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Routing Diagram for Proposed - Addendum_5.24.2019
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Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
208,892	74	>75% Grass cover, Good, HSG C (PDA-100, PDA-101, PDA-102, PDA-200, PDA-201, PDA-300, PDA-301, PDA-302, PDA-400)
14,649	96	Gravel surface, HSG C (PDA-100, PDA-101, PDA-102, PDA-200, PDA-201, PDA-300, PDA-301)
57,415	98	Paved parking, HSG C (PDA-100, PDA-101, PDA-102, PDA-200, PDA-201, PDA-301, PDA-302)
56,188	98	Roofs, HSG C (PDA-101, PDA-102, PDA-200, PDA-201, PDA-300, PDA-301, PDA-302, PDA-400)
11,510	98	Unconnected pavement, HSG C (PDA-400)
318,887	70	Woods, Good, HSG C (PDA-100, PDA-102, PDA-300, PDA-400)
667,541	77	TOTAL AREA

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Page 3

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
667,541	HSG C	PDA-100, PDA-101, PDA-102, PDA-200, PDA-201, PDA-300, PDA-301, PDA-302, PDA-400
0	HSG D	
0	Other	
667,541		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	208,892	0	0	208,892	>75% Grass cover, Good
0	0	14,649	0	0	14,649	Gravel surface
0	0	57,415	0	0	57,415	Paved parking
0	0	56,188	0	0	56,188	Roofs
0	0	11,510	0	0	11,510	Unconnected pavement
0	0	318,887	0	0	318,887	Woods, Good
0	0	667,541	0	0	667,541	TOTAL AREA

Sub
Num

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Page 5

Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 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 PDA-100: Subcat PDA-100	Runoff Area=83,108 sf 0.00% Impervious Runoff Depth=0.95" Flow Length=420' Tc=9.2 min CN=72 Runoff=1.7 cfs 6,611 cf
Subcatchment PDA-101: Subcat PDA-101	Runoff Area=56,037 sf 44.91% Impervious Runoff Depth=1.87" Flow Length=420' Tc=6.1 min CN=86 Runoff=2.8 cfs 8,732 cf
Subcatchment PDA-102: Subcat PDA-102	Runoff Area=37,593 sf 25.75% Impervious Runoff Depth=1.50" Flow Length=363' Tc=7.6 min CN=81 Runoff=1.4 cfs 4,701 cf
Subcatchment PDA-200: Subcat PDA-200	Runoff Area=28,172 sf 31.17% Impervious Runoff Depth=1.57" Tc=6.0 min CN=82 Runoff=1.2 cfs 3,687 cf
Subcatchment PDA-201: Subcat PDA-201	Runoff Area=22,776 sf 52.14% Impervious Runoff Depth=2.12" Tc=6.0 min CN=89 Runoff=1.3 cfs 4,020 cf
Subcatchment PDA-300: Subcat PDA-300	Runoff Area=91,425 sf 4.89% Impervious Runoff Depth=1.01" Tc=6.0 min CN=73 Runoff=2.3 cfs 7,683 cf
Subcatchment PDA-301: Subcat PDA-301	Runoff Area=75,396 sf 51.45% Impervious Runoff Depth=1.95" Tc=6.0 min CN=87 Runoff=3.9 cfs 12,254 cf
Subcatchment PDA-302: Subcat PDA-302	Runoff Area=17,034 sf 73.53% Impervious Runoff Depth=2.39" Tc=6.0 min CN=92 Runoff=1.0 cfs 3,391 cf
Subcatchment PDA-400: Off Site - East	Runoff Area=256,000 sf 5.40% Impervious Runoff Depth=0.90" Flow Length=737' Tc=11.5 min UI Adjusted CN=71 Runoff=4.6 cfs 19,248 cf
Pond DB-1: Basin	Peak Elev=449.37' Storage=2,749 cf Inflow=2.8 cfs 8,732 cf Primary=0.7 cfs 8,538 cf Secondary=0.0 cfs 0 cf Outflow=0.7 cfs 8,538 cf
Pond DB-2: Basin	Peak Elev=453.89' Storage=1,743 cf Inflow=1.4 cfs 4,701 cf Primary=0.4 cfs 4,125 cf Secondary=0.0 cfs 0 cf Outflow=0.4 cfs 4,125 cf
Pond DB-3: Gravel Wet Basin	Peak Elev=466.84' Storage=7,672 cf Inflow=4.9 cfs 15,014 cf Discarded=0.0 cfs 106 cf Primary=0.5 cfs 13,124 cf Secondary=0.0 cfs 0 cf Outflow=0.5 cfs 13,230 cf
Pond DB-4: Underground Detention	Peak Elev=453.20' Storage=2,076 cf Inflow=1.3 cfs 4,020 cf Outflow=0.4 cfs 2,174 cf
Pond INF-1: Infiltration Chambers	Peak Elev=476.29' Storage=657 cf Inflow=1.0 cfs 3,391 cf Outflow=1.1 cfs 2,760 cf
Link DP-1: Church Street	Inflow=2.6 cfs 19,274 cf Primary=2.6 cfs 19,274 cf
Link DP-2: West Street	Inflow=1.2 cfs 5,861 cf Primary=1.2 cfs 5,861 cf

Link DP-3: Wetland

Inflow=2.6 cfs 20,807 cf
Primary=2.6 cfs 20,807 cf

Link DP-4: Culvert

Inflow=4.6 cfs 19,248 cf
Primary=4.6 cfs 19,248 cf

Total Runoff Area = 667,541 sf Runoff Volume = 70,326 cf Average Runoff Depth = 1.26"
81.26% Pervious = 542,428 sf 18.74% Impervious = 125,113 sf

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Summary for Subcatchment PDA-100: Subcat PDA-100

Runoff = 1.7 cfs @ 12.15 hrs, Volume= 6,611 cf, Depth= 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year-NRCC Rainfall=3.24"

Area (sf)	CN	Description
28,053	74	>75% Grass cover, Good, HSG C
25	74	>75% Grass cover, Good, HSG C
168	96	Gravel surface, HSG C
291	96	Gravel surface, HSG C
949	96	Gravel surface, HSG C
0	98	Paved parking, HSG C
45,248	70	Woods, Good, HSG C
8,374	70	Woods, Good, HSG C
83,108	72	Weighted Average
83,108		100.00% Pervious Area
0		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	50	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
2.1	370	0.1700	2.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
9.2	420	Total			

Summary for Subcatchment PDA-101: Subcat PDA-101

Runoff = 2.8 cfs @ 12.09 hrs, Volume= 8,732 cf, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Area (sf)	CN	Description
509	74	>75% Grass cover, Good, HSG C
339	74	>75% Grass cover, Good, HSG C
343	74	>75% Grass cover, Good, HSG C
131	74	>75% Grass cover, Good, HSG C
15,978	74	>75% Grass cover, Good, HSG C
330	74	>75% Grass cover, Good, HSG C
418	74	>75% Grass cover, Good, HSG C
4,509	74	>75% Grass cover, Good, HSG C
4,661	74	>75% Grass cover, Good, HSG C
2,982	96	Gravel surface, HSG C
671	96	Gravel surface, HSG C
11,823	98	Paved parking, HSG C
3,678	98	Roofs, HSG C
3,698	98	Roofs, HSG C
3,491	98	Roofs, HSG C
1,158	98	Roofs, HSG C
1,318	98	Roofs, HSG C
56,037	86	Weighted Average
30,871		55.09% Pervious Area
25,166		44.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
1.5	140	0.0500	1.57		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	230	0.0600	11.11	8.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
6.1	420	Total			

Summary for Subcatchment PDA-102: Subcat PDA-102

Runoff = 1.4 cfs @ 12.11 hrs, Volume= 4,701 cf, Depth= 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Area (sf)	CN	Description
1,859	74	>75% Grass cover, Good, HSG C
17,909	74	>75% Grass cover, Good, HSG C
0	74	>75% Grass cover, Good, HSG C
3,181	74	>75% Grass cover, Good, HSG C
1,565	96	Gravel surface, HSG C
5,321	98	Paved parking, HSG C
1,569	98	Roofs, HSG C
23	98	Roofs, HSG C
2,055	98	Roofs, HSG C
711	98	Roofs, HSG C
3,401	70	Woods, Good, HSG C
37,593	81	Weighted Average
27,915		74.25% Pervious Area
9,679		25.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
1.3	113	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.7	200	0.0500	4.54		Shallow Concentrated Flow, Paved Kv= 20.3 fps
7.6	363	Total			

Summary for Subcatchment PDA-200: Subcat PDA-200

Runoff = 1.2 cfs @ 12.09 hrs, Volume= 3,687 cf, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year-NRCC Rainfall=3.24"

Area (sf)	CN	Description
369	74	>75% Grass cover, Good, HSG C
7,894	74	>75% Grass cover, Good, HSG C
10,980	74	>75% Grass cover, Good, HSG C
148	96	Gravel surface, HSG C
3,791	98	Paved parking, HSG C
533	98	Roofs, HSG C
4,457	98	Roofs, HSG C
28,172	82	Weighted Average
19,391		68.83% Pervious Area
8,781		31.17% Impervious Area

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

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Summary for Subcatchment PDA-201: Subcat PDA-201

Runoff = 1.3 cfs @ 12.09 hrs, Volume= 4,020 cf, Depth= 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year-NRCC Rainfall=3.24"

Area (sf)	CN	Description
44	74	>75% Grass cover, Good, HSG C
332	74	>75% Grass cover, Good, HSG C
1,433	74	>75% Grass cover, Good, HSG C
2,488	74	>75% Grass cover, Good, HSG C
337	74	>75% Grass cover, Good, HSG C
1	74	>75% Grass cover, Good, HSG C
706	74	>75% Grass cover, Good, HSG C
2,669	74	>75% Grass cover, Good, HSG C
2,170	96	Gravel surface, HSG C
719	96	Gravel surface, HSG C
45	98	Paved parking, HSG C
7,676	98	Paved parking, HSG C
134	98	Paved parking, HSG C
1,080	98	Roofs, HSG C
182	98	Roofs, HSG C
2,758	98	Roofs, HSG C
22,776	89	Weighted Average
10,900		47.86% Pervious Area
11,876		52.14% Impervious Area

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

Summary for Subcatchment PDA-300: Subcat PDA-300

Runoff = 2.3 cfs @ 12.10 hrs, Volume= 7,683 cf, Depth= 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
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Area (sf)	CN	Description
32,702	74	>75% Grass cover, Good, HSG C
38	74	>75% Grass cover, Good, HSG C
352	96	Gravel surface, HSG C
908	96	Gravel surface, HSG C
532	98	Roofs, HSG C
20	98	Roofs, HSG C
1,141	98	Roofs, HSG C
2,598	98	Roofs, HSG C
175	98	Roofs, HSG C
52,959	70	Woods, Good, HSG C
91,425	73	Weighted Average
86,958		95.11% Pervious Area
4,467		4.89% Impervious Area

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

Summary for Subcatchment PDA-301: Subcat PDA-301

Runoff = 3.9 cfs @ 12.09 hrs, Volume= 12,254 cf, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Area (sf)	CN	Description
7,797	74	>75% Grass cover, Good, HSG C
0	74	>75% Grass cover, Good, HSG C
374	74	>75% Grass cover, Good, HSG C
3,114	74	>75% Grass cover, Good, HSG C
51	74	>75% Grass cover, Good, HSG C
412	74	>75% Grass cover, Good, HSG C
36	74	>75% Grass cover, Good, HSG C
491	74	>75% Grass cover, Good, HSG C
383	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
3,631	74	>75% Grass cover, Good, HSG C
2,788	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
376	74	>75% Grass cover, Good, HSG C
512	74	>75% Grass cover, Good, HSG C
11,499	74	>75% Grass cover, Good, HSG C
3,726	96	Gravel surface, HSG C
11,265	98	Paved parking, HSG C
1,740	98	Paved parking, HSG C
8,269	98	Paved parking, HSG C
1,114	98	Roofs, HSG C
911	98	Roofs, HSG C
5,335	98	Roofs, HSG C
2,187	98	Roofs, HSG C
2,129	98	Roofs, HSG C
1,461	98	Roofs, HSG C
4,376	98	Roofs, HSG C
75,396	87	Weighted Average
36,608		48.55% Pervious Area
38,788		51.45% Impervious Area

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

Summary for Subcatchment PDA-302: Subcat PDA-302

Runoff = 1.0 cfs @ 12.09 hrs, Volume= 3,391 cf, Depth= 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-year-NRCC Rainfall=3.24"

Proposed - Addendum_5.24.2019

Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Area (sf)	CN	Description
3,798	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
7,350	98	Paved parking, HSG C
1,825	98	Roofs, HSG C
3,350	98	Roofs, HSG C
17,034	92	Weighted Average
4,508		26.47% Pervious Area
12,525		73.53% Impervious Area

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

Summary for Subcatchment PDA-400: Off Site - East

Runoff = 4.6 cfs @ 12.18 hrs, Volume= 19,248 cf, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year-NRCC Rainfall=3.24"

Area (sf)	CN	Adj	Description
208,906	70		Woods, Good, HSG C
11,510	98		Unconnected pavement, HSG C
2,322	98		Roofs, HSG C
33,262	74		>75% Grass cover, Good, HSG C
256,000	72	71	Weighted Average, UI Adjusted
242,168			94.60% Pervious Area
13,832			5.40% Impervious Area
11,510			83.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
7.2	687	0.1000	1.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
11.5	737	Total			

Summary for Pond DB-1: Basin

Inflow Area = 56,037 sf, 44.91% Impervious, Inflow Depth = 1.87" for 2-year-NRCC event
 Inflow = 2.8 cfs @ 12.09 hrs, Volume= 8,732 cf
 Outflow = 0.7 cfs @ 12.50 hrs, Volume= 8,538 cf, Atten= 76%, Lag= 24.6 min
 Primary = 0.7 cfs @ 12.50 hrs, Volume= 8,538 cf
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Proposed - Addendum_5.24.2019

Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Peak Elev= 449.37' @ 12.50 hrs Surf.Area= 1,809 sf Storage= 2,749 cf

Plug-Flow detention time= 55.6 min calculated for 8,538 cf (98% of inflow)

Center-of-Mass det. time= 41.8 min (863.9 - 822.1)

Volume	Invert	Avail.Storage	Storage Description
#1	446.00'	14,092 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
446.00	130	0	0
448.00	820	950	950
450.00	2,266	3,086	4,036
452.00	3,720	5,986	10,022
453.00	4,420	4,070	14,092

Device	Routing	Invert	Outlet Devices
#1	Primary	444.00'	18.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 444.00' / 439.50' S= 0.0818 ' /' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.77 sf
#2	Device 1	446.75'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	451.50'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	451.95'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	452.00'	10.0' long x 16.0' 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=0.7 cfs @ 12.50 hrs HW=449.37' (Free Discharge)

- ↑ 1=Culvert (Passes 0.7 cfs of 18.3 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.7 cfs @ 7.54 fps)
- ↑ 3=Orifice/Grate (Controls 0.0 cfs)
- ↑ 4=Orifice/Grate (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=446.00' (Free Discharge)

- ↑ 5=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond DB-2: Basin

Inflow Area = 37,593 sf, 25.75% Impervious, Inflow Depth = 1.50" for 2-year-NRCC event
 Inflow = 1.4 cfs @ 12.11 hrs, Volume= 4,701 cf
 Outflow = 0.4 cfs @ 12.52 hrs, Volume= 4,125 cf, Atten= 72%, Lag= 24.2 min
 Primary = 0.4 cfs @ 12.52 hrs, Volume= 4,125 cf
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 453.89' @ 12.52 hrs Surf.Area= 1,371 sf Storage= 1,743 cf

Plug-Flow detention time= 123.4 min calculated for 4,123 cf (88% of inflow)
 Center-of-Mass det. time= 67.2 min (907.6 - 840.4)

Proposed - Addendum_5.24.2019

Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Volume	Invert	Avail.Storage	Storage Description
#1	452.00'	3,603 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
452.00	476	0	0
454.00	1,424	1,900	1,900
455.00	1,982	1,703	3,603

Device	Routing	Invert	Outlet Devices
#1	Primary	449.90'	18.0" Round Culvert L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 449.90' / 449.74' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	452.85'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	453.95'	10.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	454.40'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	454.50'	10.0' long x 16.0' 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=0.4 cfs @ 12.52 hrs HW=453.89' (Free Discharge)

- 1=Culvert (Passes 0.4 cfs of 15.3 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.4 cfs @ 4.49 fps)
- 3=Orifice/Grate (Controls 0.0 cfs)
- 4=Orifice/Grate (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=452.00' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond DB-3: Gravel Wet Basin

Inflow Area =	92,430 sf, 55.52% Impervious, Inflow Depth = 1.95" for 2-year-NRCC event
Inflow =	4.9 cfs @ 12.09 hrs, Volume= 15,014 cf
Outflow =	0.5 cfs @ 12.96 hrs, Volume= 13,230 cf, Atten= 90%, Lag= 52.1 min
Discarded =	0.0 cfs @ 12.96 hrs, Volume= 106 cf
Primary =	0.5 cfs @ 12.96 hrs, Volume= 13,124 cf
Secondary =	0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 466.84' @ 12.96 hrs Surf.Area= 5,156 sf Storage= 7,672 cf

Plug-Flow detention time= 228.5 min calculated for 13,230 cf (88% of inflow)
Center-of-Mass det. time= 173.0 min (995.0 - 822.0)

Volume	Invert	Avail.Storage	Storage Description
#1	463.70'	32,768 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
463.70	0	0	0
464.00	867	130	130
465.00	1,385	1,126	1,256
466.00	3,884	2,635	3,891
468.00	6,925	10,809	14,700
470.00	11,143	18,068	32,768

Device	Routing	Invert	Outlet Devices
#1	Primary	464.00'	18.0" Round Culvert L= 52.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 464.00' / 462.50' S= 0.0288 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	465.30'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	467.00'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	468.00'	6.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	469.50'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	469.50'	10.0' long x 16.0' 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
#7	Discarded	466.00'	0.270 in/hr Exfiltration over Surface area above 466.00' Excluded Surface area = 3,884 sf

Discarded OutFlow Max=0.0 cfs @ 12.96 hrs HW=466.84' (Free Discharge)
 ↳ **7=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.5 cfs @ 12.96 hrs HW=466.84' (Free Discharge)
 ↳ **1=Culvert** (Passes 0.5 cfs of 12.3 cfs potential flow)
 ↳ **2=Orifice/Grate** (Orifice Controls 0.5 cfs @ 5.64 fps)
 ↳ **3=Orifice/Grate** (Controls 0.0 cfs)
 ↳ **4=Orifice/Grate** (Controls 0.0 cfs)
 ↳ **5=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=463.70' (Free Discharge)
 ↳ **6=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond DB-4: Underground Detention Chambers

Inflow Area = 22,776 sf, 52.14% Impervious, Inflow Depth = 2.12" for 2-year-NRCC event
 Inflow = 1.3 cfs @ 12.09 hrs, Volume= 4,020 cf
 Outflow = 0.4 cfs @ 12.45 hrs, Volume= 2,174 cf, Atten= 72%, Lag= 21.8 min
 Primary = 0.4 cfs @ 12.45 hrs, Volume= 2,174 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 453.20' @ 12.45 hrs Surf.Area= 1,389 sf Storage= 2,076 cf

Plug-Flow detention time= 233.9 min calculated for 2,173 cf (54% of inflow)
 Center-of-Mass det. time= 124.6 min (935.2 - 810.6)

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Type III 24-hr 2-year-NRCC Rainfall=3.24"

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Volume	Invert	Avail.Storage	Storage Description
#1A	450.90'	1,338 cf	16.75'W x 82.94'L x 3.50'H Field A 4,862 cf Overall - 1,516 cf Embedded = 3,346 cf x 40.0% Voids
#2A	451.40'	1,516 cf	ADS_StormTech SC-740 +Cap x 33 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 33 Chambers in 3 Rows
#3	454.39'	564 cf	83.00'W x 17.00'L x 1.00'H Prismaoid 1,411 cf Overall x 40.0% Voids
		3,419 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	450.56'	10.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 450.56' / 450.50' S= 0.0100 '/ Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.55 sf
#2	Device 1	452.94'	6.0" Vert. Orifice/Grate X 2.00 C= 0.600

Primary OutFlow Max=0.4 cfs @ 12.45 hrs HW=453.20' (Free Discharge)

1=Culvert (Passes 0.4 cfs of 3.9 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.4 cfs @ 1.73 fps)

Summary for Pond INF-1: Infiltration Chambers

Inflow Area =	17,034 sf, 73.53% Impervious, Inflow Depth = 2.39" for 2-year-NRCC event
Inflow =	1.0 cfs @ 12.09 hrs, Volume= 3,391 cf
Outflow =	1.1 cfs @ 12.10 hrs, Volume= 2,760 cf, Atten= 0%, Lag= 0.4 min
Primary =	1.1 cfs @ 12.10 hrs, Volume= 2,760 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 476.29' @ 12.10 hrs Surf.Area= 447 sf Storage= 657 cf

Plug-Flow detention time= 113.5 min calculated for 2,760 cf (81% of inflow)

Center-of-Mass det. time= 41.0 min (838.3 - 797.3)

Volume	Invert	Avail.Storage	Storage Description
#1	474.50'	239 cf	12.50'W x 17.86'L x 3.50'H Prismaoid 781 cf Overall - 184 cf Embedded = 598 cf x 40.0% Voids
#2	475.00'	184 cf	ADS_StormTech SC-740 +Cap x 4 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Chambers in 2 Rows
#3	472.00'	239 cf	12.50'W x 17.86'L x 3.50'H Prismaoid 781 cf Overall - 184 cf Embedded = 598 cf x 40.0% Voids
#4	472.50'	184 cf	ADS_StormTech SC-740 +Cap x 4 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Chambers in 2 Rows
		846 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	476.10'	4.0' long x 1.00' rise Sharp-Crested Rectangular Weir 2 End Contraction(s) 6.0' Crest Height

Primary OutFlow Max=1.0 cfs @ 12.10 hrs HW=476.28' (Free Discharge)
 ↳1=Sharp-Crested Rectangular Weir (Weir Controls 1.0 cfs @ 1.41 fps)

Summary for Link DP-1: Church Street

Inflow Area = 176,738 sf, 19.72% Impervious, Inflow Depth = 1.31" for 2-year-NRCC event
 Inflow = 2.6 cfs @ 12.16 hrs, Volume= 19,274 cf
 Primary = 2.6 cfs @ 12.16 hrs, Volume= 19,274 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-2: West Street

Inflow Area = 50,948 sf, 40.54% Impervious, Inflow Depth = 1.38" for 2-year-NRCC event
 Inflow = 1.2 cfs @ 12.09 hrs, Volume= 5,861 cf
 Primary = 1.2 cfs @ 12.09 hrs, Volume= 5,861 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-3: Wetland

Inflow Area = 183,854 sf, 30.34% Impervious, Inflow Depth = 1.36" for 2-year-NRCC event
 Inflow = 2.6 cfs @ 12.10 hrs, Volume= 20,807 cf
 Primary = 2.6 cfs @ 12.10 hrs, Volume= 20,807 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-4: Culvert

Inflow Area = 256,000 sf, 5.40% Impervious, Inflow Depth = 0.90" for 2-year-NRCC event
 Inflow = 4.6 cfs @ 12.18 hrs, Volume= 19,248 cf
 Primary = 4.6 cfs @ 12.18 hrs, Volume= 19,248 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Page 19

Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 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 PDA-100: Subcat PDA-100 Runoff Area=83,108 sf 0.00% Impervious Runoff Depth=2.11"
 Flow Length=420' Tc=9.2 min CN=72 Runoff=4.1 cfs 14,584 cf

Subcatchment PDA-101: Subcat PDA-101 Runoff Area=56,037 sf 44.91% Impervious Runoff Depth=3.36"
 Flow Length=420' Tc=6.1 min CN=86 Runoff=4.9 cfs 15,668 cf

Subcatchment PDA-102: Subcat PDA-102 Runoff Area=37,593 sf 25.75% Impervious Runoff Depth=2.88"
 Flow Length=363' Tc=7.6 min CN=81 Runoff=2.7 cfs 9,021 cf

Subcatchment PDA-200: Subcat PDA-200 Runoff Area=28,172 sf 31.17% Impervious Runoff Depth=2.97"
 Tc=6.0 min CN=82 Runoff=2.2 cfs 6,977 cf

Subcatchment PDA-201: Subcat PDA-201 Runoff Area=22,776 sf 52.14% Impervious Runoff Depth=3.66"
 Tc=6.0 min CN=89 Runoff=2.1 cfs 6,941 cf

Subcatchment PDA-300: Subcat PDA-300 Runoff Area=91,425 sf 4.89% Impervious Runoff Depth=2.19"
 Tc=6.0 min CN=73 Runoff=5.2 cfs 16,660 cf

Subcatchment PDA-301: Subcat PDA-301 Runoff Area=75,396 sf 51.45% Impervious Runoff Depth=3.45"
 Tc=6.0 min CN=87 Runoff=6.7 cfs 21,704 cf

Subcatchment PDA-302: Subcat PDA-302 Runoff Area=17,034 sf 73.53% Impervious Runoff Depth=3.97"
 Tc=6.0 min CN=92 Runoff=1.7 cfs 5,638 cf

Subcatchment PDA-400: Off Site - East Runoff Area=256,000 sf 5.40% Impervious Runoff Depth=2.03"
 Flow Length=737' Tc=11.5 min UI Adjusted CN=71 Runoff=11.4 cfs 43,226 cf

Pond DB-1: Basin Peak Elev=450.64' Storage=5,638 cf Inflow=4.9 cfs 15,668 cf
 Primary=0.8 cfs 15,473 cf Secondary=0.0 cfs 0 cf Outflow=0.8 cfs 15,473 cf

Pond DB-2: Basin Peak Elev=454.33' Storage=2,403 cf Inflow=2.7 cfs 9,021 cf
 Primary=2.0 cfs 8,445 cf Secondary=0.0 cfs 0 cf Outflow=2.0 cfs 8,445 cf

Pond DB-3: Gravel Wet Basin Peak Elev=467.77' Storage=13,177 cf Inflow=8.4 cfs 26,712 cf
 Discarded=0.0 cfs 276 cf Primary=1.3 cfs 24,652 cf Secondary=0.0 cfs 0 cf Outflow=1.3 cfs 24,928 cf

Pond DB-4: Underground Detention Peak Elev=453.80' Storage=2,519 cf Inflow=2.1 cfs 6,941 cf
 Outflow=1.5 cfs 5,096 cf

Pond INF-1: Infiltration Chambers Peak Elev=476.36' Storage=667 cf Inflow=1.7 cfs 5,638 cf
 Outflow=1.7 cfs 5,008 cf

Link DP-1: Church Street Inflow=6.6 cfs 38,503 cf
 Primary=6.6 cfs 38,503 cf

Link DP-2: West Street Inflow=3.5 cfs 12,073 cf
 Primary=3.5 cfs 12,073 cf

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Link DP-3: Wetland

Inflow=5.8 cfs 41,312 cf
Primary=5.8 cfs 41,312 cf

Link DP-4: Culvert

Inflow=11.4 cfs 43,226 cf
Primary=11.4 cfs 43,226 cf

Total Runoff Area = 667,541 sf Runoff Volume = 140,420 cf Average Runoff Depth = 2.52"
81.26% Pervious = 542,428 sf 18.74% Impervious = 125,113 sf

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Summary for Subcatchment PDA-100: Subcat PDA-100

Runoff = 4.1 cfs @ 12.14 hrs, Volume= 14,584 cf, Depth= 2.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

Area (sf)	CN	Description
28,053	74	>75% Grass cover, Good, HSG C
25	74	>75% Grass cover, Good, HSG C
168	96	Gravel surface, HSG C
291	96	Gravel surface, HSG C
949	96	Gravel surface, HSG C
0	98	Paved parking, HSG C
45,248	70	Woods, Good, HSG C
8,374	70	Woods, Good, HSG C
83,108	72	Weighted Average
83,108		100.00% Pervious Area
0		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	50	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
2.1	370	0.1700	2.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
9.2	420	Total			

Summary for Subcatchment PDA-101: Subcat PDA-101

Runoff = 4.9 cfs @ 12.09 hrs, Volume= 15,668 cf, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Area (sf)	CN	Description
509	74	>75% Grass cover, Good, HSG C
339	74	>75% Grass cover, Good, HSG C
343	74	>75% Grass cover, Good, HSG C
131	74	>75% Grass cover, Good, HSG C
15,978	74	>75% Grass cover, Good, HSG C
330	74	>75% Grass cover, Good, HSG C
418	74	>75% Grass cover, Good, HSG C
4,509	74	>75% Grass cover, Good, HSG C
4,661	74	>75% Grass cover, Good, HSG C
2,982	96	Gravel surface, HSG C
671	96	Gravel surface, HSG C
11,823	98	Paved parking, HSG C
3,678	98	Roofs, HSG C
3,698	98	Roofs, HSG C
3,491	98	Roofs, HSG C
1,158	98	Roofs, HSG C
1,318	98	Roofs, HSG C
56,037	86	Weighted Average
30,871		55.09% Pervious Area
25,166		44.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
1.5	140	0.0500	1.57		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	230	0.0600	11.11	8.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
6.1	420	Total			

Summary for Subcatchment PDA-102: Subcat PDA-102

Runoff = 2.7 cfs @ 12.11 hrs, Volume= 9,021 cf, Depth= 2.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Area (sf)	CN	Description
1,859	74	>75% Grass cover, Good, HSG C
17,909	74	>75% Grass cover, Good, HSG C
0	74	>75% Grass cover, Good, HSG C
3,181	74	>75% Grass cover, Good, HSG C
1,565	96	Gravel surface, HSG C
5,321	98	Paved parking, HSG C
1,569	98	Roofs, HSG C
23	98	Roofs, HSG C
2,055	98	Roofs, HSG C
711	98	Roofs, HSG C
3,401	70	Woods, Good, HSG C
37,593	81	Weighted Average
27,915		74.25% Pervious Area
9,679		25.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
1.3	113	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.7	200	0.0500	4.54		Shallow Concentrated Flow, Paved Kv= 20.3 fps
7.6	363	Total			

Summary for Subcatchment PDA-200: Subcat PDA-200

Runoff = 2.2 cfs @ 12.09 hrs, Volume= 6,977 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

Area (sf)	CN	Description
369	74	>75% Grass cover, Good, HSG C
7,894	74	>75% Grass cover, Good, HSG C
10,980	74	>75% Grass cover, Good, HSG C
148	96	Gravel surface, HSG C
3,791	98	Paved parking, HSG C
533	98	Roofs, HSG C
4,457	98	Roofs, HSG C
28,172	82	Weighted Average
19,391		68.83% Pervious Area
8,781		31.17% Impervious Area

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

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Summary for Subcatchment PDA-201: Subcat PDA-201

Runoff = 2.1 cfs @ 12.09 hrs, Volume= 6,941 cf, Depth= 3.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

Area (sf)	CN	Description
44	74	>75% Grass cover, Good, HSG C
332	74	>75% Grass cover, Good, HSG C
1,433	74	>75% Grass cover, Good, HSG C
2,488	74	>75% Grass cover, Good, HSG C
337	74	>75% Grass cover, Good, HSG C
1	74	>75% Grass cover, Good, HSG C
706	74	>75% Grass cover, Good, HSG C
2,669	74	>75% Grass cover, Good, HSG C
2,170	96	Gravel surface, HSG C
719	96	Gravel surface, HSG C
45	98	Paved parking, HSG C
7,676	98	Paved parking, HSG C
134	98	Paved parking, HSG C
1,080	98	Roofs, HSG C
182	98	Roofs, HSG C
2,758	98	Roofs, HSG C
22,776	89	Weighted Average
10,900		47.86% Pervious Area
11,876		52.14% Impervious Area

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

Summary for Subcatchment PDA-300: Subcat PDA-300

Runoff = 5.2 cfs @ 12.10 hrs, Volume= 16,660 cf, Depth= 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Area (sf)	CN	Description
32,702	74	>75% Grass cover, Good, HSG C
38	74	>75% Grass cover, Good, HSG C
352	96	Gravel surface, HSG C
908	96	Gravel surface, HSG C
532	98	Roofs, HSG C
20	98	Roofs, HSG C
1,141	98	Roofs, HSG C
2,598	98	Roofs, HSG C
175	98	Roofs, HSG C
52,959	70	Woods, Good, HSG C
91,425	73	Weighted Average
86,958		95.11% Pervious Area
4,467		4.89% Impervious Area

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

Summary for Subcatchment PDA-301: Subcat PDA-301

Runoff = 6.7 cfs @ 12.09 hrs, Volume= 21,704 cf, Depth= 3.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Area (sf)	CN	Description
7,797	74	>75% Grass cover, Good, HSG C
0	74	>75% Grass cover, Good, HSG C
374	74	>75% Grass cover, Good, HSG C
3,114	74	>75% Grass cover, Good, HSG C
51	74	>75% Grass cover, Good, HSG C
412	74	>75% Grass cover, Good, HSG C
36	74	>75% Grass cover, Good, HSG C
491	74	>75% Grass cover, Good, HSG C
383	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
3,631	74	>75% Grass cover, Good, HSG C
2,788	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
376	74	>75% Grass cover, Good, HSG C
512	74	>75% Grass cover, Good, HSG C
11,499	74	>75% Grass cover, Good, HSG C
3,726	96	Gravel surface, HSG C
11,265	98	Paved parking, HSG C
1,740	98	Paved parking, HSG C
8,269	98	Paved parking, HSG C
1,114	98	Roofs, HSG C
911	98	Roofs, HSG C
5,335	98	Roofs, HSG C
2,187	98	Roofs, HSG C
2,129	98	Roofs, HSG C
1,461	98	Roofs, HSG C
4,376	98	Roofs, HSG C
75,396	87	Weighted Average
36,608		48.55% Pervious Area
38,788		51.45% Impervious Area

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

Summary for Subcatchment PDA-302: Subcat PDA-302

Runoff = 1.7 cfs @ 12.09 hrs, Volume= 5,638 cf, Depth= 3.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Area (sf)	CN	Description
3,798	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
7,350	98	Paved parking, HSG C
1,825	98	Roofs, HSG C
3,350	98	Roofs, HSG C
17,034	92	Weighted Average
4,508		26.47% Pervious Area
12,525		73.53% Impervious Area

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

Summary for Subcatchment PDA-400: Off Site - East

Runoff = 11.4 cfs @ 12.17 hrs, Volume= 43,226 cf, Depth= 2.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year-NRCC Rainfall=4.88"

Area (sf)	CN	Adj	Description
208,906	70		Woods, Good, HSG C
11,510	98		Unconnected pavement, HSG C
2,322	98		Roofs, HSG C
33,262	74		>75% Grass cover, Good, HSG C
256,000	72	71	Weighted Average, UI Adjusted
242,168			94.60% Pervious Area
13,832			5.40% Impervious Area
11,510			83.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
7.2	687	0.1000	1.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
11.5	737	Total			

Summary for Pond DB-1: Basin

Inflow Area = 56,037 sf, 44.91% Impervious, Inflow Depth = 3.36" for 10-year-NRCC event
 Inflow = 4.9 cfs @ 12.09 hrs, Volume= 15,668 cf
 Outflow = 0.8 cfs @ 12.57 hrs, Volume= 15,473 cf, Atten= 83%, Lag= 29.0 min
 Primary = 0.8 cfs @ 12.57 hrs, Volume= 15,473 cf
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Peak Elev= 450.64' @ 12.57 hrs Surf.Area= 2,732 sf Storage= 5,638 cf

Plug-Flow detention time= 71.3 min calculated for 15,465 cf (99% of inflow)

Center-of-Mass det. time= 63.8 min (869.3 - 805.5)

Volume	Invert	Avail.Storage	Storage Description
#1	446.00'	14,092 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
446.00	130	0	0
448.00	820	950	950
450.00	2,266	3,086	4,036
452.00	3,720	5,986	10,022
453.00	4,420	4,070	14,092

Device	Routing	Invert	Outlet Devices
#1	Primary	444.00'	18.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 444.00' / 439.50' S= 0.0818 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.77 sf
#2	Device 1	446.75'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	451.50'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	451.95'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	452.00'	10.0' long x 16.0' 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=0.8 cfs @ 12.57 hrs HW=450.64' (Free Discharge)

- ↑ 1=Culvert (Passes 0.8 cfs of 20.6 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.8 cfs @ 9.29 fps)
- ↑ 3=Orifice/Grate (Controls 0.0 cfs)
- ↑ 4=Orifice/Grate (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=446.00' (Free Discharge)

- ↑ 5=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond DB-2: Basin

Inflow Area =	37,593 sf, 25.75% Impervious, Inflow Depth = 2.88" for 10-year-NRCC event
Inflow =	2.7 cfs @ 12.11 hrs, Volume= 9,021 cf
Outflow =	2.0 cfs @ 12.21 hrs, Volume= 8,445 cf, Atten= 26%, Lag= 5.9 min
Primary =	2.0 cfs @ 12.21 hrs, Volume= 8,445 cf
Secondary =	0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 454.33' @ 12.21 hrs Surf.Area= 1,609 sf Storage= 2,403 cf

Plug-Flow detention time= 83.9 min calculated for 8,441 cf (94% of inflow)
Center-of-Mass det. time= 50.6 min (872.2 - 821.6)

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Volume	Invert	Avail.Storage	Storage Description
#1	452.00'	3,603 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
452.00	476	0	0
454.00	1,424	1,900	1,900
455.00	1,982	1,703	3,603

Device	Routing	Invert	Outlet Devices
#1	Primary	449.90'	18.0" Round Culvert L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 449.90' / 449.74' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	452.85'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	453.95'	10.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	454.40'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	454.50'	10.0' long x 16.0' 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=2.0 cfs @ 12.21 hrs HW=454.33' (Free Discharge)

- 1=Culvert (Passes 2.0 cfs of 16.3 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.5 cfs @ 5.51 fps)
- 3=Orifice/Grate (Orifice Controls 1.5 cfs @ 2.09 fps)
- 4=Orifice/Grate (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=452.00' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.0 cfs)

Summary for Pond DB-3: Gravel Wet Basin

Inflow Area =	92,430 sf, 55.52% Impervious, Inflow Depth = 3.47" for 10-year-NRCC event
Inflow =	8.4 cfs @ 12.09 hrs, Volume= 26,712 cf
Outflow =	1.3 cfs @ 12.58 hrs, Volume= 24,928 cf, Atten= 84%, Lag= 29.6 min
Discarded =	0.0 cfs @ 12.58 hrs, Volume= 276 cf
Primary =	1.3 cfs @ 12.58 hrs, Volume= 24,652 cf
Secondary =	0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 467.77' @ 12.58 hrs Surf.Area= 6,582 sf Storage= 13,177 cf

Plug-Flow detention time= 207.5 min calculated for 24,915 cf (93% of inflow)
Center-of-Mass det. time= 173.0 min (977.7 - 804.7)

Volume	Invert	Avail.Storage	Storage Description
#1	463.70'	32,768 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
463.70	0	0	0
464.00	867	130	130
465.00	1,385	1,126	1,256
466.00	3,884	2,635	3,891
468.00	6,925	10,809	14,700
470.00	11,143	18,068	32,768

Device	Routing	Invert	Outlet Devices
#1	Primary	464.00'	18.0" Round Culvert L= 52.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 464.00' / 462.50' S= 0.0288 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	465.30'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	467.00'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	468.00'	6.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	469.50'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	469.50'	10.0' long x 16.0' 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
#7	Discarded	466.00'	0.270 in/hr Exfiltration over Surface area above 466.00' Excluded Surface area = 3,884 sf

Discarded OutFlow Max=0.0 cfs @ 12.58 hrs HW=467.77' (Free Discharge)
 ↳ **7=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=1.3 cfs @ 12.58 hrs HW=467.77' (Free Discharge)
 ↳ **1=Culvert** (Passes 1.3 cfs of 14.8 cfs potential flow)
 ↳ **2=Orifice/Grate** (Orifice Controls 0.6 cfs @ 7.31 fps)
 ↳ **3=Orifice/Grate** (Orifice Controls 0.7 cfs @ 3.49 fps)
 ↳ **4=Orifice/Grate** (Controls 0.0 cfs)
 ↳ **5=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=463.70' (Free Discharge)
 ↳ **6=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond DB-4: Underground Detention Chambers

Inflow Area = 22,776 sf, 52.14% Impervious, Inflow Depth = 3.66" for 10-year-NRCC event
 Inflow = 2.1 cfs @ 12.09 hrs, Volume= 6,941 cf
 Outflow = 1.5 cfs @ 12.18 hrs, Volume= 5,096 cf, Atten= 31%, Lag= 5.2 min
 Primary = 1.5 cfs @ 12.18 hrs, Volume= 5,096 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 453.80' @ 12.18 hrs Surf.Area= 1,389 sf Storage= 2,519 cf

Plug-Flow detention time= 158.8 min calculated for 5,096 cf (73% of inflow)
 Center-of-Mass det. time= 70.9 min (866.1 - 795.2)

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Type III 24-hr 10-year-NRCC Rainfall=4.88"

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Volume	Invert	Avail.Storage	Storage Description
#1A	450.90'	1,338 cf	16.75'W x 82.94'L x 3.50'H Field A 4,862 cf Overall - 1,516 cf Embedded = 3,346 cf x 40.0% Voids
#2A	451.40'	1,516 cf	ADS_StormTech SC-740 +Cap x 33 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 33 Chambers in 3 Rows
#3	454.39'	564 cf	83.00'W x 17.00'L x 1.00'H Prismaoid 1,411 cf Overall x 40.0% Voids
		3,419 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	450.56'	10.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 450.56' / 450.50' S= 0.0100 '/ Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.55 sf
#2	Device 1	452.94'	6.0" Vert. Orifice/Grate X 2.00 C= 0.600

Primary OutFlow Max=1.5 cfs @ 12.18 hrs HW=453.79' (Free Discharge)

1=Culvert (Passes 1.5 cfs of 4.4 cfs potential flow)

2=Orifice/Grate (Orifice Controls 1.5 cfs @ 3.73 fps)

Summary for Pond INF-1: Infiltration Chambers

Inflow Area =	17,034 sf, 73.53% Impervious, Inflow Depth = 3.97" for 10-year-NRCC event
Inflow =	1.7 cfs @ 12.09 hrs, Volume= 5,638 cf
Outflow =	1.7 cfs @ 12.09 hrs, Volume= 5,008 cf, Atten= 0%, Lag= 0.3 min
Primary =	1.7 cfs @ 12.09 hrs, Volume= 5,008 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 476.36' @ 12.09 hrs Surf.Area= 447 sf Storage= 667 cf

Plug-Flow detention time= 85.0 min calculated for 5,005 cf (89% of inflow)
Center-of-Mass det. time= 32.6 min (816.1 - 783.5)

Volume	Invert	Avail.Storage	Storage Description
#1	474.50'	239 cf	12.50'W x 17.86'L x 3.50'H Prismaoid 781 cf Overall - 184 cf Embedded = 598 cf x 40.0% Voids
#2	475.00'	184 cf	ADS_StormTech SC-740 +Cap x 4 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Chambers in 2 Rows
#3	472.00'	239 cf	12.50'W x 17.86'L x 3.50'H Prismaoid 781 cf Overall - 184 cf Embedded = 598 cf x 40.0% Voids
#4	472.50'	184 cf	ADS_StormTech SC-740 +Cap x 4 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Chambers in 2 Rows
		846 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	476.10'	4.0' long x 1.00' rise Sharp-Crested Rectangular Weir 2 End Contraction(s) 6.0' Crest Height

Primary OutFlow Max=1.7 cfs @ 12.09 hrs HW=476.35' (Free Discharge)
 ↳1=Sharp-Crested Rectangular Weir (Weir Controls 1.7 cfs @ 1.66 fps)

Summary for Link DP-1: Church Street

Inflow Area = 176,738 sf, 19.72% Impervious, Inflow Depth = 2.61" for 10-year-NRCC event
 Inflow = 6.6 cfs @ 12.17 hrs, Volume= 38,503 cf
 Primary = 6.6 cfs @ 12.17 hrs, Volume= 38,503 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-2: West Street

Inflow Area = 50,948 sf, 40.54% Impervious, Inflow Depth = 2.84" for 10-year-NRCC event
 Inflow = 3.5 cfs @ 12.11 hrs, Volume= 12,073 cf
 Primary = 3.5 cfs @ 12.11 hrs, Volume= 12,073 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-3: Wetland

Inflow Area = 183,854 sf, 30.34% Impervious, Inflow Depth = 2.70" for 10-year-NRCC event
 Inflow = 5.8 cfs @ 12.10 hrs, Volume= 41,312 cf
 Primary = 5.8 cfs @ 12.10 hrs, Volume= 41,312 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-4: Culvert

Inflow Area = 256,000 sf, 5.40% Impervious, Inflow Depth = 2.03" for 10-year-NRCC event
 Inflow = 11.4 cfs @ 12.17 hrs, Volume= 43,226 cf
 Primary = 11.4 cfs @ 12.17 hrs, Volume= 43,226 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

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Page 33

Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 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 PDA-100: Subcat PDA-100 Runoff Area=83,108 sf 0.00% Impervious Runoff Depth=5.44"
 Flow Length=420' Tc=9.2 min CN=72 Runoff=10.7 cfs 37,667 cf

Subcatchment PDA-101: Subcat PDA-101 Runoff Area=56,037 sf 44.91% Impervious Runoff Depth=7.15"
 Flow Length=420' Tc=6.1 min CN=86 Runoff=10.0 cfs 33,378 cf

Subcatchment PDA-102: Subcat PDA-102 Runoff Area=37,593 sf 25.75% Impervious Runoff Depth=6.54"
 Flow Length=363' Tc=7.6 min CN=81 Runoff=6.0 cfs 20,484 cf

Subcatchment PDA-200: Subcat PDA-200 Runoff Area=28,172 sf 31.17% Impervious Runoff Depth=6.66"
 Tc=6.0 min CN=82 Runoff=4.8 cfs 15,637 cf

Subcatchment PDA-201: Subcat PDA-201 Runoff Area=22,776 sf 52.14% Impervious Runoff Depth=7.51"
 Tc=6.0 min CN=89 Runoff=4.2 cfs 14,258 cf

Subcatchment PDA-300: Subcat PDA-300 Runoff Area=91,425 sf 4.89% Impervious Runoff Depth=5.56"
 Tc=6.0 min CN=73 Runoff=13.3 cfs 42,368 cf

Subcatchment PDA-301: Subcat PDA-301 Runoff Area=75,396 sf 51.45% Impervious Runoff Depth=7.27"
 Tc=6.0 min CN=87 Runoff=13.7 cfs 45,674 cf

Subcatchment PDA-302: Subcat PDA-302 Runoff Area=17,034 sf 73.53% Impervious Runoff Depth=7.88"
 Tc=6.0 min CN=92 Runoff=3.2 cfs 11,180 cf

Subcatchment PDA-400: Off Site - East Runoff Area=256,000 sf 5.40% Impervious Runoff Depth=5.32"
 Flow Length=737' Tc=11.5 min UI Adjusted CN=71 Runoff=30.3 cfs 113,419 cf

Pond DB-1: Basin Peak Elev=452.10' Storage=10,387 cf Inflow=10.0 cfs 33,378 cf
 Primary=4.5 cfs 32,641 cf Secondary=0.8 cfs 543 cf Outflow=5.3 cfs 33,184 cf

Pond DB-2: Basin Peak Elev=454.52' Storage=2,723 cf Inflow=6.0 cfs 20,484 cf
 Primary=5.9 cfs 19,883 cf Secondary=0.1 cfs 25 cf Outflow=6.0 cfs 19,908 cf

Pond DB-3: Gravel Wet Basin Peak Elev=469.36' Storage=26,057 cf Inflow=16.9 cfs 56,222 cf
 Discarded=0.0 cfs 616 cf Primary=3.2 cfs 53,822 cf Secondary=0.0 cfs 0 cf Outflow=3.2 cfs 54,438 cf

Pond DB-4: Underground Detention Peak Elev=455.37' Storage=3,406 cf Inflow=4.2 cfs 14,258 cf
 Outflow=2.8 cfs 12,413 cf

Pond INF-1: Infiltration Chambers Peak Elev=476.50' Storage=686 cf Inflow=3.2 cfs 11,180 cf
 Outflow=3.2 cfs 10,549 cf

Link DP-1: Church Street Inflow=17.8 cfs 90,759 cf
 Primary=17.8 cfs 90,759 cf

Link DP-2: West Street Inflow=7.3 cfs 28,050 cf
 Primary=7.3 cfs 28,050 cf

Link DP-3: Wetland

Inflow=15.6 cfs 96,190 cf
Primary=15.6 cfs 96,190 cf

Link DP-4: Culvert

Inflow=30.3 cfs 113,419 cf
Primary=30.3 cfs 113,419 cf

Total Runoff Area = 667,541 sf Runoff Volume = 334,065 cf Average Runoff Depth = 6.01"
81.26% Pervious = 542,428 sf 18.74% Impervious = 125,113 sf

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Summary for Subcatchment PDA-100: Subcat PDA-100

Runoff = 10.7 cfs @ 12.13 hrs, Volume= 37,667 cf, Depth= 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

Area (sf)	CN	Description
28,053	74	>75% Grass cover, Good, HSG C
25	74	>75% Grass cover, Good, HSG C
168	96	Gravel surface, HSG C
291	96	Gravel surface, HSG C
949	96	Gravel surface, HSG C
0	98	Paved parking, HSG C
45,248	70	Woods, Good, HSG C
8,374	70	Woods, Good, HSG C
83,108	72	Weighted Average
83,108		100.00% Pervious Area
0		0.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	50	0.0800	0.12		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.20"
2.1	370	0.1700	2.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
9.2	420	Total			

Summary for Subcatchment PDA-101: Subcat PDA-101

Runoff = 10.0 cfs @ 12.09 hrs, Volume= 33,378 cf, Depth= 7.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Area (sf)	CN	Description
509	74	>75% Grass cover, Good, HSG C
339	74	>75% Grass cover, Good, HSG C
343	74	>75% Grass cover, Good, HSG C
131	74	>75% Grass cover, Good, HSG C
15,978	74	>75% Grass cover, Good, HSG C
330	74	>75% Grass cover, Good, HSG C
418	74	>75% Grass cover, Good, HSG C
4,509	74	>75% Grass cover, Good, HSG C
4,661	74	>75% Grass cover, Good, HSG C
2,982	96	Gravel surface, HSG C
671	96	Gravel surface, HSG C
11,823	98	Paved parking, HSG C
3,678	98	Roofs, HSG C
3,698	98	Roofs, HSG C
3,491	98	Roofs, HSG C
1,158	98	Roofs, HSG C
1,318	98	Roofs, HSG C
56,037	86	Weighted Average
30,871		55.09% Pervious Area
25,166		44.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
1.5	140	0.0500	1.57		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	230	0.0600	11.11	8.73	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
6.1	420	Total			

Summary for Subcatchment PDA-102: Subcat PDA-102

Runoff = 6.0 cfs @ 12.11 hrs, Volume= 20,484 cf, Depth= 6.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Area (sf)	CN	Description
1,859	74	>75% Grass cover, Good, HSG C
17,909	74	>75% Grass cover, Good, HSG C
0	74	>75% Grass cover, Good, HSG C
3,181	74	>75% Grass cover, Good, HSG C
1,565	96	Gravel surface, HSG C
5,321	98	Paved parking, HSG C
1,569	98	Roofs, HSG C
23	98	Roofs, HSG C
2,055	98	Roofs, HSG C
711	98	Roofs, HSG C
3,401	70	Woods, Good, HSG C
37,593	81	Weighted Average
27,915		74.25% Pervious Area
9,679		25.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
1.3	113	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.7	200	0.0500	4.54		Shallow Concentrated Flow, Paved Kv= 20.3 fps
7.6	363	Total			

Summary for Subcatchment PDA-200: Subcat PDA-200

Runoff = 4.8 cfs @ 12.09 hrs, Volume= 15,637 cf, Depth= 6.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

Area (sf)	CN	Description
369	74	>75% Grass cover, Good, HSG C
7,894	74	>75% Grass cover, Good, HSG C
10,980	74	>75% Grass cover, Good, HSG C
148	96	Gravel surface, HSG C
3,791	98	Paved parking, HSG C
533	98	Roofs, HSG C
4,457	98	Roofs, HSG C
28,172	82	Weighted Average
19,391		68.83% Pervious Area
8,781		31.17% Impervious Area

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

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Summary for Subcatchment PDA-201: Subcat PDA-201

Runoff = 4.2 cfs @ 12.09 hrs, Volume= 14,258 cf, Depth= 7.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

Area (sf)	CN	Description
44	74	>75% Grass cover, Good, HSG C
332	74	>75% Grass cover, Good, HSG C
1,433	74	>75% Grass cover, Good, HSG C
2,488	74	>75% Grass cover, Good, HSG C
337	74	>75% Grass cover, Good, HSG C
1	74	>75% Grass cover, Good, HSG C
706	74	>75% Grass cover, Good, HSG C
2,669	74	>75% Grass cover, Good, HSG C
2,170	96	Gravel surface, HSG C
719	96	Gravel surface, HSG C
45	98	Paved parking, HSG C
7,676	98	Paved parking, HSG C
134	98	Paved parking, HSG C
1,080	98	Roofs, HSG C
182	98	Roofs, HSG C
2,758	98	Roofs, HSG C
22,776	89	Weighted Average
10,900		47.86% Pervious Area
11,876		52.14% Impervious Area

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

Summary for Subcatchment PDA-300: Subcat PDA-300

Runoff = 13.3 cfs @ 12.09 hrs, Volume= 42,368 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Area (sf)	CN	Description
32,702	74	>75% Grass cover, Good, HSG C
38	74	>75% Grass cover, Good, HSG C
352	96	Gravel surface, HSG C
908	96	Gravel surface, HSG C
532	98	Roofs, HSG C
20	98	Roofs, HSG C
1,141	98	Roofs, HSG C
2,598	98	Roofs, HSG C
175	98	Roofs, HSG C
52,959	70	Woods, Good, HSG C
91,425	73	Weighted Average
86,958		95.11% Pervious Area
4,467		4.89% Impervious Area

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

Summary for Subcatchment PDA-301: Subcat PDA-301

Runoff = 13.7 cfs @ 12.09 hrs, Volume= 45,674 cf, Depth= 7.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Area (sf)	CN	Description
7,797	74	>75% Grass cover, Good, HSG C
0	74	>75% Grass cover, Good, HSG C
374	74	>75% Grass cover, Good, HSG C
3,114	74	>75% Grass cover, Good, HSG C
51	74	>75% Grass cover, Good, HSG C
412	74	>75% Grass cover, Good, HSG C
36	74	>75% Grass cover, Good, HSG C
491	74	>75% Grass cover, Good, HSG C
383	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
3,631	74	>75% Grass cover, Good, HSG C
2,788	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
376	74	>75% Grass cover, Good, HSG C
512	74	>75% Grass cover, Good, HSG C
11,499	74	>75% Grass cover, Good, HSG C
3,726	96	Gravel surface, HSG C
11,265	98	Paved parking, HSG C
1,740	98	Paved parking, HSG C
8,269	98	Paved parking, HSG C
1,114	98	Roofs, HSG C
911	98	Roofs, HSG C
5,335	98	Roofs, HSG C
2,187	98	Roofs, HSG C
2,129	98	Roofs, HSG C
1,461	98	Roofs, HSG C
4,376	98	Roofs, HSG C
75,396	87	Weighted Average
36,608		48.55% Pervious Area
38,788		51.45% Impervious Area

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

Summary for Subcatchment PDA-302: Subcat PDA-302

Runoff = 3.2 cfs @ 12.09 hrs, Volume= 11,180 cf, Depth= 7.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Area (sf)	CN	Description
3,798	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
355	74	>75% Grass cover, Good, HSG C
7,350	98	Paved parking, HSG C
1,825	98	Roofs, HSG C
3,350	98	Roofs, HSG C
17,034	92	Weighted Average
4,508		26.47% Pervious Area
12,525		73.53% Impervious Area

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

Summary for Subcatchment PDA-400: Off Site - East

Runoff = 30.3 cfs @ 12.16 hrs, Volume= 113,419 cf, Depth= 5.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year-NRCC Rainfall=8.84"

Area (sf)	CN	Adj	Description
208,906	70		Woods, Good, HSG C
11,510	98		Unconnected pavement, HSG C
2,322	98		Roofs, HSG C
33,262	74		>75% Grass cover, Good, HSG C
256,000	72	71	Weighted Average, UI Adjusted
242,168			94.60% Pervious Area
13,832			5.40% Impervious Area
11,510			83.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.20"
7.2	687	0.1000	1.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
11.5	737	Total			

Summary for Pond DB-1: Basin

Inflow Area = 56,037 sf, 44.91% Impervious, Inflow Depth = 7.15" for 100-year-NRCC event
 Inflow = 10.0 cfs @ 12.09 hrs, Volume= 33,378 cf
 Outflow = 5.3 cfs @ 12.25 hrs, Volume= 33,184 cf, Atten= 47%, Lag= 9.9 min
 Primary = 4.5 cfs @ 12.25 hrs, Volume= 32,641 cf
 Secondary = 0.8 cfs @ 12.25 hrs, Volume= 543 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Peak Elev= 452.10' @ 12.25 hrs Surf.Area= 3,788 sf Storage= 10,387 cf

Plug-Flow detention time= 84.2 min calculated for 33,167 cf (99% of inflow)

Center-of-Mass det. time= 80.5 min (865.2 - 784.6)

Volume	Invert	Avail.Storage	Storage Description
#1	446.00'	14,092 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
446.00	130	0	0
448.00	820	950	950
450.00	2,266	3,086	4,036
452.00	3,720	5,986	10,022
453.00	4,420	4,070	14,092

Device	Routing	Invert	Outlet Devices
#1	Primary	444.00'	18.0" Round Culvert L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 444.00' / 439.50' S= 0.0818 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.77 sf
#2	Device 1	446.75'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	451.50'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	451.95'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	452.00'	10.0' long x 16.0' 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=4.4 cfs @ 12.25 hrs HW=452.10' (Free Discharge)

- ↑ 1=Culvert (Passes 4.4 cfs of 23.1 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 1.0 cfs @ 10.96 fps)
- ↑ 3=Orifice/Grate (Orifice Controls 0.6 cfs @ 2.83 fps)
- ↑ 4=Orifice/Grate (Weir Controls 2.9 cfs @ 1.25 fps)

Secondary OutFlow Max=0.8 cfs @ 12.25 hrs HW=452.10' (Free Discharge)

- ↑ 5=Broad-Crested Rectangular Weir (Weir Controls 0.8 cfs @ 0.83 fps)

Summary for Pond DB-2: Basin

Inflow Area = 37,593 sf, 25.75% Impervious, Inflow Depth = 6.54" for 100-year-NRCC event
 Inflow = 6.0 cfs @ 12.11 hrs, Volume= 20,484 cf
 Outflow = 6.0 cfs @ 12.12 hrs, Volume= 19,908 cf, Atten= 1%, Lag= 0.8 min
 Primary = 5.9 cfs @ 12.12 hrs, Volume= 19,883 cf
 Secondary = 0.1 cfs @ 12.12 hrs, Volume= 25 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 454.52' @ 12.12 hrs Surf.Area= 1,716 sf Storage= 2,723 cf

Plug-Flow detention time= 54.7 min calculated for 19,908 cf (97% of inflow)
 Center-of-Mass det. time= 37.1 min (835.5 - 798.4)

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Volume	Invert	Avail.Storage	Storage Description
#1	452.00'	3,603 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
452.00	476	0	0
454.00	1,424	1,900	1,900
455.00	1,982	1,703	3,603

Device	Routing	Invert	Outlet Devices
#1	Primary	449.90'	18.0" Round Culvert L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 449.90' / 449.74' S= 0.0100 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	452.85'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	453.95'	10.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	454.40'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	454.50'	10.0' long x 16.0' 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=5.7 cfs @ 12.12 hrs HW=454.52' (Free Discharge)

- 1=Culvert (Passes 5.7 cfs of 16.7 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.5 cfs @ 5.90 fps)
- 3=Orifice/Grate (Orifice Controls 3.1 cfs @ 2.57 fps)
- 4=Orifice/Grate (Weir Controls 2.1 cfs @ 1.13 fps)

Secondary OutFlow Max=0.1 cfs @ 12.12 hrs HW=454.52' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Weir Controls 0.1 cfs @ 0.37 fps)

Summary for Pond DB-3: Gravel Wet Basin

Inflow Area =	92,430 sf, 55.52% Impervious, Inflow Depth = 7.30" for 100-year-NRCC event
Inflow =	16.9 cfs @ 12.09 hrs, Volume= 56,222 cf
Outflow =	3.2 cfs @ 12.53 hrs, Volume= 54,438 cf, Atten= 81%, Lag= 26.4 min
Discarded =	0.0 cfs @ 12.53 hrs, Volume= 616 cf
Primary =	3.2 cfs @ 12.53 hrs, Volume= 53,822 cf
Secondary =	0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 469.36' @ 12.53 hrs Surf.Area= 9,791 sf Storage= 26,057 cf

Plug-Flow detention time= 171.6 min calculated for 54,410 cf (97% of inflow)
Center-of-Mass det. time= 153.3 min (936.6 - 783.3)

Volume	Invert	Avail.Storage	Storage Description
#1	463.70'	32,768 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Type III 24-hr 100-year-NRCC Rainfall=8.84"

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
463.70	0	0	0
464.00	867	130	130
465.00	1,385	1,126	1,256
466.00	3,884	2,635	3,891
468.00	6,925	10,809	14,700
470.00	11,143	18,068	32,768

Device	Routing	Invert	Outlet Devices
#1	Primary	464.00'	18.0" Round Culvert L= 52.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 464.00' / 462.50' S= 0.0288 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	465.30'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	467.00'	6.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	468.00'	6.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	469.50'	48.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	469.50'	10.0' long x 16.0' 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
#7	Discarded	466.00'	0.270 in/hr Exfiltration over Surface area above 466.00' Excluded Surface area = 3,884 sf

Discarded OutFlow Max=0.0 cfs @ 12.53 hrs HW=469.36' (Free Discharge)
 ↳ **7=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=3.2 cfs @ 12.53 hrs HW=469.36' (Free Discharge)
 ↳ **1=Culvert** (Passes 3.2 cfs of 18.3 cfs potential flow)
 ↳ **2=Orifice/Grate** (Orifice Controls 0.8 cfs @ 9.50 fps)
 ↳ **3=Orifice/Grate** (Orifice Controls 1.4 cfs @ 6.99 fps)
 ↳ **4=Orifice/Grate** (Orifice Controls 1.0 cfs @ 5.07 fps)
 ↳ **5=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=463.70' (Free Discharge)
 ↳ **6=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond DB-4: Underground Detention Chambers

Inflow Area = 22,776 sf, 52.14% Impervious, Inflow Depth = 7.51" for 100-year-NRCC event
 Inflow = 4.2 cfs @ 12.09 hrs, Volume= 14,258 cf
 Outflow = 2.8 cfs @ 12.18 hrs, Volume= 12,413 cf, Atten= 34%, Lag= 5.7 min
 Primary = 2.8 cfs @ 12.18 hrs, Volume= 12,413 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 455.37' @ 12.18 hrs Surf.Area= 2,800 sf Storage= 3,406 cf

Plug-Flow detention time= 108.0 min calculated for 12,406 cf (87% of inflow)
 Center-of-Mass det. time= 50.3 min (826.4 - 776.1)

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Volume	Invert	Avail.Storage	Storage Description
#1A	450.90'	1,338 cf	16.75'W x 82.94'L x 3.50'H Field A 4,862 cf Overall - 1,516 cf Embedded = 3,346 cf x 40.0% Voids
#2A	451.40'	1,516 cf	ADS_StormTech SC-740 +Cap x 33 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 33 Chambers in 3 Rows
#3	454.39'	564 cf	83.00'W x 17.00'L x 1.00'H Prismaoid 1,411 cf Overall x 40.0% Voids
		3,419 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	450.56'	10.0" Round Culvert L= 6.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 450.56' / 450.50' S= 0.0100 '/ Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.55 sf
#2	Device 1	452.94'	6.0" Vert. Orifice/Grate X 2.00 C= 0.600

Primary OutFlow Max=2.8 cfs @ 12.18 hrs HW=455.35' (Free Discharge)

1=Culvert (Passes 2.8 cfs of 5.5 cfs potential flow)

2=Orifice/Grate (Orifice Controls 2.8 cfs @ 7.07 fps)

Summary for Pond INF-1: Infiltration Chambers

Inflow Area =	17,034 sf, 73.53% Impervious, Inflow Depth = 7.88" for 100-year-NRCC event
Inflow =	3.2 cfs @ 12.09 hrs, Volume= 11,180 cf
Outflow =	3.2 cfs @ 12.09 hrs, Volume= 10,549 cf, Atten= 0%, Lag= 0.2 min
Primary =	3.2 cfs @ 12.09 hrs, Volume= 10,549 cf

Routing by Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 476.50' @ 12.09 hrs Surf.Area= 447 sf Storage= 686 cf

Plug-Flow detention time= 55.0 min calculated for 10,543 cf (94% of inflow)

Center-of-Mass det. time= 23.4 min (789.9 - 766.5)

Volume	Invert	Avail.Storage	Storage Description
#1	474.50'	239 cf	12.50'W x 17.86'L x 3.50'H Prismaoid 781 cf Overall - 184 cf Embedded = 598 cf x 40.0% Voids
#2	475.00'	184 cf	ADS_StormTech SC-740 +Cap x 4 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Chambers in 2 Rows
#3	472.00'	239 cf	12.50'W x 17.86'L x 3.50'H Prismaoid 781 cf Overall - 184 cf Embedded = 598 cf x 40.0% Voids
#4	472.50'	184 cf	ADS_StormTech SC-740 +Cap x 4 Inside #3 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 4 Chambers in 2 Rows
		846 cf	Total Available Storage

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Page 46

Device	Routing	Invert	Outlet Devices
#1	Primary	476.10'	4.0' long x 1.00' rise Sharp-Crested Rectangular Weir 2 End Contraction(s) 6.0' Crest Height

Primary OutFlow Max=3.2 cfs @ 12.09 hrs HW=476.49' (Free Discharge)

↳1=Sharp-Crested Rectangular Weir (Weir Controls 3.2 cfs @ 2.06 fps)

Summary for Link DP-1: Church Street

Inflow Area = 176,738 sf, 19.72% Impervious, Inflow Depth = 6.16" for 100-year-NRCC event
 Inflow = 17.8 cfs @ 12.18 hrs, Volume= 90,759 cf
 Primary = 17.8 cfs @ 12.18 hrs, Volume= 90,759 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-2: West Street

Inflow Area = 50,948 sf, 40.54% Impervious, Inflow Depth = 6.61" for 100-year-NRCC event
 Inflow = 7.3 cfs @ 12.10 hrs, Volume= 28,050 cf
 Primary = 7.3 cfs @ 12.10 hrs, Volume= 28,050 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-3: Wetland

Inflow Area = 183,854 sf, 30.34% Impervious, Inflow Depth = 6.28" for 100-year-NRCC event
 Inflow = 15.6 cfs @ 12.10 hrs, Volume= 96,190 cf
 Primary = 15.6 cfs @ 12.10 hrs, Volume= 96,190 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Summary for Link DP-4: Culvert

Inflow Area = 256,000 sf, 5.40% Impervious, Inflow Depth = 5.32" for 100-year-NRCC event
 Inflow = 30.3 cfs @ 12.16 hrs, Volume= 113,419 cf
 Primary = 30.3 cfs @ 12.16 hrs, Volume= 113,419 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs