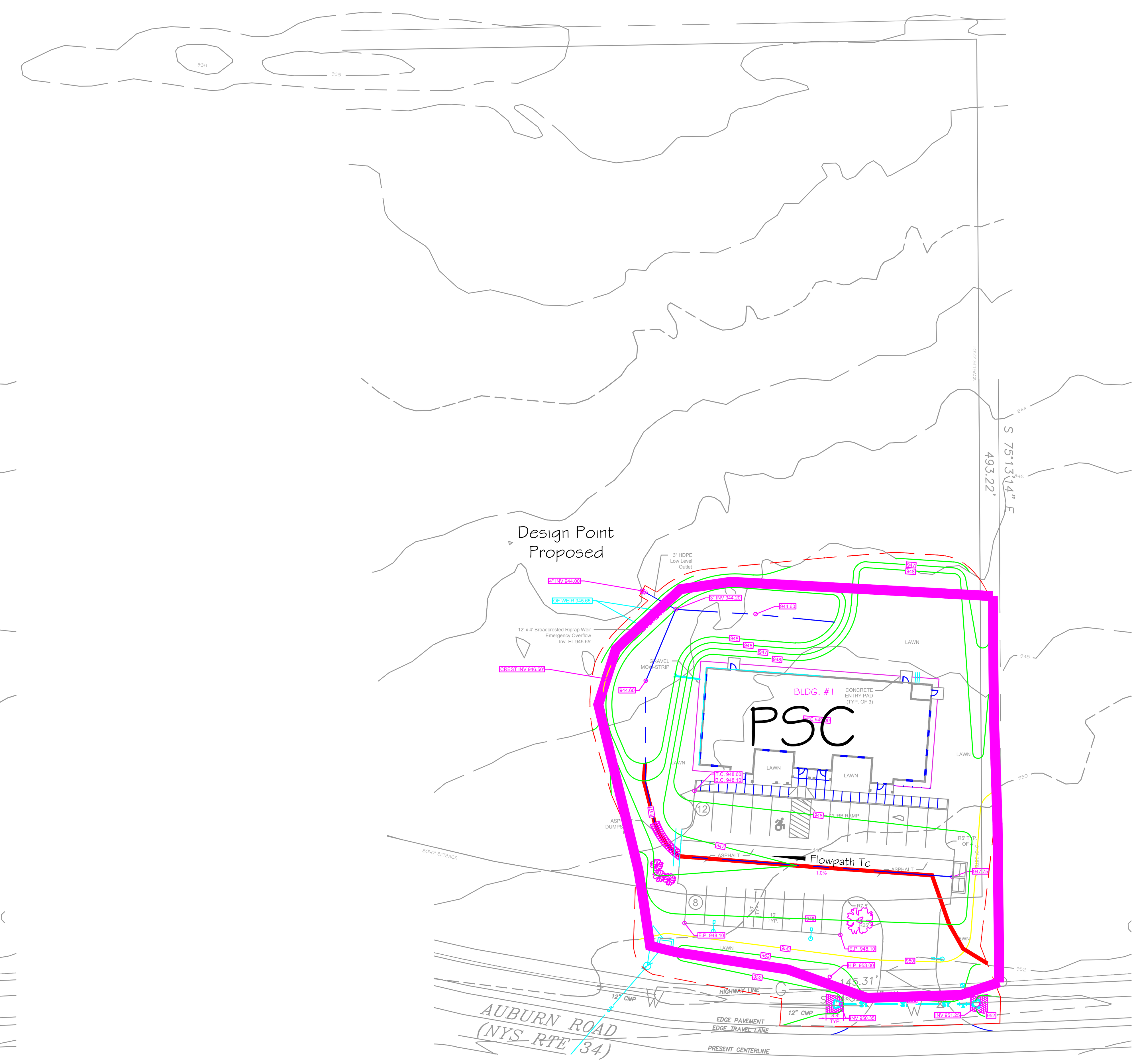
Runoff Curve Number = 98, Paved Drive & Rooftops, HSG C Soils
Runoff Curve Number = 74, Grass >75%, HSG C Soils

Overland Stormwater Runoff - Longest Flowpath = 240lf +/-
Minimum Time of Concentration - 6 Minutes

To Design Point - (DPP)



Existing Conditions



Proposed Conditions

SCALE: 1" = 40'-0"

164 AUBURN ROAD
LANSING, NY

HYDRAULIC AND HYDROLOGIC WORKSHEET

TOWN OF LANSING, LANSING, NEW YORK

drawn	checked
S.G.	
date Sept 26, 2025	scale 1" = 40'
project no.	
sheet no. HYD	