

Uxbridge, MA
High Street, Park Street, South Main Street
BETA Job No. 10151
June 2022

HYDROLOGIC/HYDRAULIC REPORT



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HYDROLOGIC/HYDRAULIC REPORT

Prepared by: BETA GROUP, INC.
Prepared for: Town of Uxbridge, MA

June 2022

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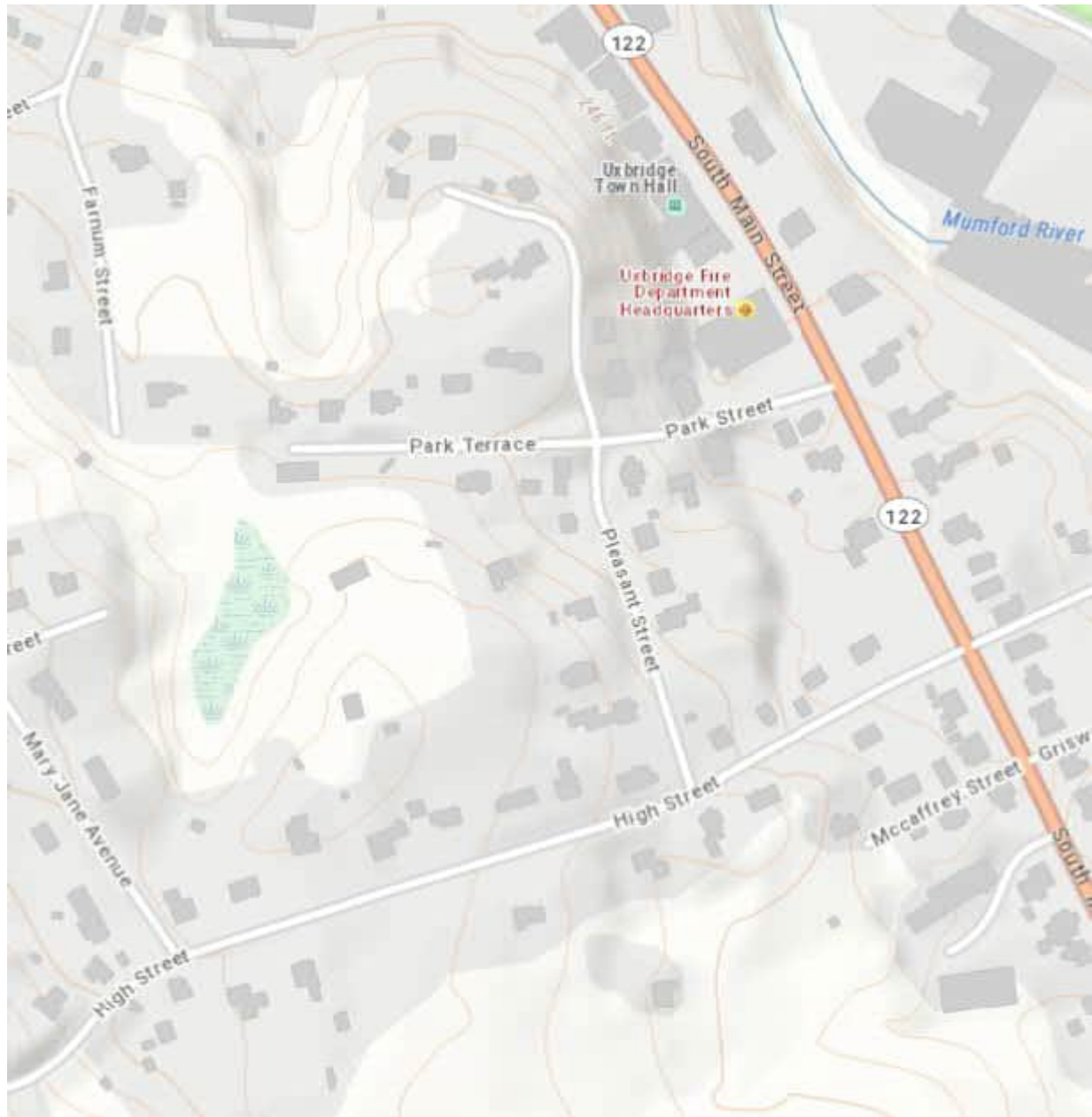
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1.0 PROJECT LOCUS



Project Locus Plan taken from MassMapper.

2.0 PROJECT NARRATIVE

2.1 OBJECTIVE OF CALCULATIONS

This calculation is an analysis of the area hydrology and stormwater system hydraulics for the watershed that contributes stormwater runoff flows on High Street and South Main Street in Uxbridge, MA. The objective is to identify issues and provide recommendations for improvements that can reduce frequency and severity of flooding.

2.2 CALCULATION METHODS AND ASSUMPTIONS

The following are methods used and the sources utilized for the design and analysis of the stormwater management system:

2.2.1 DATA SOURCES

- Field Observations and Measurements: November 2 and December 3, 2021
- USGS Maps
- MassGIS "Oliver"
- NRCS maps indicating majority of the soils in the project area are rated (hydrologic group) type B soils (moderate infiltration rate)
- Watershed Maps (Existing and Proposed)

2.2.2 HYDROCAD MODEL

"HydroCAD™ Stormwater Modeling System," version 10/00-22 by Applied Microcomputer Systems based upon SCS Technical Releases No. 20 for generating hydrologic calculations including peak flows and runoff volumes. Modeling includes the following assumptions:

- "CN" values used include:
 - 98 for pavement and roofs
 - 39 for >75% Grass cover, Good, HSG A
 - 61 for >75% Grass cover, Good, HSG B
 - 74 for >75% Grass cover, Good, HSG B
 - 58 for Woods/grass comb., Good, HSG B
- Minimum time of concentration was 6 minutes
- Point Precipitation Frequency Estimates from the NOAA Atlas 14, Volume 10, Version 3
- All gutter flow captured by inlet grate (assume no bypass)
- Flow that cannot be conveyed due to pipe capacity issues that exceeds the inlet grate elevation is conveyed in gutter flow to the next down gradient inlet as "Secondary Flow".

3.0 WATERSHED AND INFRASTRUCTURE DESCRIPTION

3.1 WATERSHED AREA

Stormwater runoff generated from the watershed is routed through the drainage system and outlets into Mumford River. The watershed area is bordered by residential neighborhoods to the west and south, Mumford River to the east, and Route 16 to the north. The catchment area map is included as Appendix A.

3.2 INFRASTRUCTURE DESCRIPTION

This watershed includes about 4,700 linear feet of roadway and 54 residential homes. Similar to older New England towns and cities, the drainage infrastructure does not meet current standards for system capacity to convey extreme storm events nor does it provide treatment of stormwater runoff for the following reasons.

1. Drainage systems were constructed over decades with different materials during lower development conditions. Most older pipes are undersized and/or may not be functioning under full capacity due to deterioration, sediment accumulation, debris blockage, or root intrusion.
2. Development within the watershed reduces the amount of rainfall that can be absorbed by the ground. Each time a house or driveway is expanded, impervious area increases thus increasing stormwater runoff.
3. Rainfall data indicates that frequency and severity of rainfall events have been increasing, causing an increase in runoff and flooding.
4. Non-typical conditions can also contribute to higher stormwater runoff including frozen ground, conditions, saturated soil conditions, significant snow melt during extreme rainfall events, extreme rainfall events when trees are dormant, and high leaves debris blockage.

3.3 OBSERVATIONS BY RESIDENTS

Residents and the Town provided the following observations:

1. Flooding of private properties in the South Main Street area.
2. Flooding of private properties on High Street;
 - a. Water flows over curb, lawn and driveway of 7 High Street. The stone wall at the property line behind 7 High Street is being eroded from the flooding. Resident concerned rocks will come loose and be carried away. Fallen trees are holding the rocks back.
3. Flooding of private properties on Park Street.
4. Seepage from retaining wall that supports Park Street, adjacent to the Fire Station.

4.0 FINDINGS

The following are issues identified in the development and interpretation of this report. The recommended action items have been broken down into three phases. BETA recommends all phases be completed to manage the stormwater runoff most effectively.

4.1 PHASE 1: CRITICAL INFRASTRUCTURE IMPROVEMENTS

BETA was not able to access the inlet from the basin to the west of house #6 Park Street. BETA recommends CCTV of this inlet connection to MH-329 (across the street) to verify conditions.

BETA noted catch basins in the field for opportunities to increase inlet function and using the HydroCAD model, noted areas of high stormwater runoff flows. To be able to manage these high flows, it is recommended to improve grate capacity of catch basins and add additional catch basins to the stormwater system. Locations for these opportunities are called out in Appendix B Phase 1.

4.1.1 CATCH BASINS WITH HIGH BYPASS FLOW

BETA observed several inlets that should be investigated for improved inlet function, summarized in Table 4-1. See Appendix C for photos.

Table 4-1. Catch Basins with Reduced Inlet Function

Catch Basin ID	Street	Notes
CB-742	Pleasant Street	CB not against curb – bypass likely
CB-738	Park Street	CB not against curb – bypass likely
CB-737	Park Street	CB not against curb – bypass likely
CB-1025	High Street	CB off road – fills with debris
CB-1031	High Street	CB in sidewalk/driveway

BETA notes that inlets receiving high runoff flows (>1.65 cfs) are likely to have higher inlet bypass. Opportunities for adding additional inlets or improving grate capacity with double or cascade grates with curb inlets should be investigated for those listed in Table 4-2. Refer to catchment flow data from the HydroCAD model included in Appendix D.

Table 4-2. Catch Basins with High Bypass Potential due to High Flows

Catch Basin ID	Street	10-yr Flow (cfs)
CB-1026	High Street	4.14
CB-1023	High Street	3.79
CB-742	Pleasant Street	3.19
CB-738	Park Street	8.01
CB-737	Park Street	5.41
MH-328	Park Street	1.80
CB-337	S Main Street	2.34
CB	S Main Street	2.02
CB-342	S Main Street	1.92

4.1.2 STRUCTURES TO ADD TO THE STORMWATER SYSTEM

To help capture the flow on the west side of High Street in the watershed area, BETA recommends adding 2 additional catch basins to the system in the following locations:

- Near #55 High Street: Cascade Grate with Curb Inlet
- Near #39 High Street: Cascade Grate with Curb Inlet.

These catch basins would allow more stormwater runoff to flow into the stormwater system, instead of down the hill towards the low point on High Street (#7 High Street). To incorporate the new structures and accommodate high runoff flows, upgraded pipes (to 15" RCP) are proposed between CB-1027 to CB-1023.

To manage the flow from the high point located north of High Street, west of Pleasant Street, and south of Park Street (currently handled only by CB-738), BETA recommends 3 additional catch basins for the stormwater system in the following locations:

- Across the street from CB-741 (near #17 Pleasant Street): Cascade Grate with Curb Inlet
- Across the street from CB-740 (near #22 Pleasant Street): Cascade Grate with Curb Inlet
- Along the curb at the southwest corner of the intersection of Pleasant Street and Park Street.

These catch basins would help capture the flows from the higher elevation to the west, along with any bypass of existing structures on Pleasant Street.

Also, BETA recommends 4 new catch basins and 4 new drainage manhole structures to alleviate flooding at the low point on High Street, in front of #7 High Street. The 4 new deep sump catch basins would replace existing catch basins, and the 4 new drainage manholes would be added to connect the stormwater flow all along High Street to the system on South Main Street.

Refer to the Phase 1 map in Appendix B for a depiction of these upgrades.

4.2 PHASE 2: ADDITIONAL INFRASTRUCTURE IMPROVEMENTS

Areas of high stormwater flow could be found using the HydroCAD model. To manage these high flows, it is recommended to improve pipe capacity throughout the system. These locations are specified in the following sections, and noted in Appendix B Phase 2.

4.2.1 CATCH BASINS THAT OVERFLOW DUE TO INSUFFICIENT PIPE CAPACITY

The HydroCAD model indicated several existing pipes are undersized, which causes stormwater runoff flows to either not be able to enter a catch basin or to overflow out of catch basins. These flows are identified in the HydroCAD model as structures with “secondary flow” (refer to Appendix D). Table 4-3 summarizes these findings.

Table 4-3. Undersized Pipes

Pipe Section		Street	Length (feet)	Pipe Size Change	
From	To			Existing	Proposed
CB-1027	CB-1026 ¹	High Street	327 ¹	12" CMP	15" RCP
CB-1026	CB-1023 ¹	High Street	328 ¹	12" CMP	15" RCP
CB-1023	CB-1024	High Street	60	12" HDPE	18" RCP
CB-1024	MH-42	High Street	20	12" RCP	18" RCP
CB-740	MH-327	Pleasant Street	133	12" RCP	18" RCP
CB-738	MH-327	Park Street	14	12" VC	**
MH-327	MH-328	Park Street	267	12" VC	24" RCP
MH-328	MH-329	Park Street	14	12" VC	30" RCP
CB on S Main St	FS-MH-2	S Main Street	37	12" CPP	15" RCP
CB-341	MH-120	S Main Street	22	12" VC	**
CB-340	MH-30	S Main Street	27	12" RCP	**
CB-339	CB on S Main St	S Main Street	58	8" VC	12" RCP
MH-120	NEW MH	S Main Street	22	12" RCP	24" RCP

¹ With proposed new structures added to the system, these pipe sections would be connecting to new structures (lengths of pipe would decrease).

² Should be upgraded to manage stormwater flows with additional new structures added to the system.

** With proposed new structures added to the system, these areas do not need upgrading.

BETA did not investigate pipes that might have compromised capacities due to blockage with debris, sediment, roots, or damaged pipes.

5.0 SUMMARY OF FINDINGS

The area of flooding observed at #7 High Street located in the natural low area of the watershed and is susceptible to impacts associated with uncontrolled or excessive stormwater runoff.

Due to the high volume of stormwater runoff particularly in this portion of the watershed, an improved stormwater drainage system should be in place to handle the capacity. As mentioned in the previous sections, BETA recommends:

1. Critical Infrastructure Improvements

- a. To handle high runoff flows as noted in Table 4-2, the following existing structures should be upgraded as noted:

- i. Cascade Grates with Curb Inlet:

CB-1026	CB-1023	CB-742
MH-328	CB-342	CB-337

- ii. Double Catch Basins:

CB-738
CB-737

- b. To increase capacity of the stormwater system, additional catch basins should be added:

- i. Near #55 High Street: Cascade Grate with Curb Inlet
 - ii. Near #39 High Street: Cascade Grate with Curb Inlet
 - iii. Across the street from CB-741 (near #17 Pleasant Street): Cascade Grate with Curb Inlet
 - iv. Across the street from CB-740 (near #22 Pleasant Street): Cascade Grate with Curb Inlet
 - v. Along the curb at the southwest corner of the intersection of Pleasant Street and Park Street
 - vi. In front of #7 High Street: 4 new catch basins and 4 new drainage manholes
 - vii. This includes additional pipe connections:

Near #55 High Street:	175FT of 15" RCP
Near #39 High Street:	230FT of 15" RCP
Across from CB-741:	18FT of 12" RCP
Across from CB-740:	18FT of 12" RCP
At Pleasant Street and Park Street intersection:	20FT of 12" RCP
From CB-1024 to system in front of #7 High St:	530FT of 12" RCP
From MH-P2 to MH-120 on S Main Street:	580FT of 24" RCP

2. Additional Infrastructure Improvements

- a. Increase pipe sizes to accommodate for flows as listed in Table 4-3.

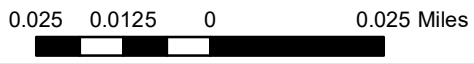
APPENDIX A

- Watershed Catchment Area Map

Uxbridge, MA
High Street, Park Street, South Main Street Drainage



This Map is Intended for Planning Purposes Only
Issue Date: June 2022



Map Legend

- | | |
|---------------|---|
| Catch Basin | Hydrologic Soil Group
A
B
C |
| Drain Manhole | |
| Drain Inlet | |
| Outfall | |
| Drain Pipe | |
| Basin | |
| Subcatchments | |
-



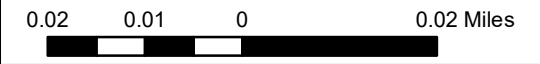
APPENDIX B

- Drainage Recommendations Maps
 - Phase 1
 - Phase 2

Uxbridge, MA
High Street, Park Street, South Main Street Drainage
Phase 1: Critical Infrastructure Improvements

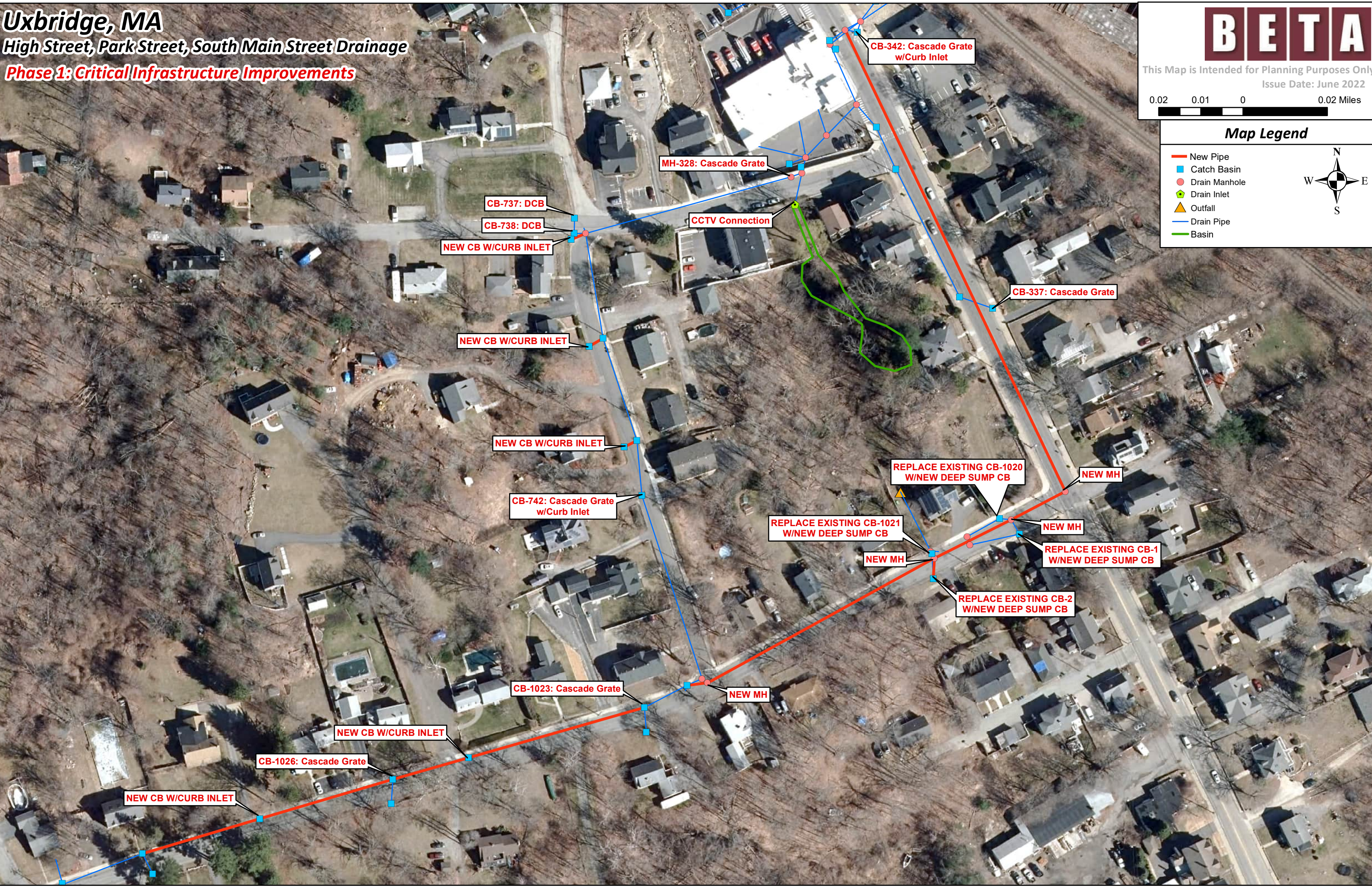
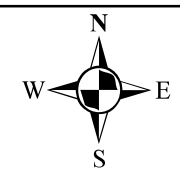


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Map Legend

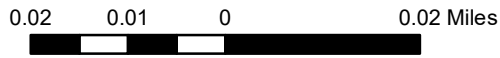
- New Pipe
- Catch Basin
- Drain Manhole
- Drain Inlet
- Outfall
- Drain Pipe
- Basin



Uxbridge, MA
High Street, Park Street, South Main Street Drainage
Phase 2: Additional Infrastructure Improvements

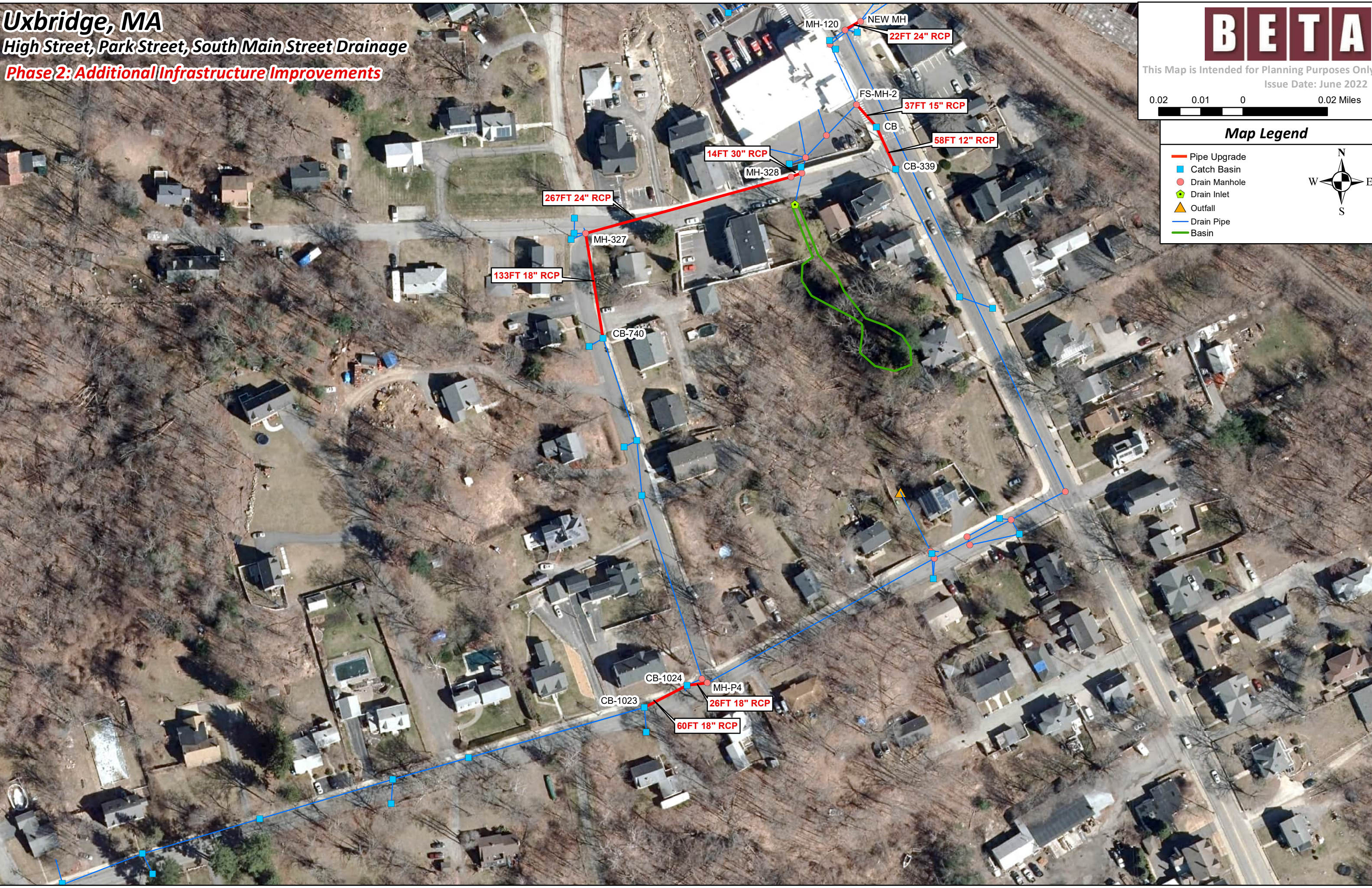


This Map is Intended for Planning Purposes Only
Issue Date: June 2022



Map Legend

- Pipe Upgrade
- Catch Basin
- Drain Manhole
- Drain Inlet
- Outfall
- Drain Pipe
- Basin



APPENDIX C

- Catch Basins with Reduced Inlet Function Photos



CB-742: CB not against curb – bypass likely



CB-738: CB not against curb – bypass likely



CB-737: CB not against curb – bypass likely



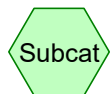
CB-1025: CB off road – fills with debris




CB-1031: CB in sidewalk/driveway of house #75 High Street

APPENDIX D

- HydroCAD Model –10-Year Storm, Existing and Proposed Conditions



Reach



Link

Routing Diagram for High Park Street Drainage - Existing
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High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

Prepared by {enter your company name here}

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Time span=1.00-24.00 hrs, dt=0.01 hrs, 2301 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 40S: HS-1	Runoff Area=0.390 ac 38.46% Impervious Runoff Depth>1.54" Tc=6.0 min CN=62 Runoff=0.65 cfs 0.050 af
Subcatchment 41S: HS-2	Runoff Area=0.324 ac 61.73% Impervious Runoff Depth>3.92" Tc=6.0 min CN=89 Runoff=1.45 cfs 0.106 af
Subcatchment 42S: HS-3	Runoff Area=0.170 ac 76.47% Impervious Runoff Depth>4.24" Tc=6.0 min CN=92 Runoff=0.80 cfs 0.060 af
Subcatchment 43S: HS-4	Runoff Area=0.042 ac 80.95% Impervious Runoff Depth>4.35" Tc=6.0 min CN=93 Runoff=0.20 cfs 0.015 af
Subcatchment 44S: HS-5	Runoff Area=0.340 ac 64.71% Impervious Runoff Depth>4.02" Flow Length=213' Slope=0.0100 ' Tc=9.6 min CN=90 Runoff=1.37 cfs 0.114 af
Subcatchment 45S: HS-6	Runoff Area=1.070 ac 36.45% Impervious Runoff Depth>3.32" Tc=6.0 min CN=83 Runoff=4.14 cfs 0.296 af
Subcatchment 46S: HS-7	Runoff Area=0.121 ac 74.38% Impervious Runoff Depth>4.24" Tc=6.0 min CN=92 Runoff=0.57 cfs 0.043 af
Subcatchment 47S: HS-8	Runoff Area=0.159 ac 75.47% Impervious Runoff Depth>4.24" Tc=6.0 min CN=92 Runoff=0.75 cfs 0.056 af
Subcatchment 48S: HS-9	Runoff Area=1.180 ac 57.63% Impervious Runoff Depth>3.22" Flow Length=536' Tc=10.8 min CN=82 Runoff=3.79 cfs 0.316 af
Subcatchment 49S: HS-10	Runoff Area=0.500 ac 36.00% Impervious Runoff Depth>2.49" Flow Length=541' Tc=9.5 min CN=74 Runoff=1.29 cfs 0.104 af
Subcatchment 50S: PL-1	Runoff Area=1.330 ac 30.83% Impervious Runoff Depth>2.32" Flow Length=495' Tc=9.4 min CN=72 Runoff=3.19 cfs 0.257 af
Subcatchment 51S: PL-2	Runoff Area=0.120 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.61 cfs 0.049 af
Subcatchment 52S: PL-3	Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af
Subcatchment 53S: PS-2	Runoff Area=4.010 ac 30.67% Impervious Runoff Depth>2.15" Flow Length=695' Tc=12.7 min CN=70 Runoff=8.01 cfs 0.718 af
Subcatchment 54S: PS-1	Runoff Area=1.620 ac 46.91% Impervious Runoff Depth>2.84" Tc=6.0 min CN=78 Runoff=5.41 cfs 0.384 af
Subcatchment 55S: PS-3	Runoff Area=0.362 ac 93.92% Impervious Runoff Depth>4.69" Tc=6.0 min CN=96 Runoff=1.80 cfs 0.141 af

High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Subcatchment 56S: MS-1	Runoff Area=0.200 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=1.01 cfs 0.082 af
Subcatchment 57S: MS-2	Runoff Area=0.400 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=2.02 cfs 0.164 af
Subcatchment 58S: MS-6	Runoff Area=0.036 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.18 cfs 0.015 af
Subcatchment 59S: MS-8	Runoff Area=0.080 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.40 cfs 0.033 af
Subcatchment 60S: MS-7	Runoff Area=0.460 ac 80.43% Impervious Runoff Depth>3.61" Tc=6.0 min CN=86 Runoff=1.92 cfs 0.138 af
Subcatchment 61S: MS-5	Runoff Area=0.680 ac 67.65% Impervious Runoff Depth>2.94" Tc=6.0 min CN=79 Runoff=2.34 cfs 0.166 af
Subcatchment 62S: MS-4	Runoff Area=0.260 ac 61.54% Impervious Runoff Depth>2.58" Tc=6.0 min CN=75 Runoff=0.79 cfs 0.056 af
Subcatchment 63S: MS-3	Runoff Area=0.240 ac 70.83% Impervious Runoff Depth>3.12" Tc=6.0 min CN=81 Runoff=0.88 cfs 0.062 af
Subcatchment 64S: HS-11	Runoff Area=0.740 ac 29.73% Impervious Runoff Depth>2.32" Tc=6.0 min CN=72 Runoff=2.00 cfs 0.143 af
Subcatchment 65S: HS-12	Runoff Area=0.100 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.50 cfs 0.041 af
Subcatchment 66S: HS-14	Runoff Area=0.460 ac 54.35% Impervious Runoff Depth>2.24" Tc=6.0 min CN=71 Runoff=1.19 cfs 0.086 af
Subcatchment 67S: HS-13	Runoff Area=0.100 ac 80.00% Impervious Runoff Depth>3.61" Tc=6.0 min CN=86 Runoff=0.42 cfs 0.030 af
Subcatchment 68S: MS-9	Runoff Area=0.100 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.50 cfs 0.041 af
Subcatchment 69S: M-10	Runoff Area=0.050 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.25 cfs 0.020 af
Subcatchment 70S: MS-11	Runoff Area=0.300 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=1.51 cfs 0.123 af
Subcatchment 71S: Wetlands/Woods	Runoff Area=4.410 ac 18.82% Impervious Runoff Depth>1.83" Flow Length=450' Tc=10.3 min CN=66 Runoff=7.89 cfs 0.674 af
Pond 1P: CB-1031	Peak Elev=334.54' Inflow=0.65 cfs 0.050 af Primary=0.65 cfs 0.050 af Secondary=0.00 cfs 0.000 af Outflow=0.65 cfs 0.050 af

High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Pond 2P: MH-43

Peak Elev=331.15' Inflow=2.90 cfs 0.216 af
12.0" Round Culvert n=0.012 L=122.6' S=-0.0179 ' Outflow=2.90 cfs 0.216 af

Pond 3P: CB-1030

Peak Elev=331.57' Inflow=2.25 cfs 0.166 af
Primary=2.25 cfs 0.166 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=2.25 cfs 0.166 af

Pond 4P: CB-1029

Peak Elev=334.52' Inflow=0.80 cfs 0.060 af
Primary=0.80 cfs 0.060 af Secondary=0.00 cfs 0.000 af Outflow=0.80 cfs 0.060 af

Pond 5P: CB-1027

Peak Elev=333.48' Inflow=4.37 cfs 0.345 af
Primary=2.71 cfs 0.328 af Secondary=1.42 cfs 0.015 af Tertiary=0.24 cfs 0.002 af Outflow=4.37 cfs 0.345 af

Pond 6P: CB-1028

Peak Elev=330.89' Inflow=0.20 cfs 0.015 af
Primary=0.20 cfs 0.015 af Secondary=0.00 cfs 0.000 af Outflow=0.20 cfs 0.015 af

Pond 7P: CB-1026

Peak Elev=328.52' Inflow=9.07 cfs 0.684 af
Primary=4.55 cfs 0.630 af Secondary=3.82 cfs 0.044 af Tertiary=0.70 cfs 0.009 af Outflow=9.07 cfs 0.684 af

Pond 8P: CB-1025

Peak Elev=328.53' Inflow=0.57 cfs 0.043 af
Primary=0.57 cfs 0.043 af Secondary=0.00 cfs 0.000 af Outflow=0.57 cfs 0.043 af

Pond 9P: CB-1023

Peak Elev=310.15' Inflow=13.16 cfs 1.056 af
Primary=5.21 cfs 0.914 af Secondary=7.03 cfs 0.121 af Tertiary=0.92 cfs 0.021 af Outflow=13.16 cfs 1.056 af

Pond 10P: CB-1022

Peak Elev=307.20' Inflow=0.75 cfs 0.056 af
Primary=0.75 cfs 0.056 af Secondary=0.00 cfs 0.000 af Outflow=0.75 cfs 0.056 af

Pond 11P: CB-1024

Peak Elev=307.02' Inflow=14.38 cfs 1.160 af
Primary=7.94 cfs 1.073 af Secondary=5.61 cfs 0.073 af Tertiary=0.84 cfs 0.013 af Outflow=14.38 cfs 1.160 af

Pond 12P: MH-42

Peak Elev=308.52' Inflow=7.94 cfs 1.073 af
12.0" Round Culvert n=0.012 L=241.0' S=0.0295 ' Outflow=7.94 cfs 1.073 af

Pond 13P: CB-742

Peak Elev=299.78' Inflow=11.10 cfs 1.330 af
Primary=9.31 cfs 1.305 af Secondary=1.79 cfs 0.025 af Outflow=11.10 cfs 1.330 af

Pond 14P: CB-741

Peak Elev=294.20' Inflow=9.89 cfs 1.354 af
Primary=9.57 cfs 1.350 af Secondary=0.32 cfs 0.003 af Outflow=9.89 cfs 1.354 af

Pond 15P: CB-740

Peak Elev=285.62' Inflow=11.86 cfs 1.400 af
Primary=7.82 cfs 1.313 af Secondary=4.05 cfs 0.087 af Outflow=11.86 cfs 1.400 af

Pond 16P: MH-327

Peak Elev=310.10' Inflow=15.57 cfs 2.346 af
12.0" Round Culvert n=0.013 L=267.0' S=0.1007 ' Outflow=15.57 cfs 2.346 af

Pond 17P: CB-738

Peak Elev=282.29' Inflow=12.11 cfs 1.102 af
Primary=7.76 cfs 1.033 af Secondary=4.35 cfs 0.069 af Outflow=12.11 cfs 1.102 af

Pond 18P: CB-737

Peak Elev=281.45' Inflow=5.41 cfs 0.384 af
Primary=5.41 cfs 0.384 af Secondary=0.00 cfs 0.000 af Outflow=5.41 cfs 0.384 af

High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Pond 19P: MH-328

Peak Elev=259.32' Inflow=17.31 cfs 2.487 af
Primary=13.55 cfs 2.316 af Secondary=3.76 cfs 0.171 af Outflow=17.31 cfs 2.487 af

Pond 20P: MH-329

Peak Elev=245.71' Inflow=28.86 cfs 3.250 af
48.0" x 60.0" Box Culvert n=0.017 L=20.0' S=0.0100 '/' Outflow=28.86 cfs 3.250 af

Pond 21P: CB-1589

Peak Elev=246.29' Inflow=0.25 cfs 0.020 af
Primary=0.25 cfs 0.020 af Secondary=0.00 cfs 0.000 af Outflow=0.25 cfs 0.020 af

Pond 22P: MH-29

Peak Elev=246.55' Inflow=31.47 cfs 3.475 af
24.0" Round Culvert n=0.010 L=41.0' S=0.0198 '/' Outflow=31.47 cfs 3.475 af

Pond 23P: FS MH 1

Peak Elev=245.64' Inflow=31.47 cfs 3.475 af
24.0" Round Culvert n=0.010 L=55.0' S=0.0200 '/' Outflow=31.47 cfs 3.475 af

Pond 24P: CB

Peak Elev=250.62' Inflow=17.70 cfs 0.776 af
Primary=5.52 cfs 0.554 af Secondary=12.18 cfs 0.222 af Outflow=17.70 cfs 0.776 af

Pond 25P: CB-340

Peak Elev=244.75' Inflow=12.35 cfs 0.237 af
Primary=6.02 cfs 0.167 af Secondary=5.50 cfs 0.059 af Tertiary=0.83 cfs 0.011 af Outflow=12.35 cfs 0.237 af

Pond 27P: MH-120

Peak Elev=242.21' Inflow=5.04 cfs 0.094 af
12.0" Round Culvert n=0.012 L=22.0' S=0.0077 '/' Outflow=5.04 cfs 0.094 af

Pond 28P: CB-342

Peak Elev=242.75' Inflow=1.92 cfs 0.138 af
Primary=1.92 cfs 0.138 af Secondary=0.00 cfs 0.000 af Outflow=1.92 cfs 0.138 af

Pond 30P: CB-339

Peak Elev=254.36' Inflow=4.01 cfs 0.285 af
Primary=3.71 cfs 0.284 af Secondary=0.29 cfs 0.001 af Outflow=4.01 cfs 0.285 af

Pond 31P: CB-338

Peak Elev=263.83' Inflow=3.13 cfs 0.222 af
Primary=3.13 cfs 0.222 af Secondary=0.00 cfs 0.000 af Outflow=3.13 cfs 0.222 af

Pond 32P: CB-337

Peak Elev=264.98' Inflow=2.34 cfs 0.166 af
Primary=2.34 cfs 0.166 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=2.34 cfs 0.166 af

Pond 33P: CB-2

Peak Elev=270.99' Inflow=2.00 cfs 0.143 af
Primary=2.00 cfs 0.143 af Secondary=0.00 cfs 0.000 af Outflow=2.00 cfs 0.143 af

Pond 34P: CB-1021

Peak Elev=274.48' Inflow=8.92 cfs 0.271 af
Primary=3.07 cfs 0.204 af Secondary=5.04 cfs 0.056 af Tertiary=0.80 cfs 0.011 af Outflow=8.92 cfs 0.271 af

Pond 35P: MH-41

Peak Elev=272.43' Inflow=8.12 cfs 0.260 af
12.0" Round Culvert n=0.012 L=100.0' S=0.0260 '/' Outflow=8.12 cfs 0.260 af

Pond 36P: MH-39

Peak Elev=269.97' Inflow=0.42 cfs 0.030 af
12.0" Round Culvert n=0.025 L=65.0' S=0.0000 '/' Outflow=0.42 cfs 0.030 af

Pond 37P: CB-1

Peak Elev=273.90' Inflow=1.61 cfs 0.116 af
Outflow=1.61 cfs 0.116 af

High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Pond 38P: CB-1020

Peak Elev=270.19' Inflow=0.42 cfs 0.030 af

Primary=0.42 cfs 0.030 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.42 cfs 0.030 af

Pond 39P: MH-40

Peak Elev=269.95' Inflow=0.42 cfs 0.030 af

8.0" Round Culvert n=0.013 L=8.0' S=0.0250 '/ Outflow=0.42 cfs 0.030 af

Pond 40P: FS MH 2

Peak Elev=247.09' Inflow=36.99 cfs 4.029 af

24.0" Round Culvert n=0.010 L=81.0' S=0.0198 '/ Outflow=36.99 cfs 4.029 af

Pond 41P: MH-30

Peak Elev=238.59' Inflow=43.01 cfs 4.196 af

48.0" x 36.0" Box Culvert n=0.025 L=48.0' S=0.0106 '/ Outflow=43.01 cfs 4.196 af

Pond 42P: CB-341

Peak Elev=244.24' Inflow=6.71 cfs 0.102 af

Primary=5.04 cfs 0.094 af Secondary=1.34 cfs 0.007 af Tertiary=0.33 cfs 0.002 af Outflow=6.71 cfs 0.102 af

Pond 43P: NEW MH

Peak Elev=238.49' Inflow=50.37 cfs 4.470 af

48.0" x 36.0" Box Culvert n=0.025 L=142.0' S=0.1056 '/ Outflow=50.37 cfs 4.470 af

Pond 44P: NEW CB

Peak Elev=240.90' Inflow=0.50 cfs 0.041 af

Primary=0.50 cfs 0.041 af Secondary=0.00 cfs 0.000 af Outflow=0.50 cfs 0.041 af

Pond 45P: STATION CB

Peak Elev=239.85' Inflow=1.01 cfs 0.082 af

Primary=1.01 cfs 0.082 af Secondary=0.00 cfs 0.000 af Outflow=1.01 cfs 0.082 af

Pond 46P: Wetland Area

Peak Elev=260.01' Storage=3 cf Inflow=15.37 cfs 0.934 af

48.0" x 60.0" Box Culvert n=0.017 L=40.0' S=0.2800 '/ Outflow=15.37 cfs 0.934 af

High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 40S: HS-1

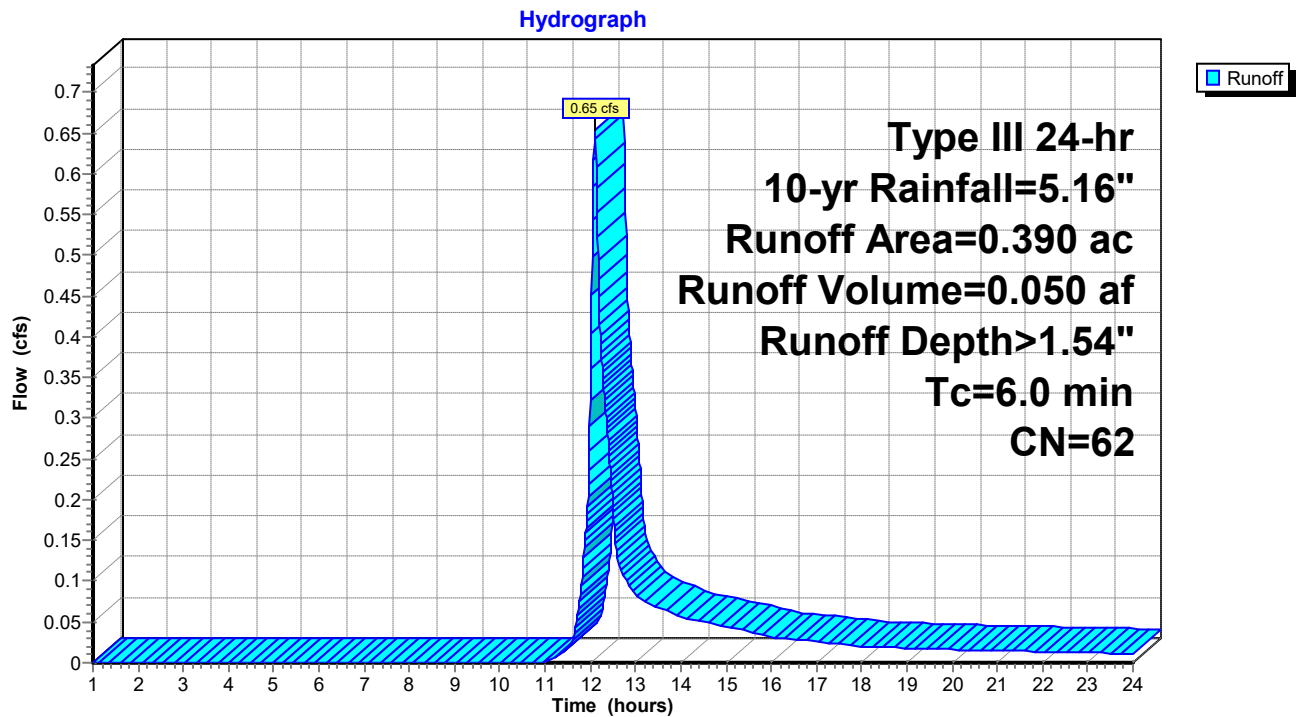
Runoff = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af, Depth> 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG B
0.240	39	>75% Grass cover, Good, HSG A
0.390	62	Weighted Average
0.240		61.54% Pervious Area
0.150		38.46% Impervious Area

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

Subcatchment 40S: HS-1



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 41S: HS-2

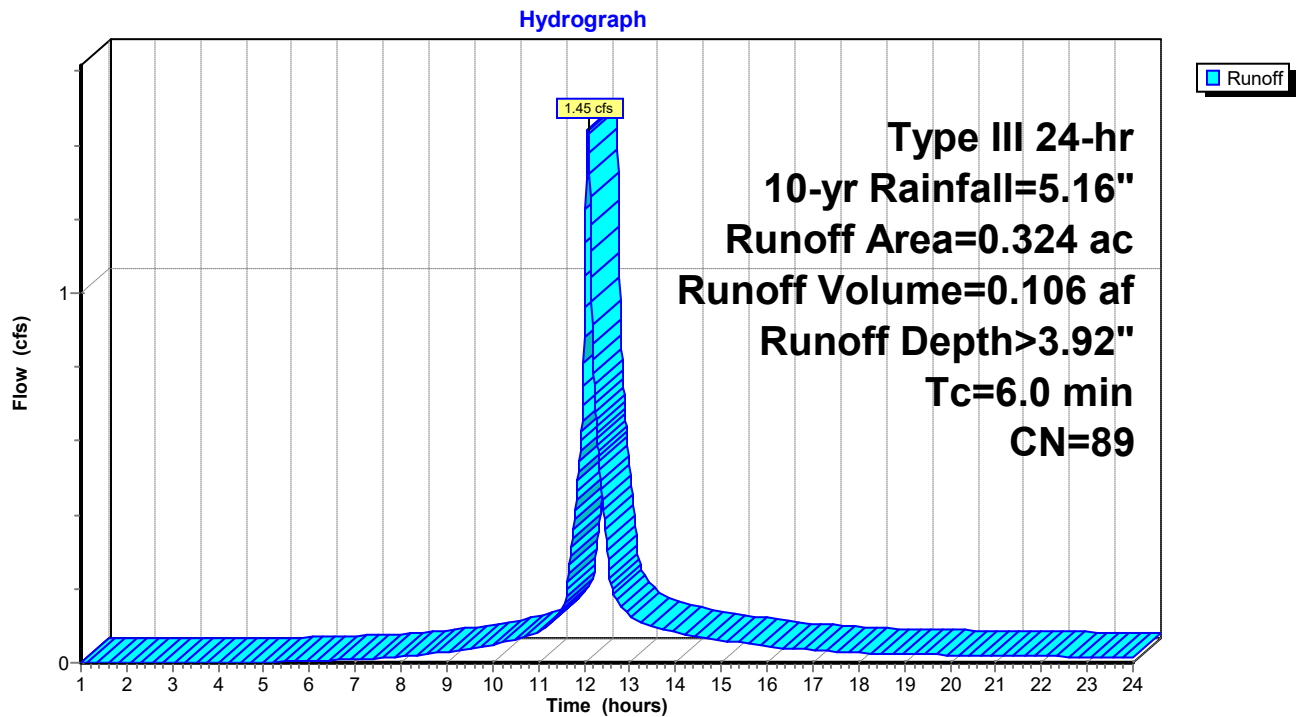
Runoff = 1.45 cfs @ 12.09 hrs, Volume= 0.106 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.200	98	Paved parking, HSG C
0.124	74	>75% Grass cover, Good, HSG C
0.324	89	Weighted Average
0.124		38.27% Pervious Area
0.200		61.73% Impervious Area

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

Subcatchment 41S: HS-2



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 42S: HS-3

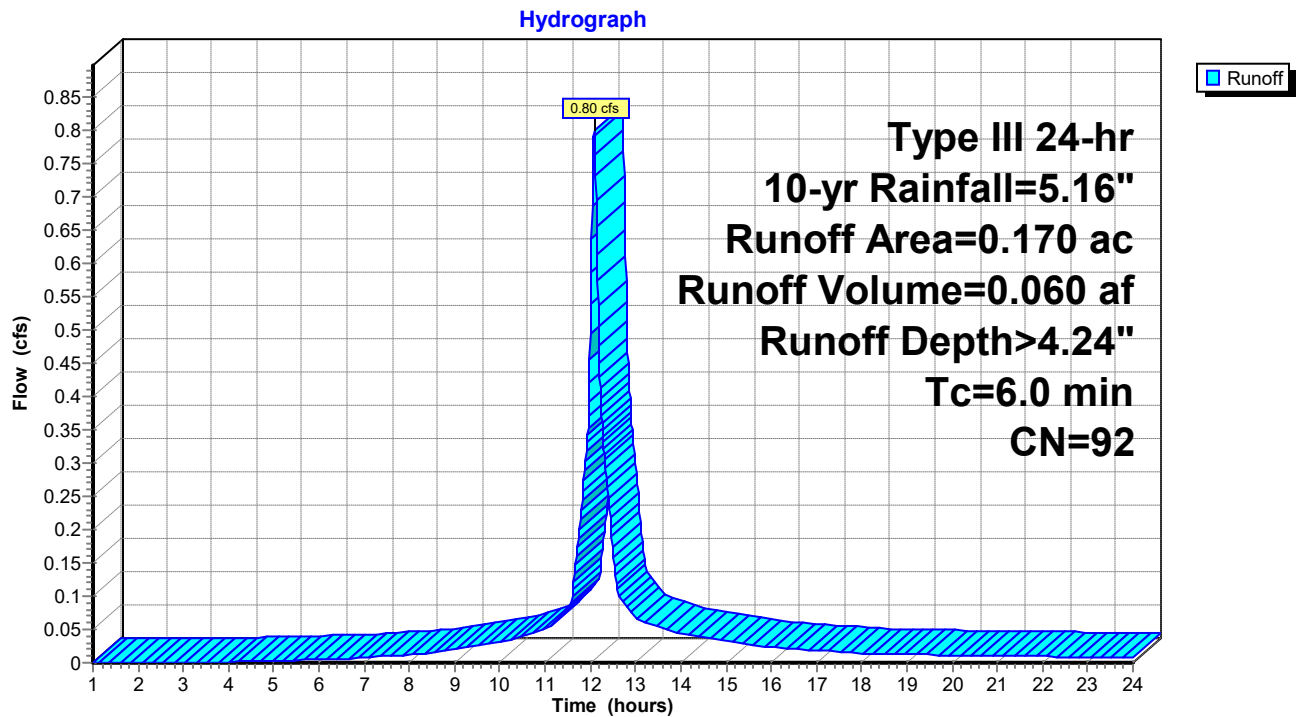
Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af, Depth> 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.130	98	Paved parking, HSG C
0.040	74	>75% Grass cover, Good, HSG C
0.170	92	Weighted Average
0.040		23.53% Pervious Area
0.130		76.47% Impervious Area

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

Subcatchment 42S: HS-3



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 43S: HS-4

Runoff = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af, Depth> 4.35"

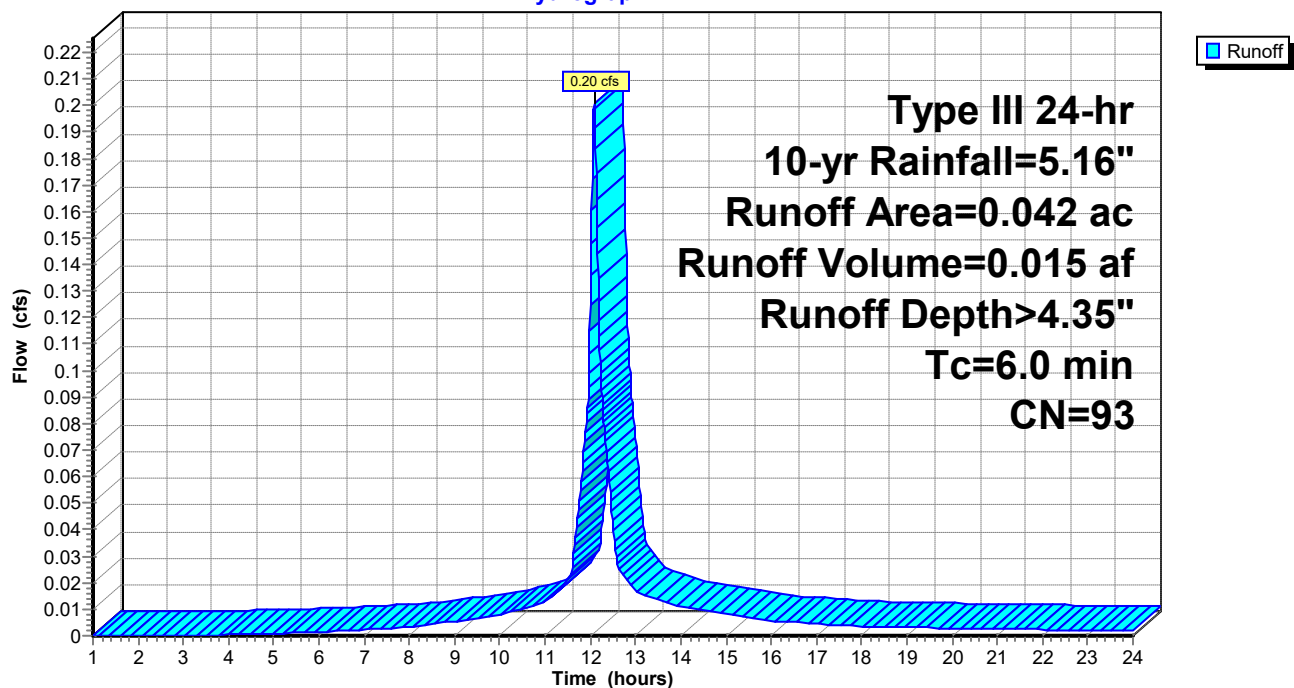
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG C
0.008	74	>75% Grass cover, Good, HSG C
0.042	93	Weighted Average
0.008		19.05% Pervious Area
0.034		80.95% Impervious Area

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

Subcatchment 43S: HS-4

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 44S: HS-5

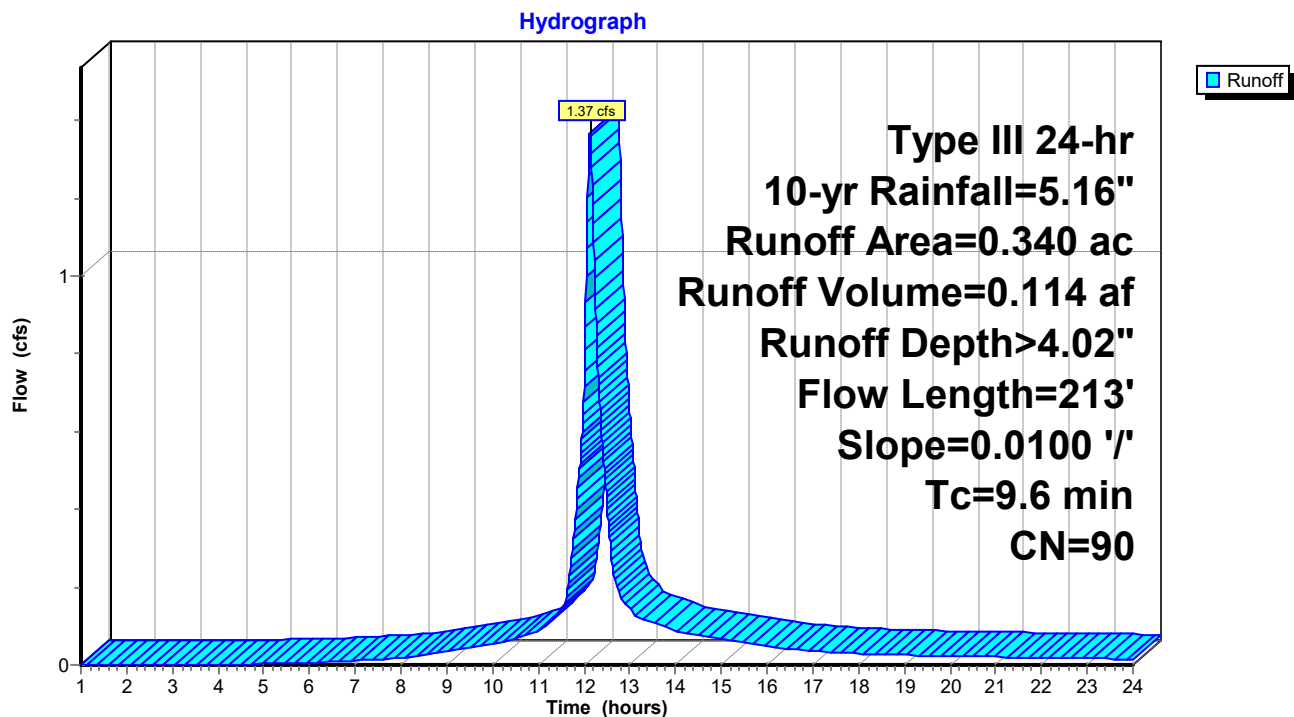
Runoff = 1.37 cfs @ 12.13 hrs, Volume= 0.114 af, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG C
0.120	74	>75% Grass cover, Good, HSG C
0.340	90	Weighted Average
0.120		35.29% Pervious Area
0.220		64.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
1.4	58	0.0100	0.70		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.9	105	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.6	213	Total			

Subcatchment 44S: HS-5



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 45S: HS-6

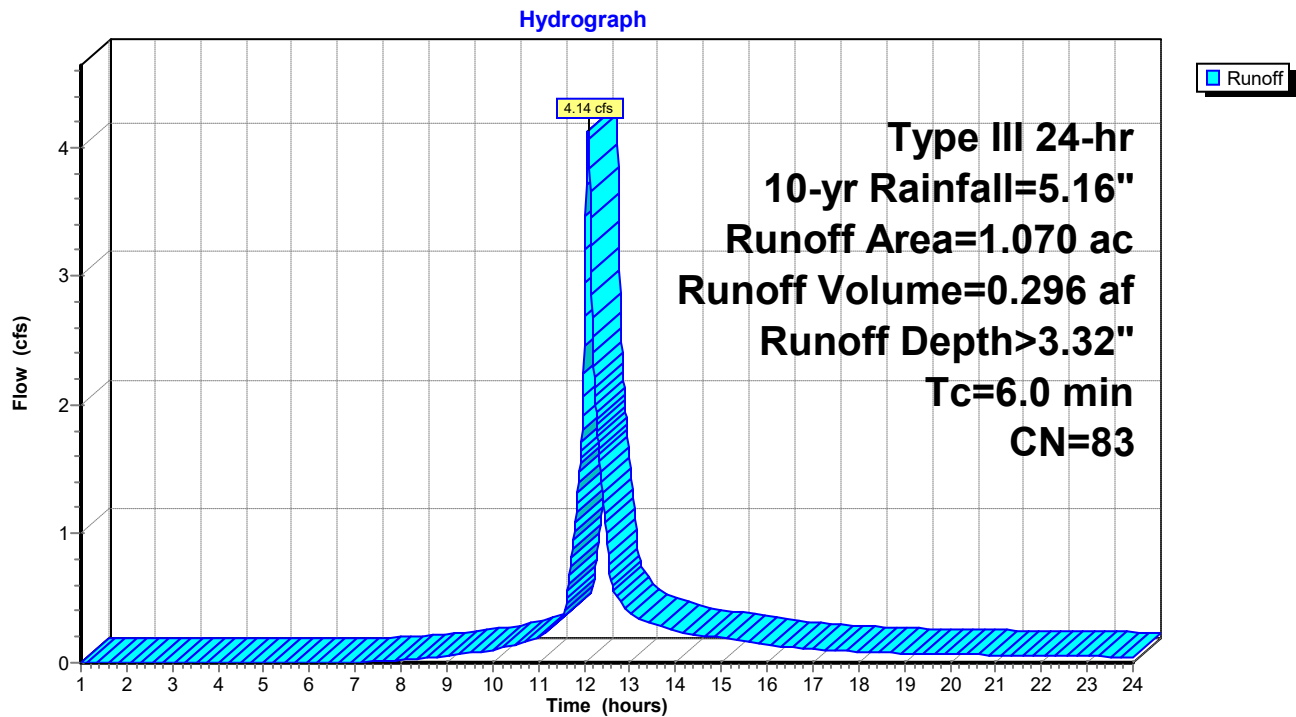
Runoff = 4.14 cfs @ 12.09 hrs, Volume= 0.296 af, Depth> 3.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.390	98	Paved parking, HSG C
0.680	74	>75% Grass cover, Good, HSG C
1.070	83	Weighted Average
0.680		63.55% Pervious Area
0.390		36.45% Impervious Area

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

Subcatchment 45S: HS-6



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 46S: HS-7

Runoff = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af, Depth> 4.24"

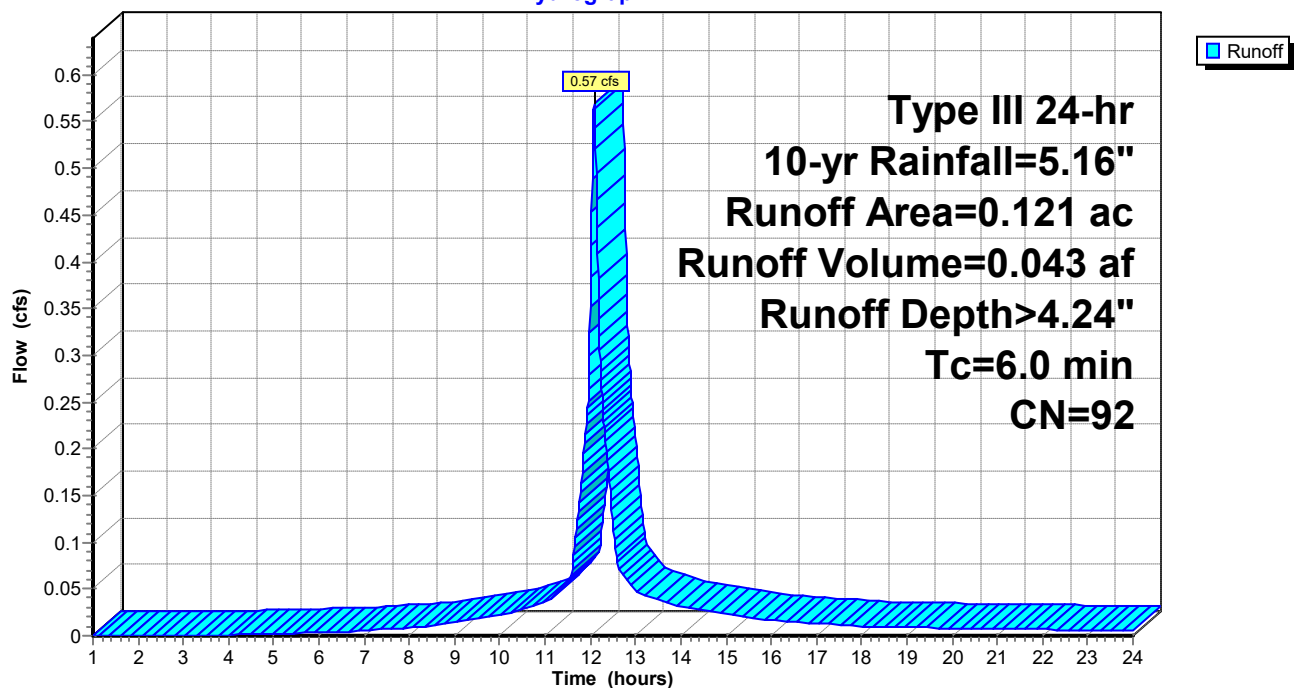
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.090	98	Paved parking, HSG C
0.031	74	>75% Grass cover, Good, HSG C
0.121	92	Weighted Average
0.031		25.62% Pervious Area
0.090		74.38% Impervious Area

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

Subcatchment 46S: HS-7

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 47S: HS-8

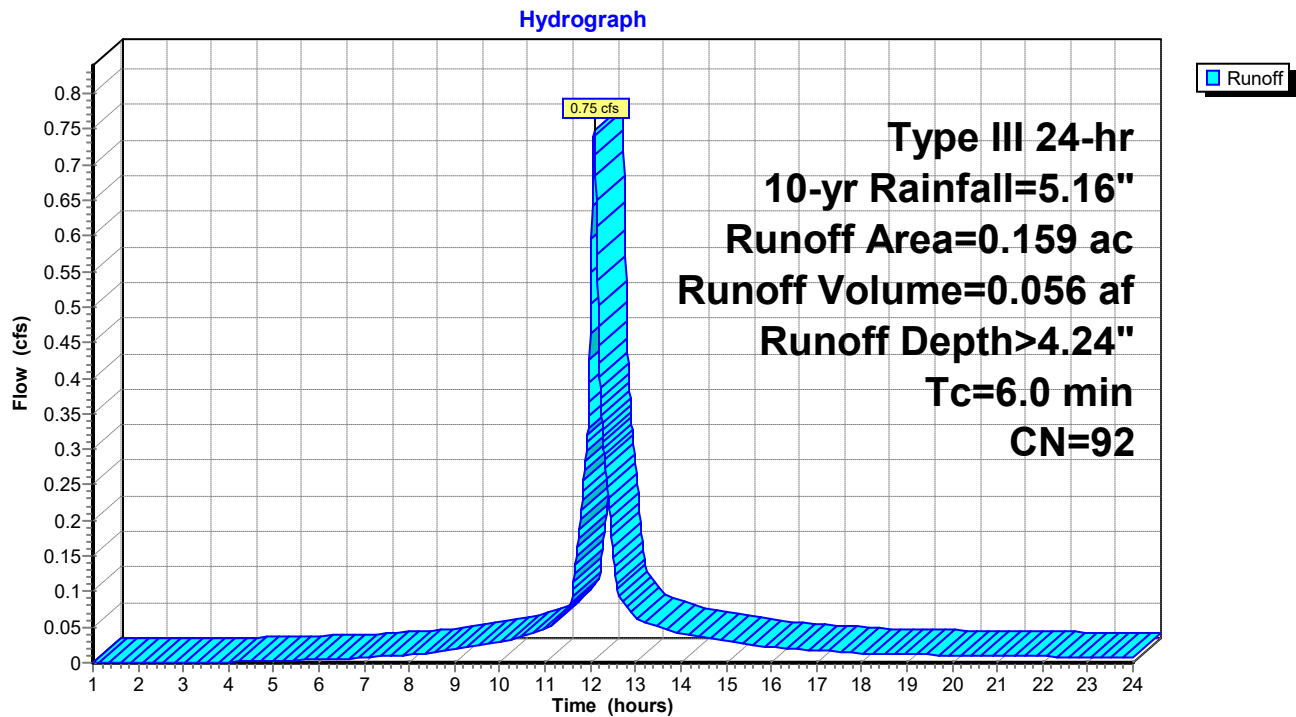
Runoff = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af, Depth> 4.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.120	98	Paved parking, HSG C
0.039	74	>75% Grass cover, Good, HSG C
0.159	92	Weighted Average
0.039		24.53% Pervious Area
0.120		75.47% Impervious Area

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

Subcatchment 47S: HS-8



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 48S: HS-9

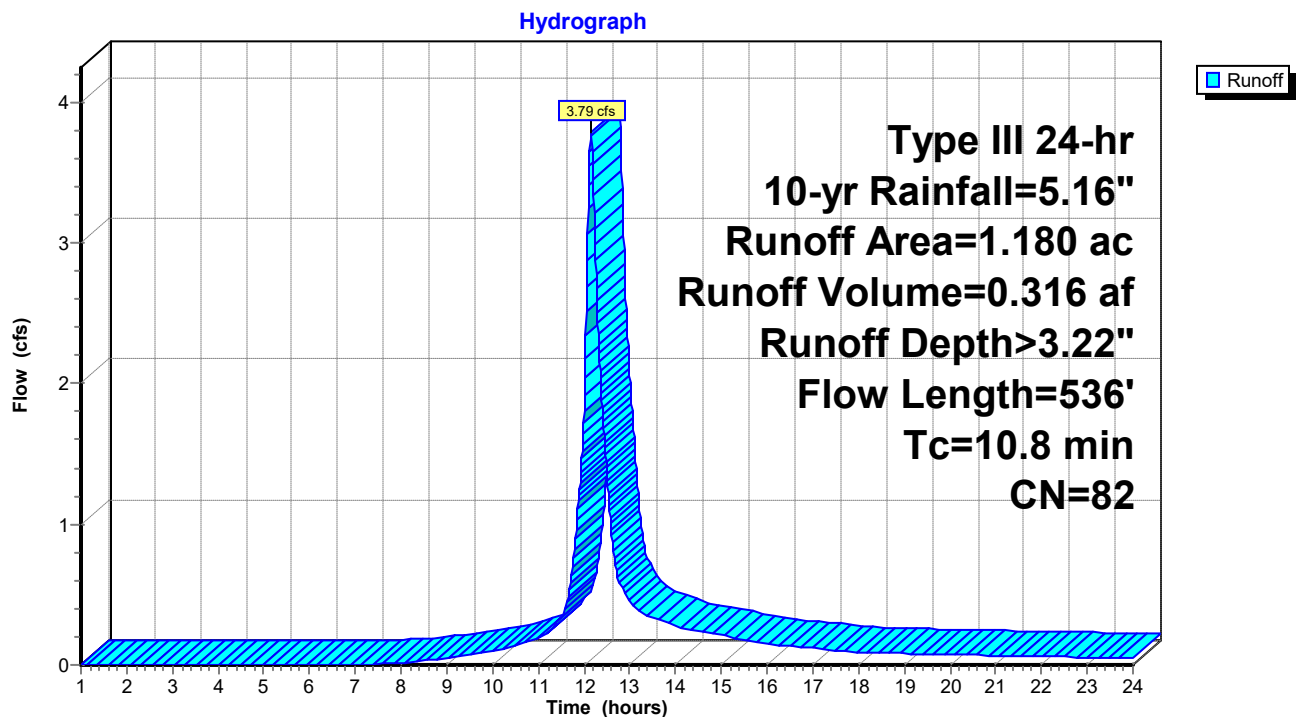
Runoff = 3.79 cfs @ 12.15 hrs, Volume= 0.316 af, Depth> 3.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.680	98	Paved parking, HSG B
0.500	61	>75% Grass cover, Good, HSG B
1.180	82	Weighted Average
0.500		42.37% Pervious Area
0.680		57.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
2.5	150	0.0200	0.99		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.8	336	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
10.8	536	Total			

Subcatchment 48S: HS-9



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 49S: HS-10

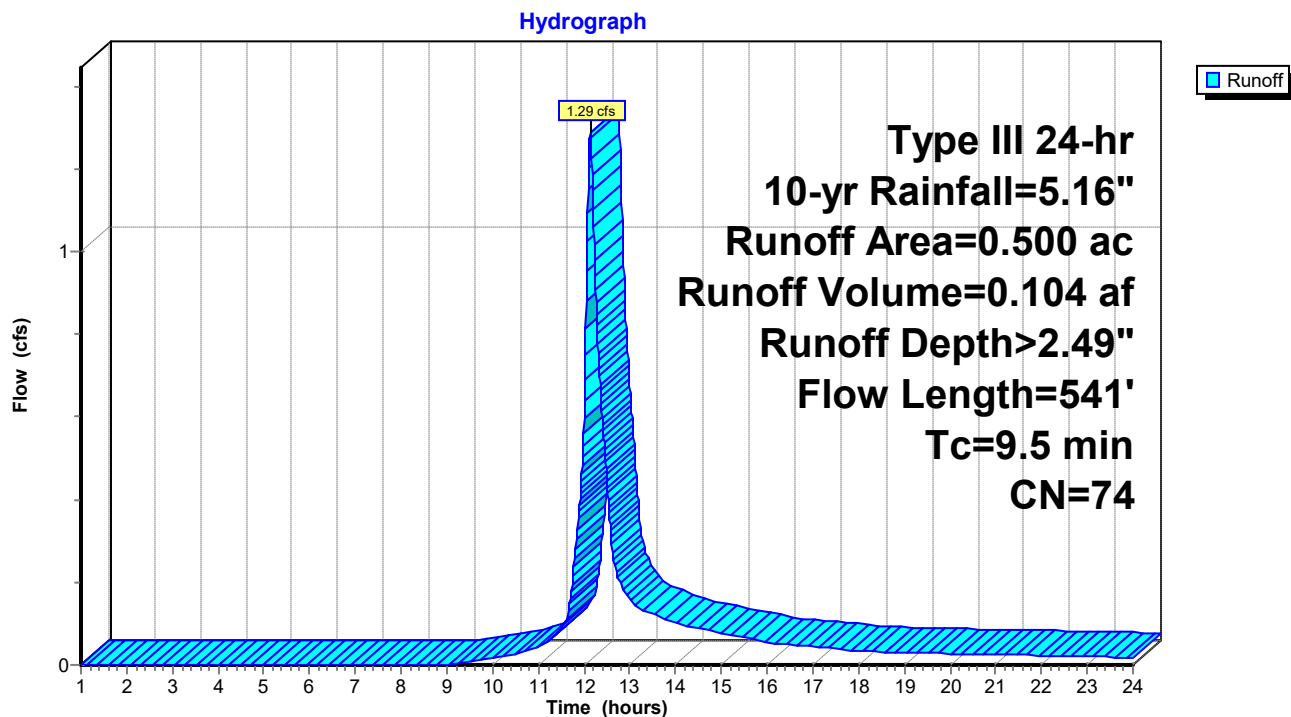
Runoff = 1.29 cfs @ 12.13 hrs, Volume= 0.104 af, Depth> 2.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.180	98	Paved parking, HSG B
0.320	61	>75% Grass cover, Good, HSG B
0.500	74	Weighted Average
0.320		64.00% Pervious Area
0.180		36.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
4.3	361	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.0	130	0.0110	2.13		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.5	541	Total			

Subcatchment 49S: HS-10



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 50S: PL-1

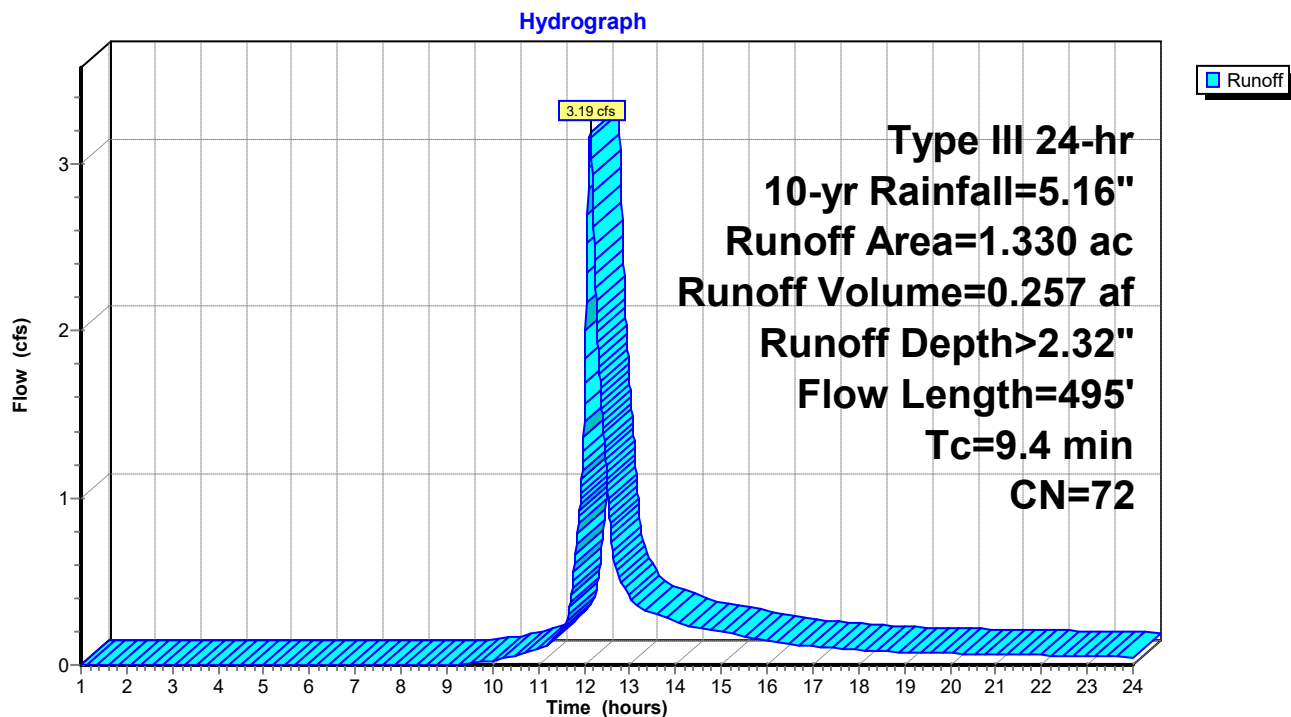
Runoff = 3.19 cfs @ 12.14 hrs, Volume= 0.257 af, Depth> 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.410	98	Paved parking, HSG B
0.920	61	>75% Grass cover, Good, HSG B
1.330	72	Weighted Average
0.920		69.17% Pervious Area
0.410		30.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
5.1	428	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.1	17	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.4	495	Total			

Subcatchment 50S: PL-1



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 51S: PL-2

Runoff = 0.61 cfs @ 12.08 hrs, Volume= 0.049 af, Depth> 4.92"

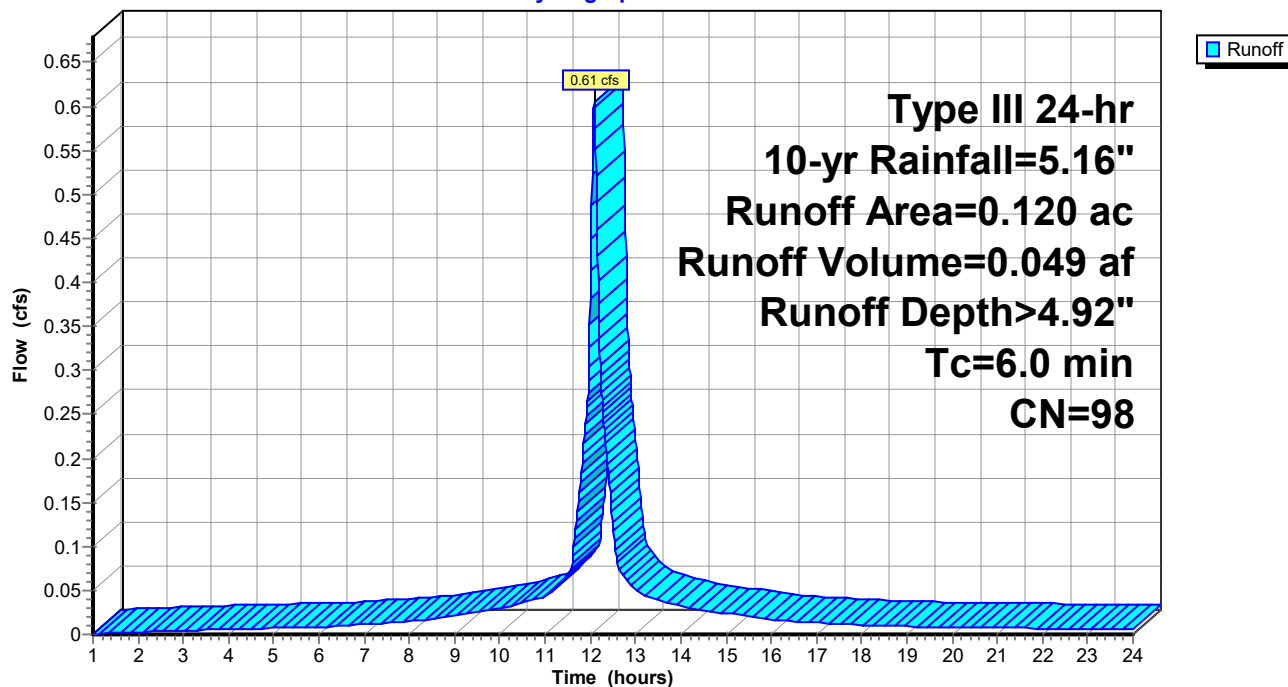
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.120	98	Paved parking, HSG B
0.120		100.00% Impervious Area

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

Subcatchment 51S: PL-2

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 52S: PL-3

Runoff = 0.26 cfs @ 12.08 hrs, Volume= 0.021 af, Depth> 4.92"

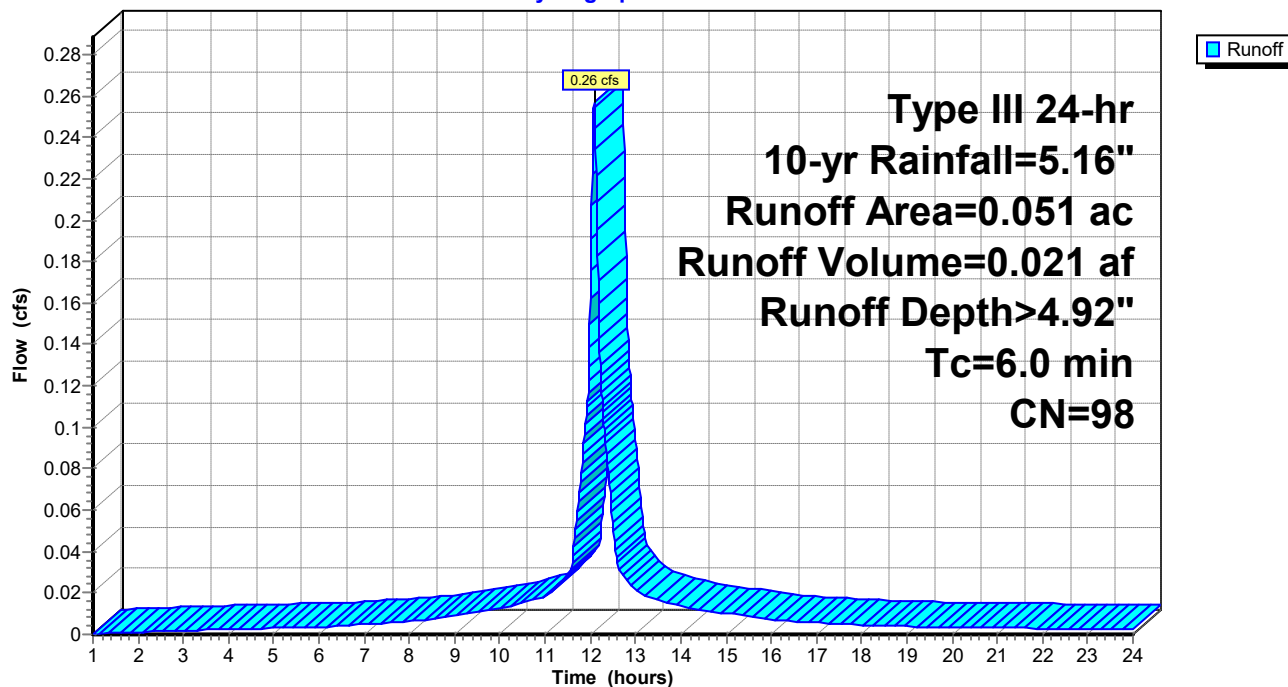
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG B
0.051		100.00% Impervious Area

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

Subcatchment 52S: PL-3

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 53S: PS-2

Runoff = 8.01 cfs @ 12.18 hrs, Volume= 0.718 af, Depth> 2.15"

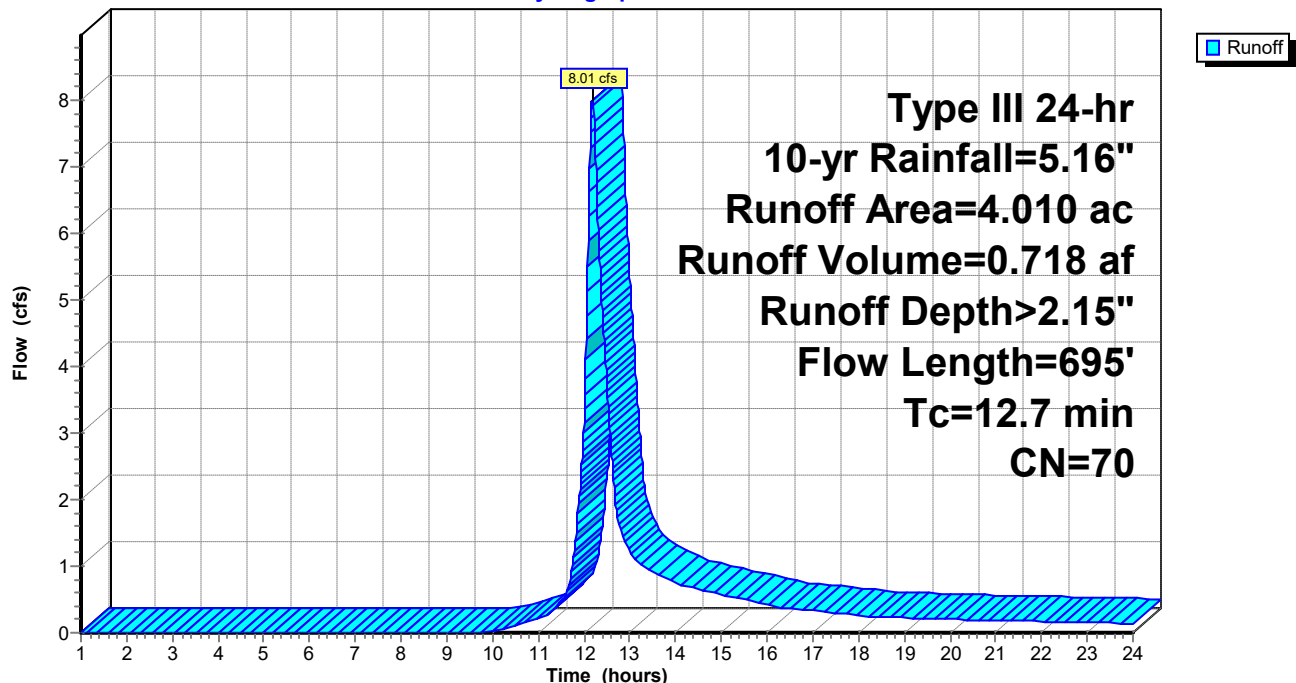
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
1.230	98	Paved parking, HSG B
2.780	58	Woods/grass comb., Good, HSG B
4.010	70	Weighted Average
2.780		69.33% Pervious Area
1.230		30.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
1.3	145	0.0700	1.85		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.7	200	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.5	300	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
12.7	695	Total			

Subcatchment 53S: PS-2

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 54S: PS-1

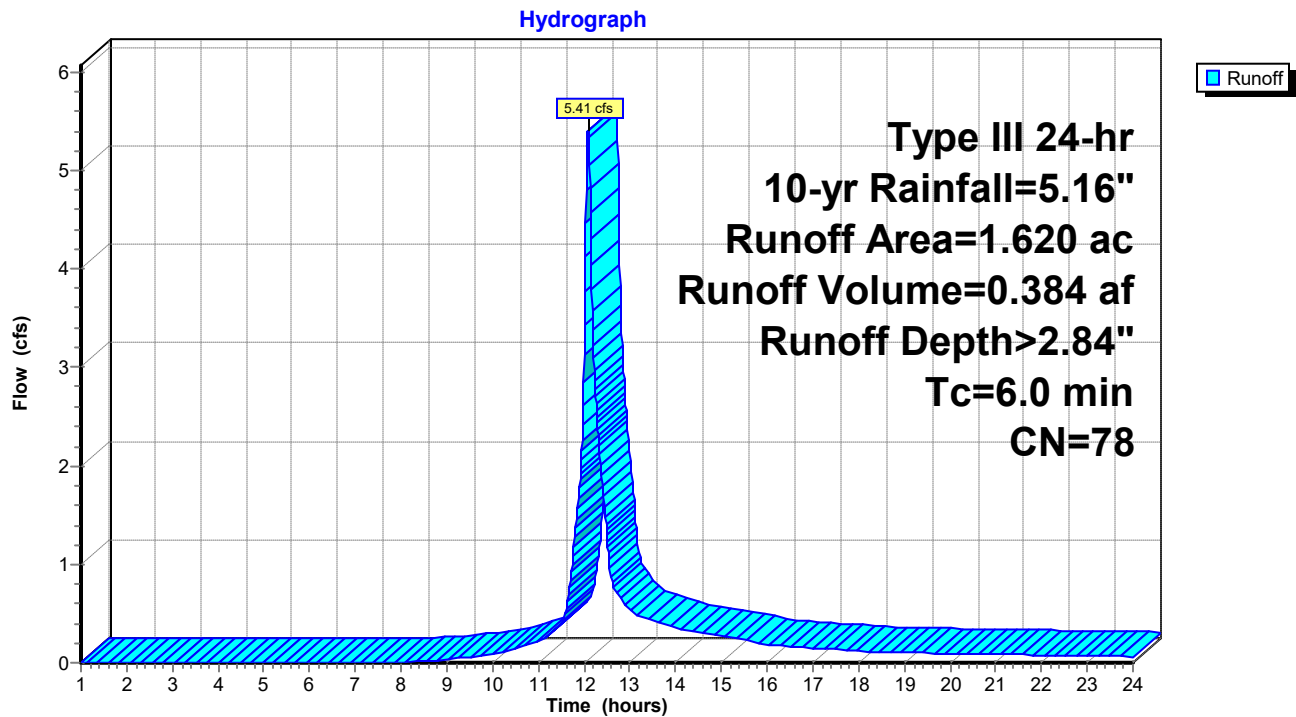
Runoff = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af, Depth> 2.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.760	98	Paved parking, HSG B
0.860	61	>75% Grass cover, Good, HSG B
1.620	78	Weighted Average
0.860		53.09% Pervious Area
0.760		46.91% Impervious Area

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

Subcatchment 54S: PS-1



High Park Street Drainage - Existing

Prepared by {enter your company name here}

HydroCAD® 10.00-22 s/n 10406 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 55S: PS-3

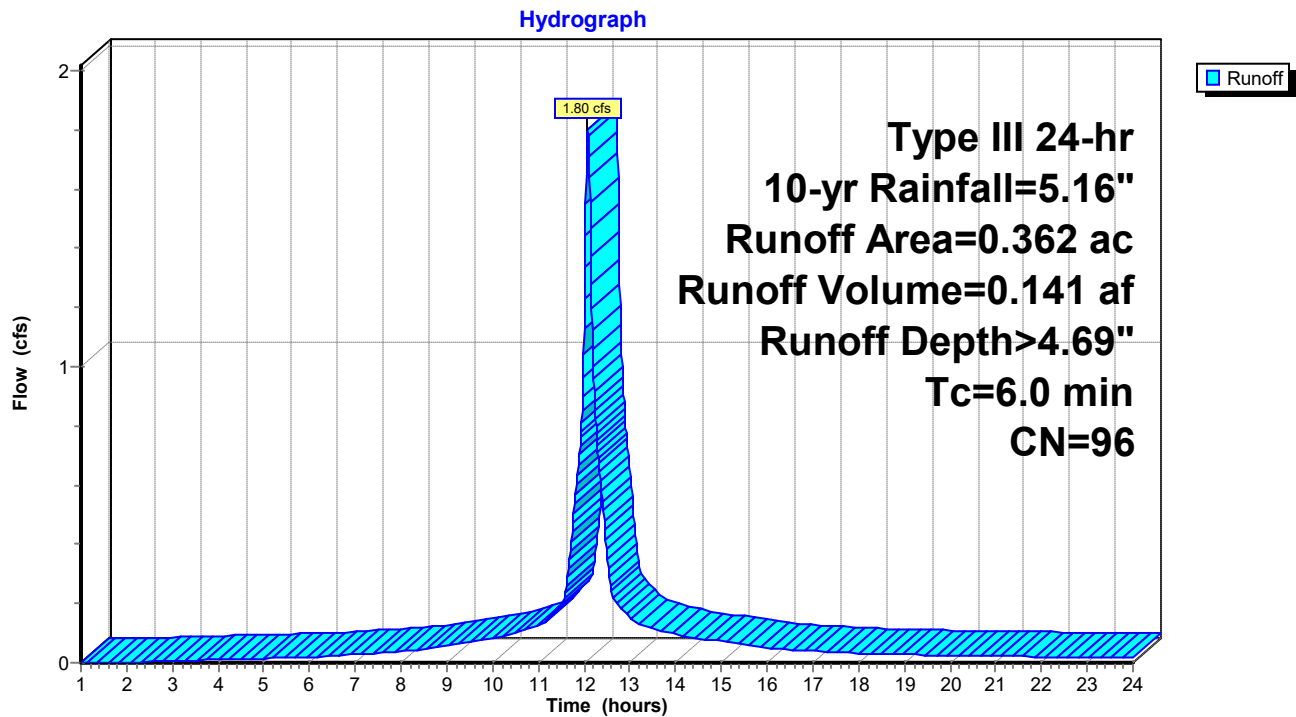
Runoff = 1.80 cfs @ 12.08 hrs, Volume= 0.141 af, Depth> 4.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.340	98	Paved parking, HSG A
0.022	61	>75% Grass cover, Good, HSG B
0.362	96	Weighted Average
0.022		6.08% Pervious Area
0.340		93.92% Impervious Area

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

Subcatchment 55S: PS-3



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 56S: MS-1

Runoff = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af, Depth> 4.92"

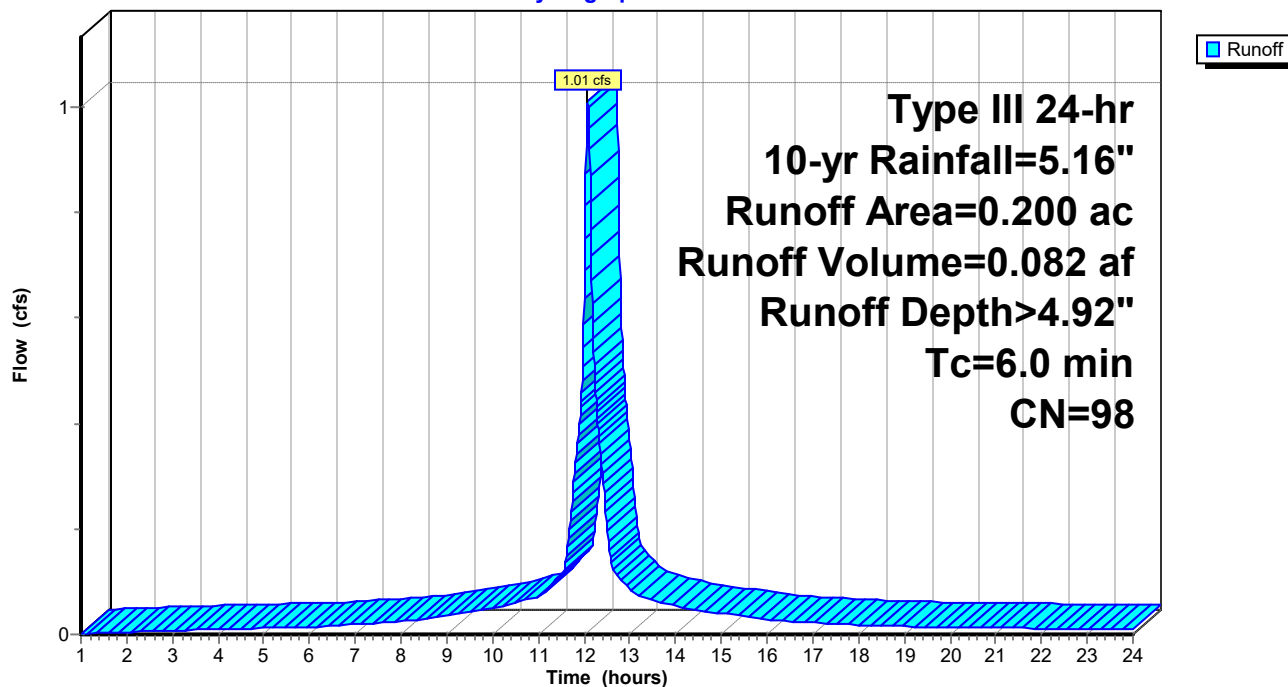
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.200	98	Paved parking, HSG A
0.200		100.00% Impervious Area

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

Subcatchment 56S: MS-1

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 57S: MS-2

Runoff = 2.02 cfs @ 12.08 hrs, Volume= 0.164 af, Depth> 4.92"

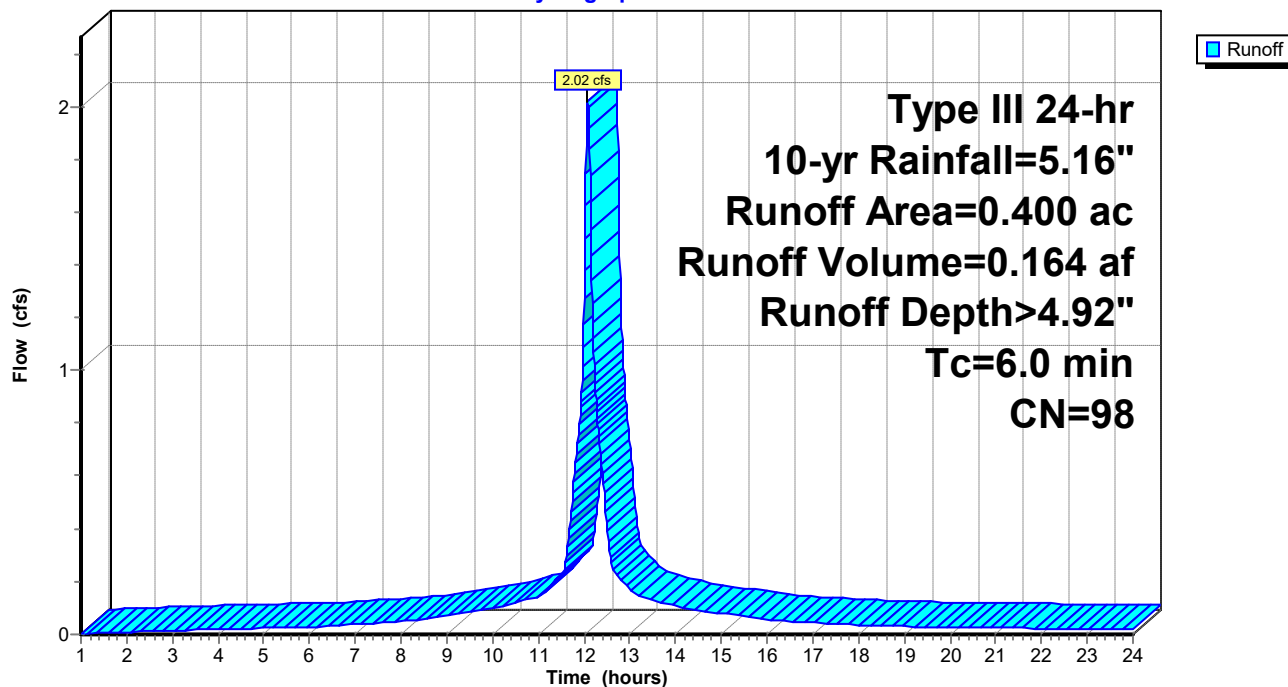
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.400	98	Paved parking, HSG A
0.400		100.00% Impervious Area

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

Subcatchment 57S: MS-2

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 58S: MS-6

Runoff = 0.18 cfs @ 12.08 hrs, Volume= 0.015 af, Depth> 4.92"

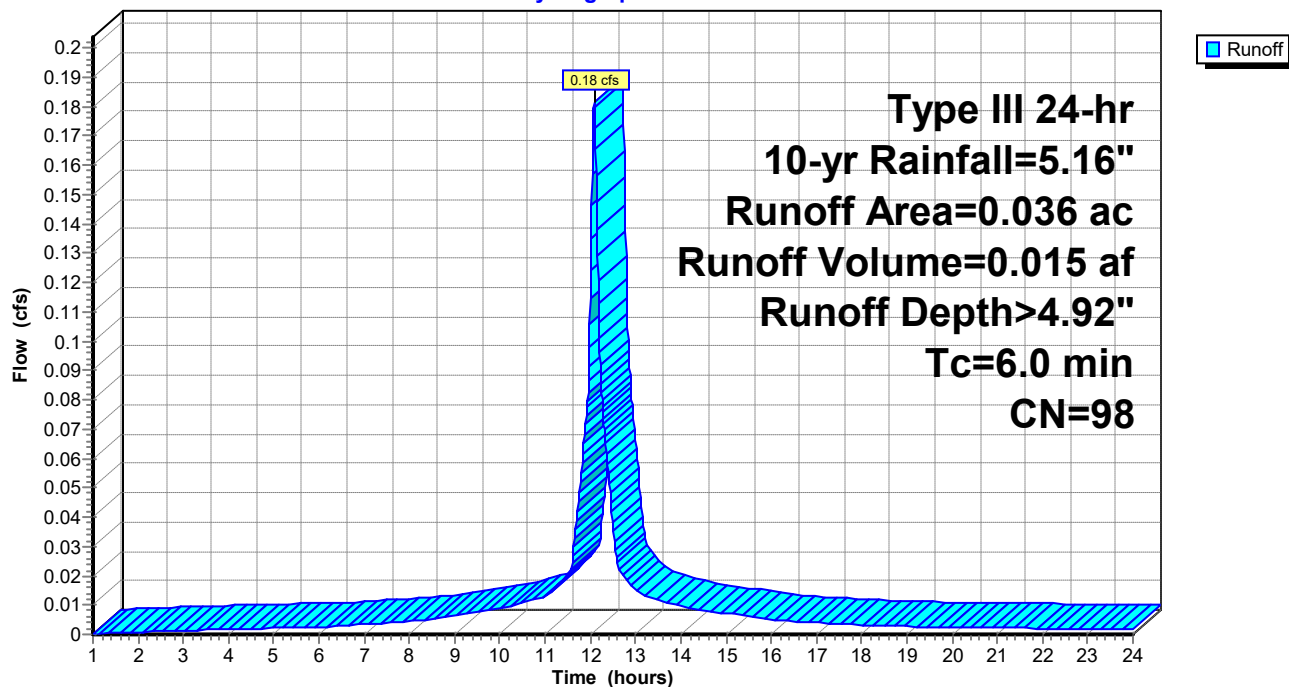
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.036	98	Paved parking, HSG A
0.036		100.00% Impervious Area

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

Subcatchment 58S: MS-6

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

HydroCAD® 10.00-22 s/n 10406 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 59S: MS-8

Runoff = 0.40 cfs @ 12.08 hrs, Volume= 0.033 af, Depth> 4.92"

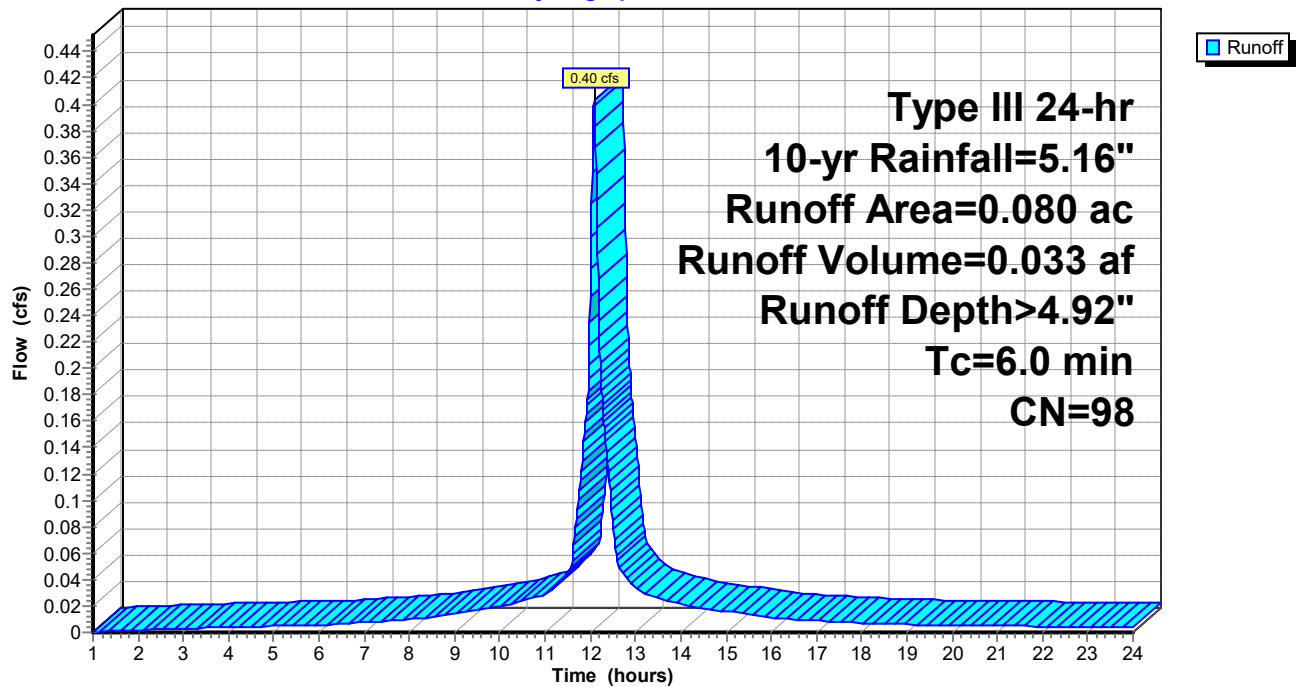
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.080	98	Paved parking, HSG A
0.080		100.00% Impervious Area

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

Subcatchment 59S: MS-8

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

HydroCAD® 10.00-22 s/n 10406 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 60S: MS-7

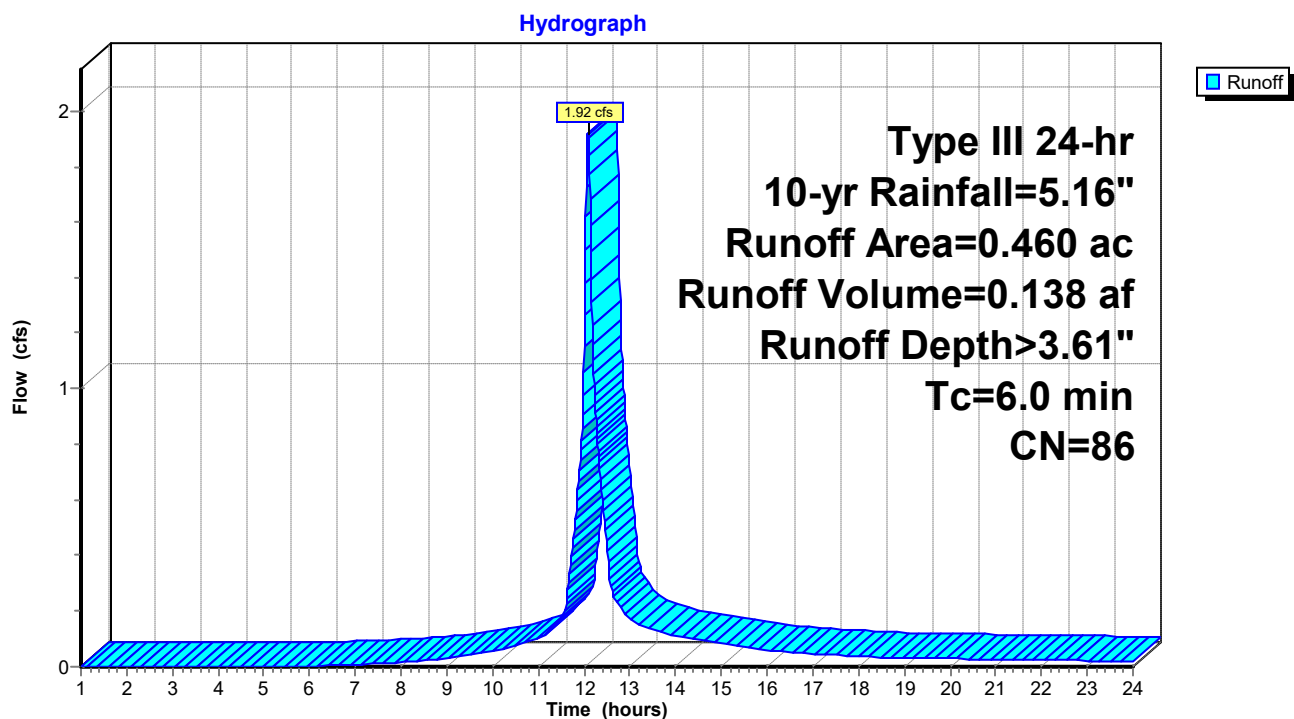
Runoff = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.370	98	Paved parking, HSG A
0.090	39	>75% Grass cover, Good, HSG A
0.460	86	Weighted Average
0.090		19.57% Pervious Area
0.370		80.43% Impervious Area

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

Subcatchment 60S: MS-7



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 61S: MS-5

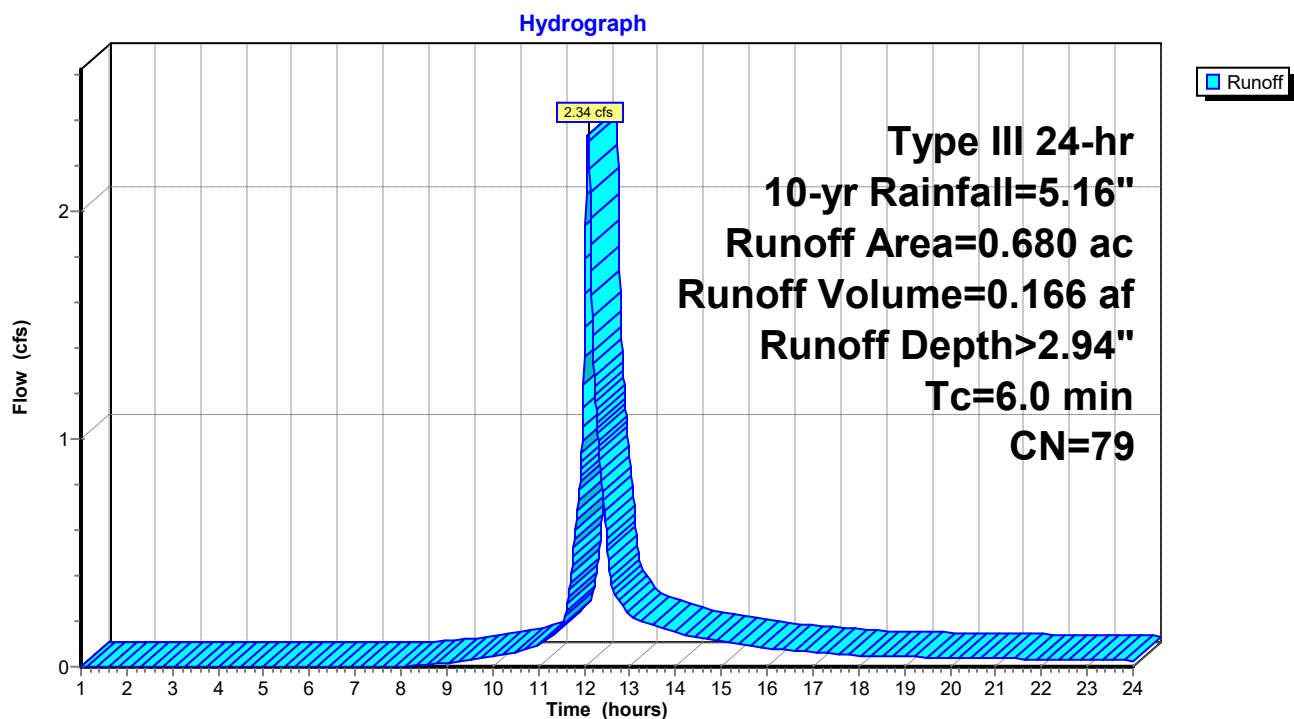
Runoff = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.460	98	Paved parking, HSG A
0.220	39	>75% Grass cover, Good, HSG A
0.680	79	Weighted Average
0.220		32.35% Pervious Area
0.460		67.65% Impervious Area

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

Subcatchment 61S: MS-5



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 62S: MS-4

Runoff = 0.79 cfs @ 12.09 hrs, Volume= 0.056 af, Depth> 2.58"

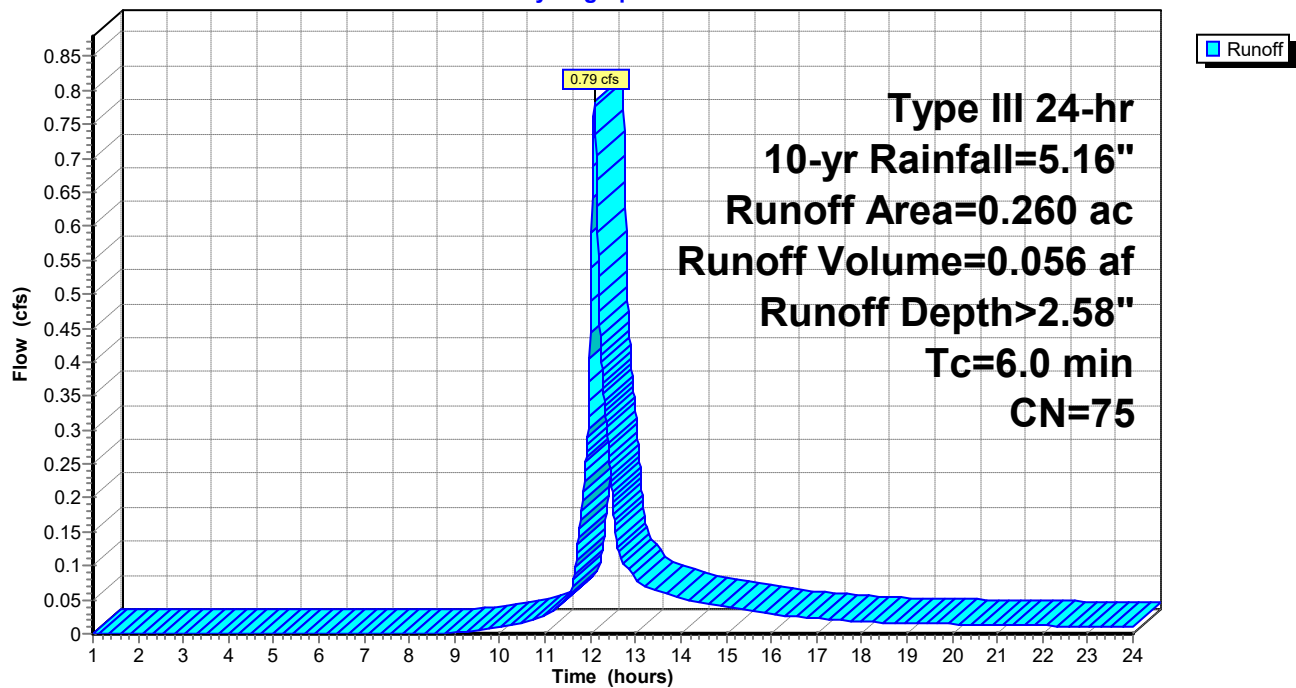
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.160	98	Paved parking, HSG A
0.100	39	>75% Grass cover, Good, HSG A
0.260	75	Weighted Average
0.100		38.46% Pervious Area
0.160		61.54% Impervious Area

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

Subcatchment 62S: MS-4

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 63S: MS-3

Runoff = 0.88 cfs @ 12.09 hrs, Volume= 0.062 af, Depth> 3.12"

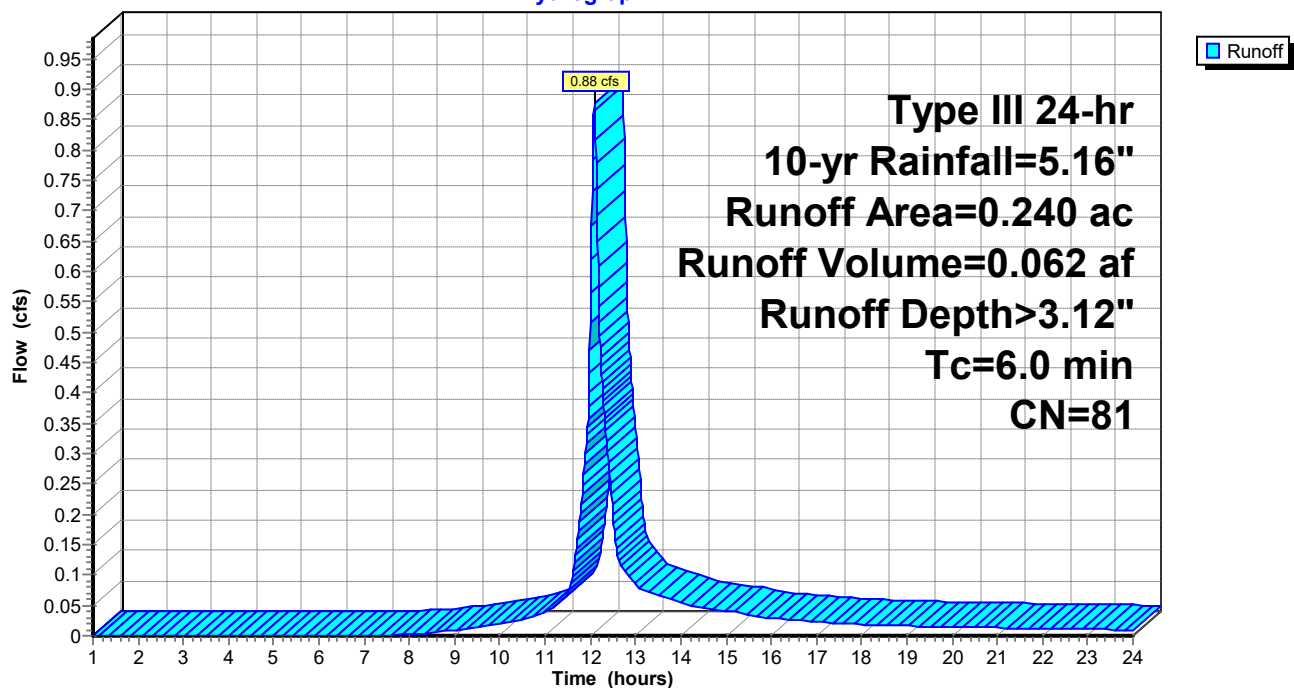
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.170	98	Paved parking, HSG A
0.070	39	>75% Grass cover, Good, HSG A
0.240	81	Weighted Average
0.070		29.17% Pervious Area
0.170		70.83% Impervious Area

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

Subcatchment 63S: MS-3

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 64S: HS-11

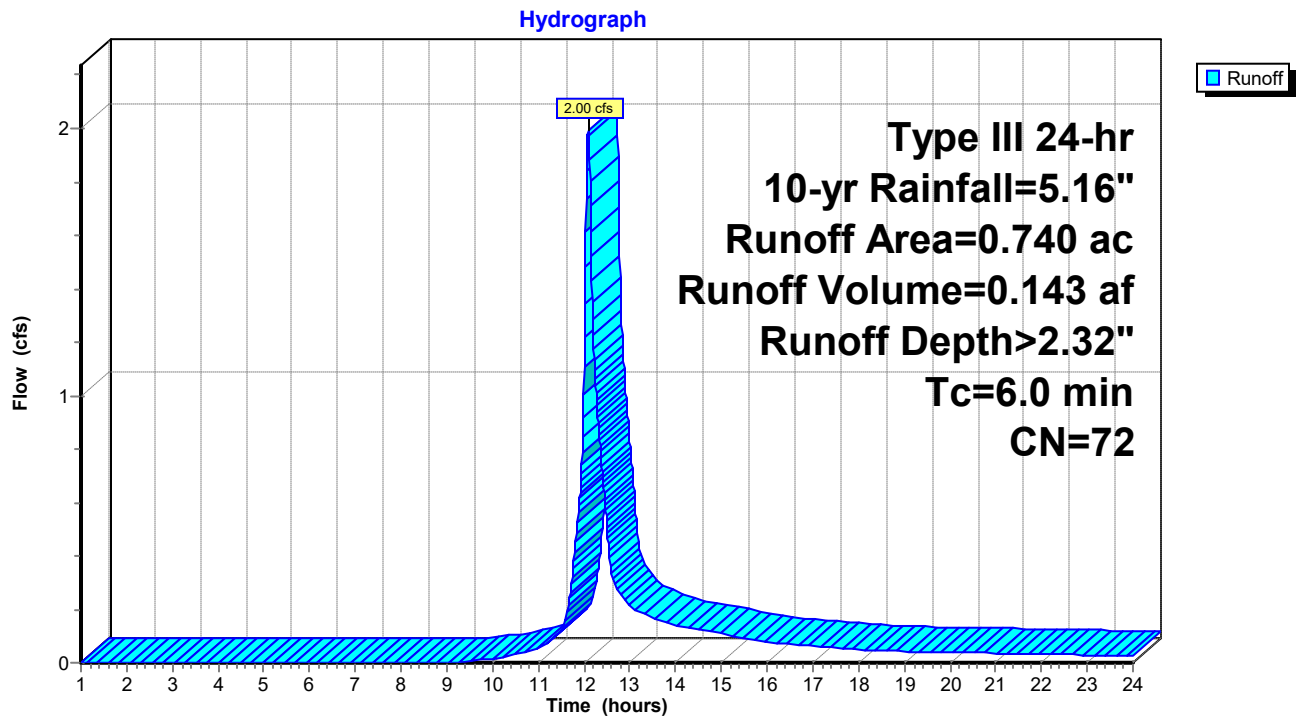
Runoff = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af, Depth> 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG B
0.520	61	>75% Grass cover, Good, HSG B
0.740	72	Weighted Average
0.520		70.27% Pervious Area
0.220		29.73% Impervious Area

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

Subcatchment 64S: HS-11



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 65S: HS-12

Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af, Depth> 4.92"

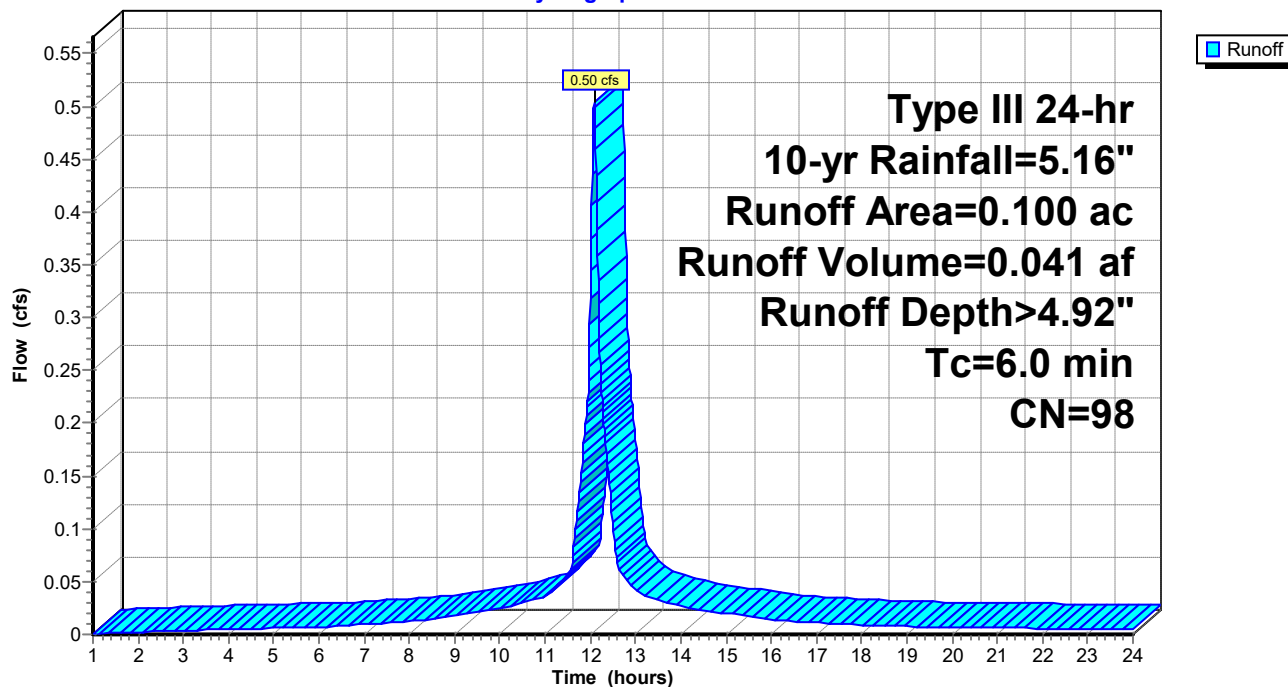
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG B
0.100		100.00% Impervious Area

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

Subcatchment 65S: HS-12

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 66S: HS-14

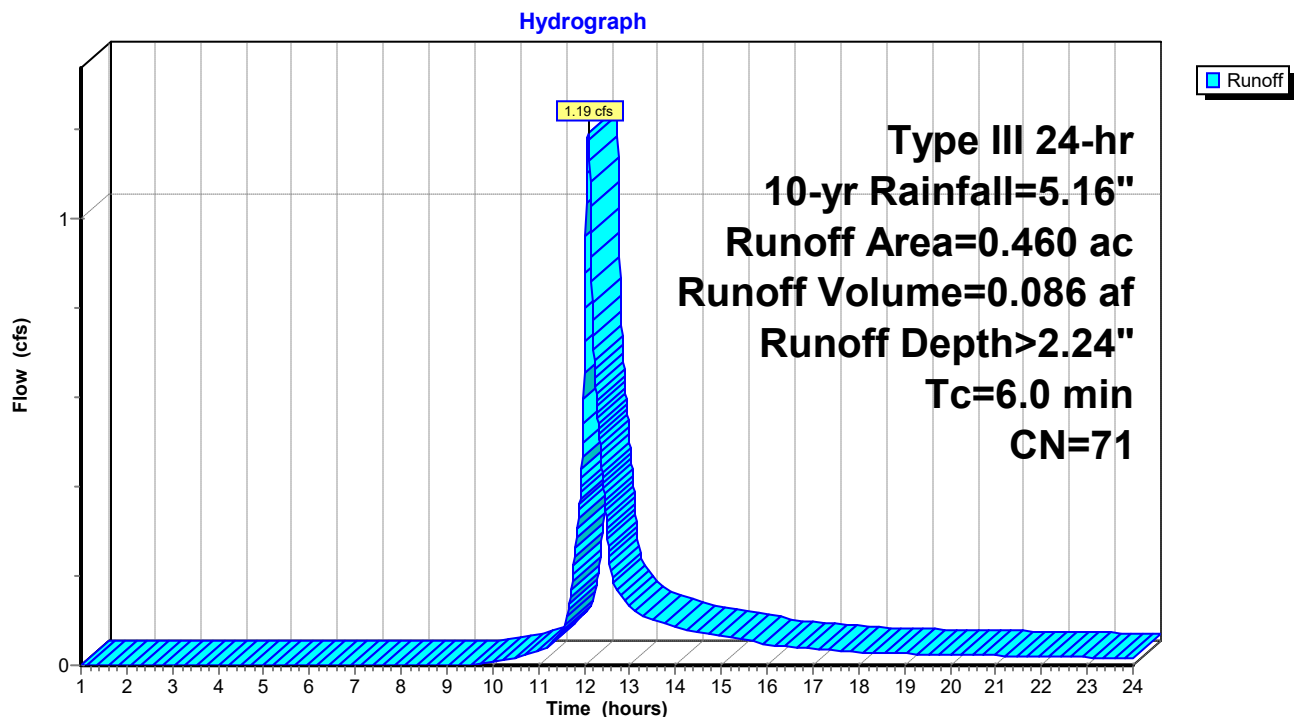
Runoff = 1.19 cfs @ 12.09 hrs, Volume= 0.086 af, Depth> 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.250	98	Unconnected pavement, HSG A
0.210	39	>75% Grass cover, Good, HSG A
0.460	71	Weighted Average
0.210		45.65% Pervious Area
0.250		54.35% Impervious Area
0.250		100.00% Unconnected

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

Subcatchment 66S: HS-14



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 67S: HS-13

Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Depth> 3.61"

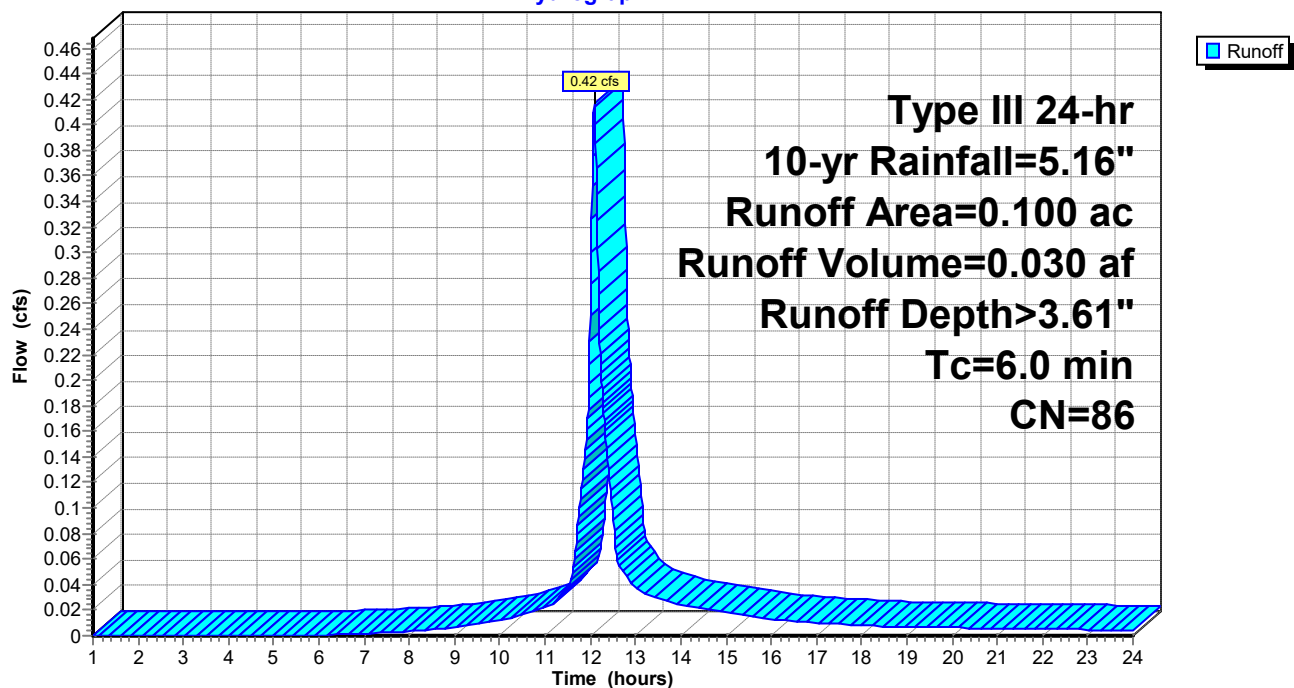
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.080	98	Paved parking, HSG A
0.020	39	>75% Grass cover, Good, HSG A
0.100	86	Weighted Average
0.020		20.00% Pervious Area
0.080		80.00% Impervious Area

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

Subcatchment 67S: HS-13

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 68S: MS-9

Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af, Depth> 4.92"

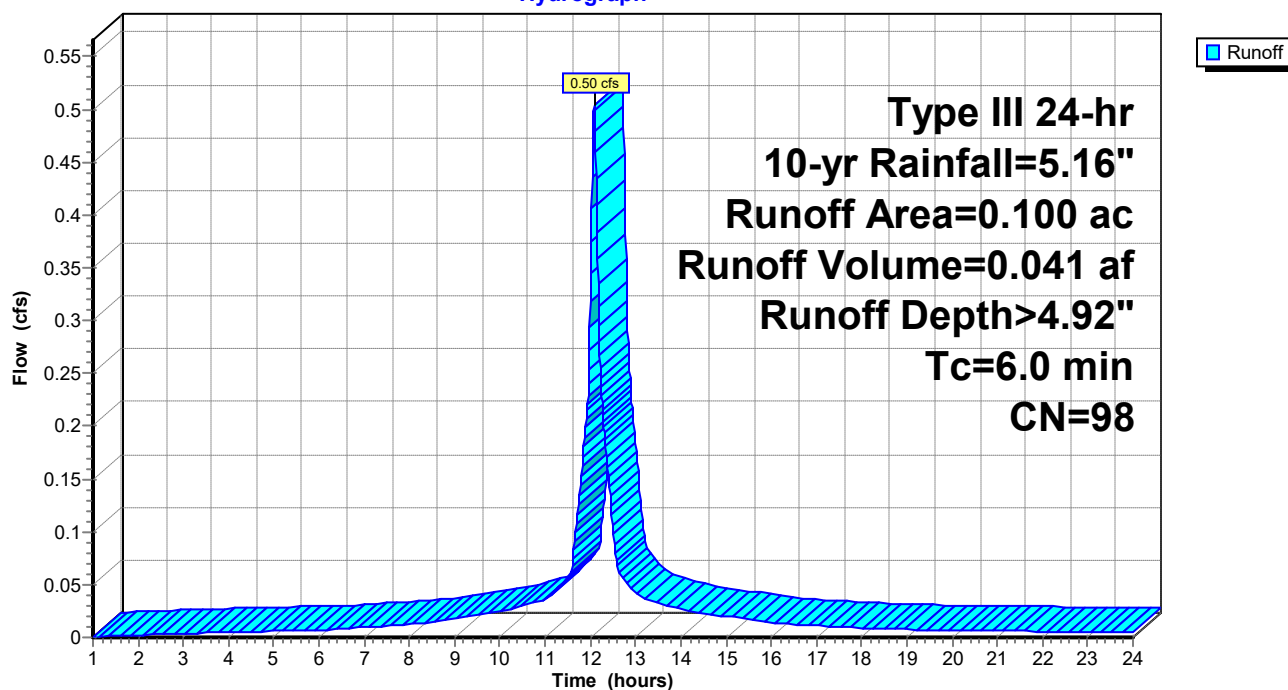
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
0.100		100.00% Impervious Area

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

Subcatchment 68S: MS-9

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 69S: M-10

Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af, Depth> 4.92"

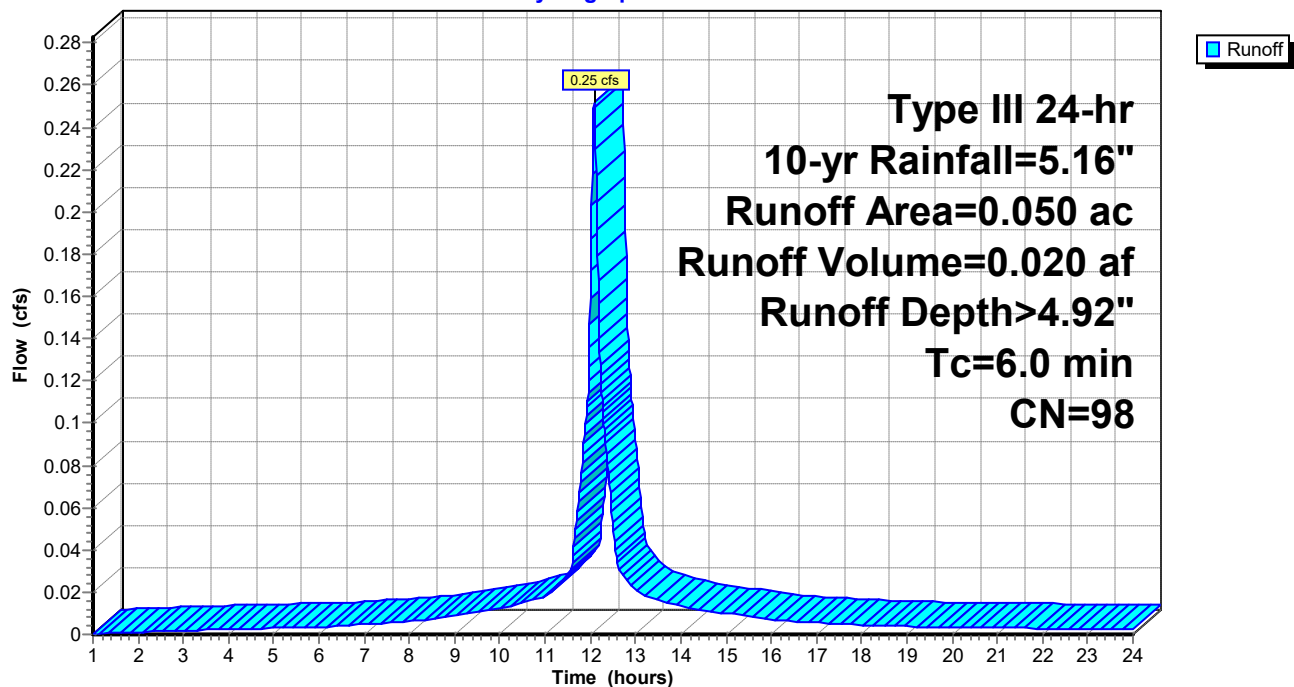
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.050	98	Paved parking, HSG A
0.050		100.00% Impervious Area

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

Subcatchment 69S: M-10

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 70S: MS-11

Runoff = 1.51 cfs @ 12.08 hrs, Volume= 0.123 af, Depth> 4.92"

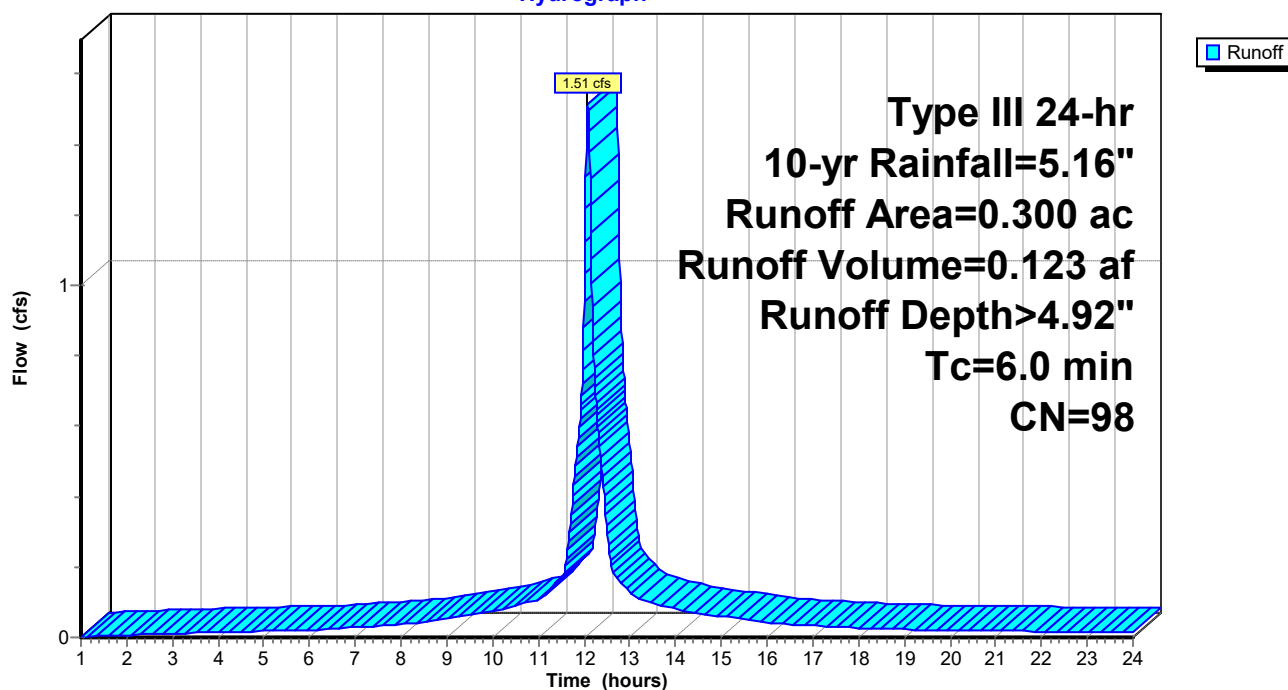
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.300	98	Paved parking, HSG A
0.300		100.00% Impervious Area

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

Subcatchment 70S: MS-11

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 71S: Wetlands/Woods

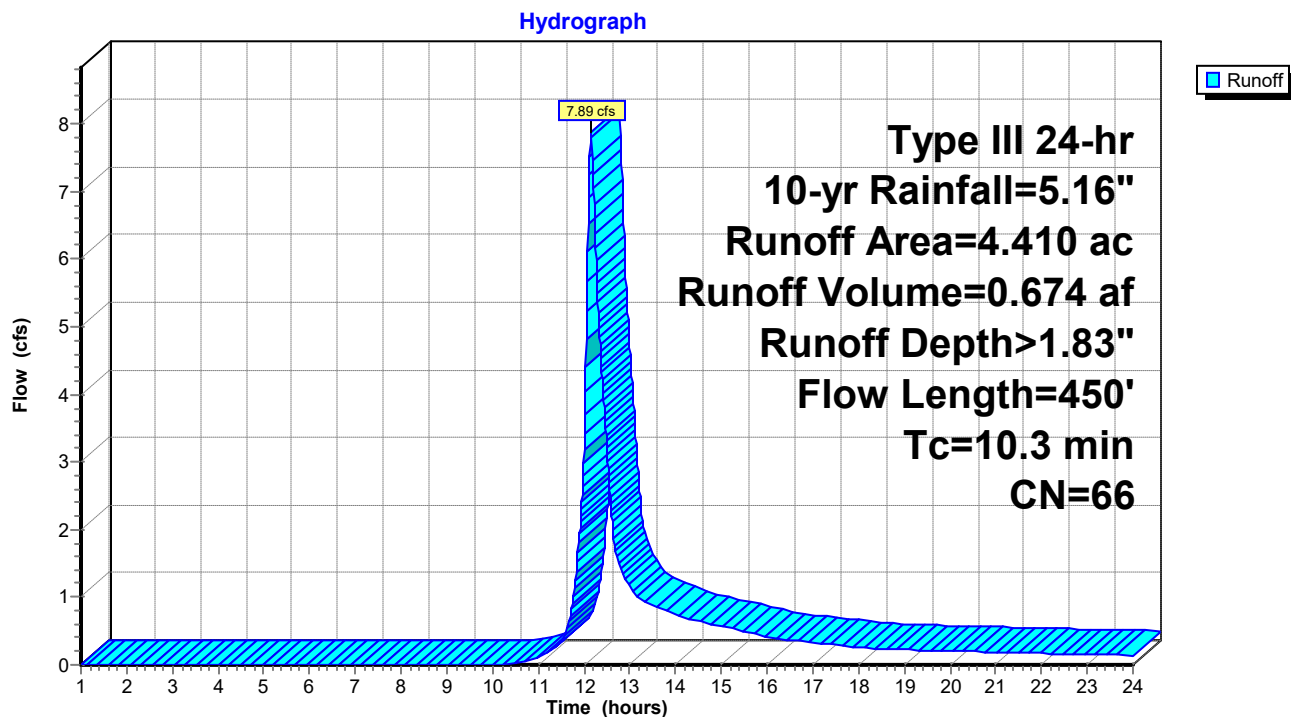
Runoff = 7.89 cfs @ 12.15 hrs, Volume= 0.674 af, Depth> 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.830	98	Paved parking, HSG B
3.580	58	Woods/grass comb., Good, HSG B
4.410	66	Weighted Average
3.580		81.18% Pervious Area
0.830		18.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.1100	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.34"
4.2	400	0.1000	1.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
10.3	450	Total			

Subcatchment 71S: Wetlands/Woods



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 1P: CB-1031

[57] Hint: Peaked at 334.54' (Flood elevation advised)

Inflow Area = 0.390 ac, 38.46% Impervious, Inflow Depth > 1.54" for 10-yr event
Inflow = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af
Outflow = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min
Primary = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 334.54' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	334.20'	15.0" Round RCP_Round 15" L= 82.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 334.20' / 331.40' S= 0.0341 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	337.60'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.65 cfs @ 12.10 hrs HW=334.54' (Free Discharge)

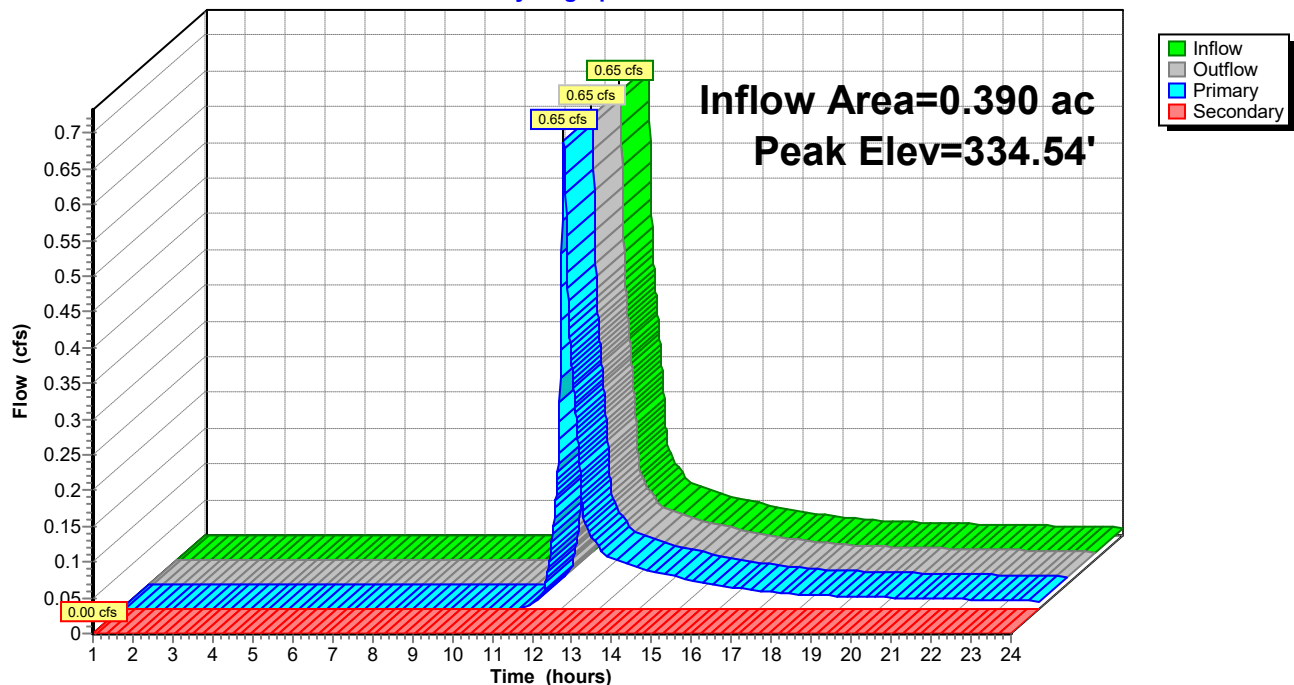
↑1=RCP_Round 15" (Inlet Controls 0.65 cfs @ 2.46 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=334.20' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: CB-1031

Hydrograph



High Park Street Drainage - Existing

Prepared by {enter your company name here}

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 2P: MH-43

[79] Warning: Submerged Pond 3P Primary device # 1 INLET by 0.34'

Inflow Area = 0.884 ac, 54.30% Impervious, Inflow Depth > 2.93" for 10-yr event
Inflow = 2.90 cfs @ 12.09 hrs, Volume= 0.216 af
Outflow = 2.90 cfs @ 12.09 hrs, Volume= 0.216 af, Atten= 0%, Lag= 0.0 min
Primary = 2.90 cfs @ 12.09 hrs, Volume= 0.216 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 331.15' @ 12.09 hrs

Flood Elev= 335.45'

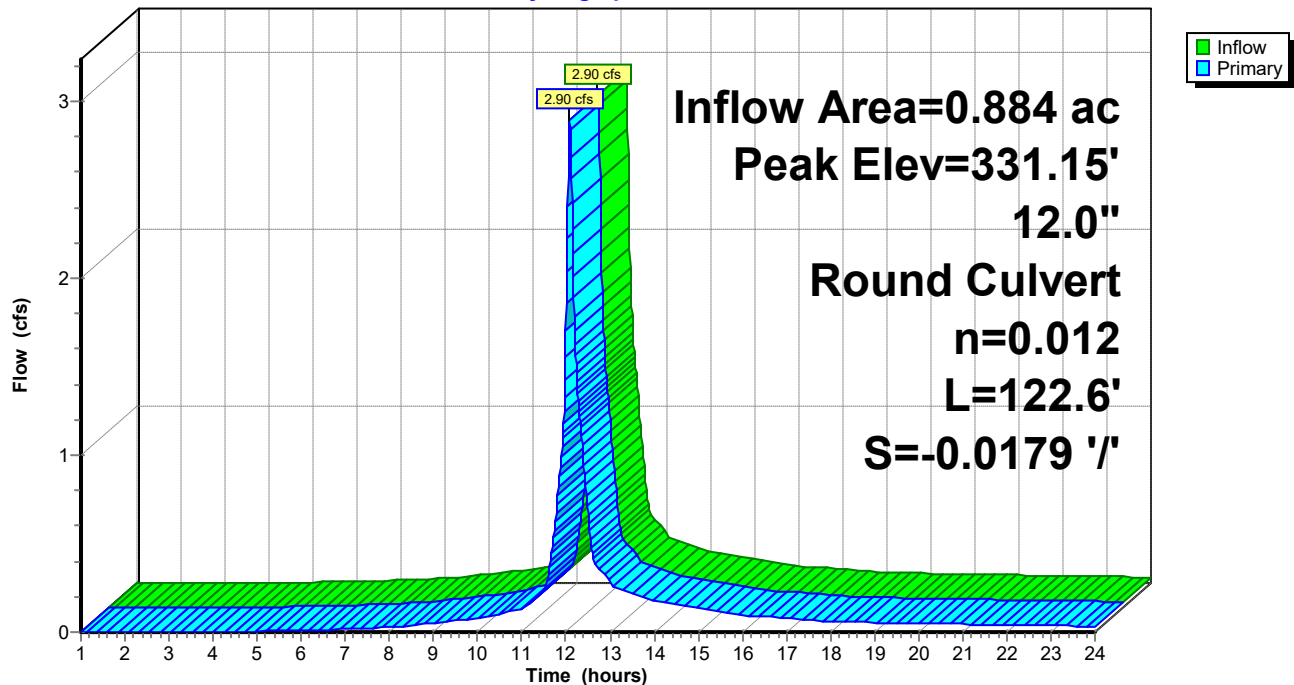
Device	Routing	Invert	Outlet Devices
#1	Primary	330.20'	12.0" Round RCP_Round 12" L= 122.6' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 328.00' / 330.20' S= -0.0179 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.89 cfs @ 12.09 hrs HW=331.14' (Free Discharge)

↑1=RCP_Round 12" (Outlet Controls 2.89 cfs @ 3.68 fps)

Pond 2P: MH-43

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 3P: CB-1030

[57] Hint: Peaked at 331.57' (Flood elevation advised)

Inflow Area = 0.494 ac, 66.80% Impervious, Inflow Depth > 4.03" for 10-yr event
Inflow = 2.25 cfs @ 12.08 hrs, Volume= 0.166 af
Outflow = 2.25 cfs @ 12.08 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.0 min
Primary = 2.25 cfs @ 12.08 hrs, Volume= 0.166 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 331.57' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	330.80'	15.0" Round RCP_Round 15" L= 15.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 330.80' / 330.60' S= 0.0133 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	335.02'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	335.02'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.24 cfs @ 12.08 hrs HW=331.57' (Free Discharge)

↑**1=RCP_Round 15"** (Barrel Controls 2.24 cfs @ 4.07 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.80' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.80' (Free Discharge)

↑**3=Orifice/Grate** (Controls 0.00 cfs)

High Park Street Drainage - Existing

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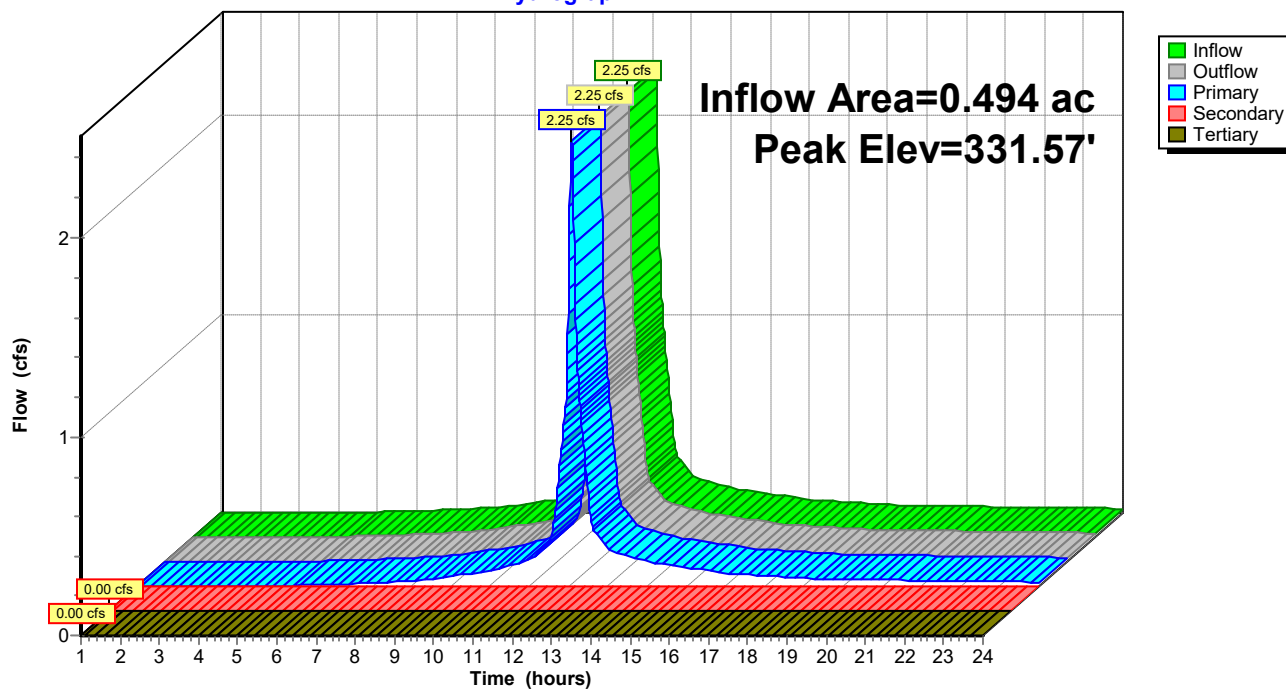
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 3P: CB-1030

Hydrograph



High Park Street Drainage - Existing

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Summary for Pond 4P: CB-1029

[57] Hint: Peaked at 334.52' (Flood elevation advised)

Inflow Area = 0.170 ac, 76.47% Impervious, Inflow Depth > 4.24" for 10-yr event
Inflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af
Outflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 334.52' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	333.90'	12.0" Round CMP_Round 12" L= 22.5' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 333.90' / 333.70' S= 0.0089 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	334.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.80 cfs @ 12.08 hrs HW=334.52' (Free Discharge)

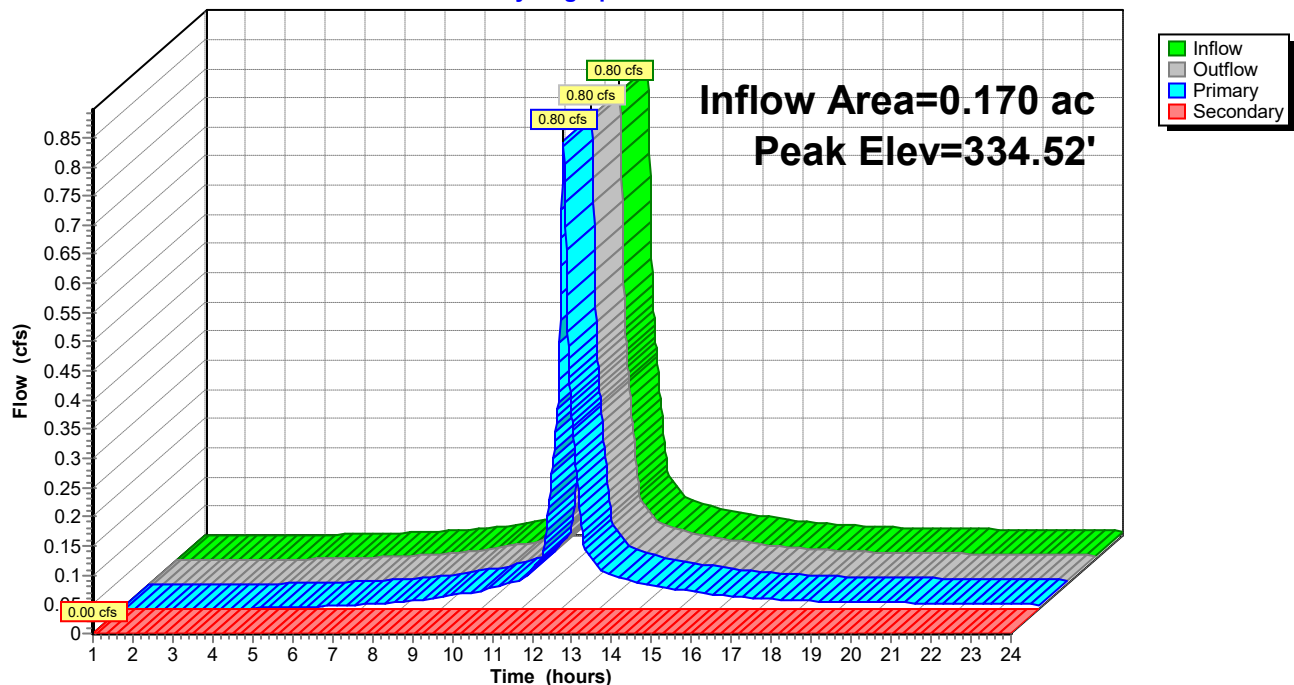
↑**1=CMP_Round 12"** (Barrel Controls 0.80 cfs @ 2.22 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=333.90' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: CB-1029

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 5P: CB-1027

[57] Hint: Peaked at 333.48' (Flood elevation advised)

[81] Warning: Exceeded Pond 2P by 2.57' @ 12.21 hrs

[81] Warning: Exceeded Pond 6P by 2.60' @ 12.13 hrs

Inflow Area = 1.266 ac, 57.98% Impervious, Inflow Depth > 3.27" for 10-yr event
Inflow = 4.37 cfs @ 12.10 hrs, Volume= 0.345 af
Outflow = 4.37 cfs @ 12.10 hrs, Volume= 0.345 af, Atten= 0%, Lag= 0.0 min
Primary = 2.71 cfs @ 12.10 hrs, Volume= 0.328 af
Secondary = 1.42 cfs @ 12.10 hrs, Volume= 0.015 af
Tertiary = 0.24 cfs @ 12.10 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 333.48' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	330.20'	12.0" Round CMP_Round 12" L= 327.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 330.20' / 325.10' S= 0.0156 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	333.34'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	333.37'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.71 cfs @ 12.10 hrs HW=333.48' (Free Discharge)

↑ **1=CMP_Round 12"** (Barrel Controls 2.71 cfs @ 3.45 fps)

Secondary OutFlow Max=1.40 cfs @ 12.10 hrs HW=333.48' (Free Discharge)

↑ **2=Orifice/Grate** (Weir Controls 1.40 cfs @ 1.23 fps)

Tertiary OutFlow Max=0.24 cfs @ 12.10 hrs HW=333.48' (Free Discharge)

↑ **3=Orifice/Grate** (Orifice Controls 0.24 cfs @ 1.08 fps)

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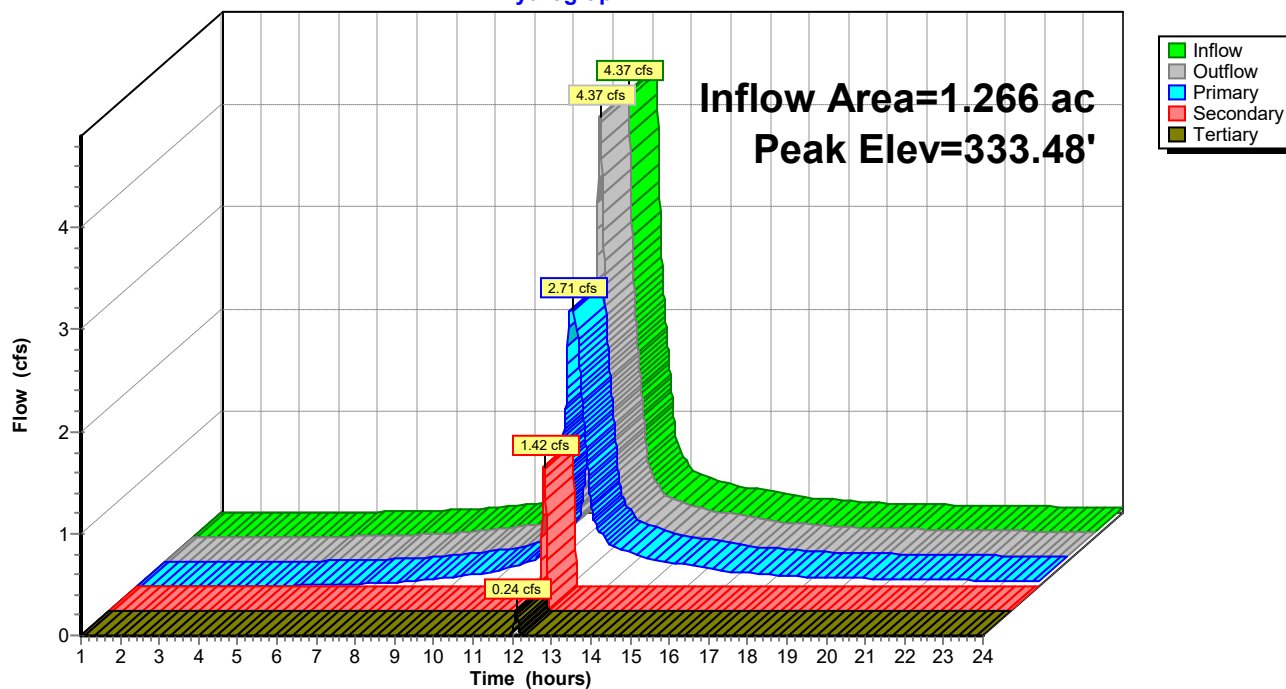
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 5P: CB-1027

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 6P: CB-1028

[57] Hint: Peaked at 330.89' (Flood elevation advised)

Inflow Area = 0.042 ac, 80.95% Impervious, Inflow Depth > 4.35" for 10-yr event
Inflow = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af
Outflow = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 330.89' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	330.60'	12.0" Round CMP_Round 12" L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 330.60' / 330.30' S= 0.0107 ' S= 0.0107 ' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	333.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.20 cfs @ 12.08 hrs HW=330.89' (Free Discharge)

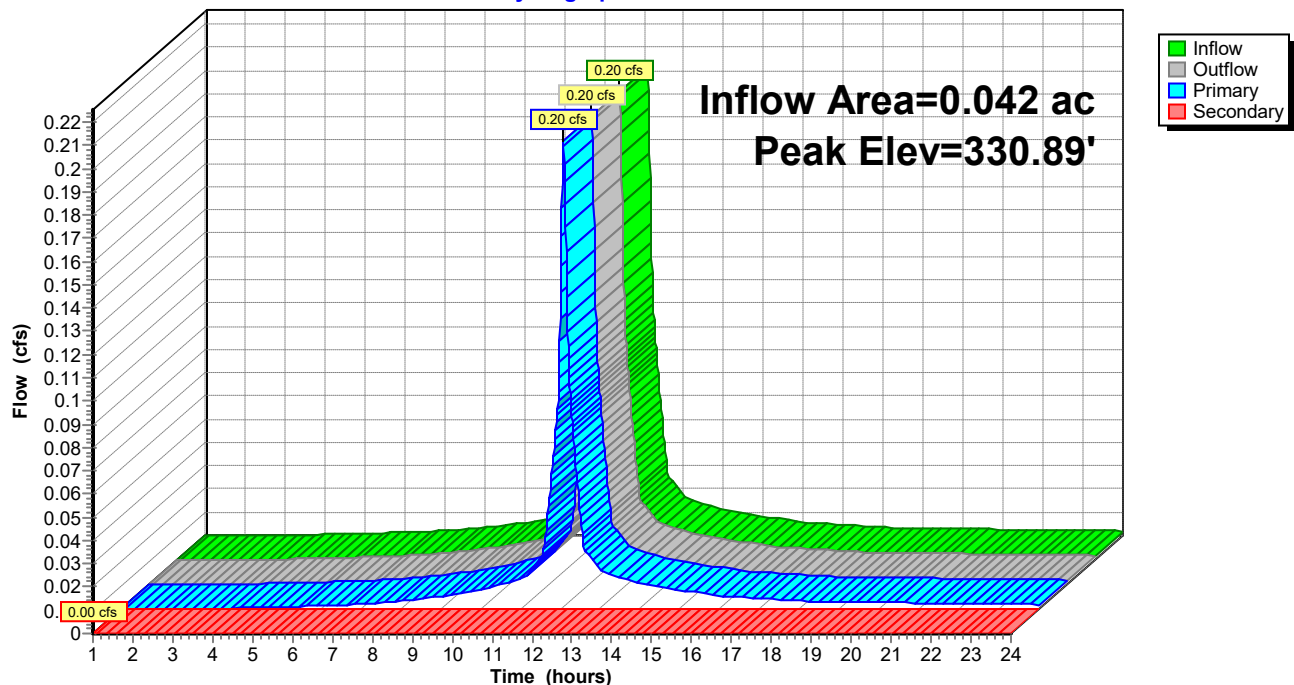
↑ **1=CMP_Round 12"** (Barrel Controls 0.20 cfs @ 1.58 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.60' (Free Discharge)

↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Pond 6P: CB-1028

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 7P: CB-1026

[57] Hint: Peaked at 328.52' (Flood elevation advised)

[79] Warning: Submerged Pond 5P Primary device # 1 OUTLET by 3.42'

[79] Warning: Submerged Pond 8P Primary device # 1 INLET by 0.42'

Inflow Area = 2.457 ac, 49.41% Impervious, Inflow Depth > 3.34" for 10-yr event
Inflow = 9.07 cfs @ 12.09 hrs, Volume= 0.684 af
Outflow = 9.07 cfs @ 12.09 hrs, Volume= 0.684 af, Atten= 0%, Lag= 0.0 min
Primary = 4.55 cfs @ 12.09 hrs, Volume= 0.630 af
Secondary = 3.82 cfs @ 12.09 hrs, Volume= 0.044 af
Tertiary = 0.70 cfs @ 12.09 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 328.52' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	325.10'	12.0" Round CMP_Round 12" L= 328.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 325.10' / 306.70' S= 0.0561 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	328.24'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	328.24'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=4.55 cfs @ 12.09 hrs HW=328.52' (Free Discharge)

↑**1=CMP_Round 12"** (Barrel Controls 4.55 cfs @ 5.79 fps)

Secondary OutFlow Max=3.81 cfs @ 12.09 hrs HW=328.52' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 3.81 cfs @ 1.72 fps)

Tertiary OutFlow Max=0.70 cfs @ 12.09 hrs HW=328.52' (Free Discharge)

↑**3=Orifice/Grate** (Orifice Controls 0.70 cfs @ 2.10 fps)

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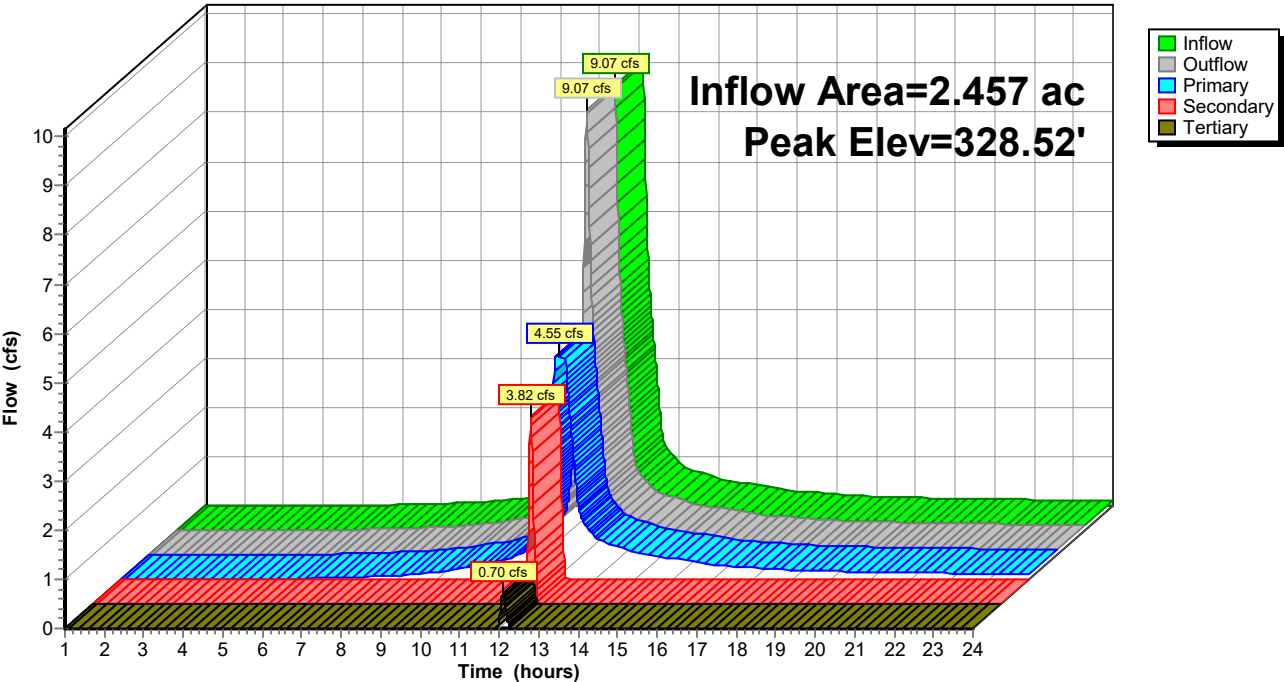
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 7P: CB-1026

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 8P: CB-1025

[57] Hint: Peaked at 328.53' (Flood elevation advised)

Inflow Area = 0.121 ac, 74.38% Impervious, Inflow Depth > 4.24" for 10-yr event
Inflow = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af
Outflow = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af, Atten= 0%, Lag= 0.0 min
Primary = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 328.53' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	328.10'	12.0" Round CMP_Round 12" L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 328.10' / 325.30' S= 0.0933 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	330.99'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.57 cfs @ 12.08 hrs HW=328.53' (Free Discharge)

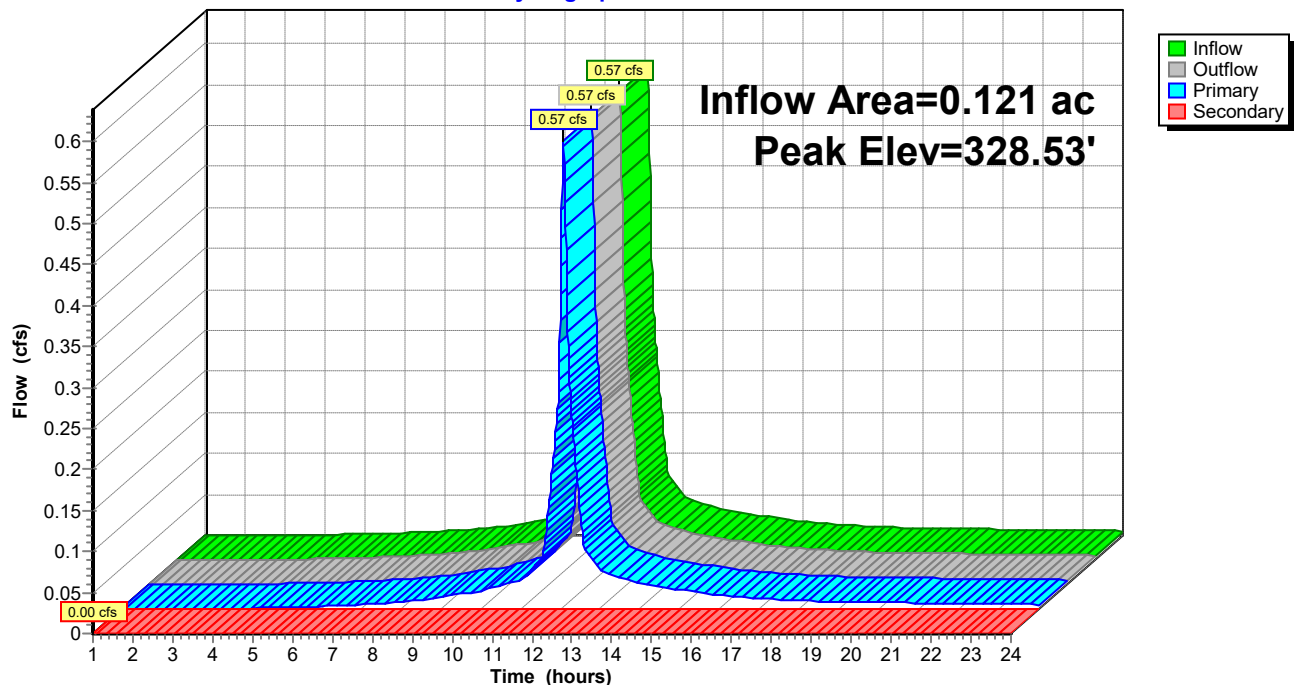
↑**1=CMP_Round 12"** (Inlet Controls 0.57 cfs @ 1.76 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=328.10' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 8P: CB-1025

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 9P: CB-1023

[57] Hint: Peaked at 310.15' (Flood elevation advised)

[79] Warning: Submerged Pond 7P Primary device # 1 OUTLET by 3.45'

[81] Warning: Exceeded Pond 10P by 2.97' @ 12.14 hrs

Inflow Area = 3.796 ac, 53.06% Impervious, Inflow Depth > 3.34" for 10-yr event
Inflow = 13.16 cfs @ 12.10 hrs, Volume= 1.056 af
Outflow = 13.16 cfs @ 12.10 hrs, Volume= 1.056 af, Atten= 0%, Lag= 0.0 min
Primary = 5.21 cfs @ 12.10 hrs, Volume= 0.914 af
Secondary = 7.03 cfs @ 12.10 hrs, Volume= 0.121 af
Tertiary = 0.92 cfs @ 12.10 hrs, Volume= 0.021 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 310.15' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	306.60'	12.0" Round 12" HDPE L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 306.60' / 303.70' S= 0.0483 ' / Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	309.73'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	309.73'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=5.21 cfs @ 12.10 hrs HW=310.15' (Free Discharge)

↑ **1=12" HDPE** (Inlet Controls 5.21 cfs @ 6.63 fps)

Secondary OutFlow Max=7.01 cfs @ 12.10 hrs HW=310.15' (Free Discharge)

↑ **2=Orifice/Grate** (Weir Controls 7.01 cfs @ 2.11 fps)

Tertiary OutFlow Max=0.92 cfs @ 12.10 hrs HW=310.15' (Free Discharge)

↑ **3=Orifice/Grate** (Orifice Controls 0.92 cfs @ 2.77 fps)

High Park Street Drainage - Existing

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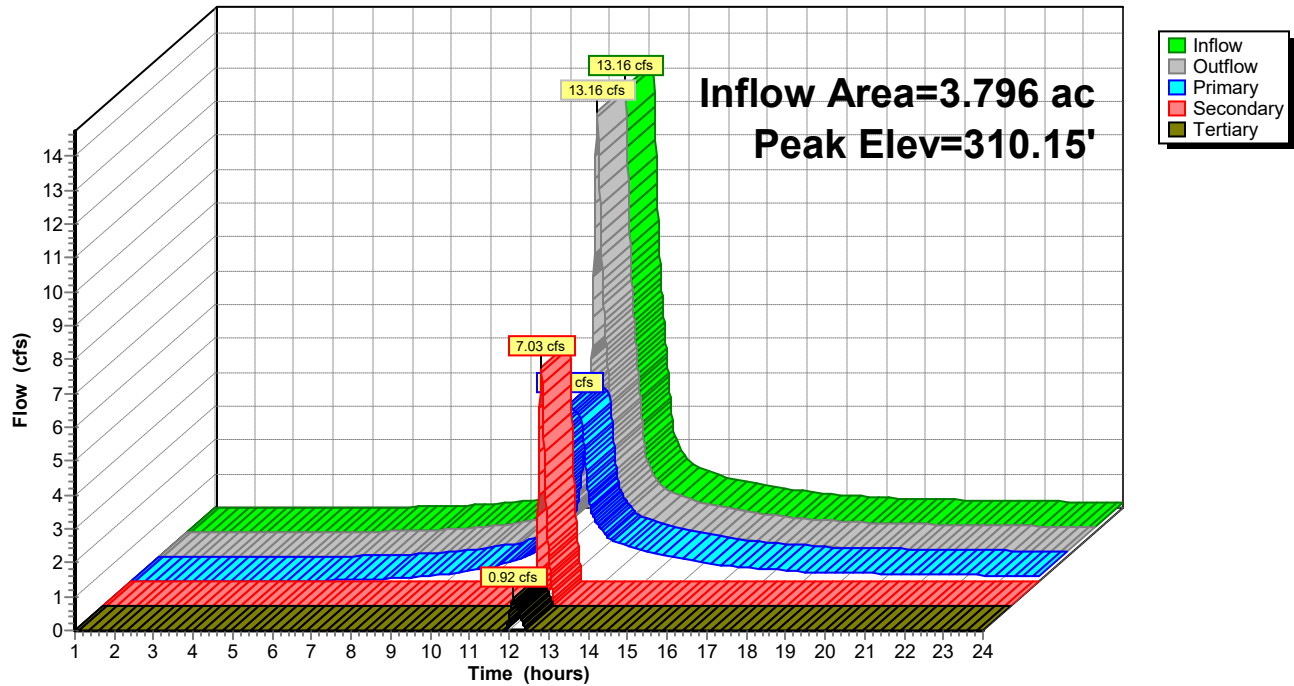
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 9P: CB-1023

Hydrograph



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Summary for Pond 10P: CB-1022

[57] Hint: Peaked at 307.20' (Flood elevation advised)

Inflow Area = 0.159 ac, 75.47% Impervious, Inflow Depth > 4.24" for 10-yr event
Inflow = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af
Outflow = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
Primary = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 307.20' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	306.70'	12.0" Round CMP_Round 12" L= 30.8' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 306.40' / 306.70' S= -0.0097 ' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	309.39'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.75 cfs @ 12.08 hrs HW=307.20' (Free Discharge)

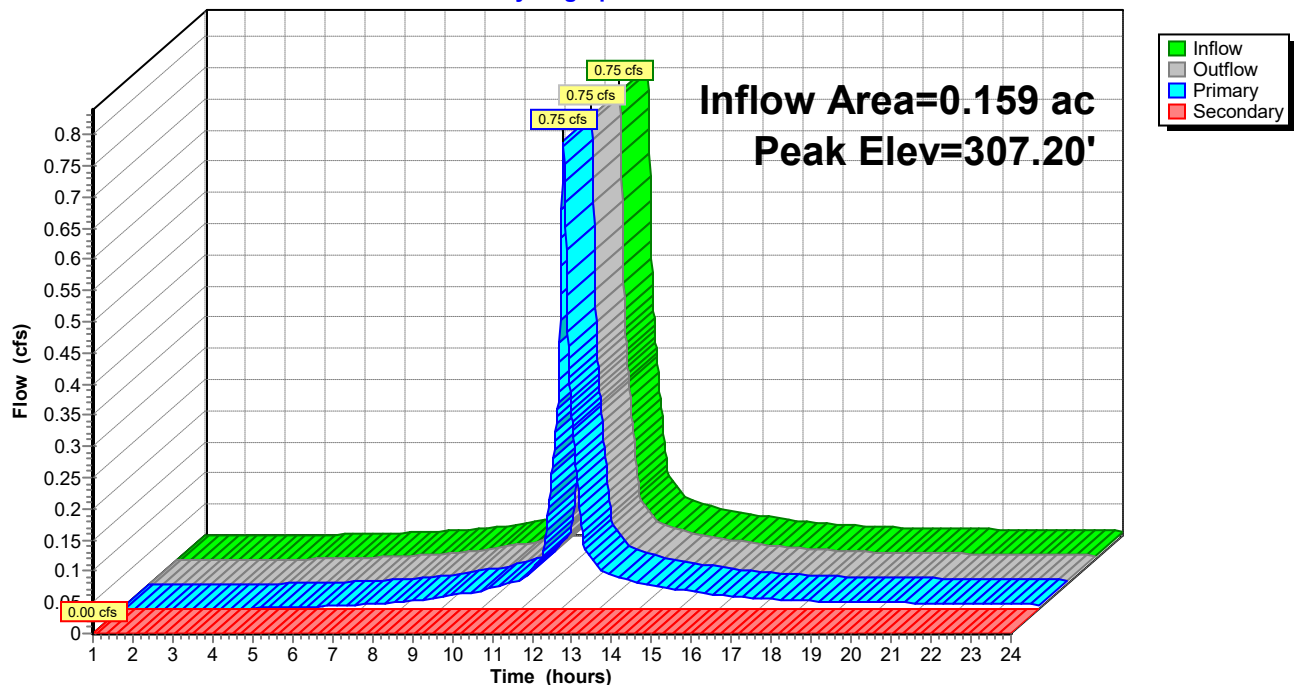
↑1=CMP_Round 12" (Inlet Controls 0.75 cfs @ 1.90 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=306.70' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 10P: CB-1022

Hydrograph



High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 11P: CB-1024

[57] Hint: Peaked at 307.02' (Flood elevation advised)

[79] Warning: Submerged Pond 9P Primary device # 1 INLET by 0.42'

Inflow Area = 4.296 ac, 51.07% Impervious, Inflow Depth > 3.24" for 10-yr event
Inflow = 14.38 cfs @ 12.10 hrs, Volume= 1.160 af
Outflow = 14.38 cfs @ 12.10 hrs, Volume= 1.160 af, Atten= 0%, Lag= 0.0 min
Primary = 7.94 cfs @ 12.10 hrs, Volume= 1.073 af
Secondary = 5.61 cfs @ 12.10 hrs, Volume= 0.073 af
Tertiary = 0.84 cfs @ 12.10 hrs, Volume= 0.013 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 307.02' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	303.70'	12.0" Round RCP_Round 12" L= 20.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 303.70' / 302.60' S= 0.0539 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	306.66'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	306.66'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=7.93 cfs @ 12.10 hrs HW=307.02' (Free Discharge)

↑**1=RCP_Round 12"** (Inlet Controls 7.93 cfs @ 10.10 fps)

Secondary OutFlow Max=5.59 cfs @ 12.10 hrs HW=307.02' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 5.59 cfs @ 1.96 fps)

Tertiary OutFlow Max=0.84 cfs @ 12.10 hrs HW=307.02' (Free Discharge)

↑**3=Orifice/Grate** (Orifice Controls 0.84 cfs @ 2.51 fps)

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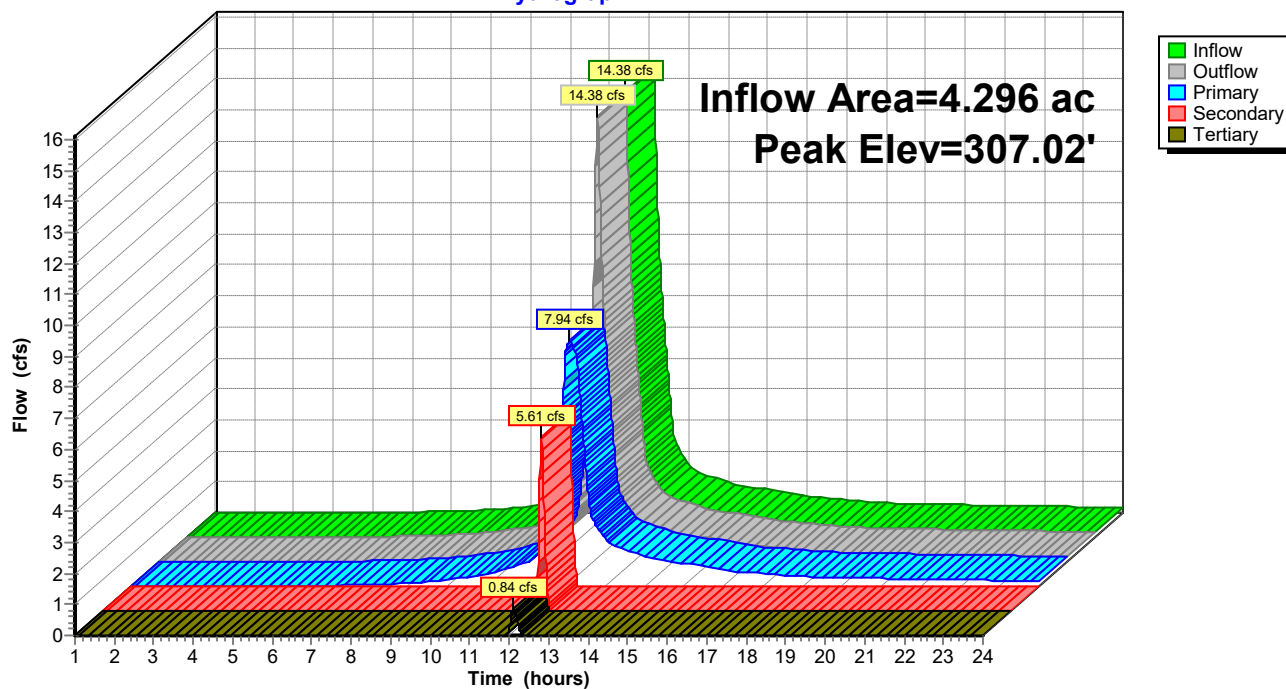
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 11P: CB-1024

Hydrograph



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Summary for Pond 12P: MH-42

[58] Hint: Peaked 2.06' above defined flood level

[81] Warning: Exceeded Pond 11P by 1.50' @ 12.10 hrs

Inflow Area = 4.296 ac, 51.07% Impervious, Inflow Depth > 3.00" for 10-yr event
Inflow = 7.94 cfs @ 12.10 hrs, Volume= 1.073 af
Outflow = 7.94 cfs @ 12.10 hrs, Volume= 1.073 af, Atten= 0%, Lag= 0.0 min
Primary = 7.94 cfs @ 12.10 hrs, Volume= 1.073 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 308.52' @ 12.10 hrs

Flood Elev= 306.46'

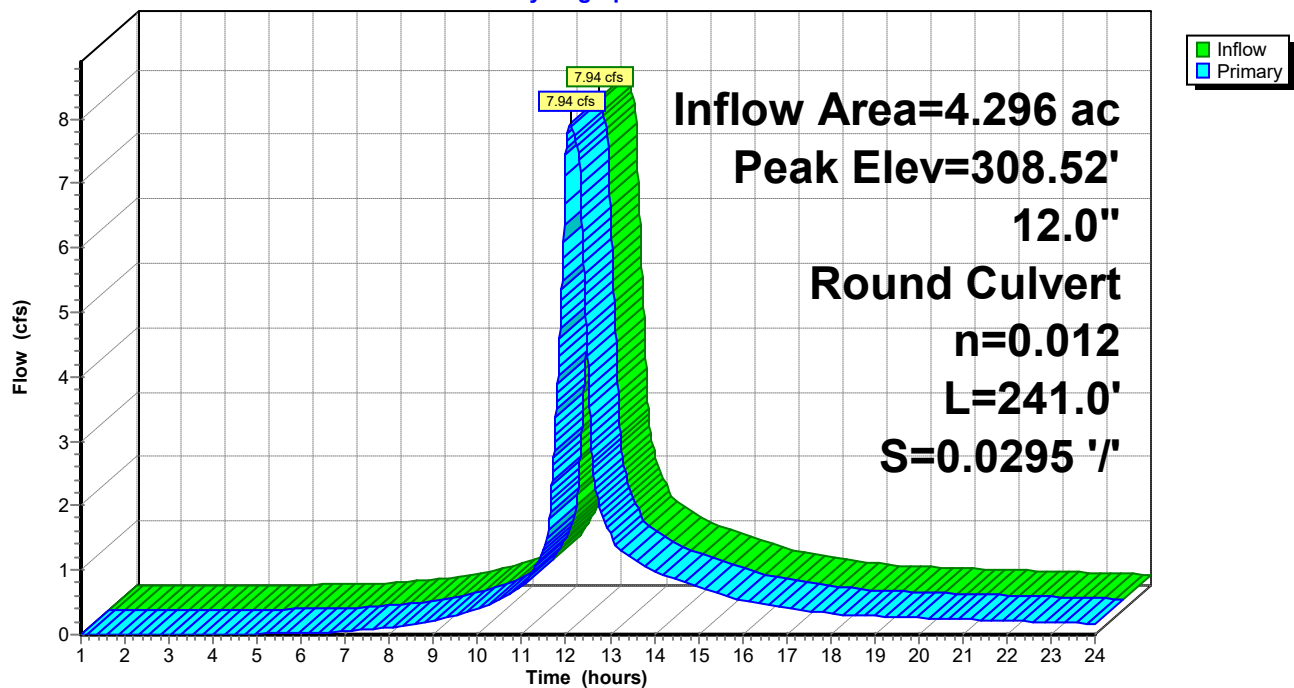
Device	Routing	Invert	Outlet Devices
#1	Primary	302.50'	12.0" Round RCP_Round 12" L= 241.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 302.50' / 295.40' S= 0.0295 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=7.93 cfs @ 12.10 hrs HW=308.52' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 7.93 cfs @ 10.10 fps)

Pond 12P: MH-42

Hydrograph



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Summary for Pond 13P: CB-742

[57] Hint: Peaked at 299.78' (Flood elevation advised)

[79] Warning: Submerged Pond 12P Primary device # 1 OUTLET by 4.38'

Inflow Area = 5.626 ac, 46.29% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 11.10 cfs @ 12.13 hrs, Volume= 1.330 af
Outflow = 11.10 cfs @ 12.13 hrs, Volume= 1.330 af, Atten= 0%, Lag= 0.0 min
Primary = 9.31 cfs @ 12.13 hrs, Volume= 1.305 af
Secondary = 1.79 cfs @ 12.13 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 299.78' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	295.40'	12.0" Round RCP_Round 12" L= 69.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 295.40' / 289.60' S= 0.0841 ' S= 0.0841 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	299.61'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=9.31 cfs @ 12.13 hrs HW=299.78' (Free Discharge)

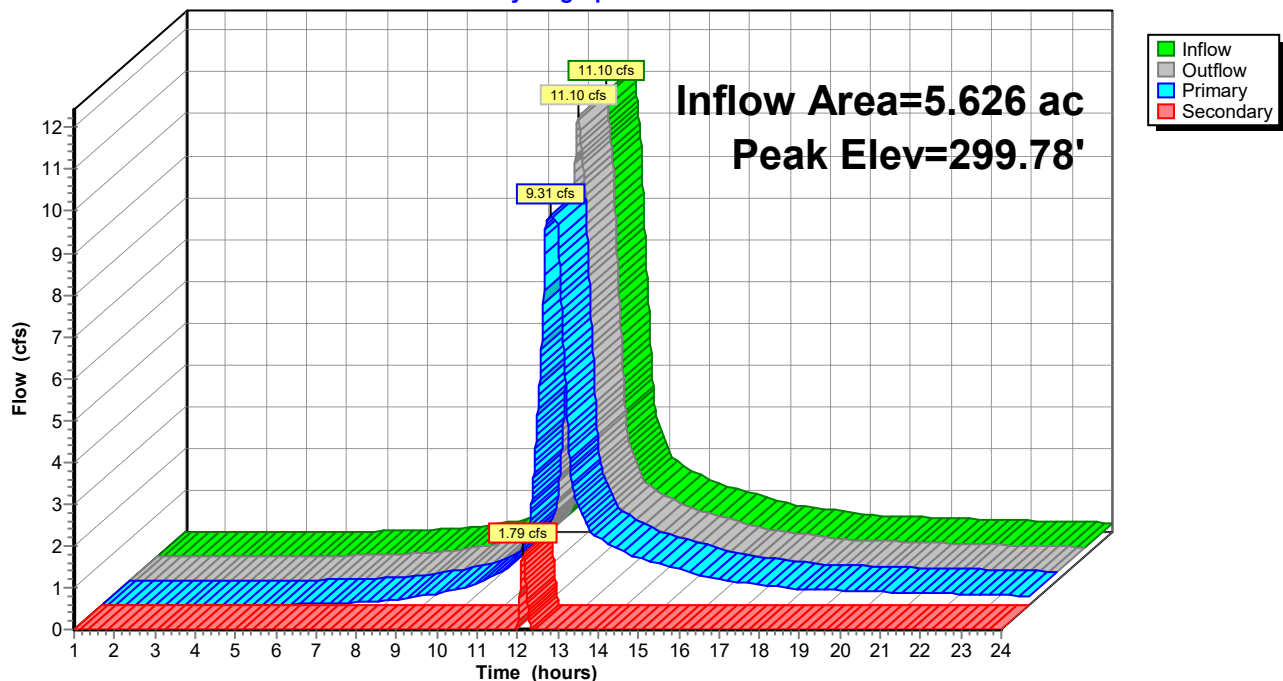
↑1=RCP_Round 12" (Inlet Controls 9.31 cfs @ 11.85 fps)

Secondary OutFlow Max=1.79 cfs @ 12.13 hrs HW=299.78' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 1.79 cfs @ 1.34 fps)

Pond 13P: CB-742

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 14P: CB-741

[57] Hint: Peaked at 294.20' (Flood elevation advised)

[79] Warning: Submerged Pond 13P Primary device # 1 OUTLET by 4.60'

Inflow Area = 5.746 ac, 47.41% Impervious, Inflow Depth > 2.83" for 10-yr event
Inflow = 9.89 cfs @ 12.09 hrs, Volume= 1.354 af
Outflow = 9.89 cfs @ 12.09 hrs, Volume= 1.354 af, Atten= 0%, Lag= 0.0 min
Primary = 9.57 cfs @ 12.09 hrs, Volume= 1.350 af
Secondary = 0.32 cfs @ 12.09 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 294.20' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	289.60'	12.0" Round RCP_Round 12" L= 135.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 289.60' / 281.30' S= 0.0615 ' S= 0.0615 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	294.15'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=9.57 cfs @ 12.09 hrs HW=294.20' (Free Discharge)

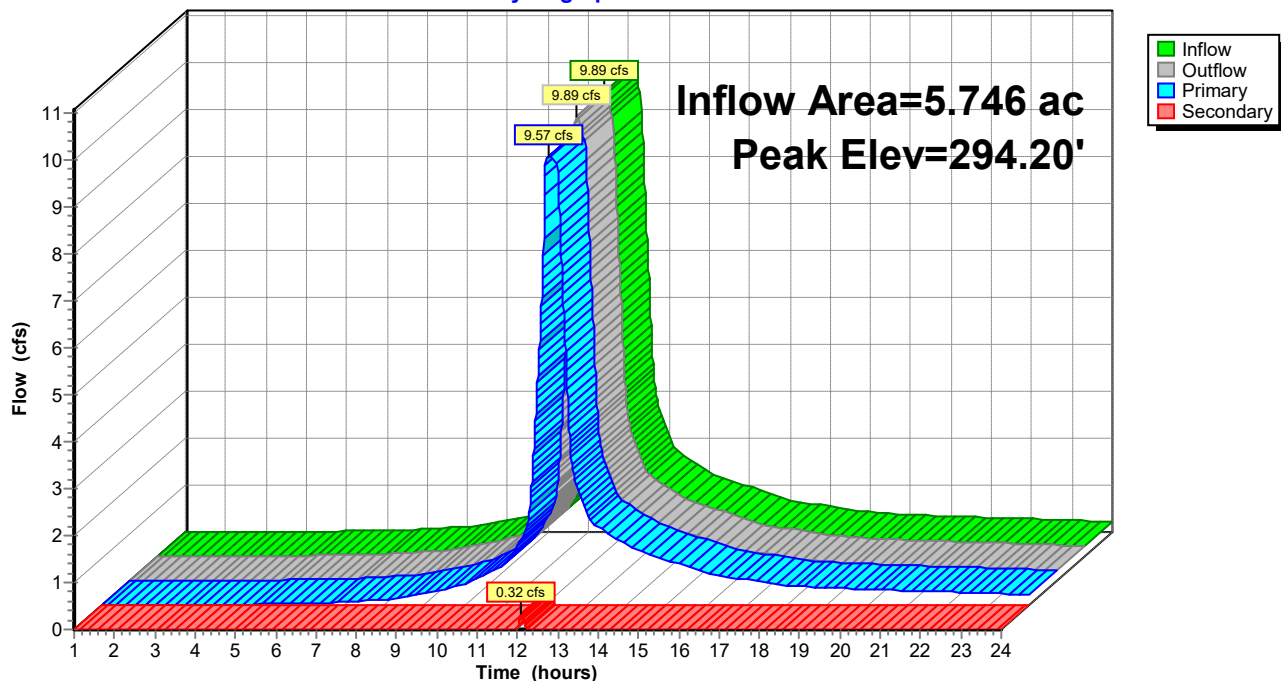
↑1=RCP_Round 12" (Inlet Controls 9.57 cfs @ 12.19 fps)

Secondary OutFlow Max=0.31 cfs @ 12.09 hrs HW=294.20' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 0.31 cfs @ 0.74 fps)

Pond 14P: CB-741

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 15P: CB-740

[57] Hint: Peaked at 285.62' (Flood elevation advised)

[79] Warning: Submerged Pond 14P Primary device # 1 OUTLET by 4.32'

Inflow Area = 5.797 ac, 47.87% Impervious, Inflow Depth > 2.90" for 10-yr event
Inflow = 11.86 cfs @ 12.12 hrs, Volume= 1.400 af
Outflow = 11.86 cfs @ 12.12 hrs, Volume= 1.400 af, Atten= 0%, Lag= 0.0 min
Primary = 7.82 cfs @ 12.12 hrs, Volume= 1.313 af
Secondary = 4.05 cfs @ 12.12 hrs, Volume= 0.087 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 285.62' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	281.30'	12.0" Round RCP_Round 12" L= 133.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 281.30' / 277.30' S= 0.0301 ' S= 0.0301 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	285.33'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.82 cfs @ 12.12 hrs HW=285.62' (Free Discharge)

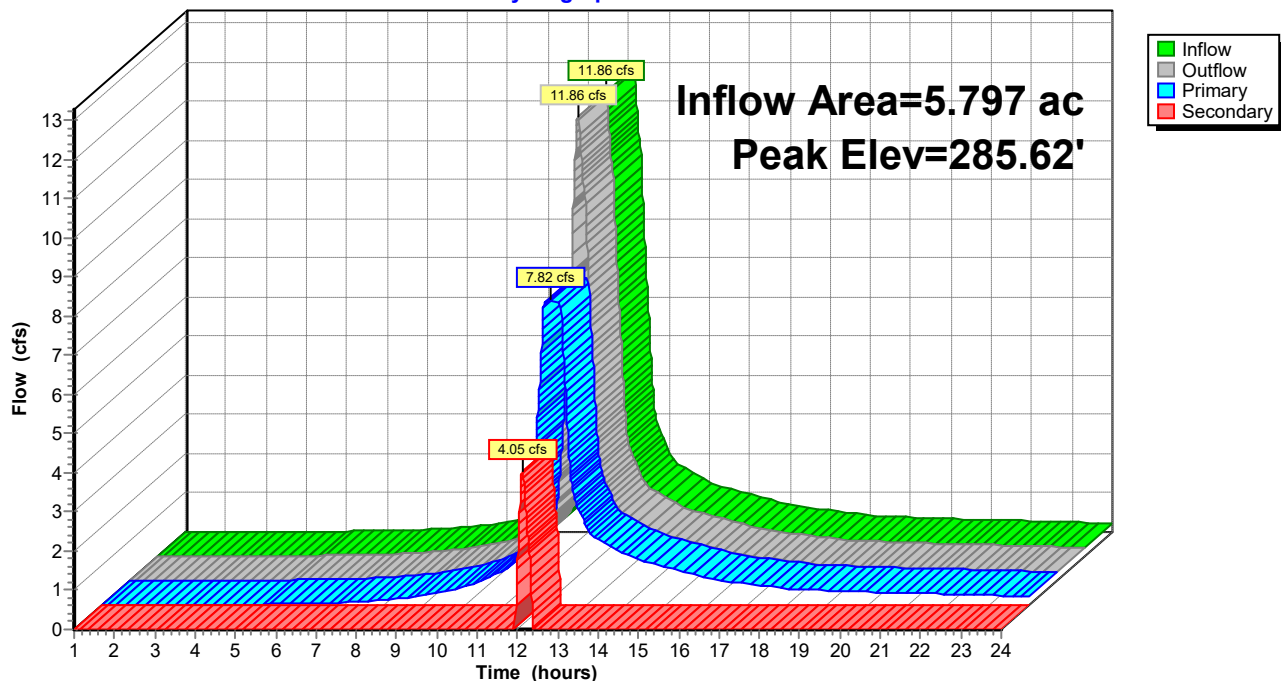
↑1=RCP_Round 12" (Barrel Controls 7.82 cfs @ 9.95 fps)

Secondary OutFlow Max=4.04 cfs @ 12.12 hrs HW=285.62' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 4.04 cfs @ 1.75 fps)

Pond 15P: CB-740

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 16P: MH-327

[58] Hint: Peaked 28.38' above defined flood level

[81] Warning: Exceeded Pond 15P by 24.48' @ 12.13 hrs

[81] Warning: Exceeded Pond 17P by 27.80' @ 12.13 hrs

Inflow Area = 11.427 ac, 41.70% Impervious, Inflow Depth > 2.46" for 10-yr event
Inflow = 15.57 cfs @ 12.13 hrs, Volume= 2.346 af
Outflow = 15.57 cfs @ 12.13 hrs, Volume= 2.346 af, Atten= 0%, Lag= 0.0 min
Primary = 15.57 cfs @ 12.13 hrs, Volume= 2.346 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 310.10' @ 12.13 hrs

Flood Elev= 281.72'

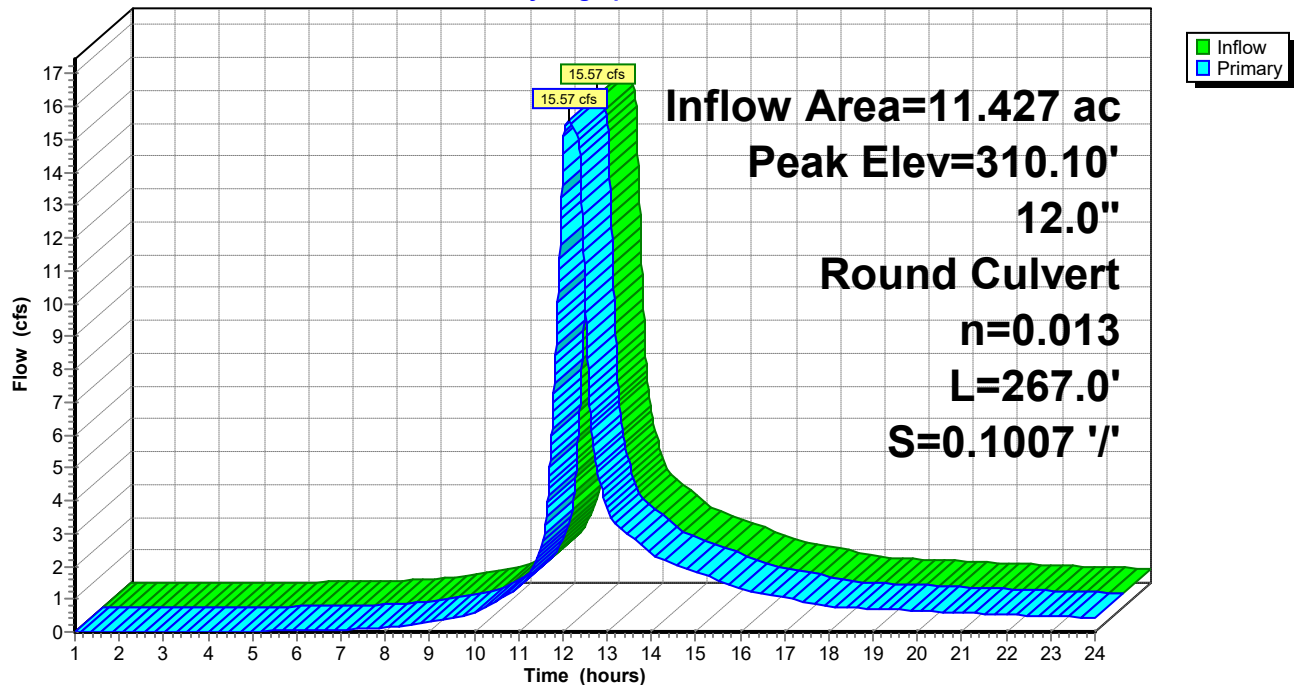
Device	Routing	Invert	Outlet Devices
#1	Primary	277.50'	12.0" Round 12" VC L= 267.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 277.50' / 250.60' S= 0.1007 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.79 sf

Primary OutFlow Max=15.57 cfs @ 12.13 hrs HW=310.09' (Free Discharge)

↑ **1=12" VC** (Barrel Controls 15.57 cfs @ 19.83 fps)

Pond 16P: MH-327

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 17P: CB-738

[57] Hint: Peaked at 282.29' (Flood elevation advised)

[81] Warning: Exceeded Pond 18P by 1.74' @ 12.27 hrs

Inflow Area = 5.630 ac, 35.35% Impervious, Inflow Depth > 2.35" for 10-yr event
Inflow = 12.11 cfs @ 12.13 hrs, Volume= 1.102 af
Outflow = 12.11 cfs @ 12.13 hrs, Volume= 1.102 af, Atten= 0%, Lag= 0.0 min
Primary = 7.76 cfs @ 12.13 hrs, Volume= 1.033 af
Secondary = 4.35 cfs @ 12.13 hrs, Volume= 0.069 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 282.29' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	279.10'	12.0" Round 12" VC L= 14.2' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 279.10' / 278.10' S= 0.0704 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.79 sf
#2	Secondary	281.99'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.76 cfs @ 12.13 hrs HW=282.29' (Free Discharge)

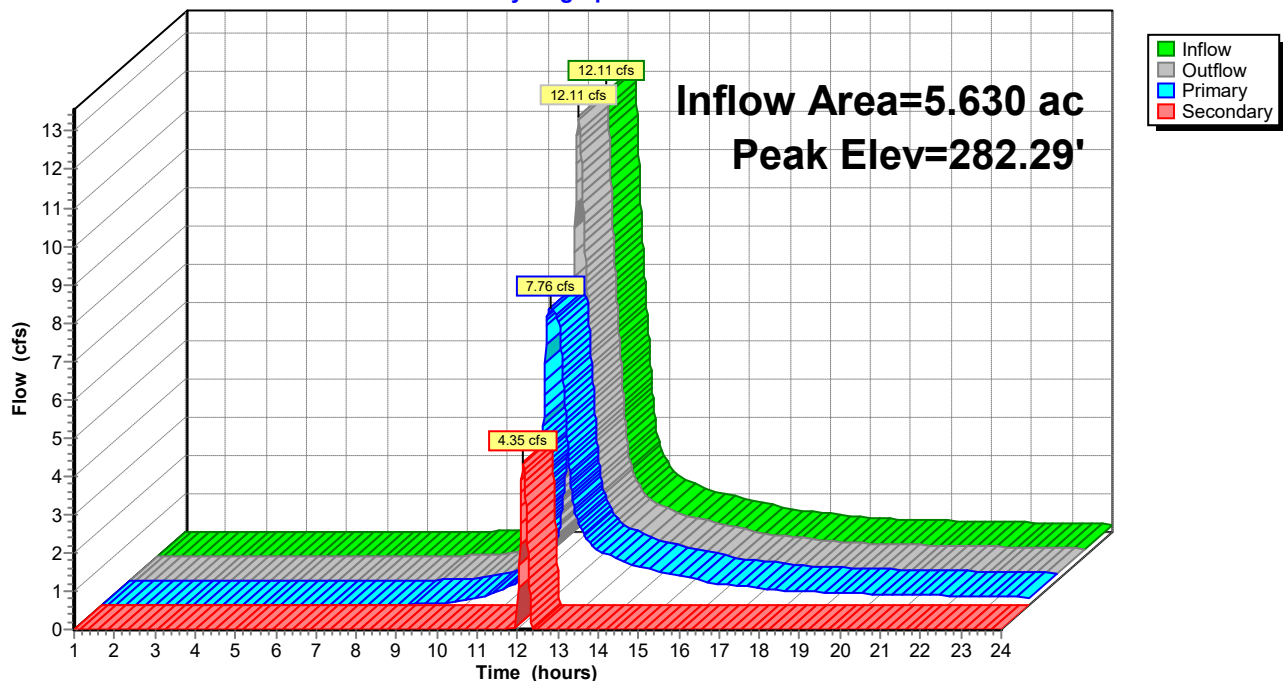
↑**1=12" VC** (Inlet Controls 7.76 cfs @ 9.88 fps)

Secondary OutFlow Max=4.34 cfs @ 12.13 hrs HW=282.29' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 4.34 cfs @ 1.80 fps)

Pond 17P: CB-738

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 18P: CB-737

[57] Hint: Peaked at 281.45' (Flood elevation advised)

Inflow Area = 1.620 ac, 46.91% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af
Outflow = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af, Atten= 0%, Lag= 0.0 min
Primary = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 281.45' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	279.60'	12.0" Round RCP_Round 12" L= 23.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 279.60' / 279.10' S= 0.0213 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	282.47'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

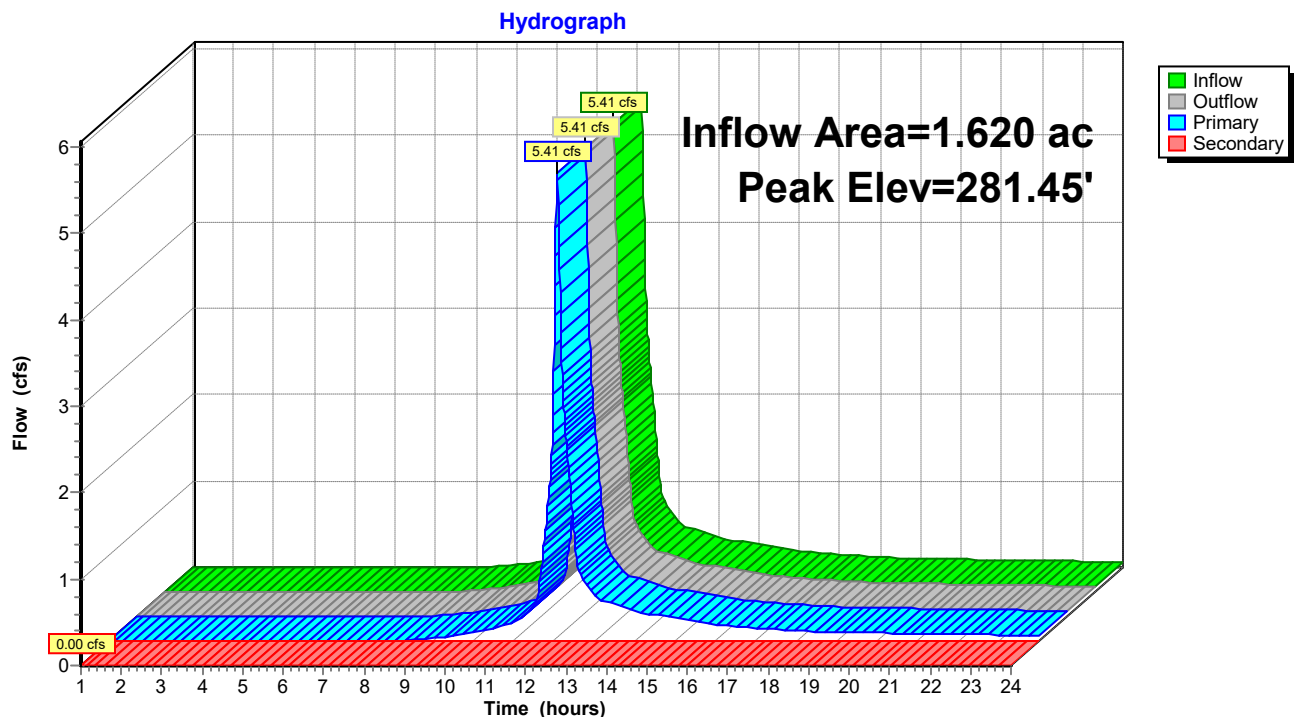
Primary OutFlow Max=5.41 cfs @ 12.09 hrs HW=281.45' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 5.41 cfs @ 6.89 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=279.60' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 18P: CB-737



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 19P: MH-328

[58] Hint: Peaked 4.56' above defined flood level

[79] Warning: Submerged Pond 16P Primary device # 1 OUTLET by 8.72'

Inflow Area = 11.789 ac, 43.30% Impervious, Inflow Depth > 2.53" for 10-yr event
Inflow = 17.31 cfs @ 12.09 hrs, Volume= 2.487 af
Outflow = 17.31 cfs @ 12.09 hrs, Volume= 2.487 af, Atten= 0%, Lag= 0.0 min
Primary = 13.55 cfs @ 12.09 hrs, Volume= 2.316 af
Secondary = 3.76 cfs @ 12.09 hrs, Volume= 0.171 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 259.32' @ 12.09 hrs

Flood Elev= 254.76'

Device	Routing	Invert	Outlet Devices
#1	Primary	250.60'	12.0" Round 12" VC L= 14.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 250.60' / 250.50' S= 0.0071 ' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.79 sf
#2	Secondary	253.75'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=13.55 cfs @ 12.09 hrs HW=259.32' (Free Discharge)

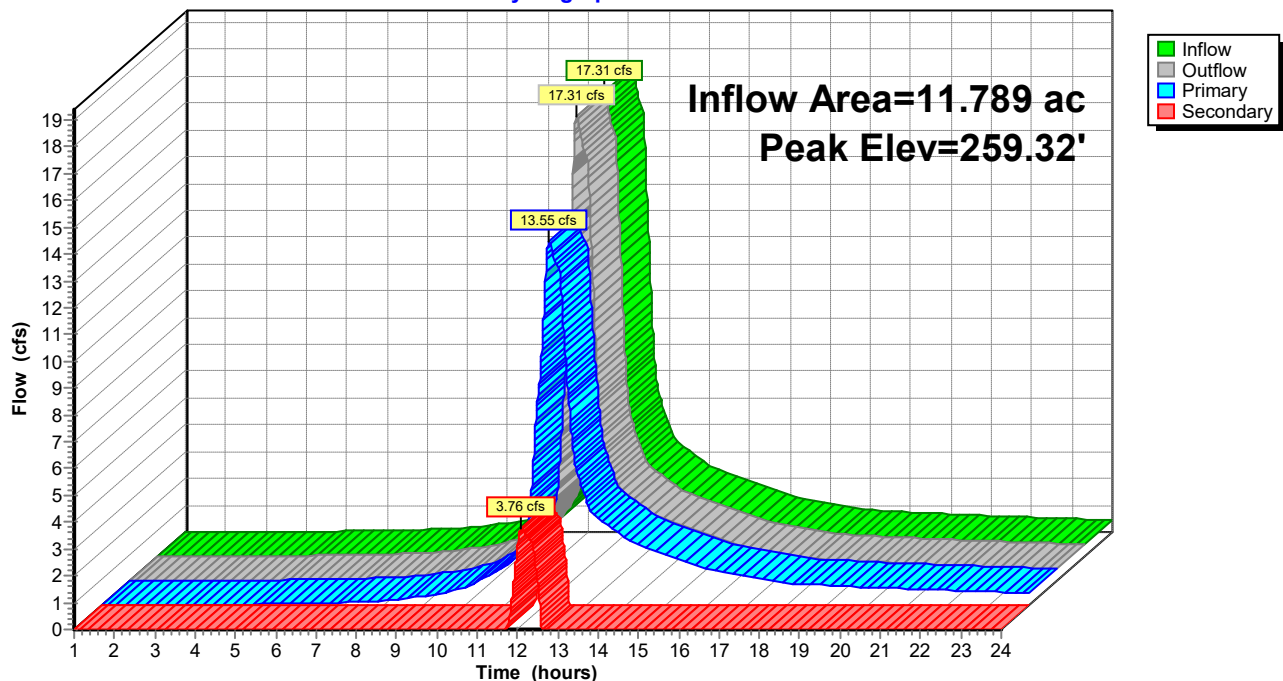
↑**1=12" VC** (Inlet Controls 13.55 cfs @ 17.25 fps)

Secondary OutFlow Max=3.76 cfs @ 12.09 hrs HW=259.32' (Free Discharge)

↑**2=Orifice/Grate** (Orifice Controls 3.76 cfs @ 11.27 fps)

Pond 19P: MH-328

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 20P: MH-329

[79] Warning: Submerged Pond 46P Primary device # 1 OUTLET by 1.91'

Inflow Area = 17.039 ac, 36.71% Impervious, Inflow Depth > 2.29" for 10-yr event
Inflow = 28.86 cfs @ 12.12 hrs, Volume= 3.250 af
Outflow = 28.86 cfs @ 12.12 hrs, Volume= 3.250 af, Atten= 0%, Lag= 0.0 min
Primary = 28.86 cfs @ 12.12 hrs, Volume= 3.250 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 245.71' @ 12.12 hrs

Flood Elev= 254.38'

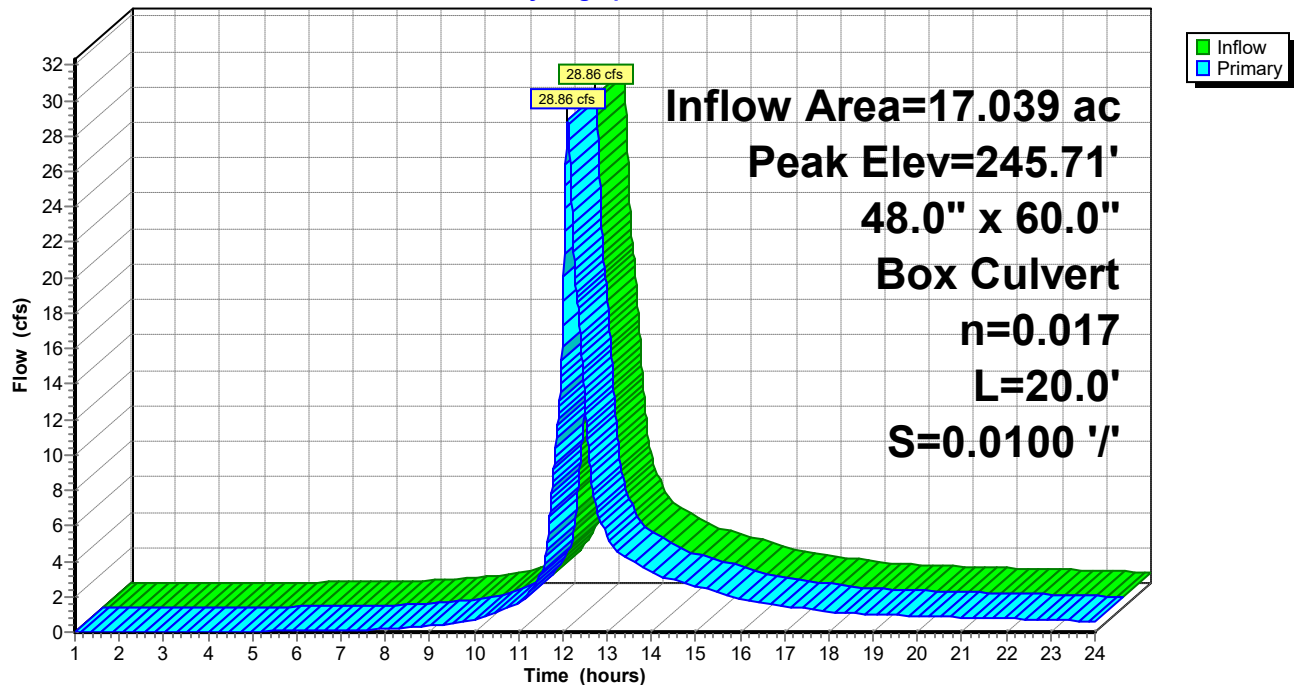
Device	Routing	Invert	Outlet Devices
#1	Primary	243.80'	48.0" W x 60.0" H Box Culvert L= 20.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 243.80' / 243.60' S= 0.0100 '/' Cc= 0.900 n= 0.017 Concrete, unfinished, Flow Area= 20.00 sf

Primary OutFlow Max=28.83 cfs @ 12.12 hrs HW=245.71' (Free Discharge)

↑1=Culvert (Barrel Controls 28.83 cfs @ 5.04 fps)

Pond 20P: MH-329

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 21P: CB-1589

[57] Hint: Peaked at 246.29' (Flood elevation advised)

Inflow Area = 0.050 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af
Outflow = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
Primary = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 246.29' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	246.00'	10.0" Round 10" VC L= 4.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 246.00' / 245.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.55 sf
#2	Secondary	247.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.25 cfs @ 12.08 hrs HW=246.29' (Free Discharge)

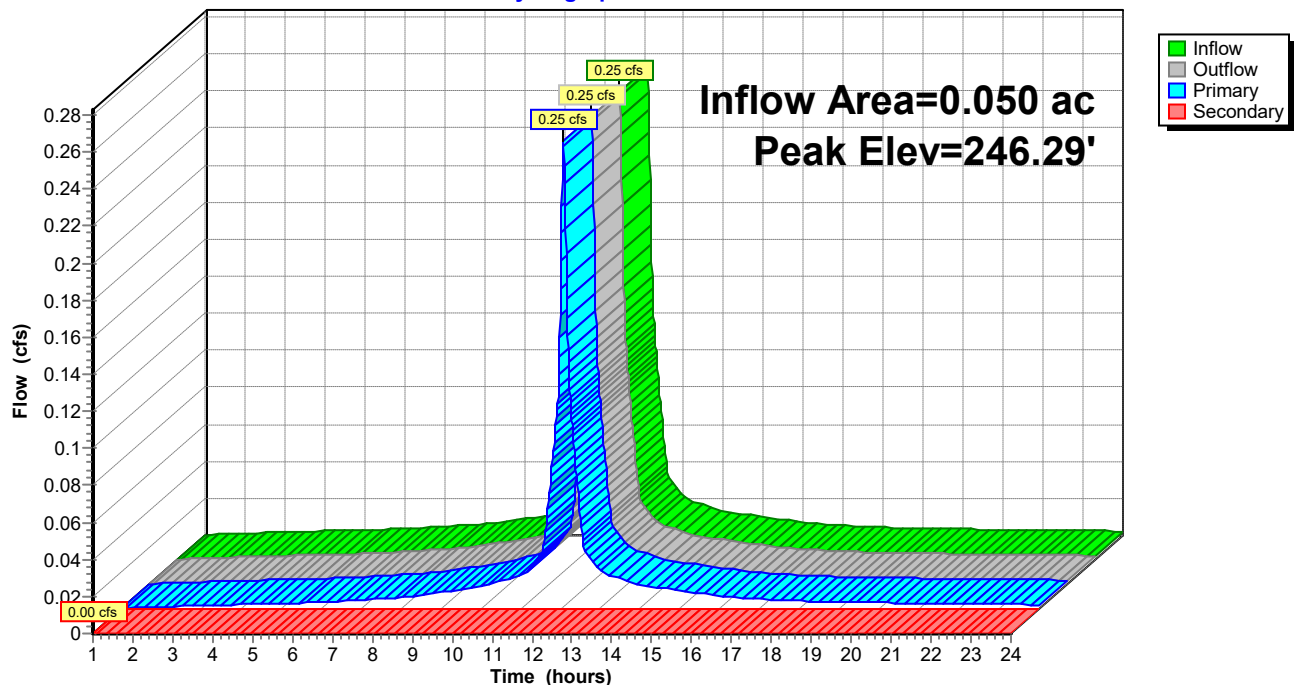
↑**1=10" VC** (Barrel Controls 0.25 cfs @ 2.20 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=246.01' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 21P: CB-1589

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 22P: MH-29

[58] Hint: Peaked 1.05' above defined flood level

[81] Warning: Exceeded Pond 20P by 0.85' @ 12.11 hrs

[81] Warning: Exceeded Pond 21P by 0.27' @ 12.11 hrs

[81] Warning: Exceeded Pond 45P by 6.71' @ 12.11 hrs

Inflow Area = 17.589 ac, 38.69% Impervious, Inflow Depth > 2.37" for 10-yr event
Inflow = 31.47 cfs @ 12.11 hrs, Volume= 3.475 af
Outflow = 31.47 cfs @ 12.11 hrs, Volume= 3.475 af, Atten= 0%, Lag= 0.0 min
Primary = 31.47 cfs @ 12.11 hrs, Volume= 3.475 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 246.55' @ 12.11 hrs

Flood Elev= 245.50'

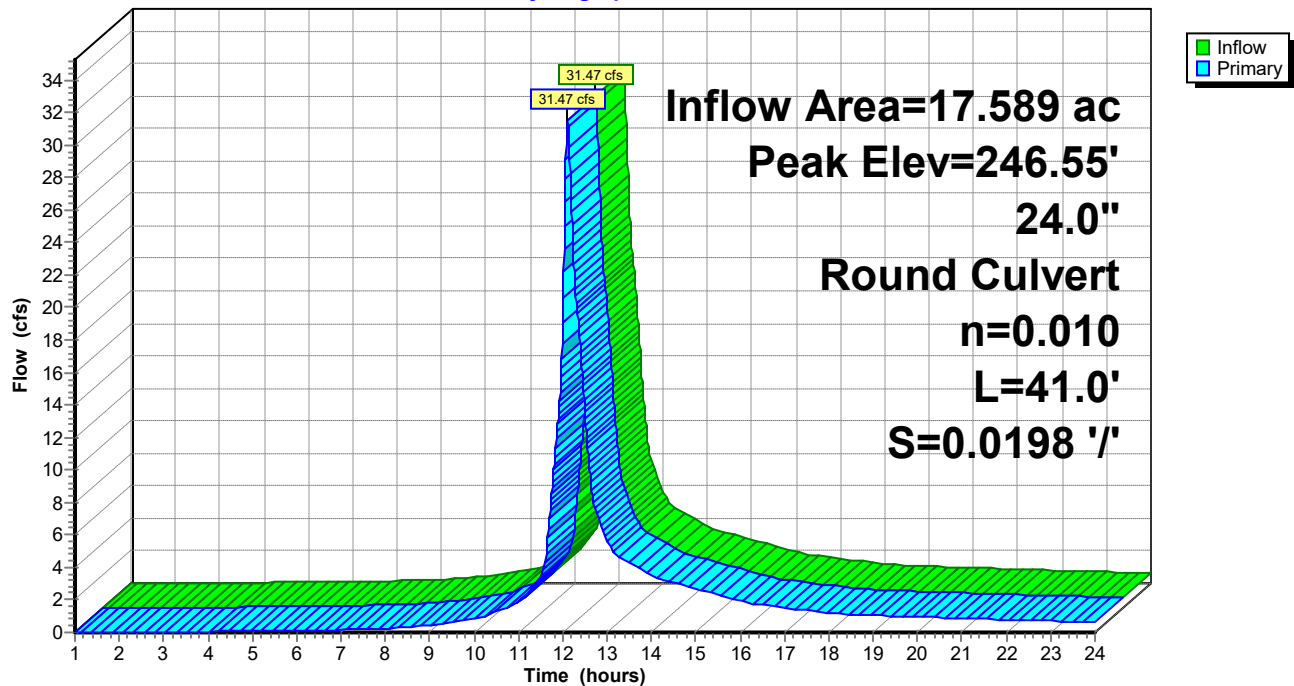
Device	Routing	Invert	Outlet Devices
#1	Primary	238.61'	24.0" Round 24" HDPE L= 41.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 238.61' / 237.80' S= 0.0198 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=31.45 cfs @ 12.11 hrs HW=246.55' (Free Discharge)

↑ **1=24" HDPE** (Inlet Controls 31.45 cfs @ 10.01 fps)

Pond 22P: MH-29

Hydrograph



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Summary for Pond 23P: FS MH 1

[79] Warning: Submerged Pond 22P Primary device # 1 INLET by 7.03'

Inflow Area = 17.589 ac, 38.69% Impervious, Inflow Depth > 2.37" for 10-yr event
Inflow = 31.47 cfs @ 12.11 hrs, Volume= 3.475 af
Outflow = 31.47 cfs @ 12.11 hrs, Volume= 3.475 af, Atten= 0%, Lag= 0.0 min
Primary = 31.47 cfs @ 12.11 hrs, Volume= 3.475 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 245.64' @ 12.11 hrs

Flood Elev= 246.80'

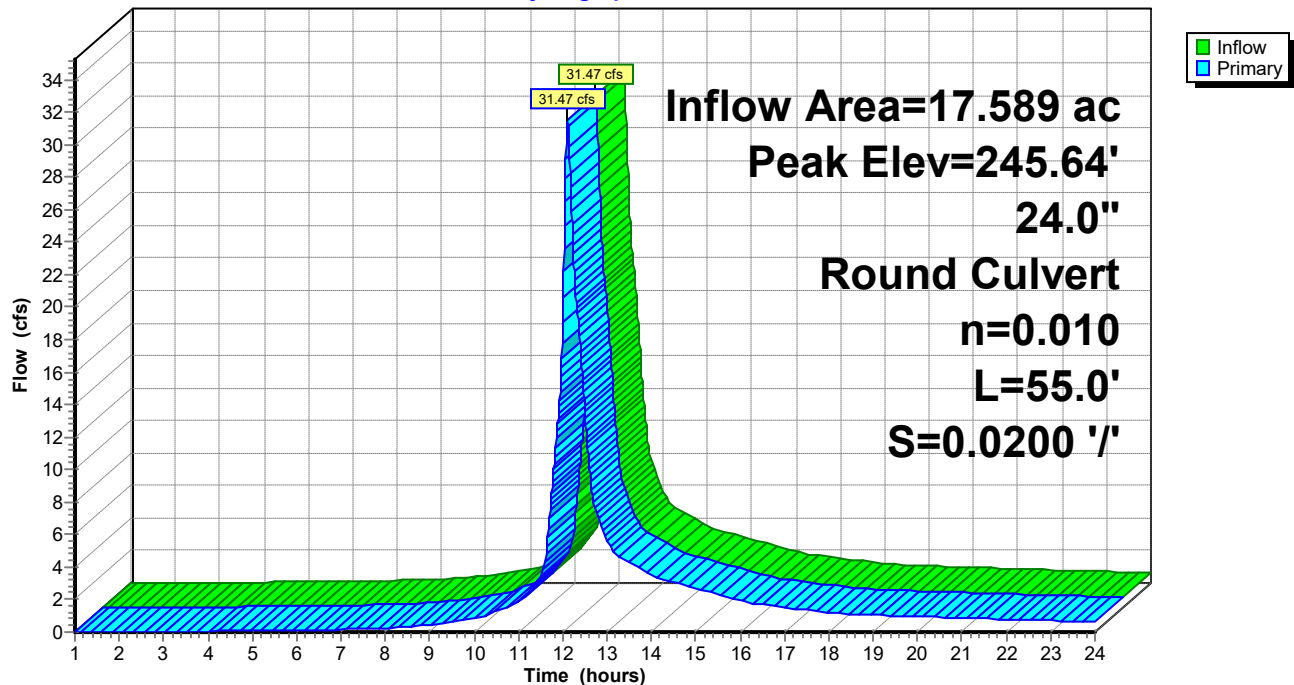
Device	Routing	Invert	Outlet Devices
#1	Primary	237.70'	24.0" Round 24" HDPE L= 55.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 237.70' / 236.60' S= 0.0200 '/ Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=31.45 cfs @ 12.11 hrs HW=245.64' (Free Discharge)

↑ **1=24" HDPE** (Inlet Controls 31.45 cfs @ 10.01 fps)

Pond 23P: FS MH 1

Hydrograph



High Park Street Drainage - Existing

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Summary for Pond 24P: CB

[57] Hint: Peaked at 250.62' (Flood elevation advised)

[79] Warning: Submerged Pond 30P Primary device # 1 OUTLET by 10.22'

Inflow Area = 1.580 ac, 75.32% Impervious, Inflow Depth > 5.89" for 10-yr event
Inflow = 17.70 cfs @ 12.11 hrs, Volume= 0.776 af
Outflow = 17.70 cfs @ 12.11 hrs, Volume= 0.776 af, Atten= 0%, Lag= 0.0 min
Primary = 5.52 cfs @ 12.11 hrs, Volume= 0.554 af
Secondary = 12.18 cfs @ 12.11 hrs, Volume= 0.222 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 250.62' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	246.70'	12.0" Round 12" CPP L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 246.70' / 241.30' S= 0.1459 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	250.02'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

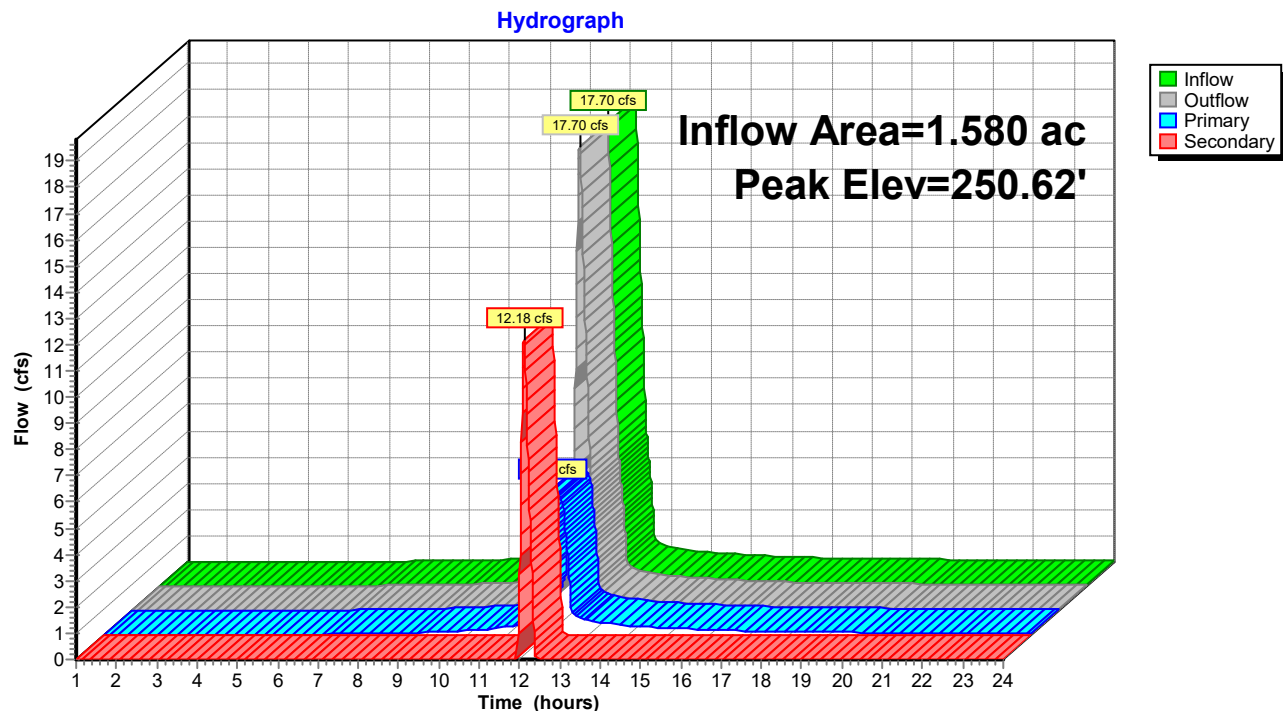
Primary OutFlow Max=5.52 cfs @ 12.11 hrs HW=250.62' (Free Discharge)

↑**1=12" CPP** (Inlet Controls 5.52 cfs @ 7.03 fps)

Secondary OutFlow Max=12.16 cfs @ 12.11 hrs HW=250.62' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 12.16 cfs @ 2.53 fps)

Pond 24P: CB



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Summary for Pond 25P: CB-340

[57] Hint: Peaked at 244.75' (Flood elevation advised)

[81] Warning: Exceeded Pond 28P by 2.12' @ 12.18 hrs

Inflow Area = 0.036 ac, 100.00% Impervious, Inflow Depth > 78.99" for 10-yr event
Inflow = 12.35 cfs @ 12.11 hrs, Volume= 0.237 af
Outflow = 12.35 cfs @ 12.11 hrs, Volume= 0.237 af, Atten= 0%, Lag= 0.0 min
Primary = 6.02 cfs @ 12.11 hrs, Volume= 0.167 af
Secondary = 5.50 cfs @ 12.11 hrs, Volume= 0.059 af
Tertiary = 0.83 cfs @ 12.11 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 244.75' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	242.03'	12.0" Round RCP_Round 12" L= 27.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 242.00' / 242.03' S= -0.0011 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	244.40'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	244.40'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=6.02 cfs @ 12.11 hrs HW=244.75' (Free Discharge)

↑**1=RCP_Round 12"** (Barrel Controls 6.02 cfs @ 7.66 fps)

Secondary OutFlow Max=5.49 cfs @ 12.11 hrs HW=244.75' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 5.49 cfs @ 1.94 fps)

Tertiary OutFlow Max=0.83 cfs @ 12.11 hrs HW=244.75' (Free Discharge)

↑**3=Orifice/Grate** (Orifice Controls 0.83 cfs @ 2.49 fps)

High Park Street Drainage - Existing

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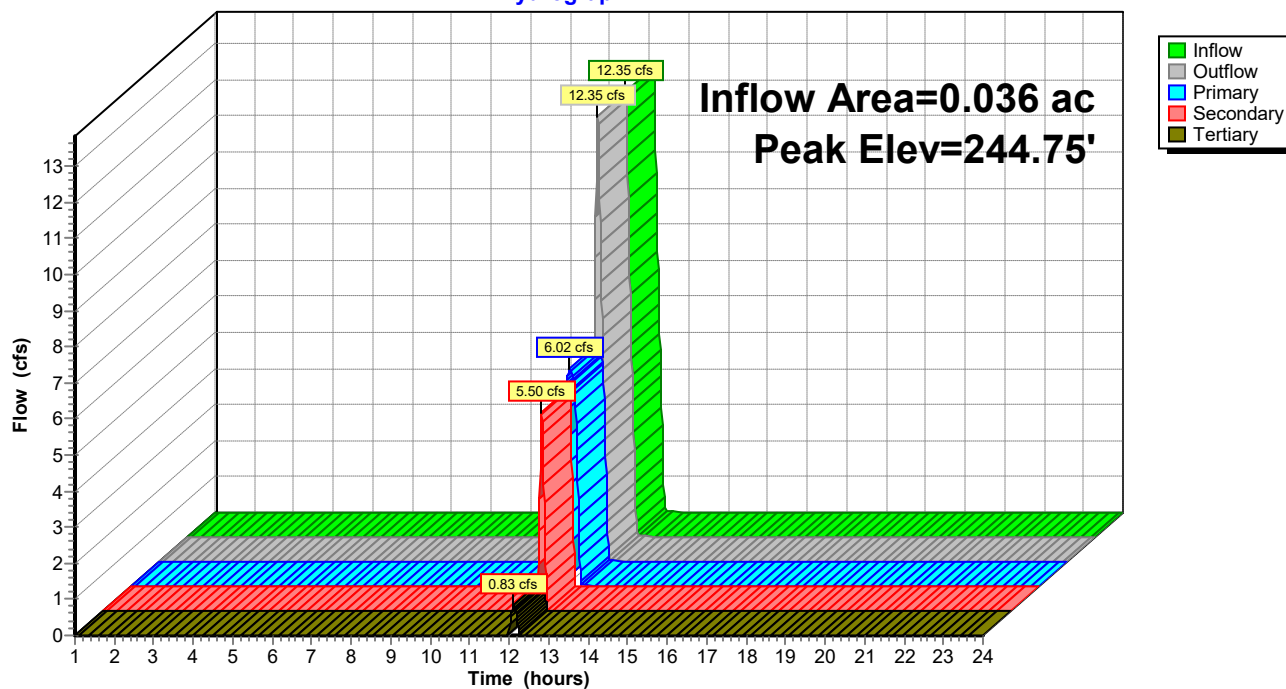
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 25P: CB-340

Hydrograph



High Park Street Drainage - Existing

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Summary for Pond 27P: MH-120

[79] Warning: Submerged Pond 42P Primary device # 1 OUTLET by 0.18'

Inflow Area = 0.080 ac, 100.00% Impervious, Inflow Depth > 14.07" for 10-yr event
Inflow = 5.04 cfs @ 12.11 hrs, Volume= 0.094 af
Outflow = 5.04 cfs @ 12.11 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min
Primary = 5.04 cfs @ 12.11 hrs, Volume= 0.094 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 242.21' @ 12.11 hrs

Flood Elev= 244.38'

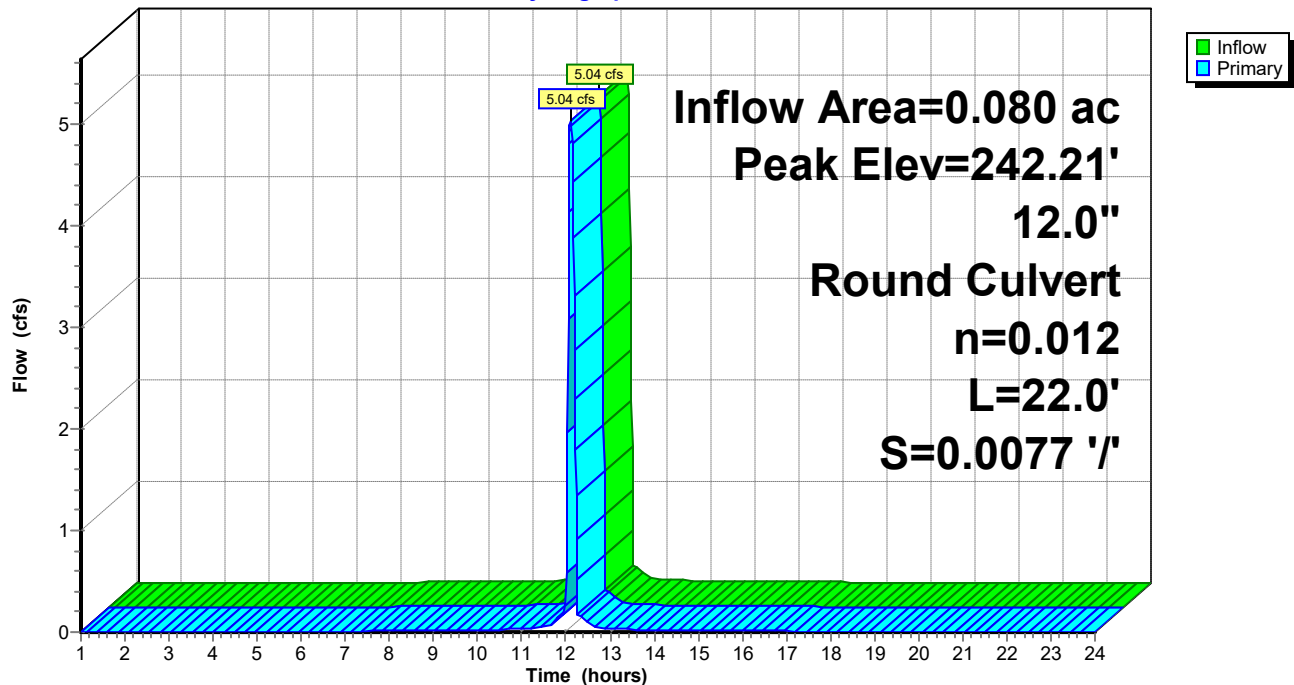
Device	Routing	Invert	Outlet Devices
#1	Primary	240.24'	12.0" Round RCP_Round 12" L= 22.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 240.24' / 240.07' S= 0.0077 ' S= 0.0077 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.04 cfs @ 12.11 hrs HW=242.21' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 5.04 cfs @ 6.41 fps)

Pond 27P: MH-120

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 28P: CB-342

[57] Hint: Peaked at 242.75' (Flood elevation advised)

Inflow Area = 0.460 ac, 80.43% Impervious, Inflow Depth > 3.61" for 10-yr event
Inflow = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af
Outflow = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min
Primary = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 242.75' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	241.80'	12.0" Round 12" HDPE L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.80' / 241.70' S= 0.0071 ' S= 0.0071 ' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	244.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.92 cfs @ 12.09 hrs HW=242.75' (Free Discharge)

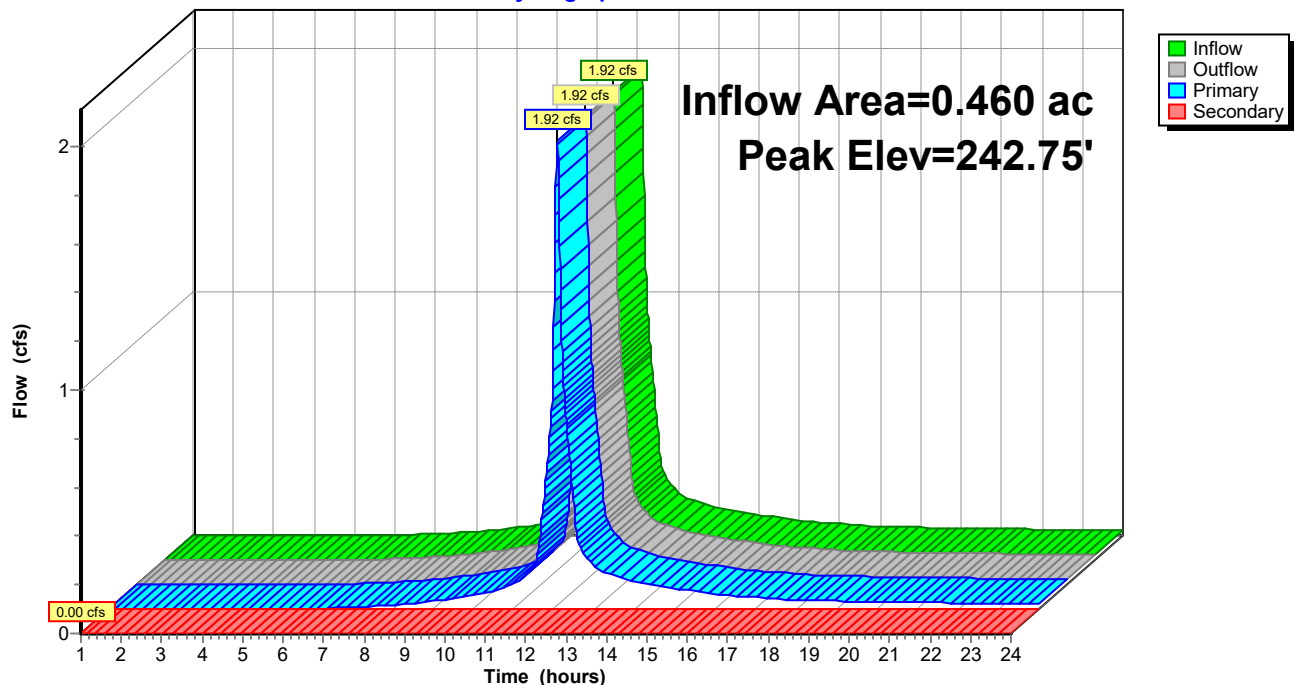
↑1=12" HDPE (Barrel Controls 1.92 cfs @ 3.21 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=241.80' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 28P: CB-342

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 30P: CB-339

[57] Hint: Peaked at 254.36' (Flood elevation advised)

[79] Warning: Submerged Pond 31P Primary device # 1 OUTLET by 3.36'

Inflow Area = 1.180 ac, 66.95% Impervious, Inflow Depth > 2.90" for 10-yr event
Inflow = 4.01 cfs @ 12.09 hrs, Volume= 0.285 af
Outflow = 4.01 cfs @ 12.09 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min
Primary = 3.71 cfs @ 12.09 hrs, Volume= 0.284 af
Secondary = 0.29 cfs @ 12.09 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 254.36' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	250.90'	8.0" Round 8" VC L= 58.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 250.90' / 240.40' S= 0.1810 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.35 sf
#2	Secondary	254.31'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.71 cfs @ 12.09 hrs HW=254.36' (Free Discharge)

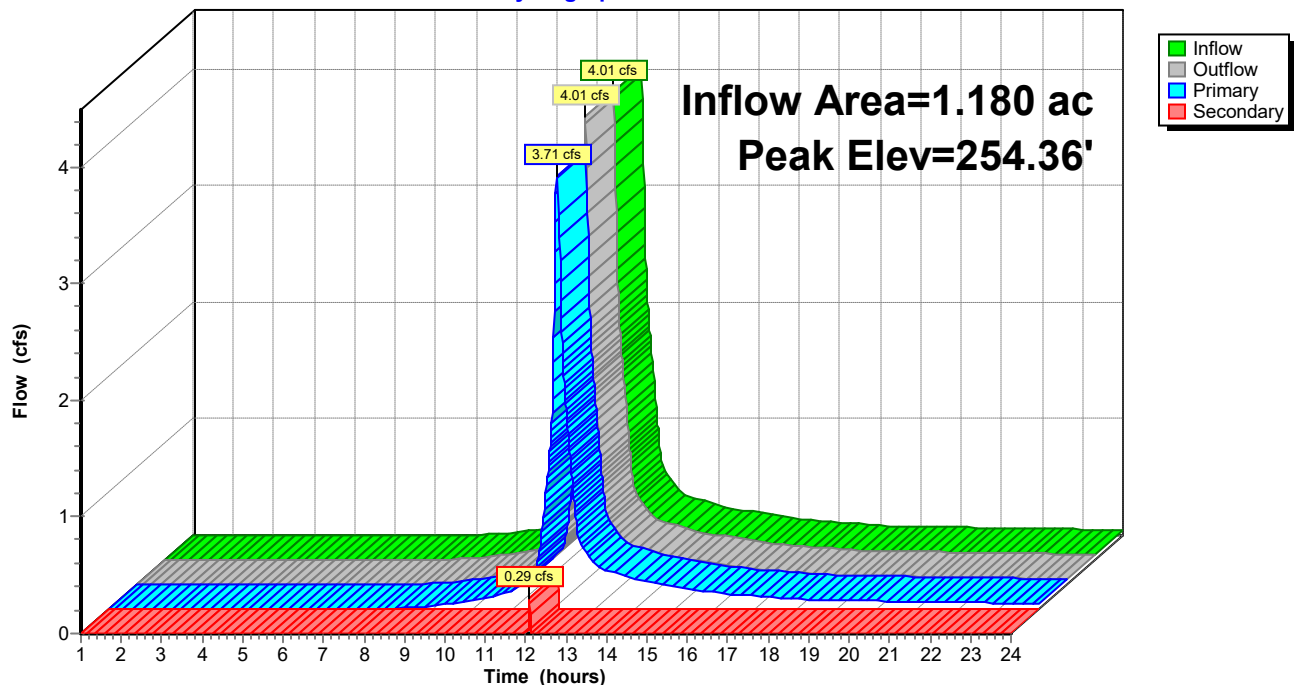
↑1=8" VC (Inlet Controls 3.71 cfs @ 10.64 fps)

Secondary OutFlow Max=0.28 cfs @ 12.09 hrs HW=254.36' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 0.28 cfs @ 0.72 fps)

Pond 30P: CB-339

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 31P: CB-338

[57] Hint: Peaked at 263.83' (Flood elevation advised)

[79] Warning: Submerged Pond 32P Primary device # 1 OUTLET by 0.13'

Inflow Area = 0.940 ac, 65.96% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 3.13 cfs @ 12.09 hrs, Volume= 0.222 af
Outflow = 3.13 cfs @ 12.09 hrs, Volume= 0.222 af, Atten= 0%, Lag= 0.0 min
Primary = 3.13 cfs @ 12.09 hrs, Volume= 0.222 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 263.83' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	262.90'	12.0" Round RCP_Round 12" L= 178.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 262.90' / 251.00' S= 0.0666 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	266.19'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.13 cfs @ 12.09 hrs HW=263.83' (Free Discharge)

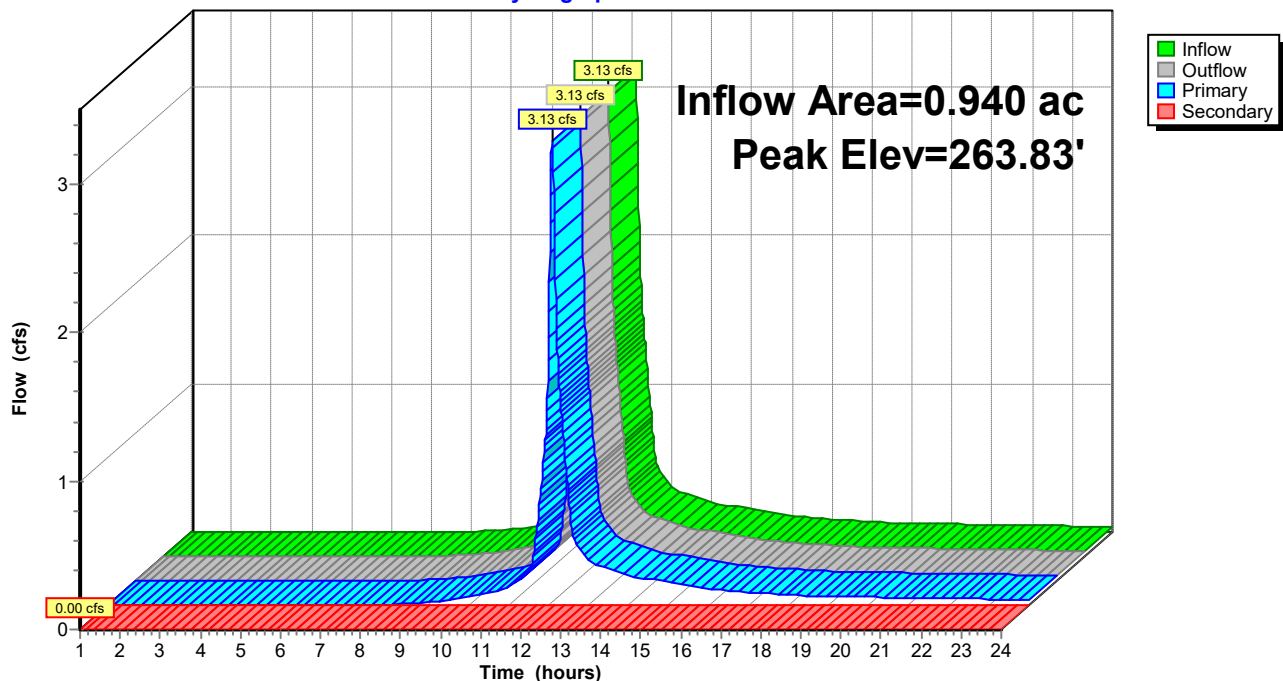
↑1=RCP_Round 12" (Inlet Controls 3.13 cfs @ 4.11 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=262.90' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 31P: CB-338

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 32P: CB-337

[57] Hint: Peaked at 264.98' (Flood elevation advised)

Inflow Area = 0.680 ac, 67.65% Impervious, Inflow Depth > 2.94" for 10-yr event
Inflow = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af
Outflow = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.0 min
Primary = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 264.98' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.10'	12.0" Round RCP_Round 12" L= 44.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 264.10' / 263.70' S= 0.0091 ' S= 0.0091 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	266.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	266.00'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.34 cfs @ 12.09 hrs HW=264.98' (Free Discharge)

↑ **1=RCP_Round 12"** (Barrel Controls 2.34 cfs @ 4.29 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=264.10' (Free Discharge)

↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=264.10' (Free Discharge)

↑ **3=Orifice/Grate** (Controls 0.00 cfs)

High Park Street Drainage - Existing

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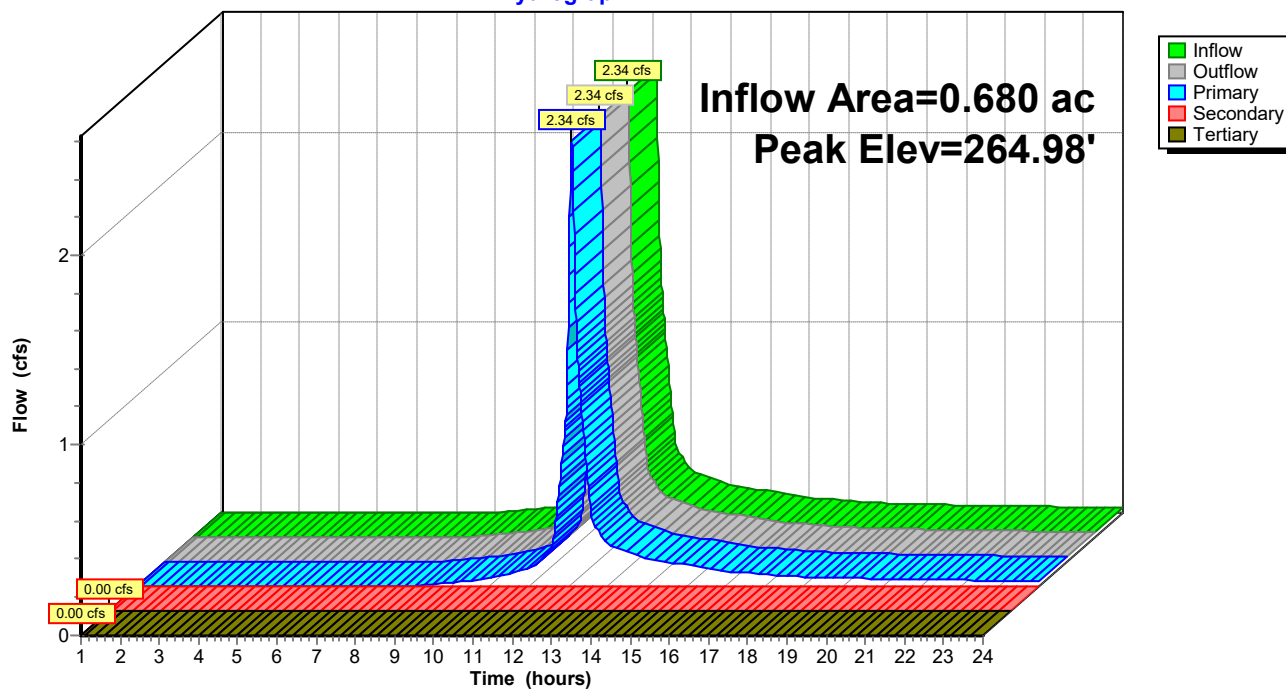
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 32P: CB-337

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 33P: CB-2

[57] Hint: Peaked at 270.99' (Flood elevation advised)

Inflow Area = 0.740 ac, 29.73% Impervious, Inflow Depth > 2.32" for 10-yr event
Inflow = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af
Outflow = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min
Primary = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 270.99' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	270.30'	12.0" Round RCP_Round 12" L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 270.30' / 269.70' S= 0.0171 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	274.08'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

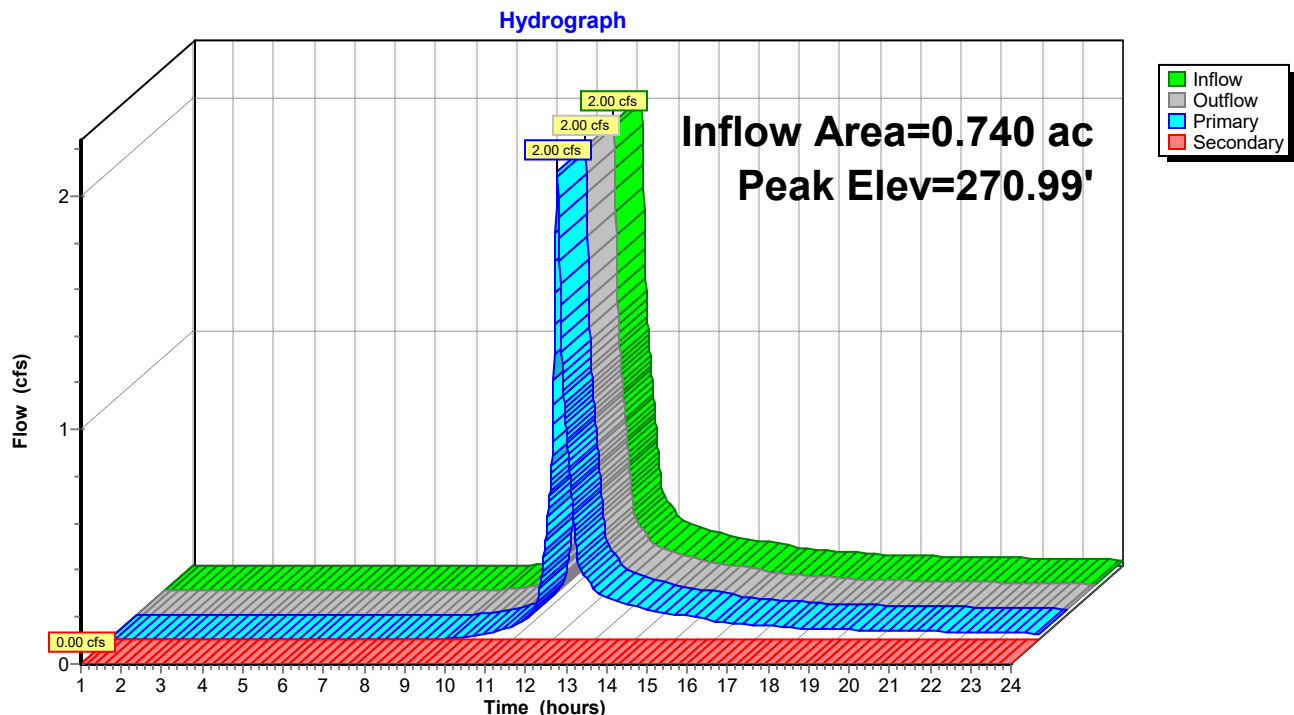
Primary OutFlow Max=2.00 cfs @ 12.09 hrs HW=270.99' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 2.00 cfs @ 4.86 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=270.30' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 33P: CB-2



High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 34P: CB-1021

[57] Hint: Peaked at 274.48' (Flood elevation advised)

[81] Warning: Exceeded Pond 33P by 3.51' @ 12.15 hrs

[81] Warning: Exceeded Pond 38P by 4.30' @ 12.12 hrs

[81] Warning: Exceeded Pond 38P by 4.30' @ 12.12 hrs

Inflow Area = 0.840 ac, 38.10% Impervious, Inflow Depth > 3.87" for 10-yr event
Inflow = 8.92 cfs @ 12.10 hrs, Volume= 0.271 af
Outflow = 8.92 cfs @ 12.10 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.0 min
Primary = 3.07 cfs @ 12.10 hrs, Volume= 0.204 af
Secondary = 5.04 cfs @ 12.10 hrs, Volume= 0.056 af
Tertiary = 0.80 cfs @ 12.10 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 274.48' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	273.10'	10.0" Round 10" VC L= 3.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 273.10' / 273.00' S= 0.0333 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.55 sf
#2	Secondary	274.15'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	274.15'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=3.07 cfs @ 12.10 hrs HW=274.48' (Free Discharge)

↑**1=10" VC** (Barrel Controls 3.07 cfs @ 5.63 fps)

Secondary OutFlow Max=5.03 cfs @ 12.10 hrs HW=274.48' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 5.03 cfs @ 1.89 fps)

Tertiary OutFlow Max=0.80 cfs @ 12.10 hrs HW=274.48' (Free Discharge)

↑**3=Orifice/Grate** (Orifice Controls 0.80 cfs @ 2.40 fps)

High Park Street Drainage - Existing

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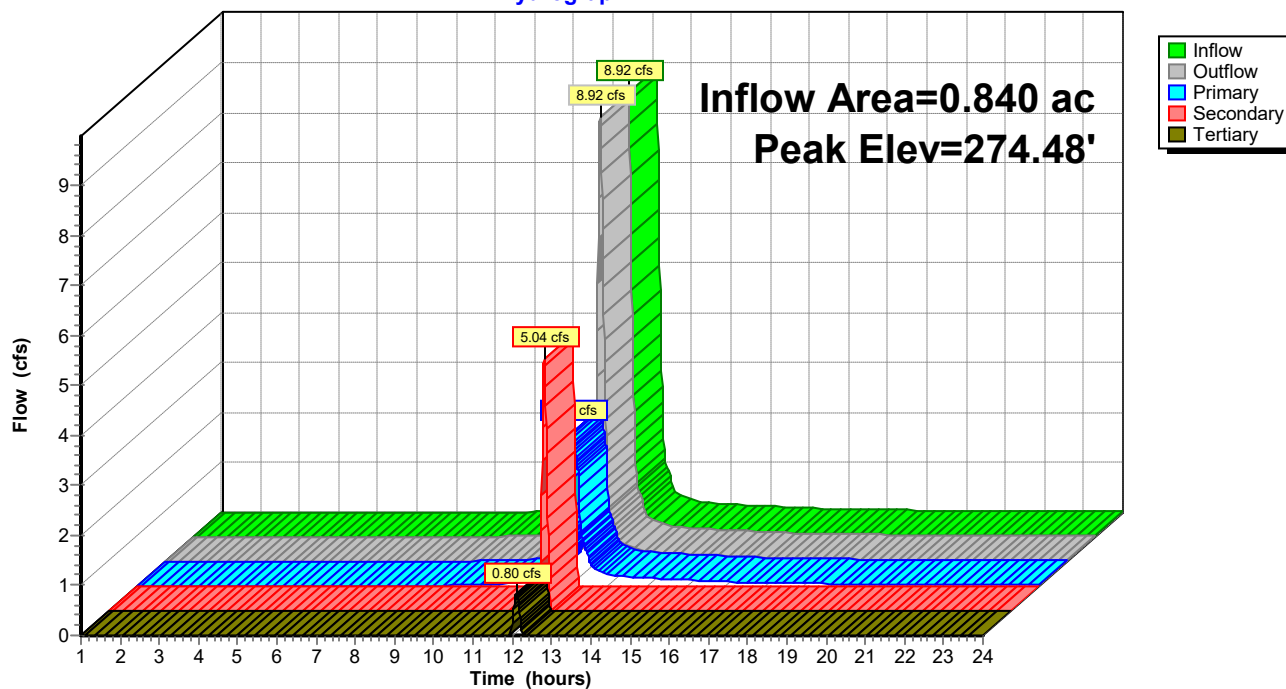
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 34P: CB-1021

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 35P: MH-41

Inflow Area = 0.840 ac, 38.10% Impervious, Inflow Depth > 3.71" for 10-yr event
Inflow = 8.12 cfs @ 12.10 hrs, Volume= 0.260 af
Outflow = 8.12 cfs @ 12.10 hrs, Volume= 0.260 af, Atten= 0%, Lag= 0.0 min
Primary = 8.12 cfs @ 12.10 hrs, Volume= 0.260 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 272.43' @ 12.10 hrs

Flood Elev= 274.44'

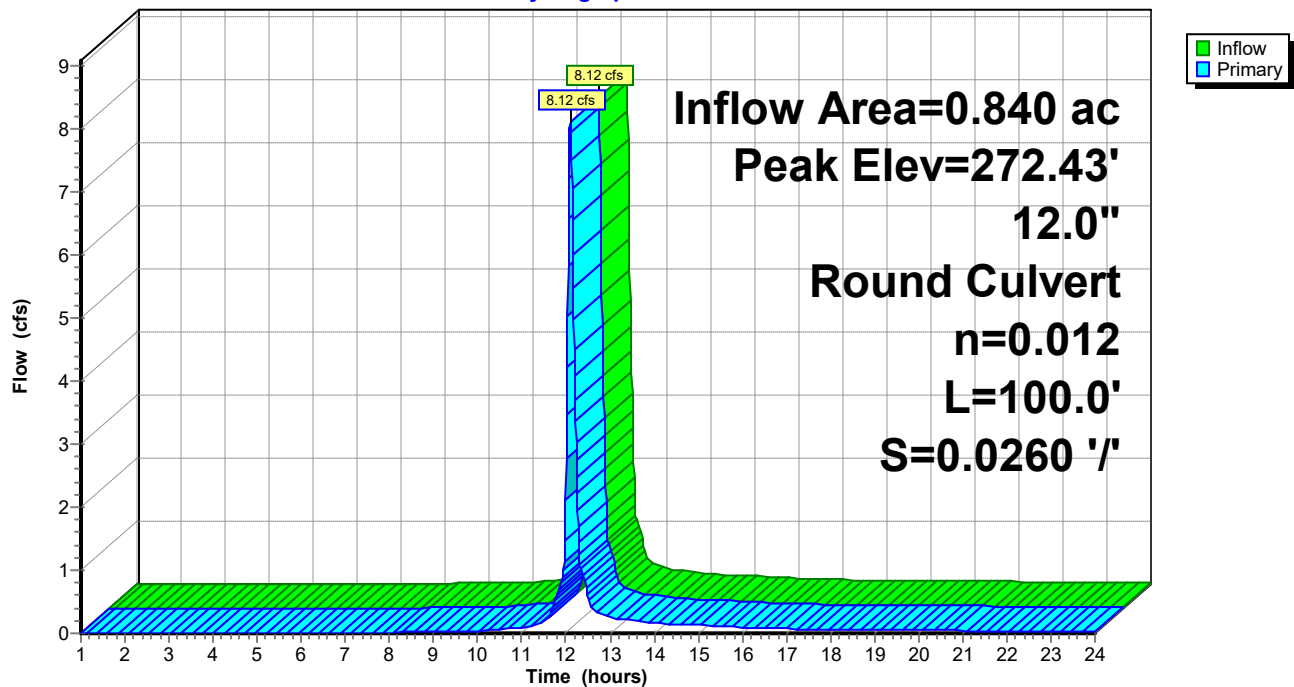
Device	Routing	Invert	Outlet Devices
#1	Primary	267.60'	12.0" Round RCP_Round 12" L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 267.60' / 265.00' S= 0.0260 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=8.10 cfs @ 12.10 hrs HW=272.41' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 8.10 cfs @ 10.32 fps)

Pond 35P: MH-41

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 36P: MH-39

[81] Warning: Exceeded Pond 39P by 0.02' @ 12.09 hrs

Inflow Area = 0.100 ac, 80.00% Impervious, Inflow Depth > 3.61" for 10-yr event
Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af
Outflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 269.97' @ 12.09 hrs

Flood Elev= 273.42'

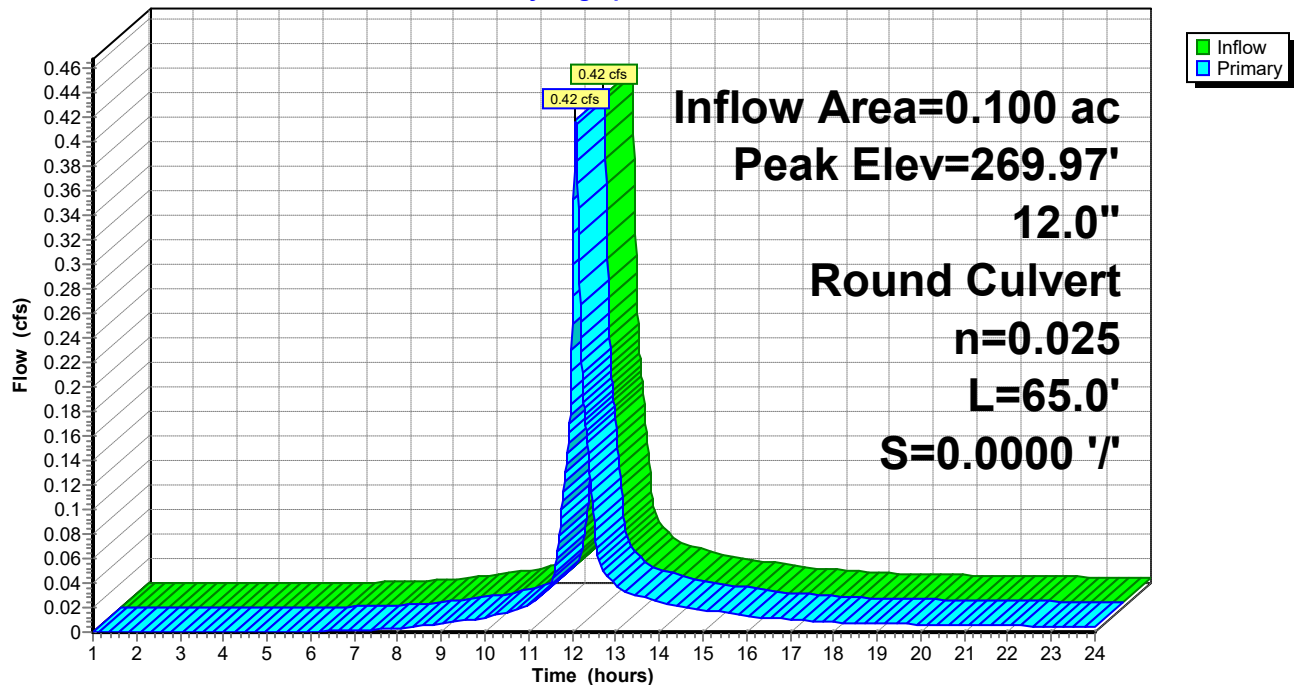
Device	Routing	Invert	Outlet Devices
#1	Primary	269.30'	12.0" Round CMP_Round 12" L= 65.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 269.30' / 269.30' S= 0.0000 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.42 cfs @ 12.09 hrs HW=269.97' (Free Discharge)

↑1=CMP_Round 12" (Barrel Controls 0.42 cfs @ 1.06 fps)

Pond 36P: MH-39

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 37P: CB-1

[57] Hint: Peaked at 273.90' (Flood elevation advised)

[81] Warning: Exceeded Pond 36P by 3.94' @ 12.09 hrs

Inflow Area = 0.560 ac, 58.93% Impervious, Inflow Depth > 2.48" for 10-yr event
Inflow = 1.61 cfs @ 12.09 hrs, Volume= 0.116 af
Outflow = 1.61 cfs @ 12.09 hrs, Volume= 0.116 af, Atten= 0%, Lag= 0.0 min
Primary = 1.61 cfs @ 12.09 hrs, Volume= 0.116 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

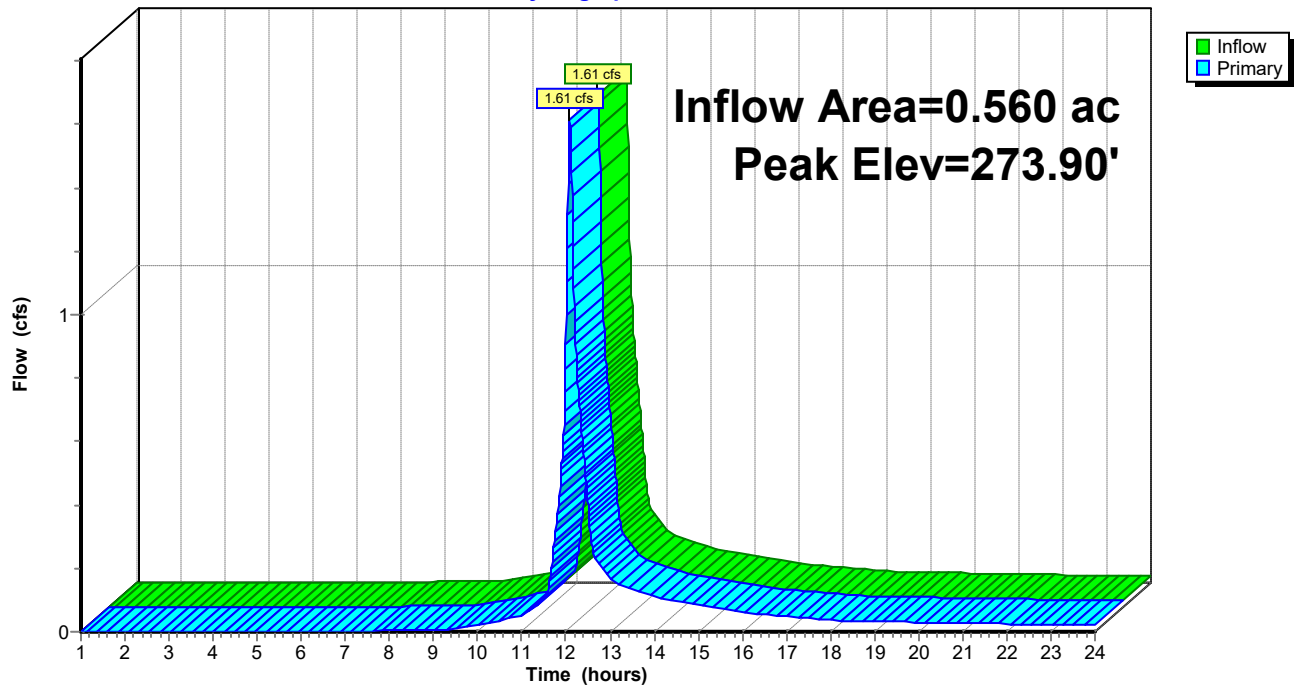
Peak Elev= 273.90' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	272.81'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=1.61 cfs @ 12.09 hrs HW=273.90' (Free Discharge)
↑1=Orifice/Grate (Orifice Controls 1.61 cfs @ 4.83 fps)

Pond 37P: CB-1

Hydrograph



High Park Street Drainage - Existing

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 38P: CB-1020

[57] Hint: Peaked at 270.19' (Flood elevation advised)

Inflow Area = 0.100 ac, 80.00% Impervious, Inflow Depth > 3.61" for 10-yr event
Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af
Outflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 270.19' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	269.70'	12.0" Round 12" HDPE L= 51.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 269.70' / 269.70' S= 0.0000 ' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	272.76'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	272.76'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.42 cfs @ 12.09 hrs HW=270.19' (Free Discharge)

↑ **1=12" HDPE** (Barrel Controls 0.42 cfs @ 1.58 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=269.70' (Free Discharge)

↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=269.70' (Free Discharge)

↑ **3=Orifice/Grate** (Controls 0.00 cfs)

High Park Street Drainage - Existing

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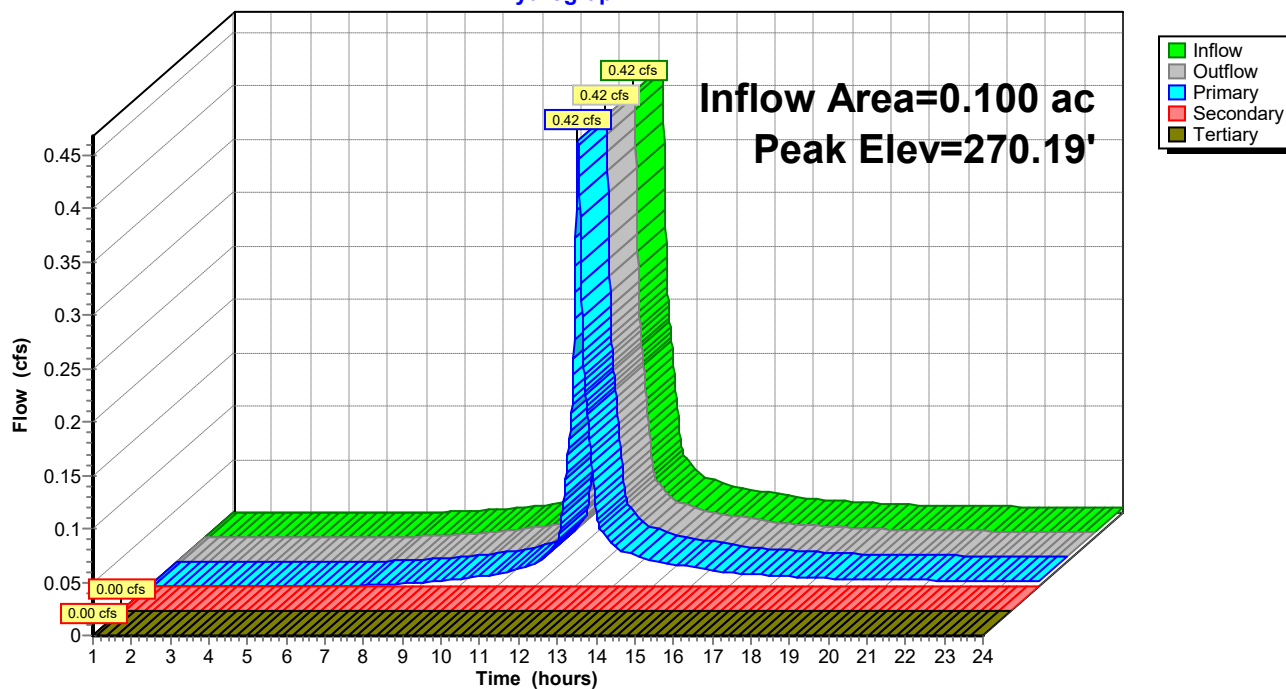
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 38P: CB-1020

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 39P: MH-40

[79] Warning: Submerged Pond 38P Primary device # 1 by 0.25'

Inflow Area = 0.100 ac, 80.00% Impervious, Inflow Depth > 3.61" for 10-yr event
Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af
Outflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 269.95' @ 12.09 hrs

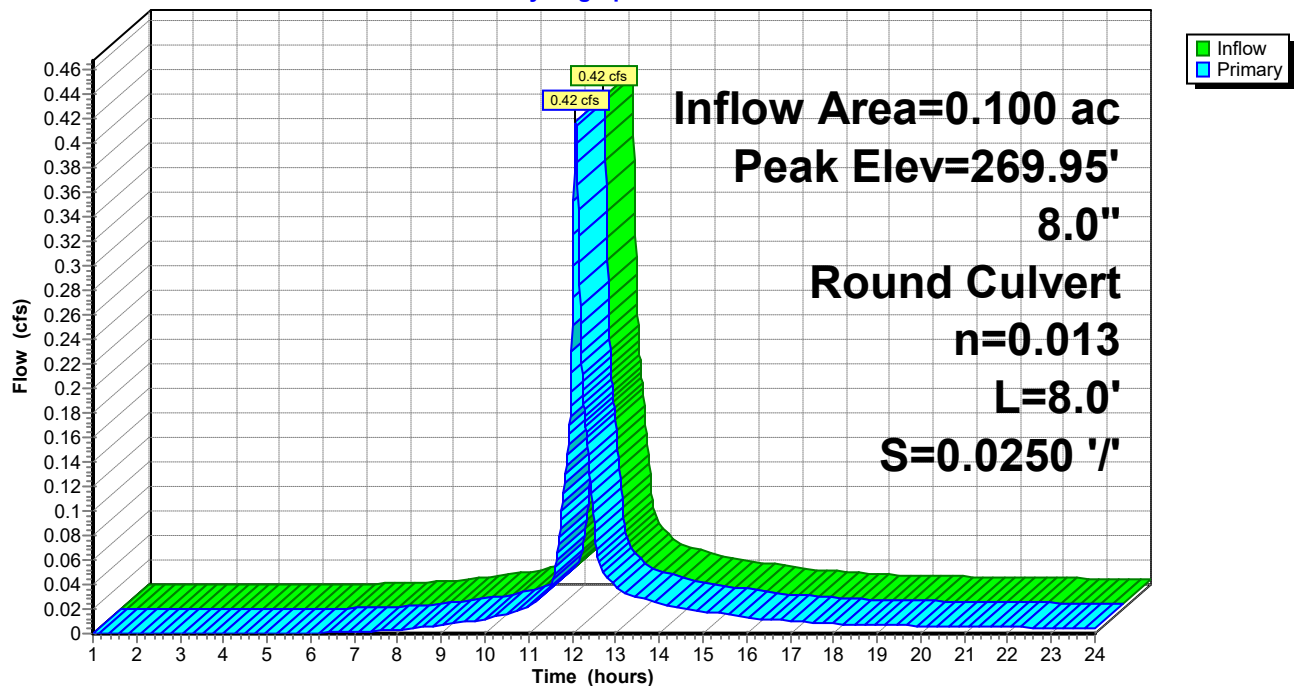
Flood Elev= 273.29'

Device	Routing	Invert	Outlet Devices
#1	Primary	269.60'	8.0" Round 8" VC L= 8.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 269.60' / 269.40' S= 0.0250 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.35 sf

Primary OutFlow Max=0.42 cfs @ 12.09 hrs HW=269.95' (Free Discharge)
↑ **1=8" VC** (Barrel Controls 0.42 cfs @ 3.26 fps)

Pond 39P: MH-40

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 40P: FS MH 2

[81] Warning: Exceeded Pond 23P by 1.45' @ 12.11 hrs

[79] Warning: Submerged Pond 24P Primary device # 1 INLET by 0.39'

Inflow Area = 19.169 ac, 41.71% Impervious, Inflow Depth > 2.52" for 10-yr event
Inflow = 36.99 cfs @ 12.11 hrs, Volume= 4.029 af
Outflow = 36.99 cfs @ 12.11 hrs, Volume= 4.029 af, Atten= 0%, Lag= 0.0 min
Primary = 36.99 cfs @ 12.11 hrs, Volume= 4.029 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 247.09' @ 12.11 hrs

Flood Elev= 247.40'

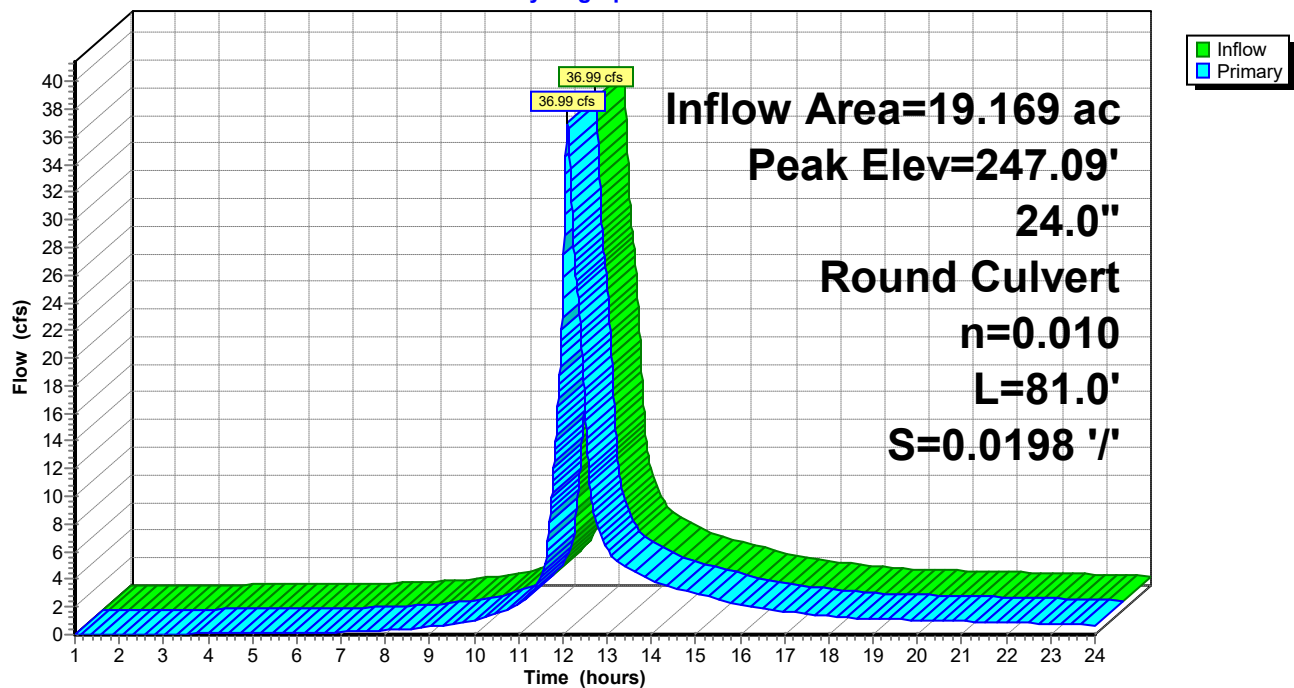
Device	Routing	Invert	Outlet Devices
#1	Primary	236.50'	24.0" Round 24" HDPE L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 236.50' / 234.90' S= 0.0198 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=36.97 cfs @ 12.11 hrs HW=247.09' (Free Discharge)

↑ **1=24" HDPE** (Inlet Controls 36.97 cfs @ 11.77 fps)

Pond 40P: FS MH 2

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 41P: MH-30

[79] Warning: Submerged Pond 40P Primary device # 1 INLET by 2.09'

Inflow Area = 19.205 ac, 41.82% Impervious, Inflow Depth > 2.62" for 10-yr event
Inflow = 43.01 cfs @ 12.11 hrs, Volume= 4.196 af
Outflow = 43.01 cfs @ 12.11 hrs, Volume= 4.196 af, Atten= 0%, Lag= 0.0 min
Primary = 43.01 cfs @ 12.11 hrs, Volume= 4.196 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 238.59' @ 12.11 hrs

Flood Elev= 244.73'

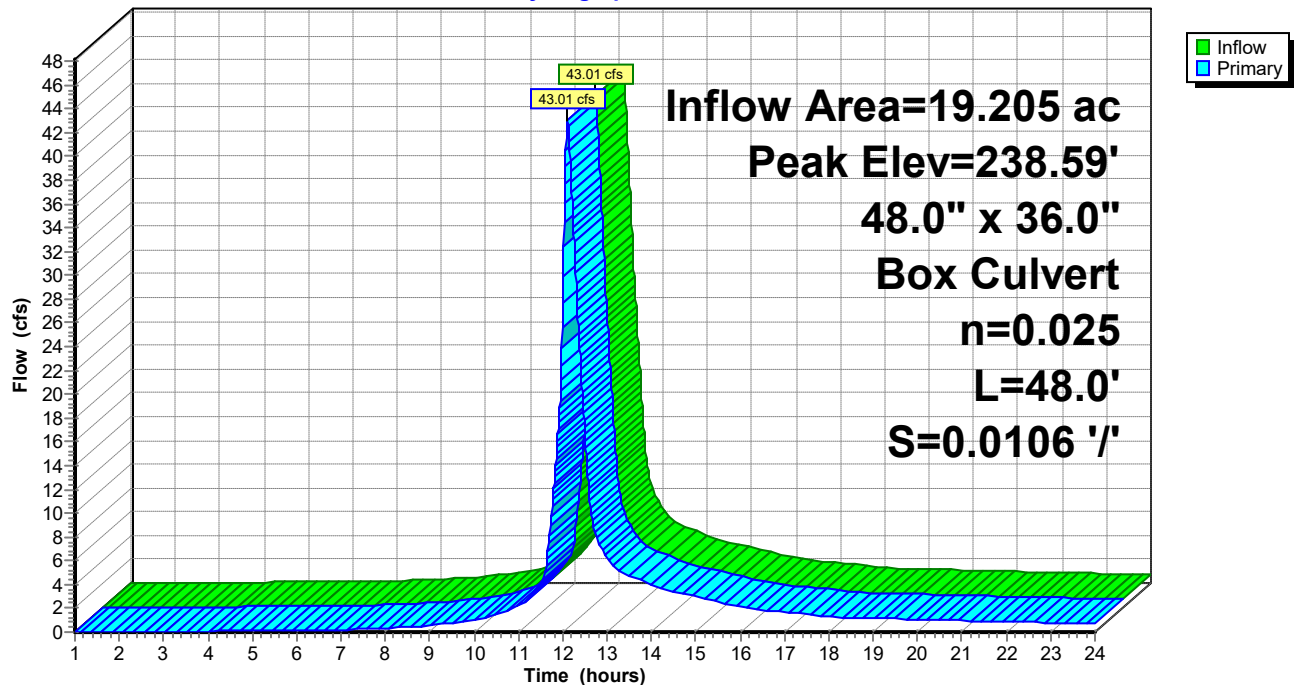
Device	Routing	Invert	Outlet Devices
#1	Primary	236.01'	48.0" W x 36.0" H Box masonry rock culvert L= 48.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 236.01' / 235.50' S= 0.0106 '/' Cc= 0.900 n= 0.025 Rubble masonry, cemented, Flow Area= 12.00 sf

Primary OutFlow Max=42.99 cfs @ 12.11 hrs HW=238.58' (Free Discharge)

↑1=masonry rock culvert (Barrel Controls 42.99 cfs @ 5.57 fps)

Pond 41P: MH-30

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 42P: CB-341

[57] Hint: Peaked at 244.24' (Flood elevation advised)

Inflow Area = 0.080 ac, 100.00% Impervious, Inflow Depth > 15.37" for 10-yr event
Inflow = 6.71 cfs @ 12.11 hrs, Volume= 0.102 af
Outflow = 6.71 cfs @ 12.11 hrs, Volume= 0.102 af, Atten= 0%, Lag= 0.0 min
Primary = 5.04 cfs @ 12.11 hrs, Volume= 0.094 af
Secondary = 1.34 cfs @ 12.11 hrs, Volume= 0.007 af
Tertiary = 0.33 cfs @ 12.11 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 244.24' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	242.30'	12.0" Round 12" clay L= 22.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 242.30' / 242.03' S= 0.0123 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.79 sf
#2	Secondary	244.10'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	244.10'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=5.04 cfs @ 12.11 hrs HW=244.24' (Free Discharge)
↑**1=12" clay** (Barrel Controls 5.04 cfs @ 6.41 fps)

Secondary OutFlow Max=1.34 cfs @ 12.11 hrs HW=244.24' (Free Discharge)
↑**2=Orifice/Grate** (Weir Controls 1.34 cfs @ 1.21 fps)

Tertiary OutFlow Max=0.33 cfs @ 12.11 hrs HW=244.24' (Free Discharge)
↑**3=Orifice/Grate** (Orifice Controls 0.33 cfs @ 1.19 fps)

High Park Street Drainage - Existing

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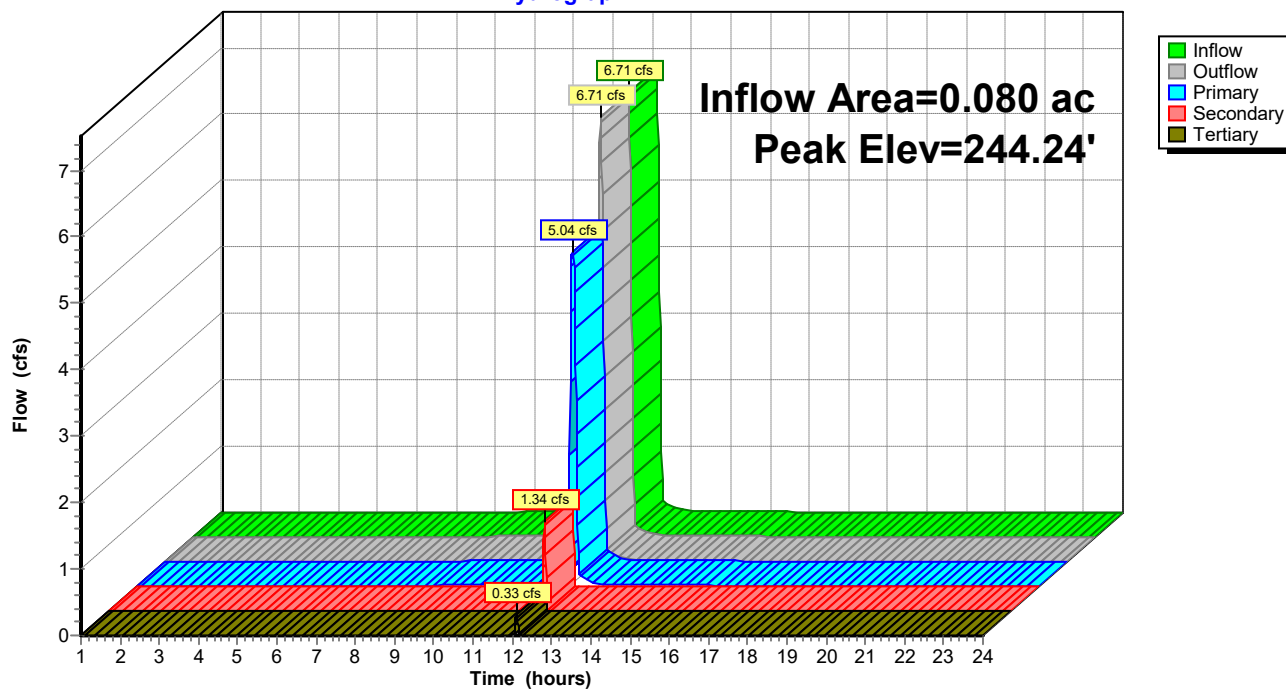
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 42P: CB-341

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 43P: NEW MH

[79] Warning: Submerged Pond 41P Primary device # 1 INLET by 2.48'

Inflow Area = 19.845 ac, 43.24% Impervious, Inflow Depth > 2.70" for 10-yr event
Inflow = 50.37 cfs @ 12.11 hrs, Volume= 4.470 af
Outflow = 50.37 cfs @ 12.11 hrs, Volume= 4.470 af, Atten= 0%, Lag= 0.0 min
Primary = 50.37 cfs @ 12.11 hrs, Volume= 4.470 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 238.49' @ 12.11 hrs

Flood Elev= 244.50'

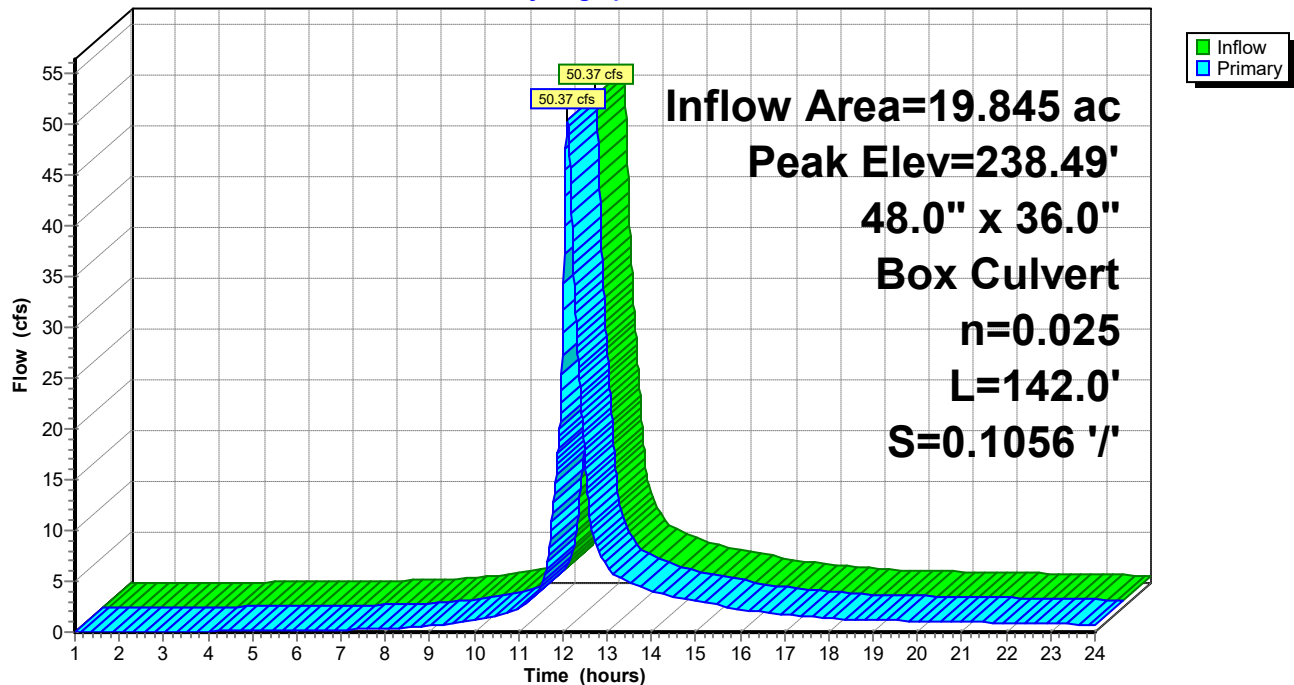
Device	Routing	Invert	Outlet Devices
#1	Primary	236.00'	48.0" W x 36.0" H Box masonry rock culvert L= 142.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 236.00' / 221.00' S= 0.1056 '/' Cc= 0.900 n= 0.025 Rubble masonry, cemented, Flow Area= 12.00 sf

Primary OutFlow Max=50.34 cfs @ 12.11 hrs HW=238.49' (Free Discharge)

↑1=masonry rock culvert (Inlet Controls 50.34 cfs @ 5.06 fps)

Pond 43P: NEW MH

Hydrograph



High Park Street Drainage - Existing

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 44P: NEW CB

[57] Hint: Peaked at 240.90' (Flood elevation advised)

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af
Outflow = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 240.90' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	240.50'	12.0" Round 12" HDPE L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.50' / 240.20' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	244.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.50 cfs @ 12.08 hrs HW=240.90' (Free Discharge)

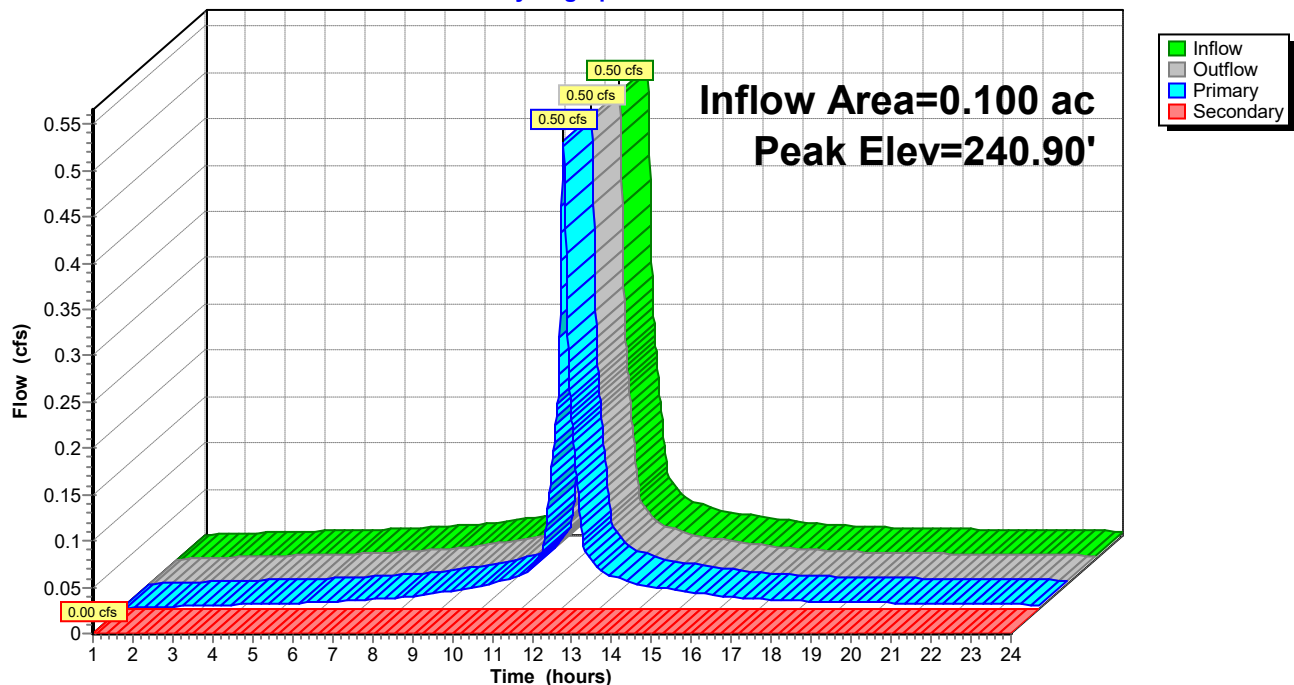
↑1=12" HDPE (Inlet Controls 0.50 cfs @ 1.70 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=240.50' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 44P: NEW CB

Hydrograph



High Park Street Drainage - Existing

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Summary for Pond 45P: STATION CB

[57] Hint: Peaked at 239.85' (Flood elevation advised)

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af
Outflow = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min
Primary = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 239.85' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	239.26'	12.0" Round 12" HDPE L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.26' / 238.80' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	244.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

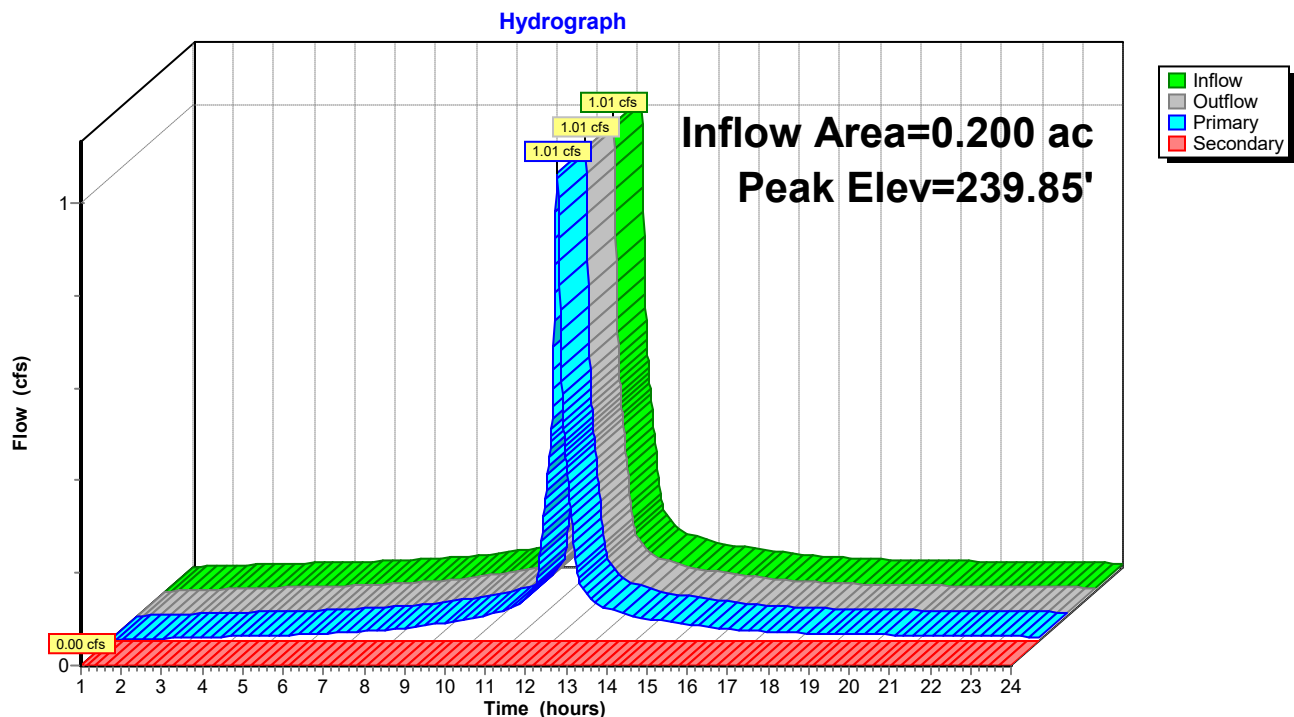
Primary OutFlow Max=1.01 cfs @ 12.08 hrs HW=239.85' (Free Discharge)

↑1=12" HDPE (Inlet Controls 1.01 cfs @ 2.07 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=239.26' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 45P: STATION CB



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 46P: Wetland Area

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 5.250 ac, 21.90% Impervious, Inflow Depth > 2.13" for 10-yr event
Inflow = 15.37 cfs @ 12.12 hrs, Volume= 0.934 af
Outflow = 15.37 cfs @ 12.12 hrs, Volume= 0.934 af, Atten= 0%, Lag= 0.0 min
Primary = 15.37 cfs @ 12.12 hrs, Volume= 0.934 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 260.01' @ 12.12 hrs Surf.Area= 595 sf Storage= 3 cf

Plug-Flow detention time= 0.0 min calculated for 0.934 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (840.3 - 840.3)

Volume	Invert	Avail.Storage	Storage Description
#1	260.00'	13,859 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
260.00	592	0	0
261.00	1,184	888	888
262.00	1,981	1,583	2,471
263.00	3,003	2,492	4,963
264.00	4,316	3,660	8,622
265.00	6,157	5,237	13,859

Device	Routing	Invert	Outlet Devices
#1	Primary	255.00'	48.0" W x 60.0" H Box Culvert L= 40.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 255.00' / 243.80' S= 0.2800 ' / Cc= 0.900 n= 0.017, Flow Area= 20.00 sf

Primary OutFlow Max=143.78 cfs @ 12.12 hrs HW=260.01' (Free Discharge)
↑**1=Culvert** (Inlet Controls 143.78 cfs @ 7.19 fps)

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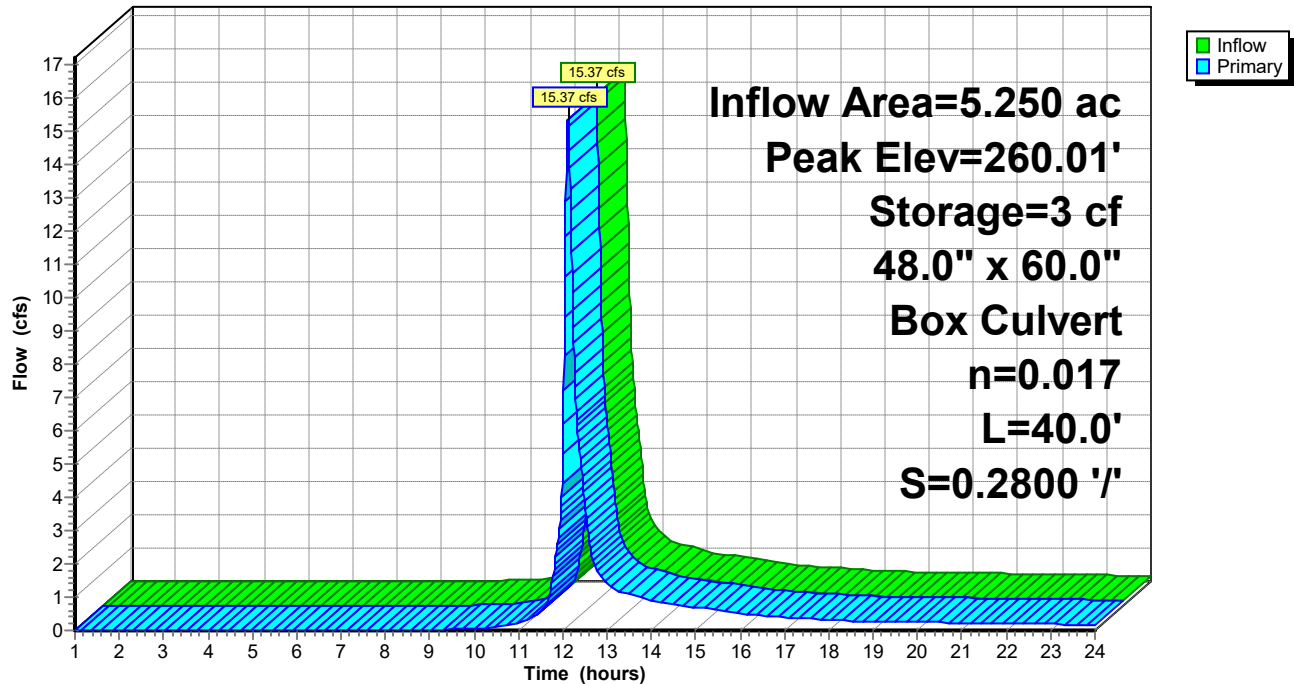
Type III 24-hr 10-yr Rainfall=5.16"

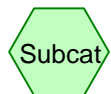
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Pond 46P: Wetland Area

Hydrograph





Reach



Link

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Time span=1.00-24.00 hrs, dt=0.01 hrs, 2301 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 40S: HS-1	Runoff Area=0.390 ac 38.46% Impervious Runoff Depth>1.54" Tc=6.0 min CN=62 Runoff=0.65 cfs 0.050 af
Subcatchment 41S: HS-2	Runoff Area=0.324 ac 61.73% Impervious Runoff Depth>3.92" Tc=6.0 min CN=89 Runoff=1.45 cfs 0.106 af
Subcatchment 42S: HS-3	Runoff Area=0.170 ac 76.47% Impervious Runoff Depth>4.24" Tc=6.0 min CN=92 Runoff=0.80 cfs 0.060 af
Subcatchment 43S: HS-4	Runoff Area=0.042 ac 80.95% Impervious Runoff Depth>4.35" Tc=6.0 min CN=93 Runoff=0.20 cfs 0.015 af
Subcatchment 44S: HS-5	Runoff Area=0.340 ac 64.71% Impervious Runoff Depth>4.02" Flow Length=213' Slope=0.0100 '/' Tc=9.6 min CN=90 Runoff=1.37 cfs 0.114 af
Subcatchment 46S: HS-7	Runoff Area=0.121 ac 74.38% Impervious Runoff Depth>4.24" Tc=6.0 min CN=92 Runoff=0.57 cfs 0.043 af
Subcatchment 47S: HS-8	Runoff Area=0.159 ac 75.47% Impervious Runoff Depth>4.24" Tc=6.0 min CN=92 Runoff=0.75 cfs 0.056 af
Subcatchment 48S: HS-6a	Runoff Area=0.450 ac 22.22% Impervious Runoff Depth>2.94" Tc=6.0 min CN=79 Runoff=1.55 cfs 0.110 af
Subcatchment 49S: HS-10	Runoff Area=0.500 ac 36.00% Impervious Runoff Depth>2.49" Flow Length=541' Tc=9.5 min CN=74 Runoff=1.29 cfs 0.104 af
Subcatchment 50S: PL-1	Runoff Area=1.350 ac 31.11% Impervious Runoff Depth>2.40" Flow Length=495' Tc=9.4 min CN=73 Runoff=3.37 cfs 0.270 af
Subcatchment 51S: PL-2	Runoff Area=0.120 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.61 cfs 0.049 af
Subcatchment 52S: PL-3	Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.26 cfs 0.021 af
Subcatchment 53S: HS-6b	Runoff Area=0.610 ac 36.07% Impervious Runoff Depth>3.32" Tc=6.0 min CN=83 Runoff=2.36 cfs 0.169 af
Subcatchment 54S: PS-1	Runoff Area=1.620 ac 46.91% Impervious Runoff Depth>2.84" Tc=6.0 min CN=78 Runoff=5.41 cfs 0.384 af
Subcatchment 55S: PS-3	Runoff Area=0.362 ac 93.92% Impervious Runoff Depth>4.69" Tc=6.0 min CN=96 Runoff=1.80 cfs 0.141 af
Subcatchment 56S: MS-1	Runoff Area=0.200 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=1.01 cfs 0.082 af

High Park Street Drainage - Proposed June 2022

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Subcatchment 57S: HS-9a	Runoff Area=0.730 ac 30.14% Impervious Runoff Depth>2.32" Flow Length=325' Tc=9.5 min CN=72 Runoff=1.75 cfs 0.141 af
Subcatchment 58S: MS-6	Runoff Area=0.036 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.18 cfs 0.015 af
Subcatchment 59S: MS-8	Runoff Area=0.080 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.40 cfs 0.033 af
Subcatchment 60S: MS-7	Runoff Area=0.460 ac 80.43% Impervious Runoff Depth>3.61" Tc=6.0 min CN=86 Runoff=1.92 cfs 0.138 af
Subcatchment 61S: MS-5	Runoff Area=0.680 ac 67.65% Impervious Runoff Depth>2.94" Tc=6.0 min CN=79 Runoff=2.34 cfs 0.166 af
Subcatchment 62S: MS-4	Runoff Area=0.260 ac 61.54% Impervious Runoff Depth>2.58" Tc=6.0 min CN=75 Runoff=0.79 cfs 0.056 af
Subcatchment 63S: MS-3	Runoff Area=0.240 ac 70.83% Impervious Runoff Depth>3.12" Tc=6.0 min CN=81 Runoff=0.88 cfs 0.062 af
Subcatchment 64S: HS-11	Runoff Area=0.740 ac 29.73% Impervious Runoff Depth>2.32" Tc=6.0 min CN=72 Runoff=2.00 cfs 0.143 af
Subcatchment 65S: HS-12	Runoff Area=0.090 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.45 cfs 0.037 af
Subcatchment 66S: HS-14	Runoff Area=0.460 ac 54.35% Impervious Runoff Depth>2.24" Tc=6.0 min CN=71 Runoff=1.19 cfs 0.086 af
Subcatchment 67S: HS-13	Runoff Area=0.100 ac 80.00% Impervious Runoff Depth>3.61" Tc=6.0 min CN=86 Runoff=0.42 cfs 0.030 af
Subcatchment 68S: MS-9	Runoff Area=0.100 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.50 cfs 0.041 af
Subcatchment 69S: M-10	Runoff Area=0.050 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=0.25 cfs 0.020 af
Subcatchment 70S: MS-11	Runoff Area=0.300 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=1.51 cfs 0.123 af
Subcatchment 71S: Wetlands/Woods	Runoff Area=4.410 ac 18.82% Impervious Runoff Depth>1.83" Flow Length=450' Tc=10.3 min CN=66 Runoff=7.89 cfs 0.674 af
Subcatchment 72S: HS-9b	Runoff Area=0.440 ac 20.45% Impervious Runoff Depth>2.07" Tc=6.0 min CN=69 Runoff=1.05 cfs 0.076 af
Subcatchment 73S: PS-2a	Runoff Area=0.900 ac 13.33% Impervious Runoff Depth>1.83" Flow Length=450' Tc=9.5 min CN=66 Runoff=1.65 cfs 0.137 af

High Park Street Drainage - Proposed June 2022

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Subcatchment 74S: MS-2	Runoff Area=0.400 ac 100.00% Impervious Runoff Depth>4.92" Tc=6.0 min CN=98 Runoff=2.02 cfs 0.164 af
Subcatchment 76S: PS-2c	Runoff Area=0.610 ac 22.95% Impervious Runoff Depth>1.91" Flow Length=440' Tc=18.6 min CN=67 Runoff=0.92 cfs 0.097 af
Subcatchment 77S: PS-2d	Runoff Area=1.310 ac 16.03% Impervious Runoff Depth>1.68" Flow Length=500' Tc=17.5 min CN=64 Runoff=1.73 cfs 0.183 af
Subcatchment 78S: PS-2b	Runoff Area=1.210 ac 14.05% Impervious Runoff Depth>1.68" Flow Length=430' Tc=6.7 min CN=64 Runoff=2.21 cfs 0.170 af
Pond 1P: CB-1031	Peak Elev=334.54' Inflow=0.65 cfs 0.050 af Primary=0.65 cfs 0.050 af Secondary=0.00 cfs 0.000 af Outflow=0.65 cfs 0.050 af
Pond 2P: MH-43	Peak Elev=331.15' Inflow=2.90 cfs 0.216 af 12.0" Round Culvert n=0.012 L=122.6' S=-0.0179 '/' Outflow=2.90 cfs 0.216 af
Pond 3P: CB-1030	Peak Elev=331.57' Inflow=2.25 cfs 0.166 af Primary=2.25 cfs 0.166 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=2.25 cfs 0.166 af
Pond 4P: CB-1029	Peak Elev=334.52' Inflow=0.80 cfs 0.060 af Primary=0.80 cfs 0.060 af Secondary=0.00 cfs 0.000 af Outflow=0.80 cfs 0.060 af
Pond 5P: CB-1027	Peak Elev=331.18' Inflow=4.37 cfs 0.345 af Primary=4.37 cfs 0.345 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=4.37 cfs 0.345 af
Pond 6P: CB-1028	Peak Elev=330.89' Inflow=0.20 cfs 0.015 af Primary=0.20 cfs 0.015 af Secondary=0.00 cfs 0.000 af Outflow=0.20 cfs 0.015 af
Pond 7P: CB-1026	Peak Elev=327.49' Inflow=8.84 cfs 0.667 af Primary=8.84 cfs 0.667 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=8.84 cfs 0.667 af
Pond 8P: CB-1025	Peak Elev=328.53' Inflow=0.57 cfs 0.043 af Primary=0.57 cfs 0.043 af Secondary=0.00 cfs 0.000 af Outflow=0.57 cfs 0.043 af
Pond 9P: CB-1023	Peak Elev=308.67' Inflow=12.21 cfs 0.940 af Primary=12.21 cfs 0.940 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=12.21 cfs 0.940 af
Pond 10P: CB-1022	Peak Elev=307.20' Inflow=0.75 cfs 0.056 af Primary=0.75 cfs 0.056 af Secondary=0.00 cfs 0.000 af Outflow=0.75 cfs 0.056 af
Pond 11P: CB-1024	Peak Elev=306.54' Inflow=13.41 cfs 1.043 af Primary=13.41 cfs 1.043 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=13.41 cfs 1.043 af
Pond 12P: MH-42	Peak Elev=0.00' 12.0" Round Culvert n=0.012 L=241.0' S=0.0295 '/' Primary=0.00 cfs 0.000 af
Pond 16P: MH-327	Peak Elev=279.12' Inflow=14.71 cfs 1.312 af 24.0" Round Culvert n=0.012 L=267.0' S=0.1007 '/' Outflow=14.71 cfs 1.312 af

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Pond 17P: CB-738

Peak Elev=281.41' Inflow=6.35 cfs 0.567 af
Primary=6.35 cfs 0.567 af Secondary=0.00 cfs 0.000 af Outflow=6.35 cfs 0.567 af

Pond 18P: CB-737

Peak Elev=281.45' Inflow=5.41 cfs 0.384 af
Primary=5.41 cfs 0.384 af Secondary=0.00 cfs 0.000 af Outflow=5.41 cfs 0.384 af

Pond 19P: MH-328

Peak Elev=252.57' Inflow=16.41 cfs 1.453 af
Primary=16.41 cfs 1.453 af Secondary=0.00 cfs 0.000 af Outflow=16.41 cfs 1.453 af

Pond 20P: MH-329

Peak Elev=245.46' Inflow=23.84 cfs 2.126 af
48.0" x 60.0" Box Culvert n=0.017 L=20.0' S=0.0100 '/' Outflow=23.84 cfs 2.126 af

Pond 21P: CB-1589

Peak Elev=246.29' Inflow=0.25 cfs 0.020 af
Primary=0.25 cfs 0.020 af Secondary=0.00 cfs 0.000 af Outflow=0.25 cfs 0.020 af

Pond 22P: MH-29

Peak Elev=244.48' Inflow=26.36 cfs 2.352 af
24.0" Round Culvert n=0.010 L=41.0' S=0.0198 '/' Outflow=26.36 cfs 2.352 af

Pond 23P: FS MH 1

Peak Elev=243.57' Inflow=26.36 cfs 2.352 af
24.0" Round Culvert n=0.010 L=55.0' S=0.0200 '/' Outflow=26.36 cfs 2.352 af

Pond 24P: CB

Peak Elev=247.99' Inflow=6.03 cfs 0.449 af
Primary=6.03 cfs 0.449 af Secondary=0.00 cfs 0.000 af Outflow=6.03 cfs 0.449 af

Pond 25P: CB-340

Peak Elev=242.31' Inflow=0.18 cfs 0.015 af
Primary=0.18 cfs 0.015 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.18 cfs 0.015 af

Pond 26P: MH-P1

Peak Elev=271.48' Inflow=15.85 cfs 1.223 af
24.0" Round Culvert n=0.012 L=108.0' S=0.0093 '/' Outflow=15.85 cfs 1.223 af

Pond 27P: MH-120

Peak Elev=242.64' Inflow=17.85 cfs 1.372 af
24.0" Round Culvert n=0.012 L=22.0' S=0.0077 '/' Outflow=17.85 cfs 1.372 af

Pond 28P: CB-342

Peak Elev=242.75' Inflow=1.92 cfs 0.138 af
Primary=1.92 cfs 0.138 af Secondary=0.00 cfs 0.000 af Outflow=1.92 cfs 0.138 af

Pond 29P: MH-P3

Peak Elev=269.44' Inflow=17.45 cfs 1.339 af
24.0" Round Culvert n=0.012 L=575.0' S=0.0463 '/' Outflow=17.45 cfs 1.339 af

Pond 30P: CB-339

Peak Elev=252.12' Inflow=4.01 cfs 0.285 af
Primary=4.01 cfs 0.285 af Secondary=0.00 cfs 0.000 af Outflow=4.01 cfs 0.285 af

Pond 31P: CB-338

Peak Elev=263.83' Inflow=3.13 cfs 0.222 af
Primary=3.13 cfs 0.222 af Secondary=0.00 cfs 0.000 af Outflow=3.13 cfs 0.222 af

Pond 32P: CB-337

Peak Elev=264.98' Inflow=2.34 cfs 0.166 af
Primary=2.34 cfs 0.166 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=2.34 cfs 0.166 af

Pond 33P: NEW CB-2

Peak Elev=270.78' Inflow=2.00 cfs 0.143 af
Primary=2.00 cfs 0.143 af Secondary=0.00 cfs 0.000 af Outflow=2.00 cfs 0.143 af

High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Pond 34P: NEW CB-1021

Peak Elev=270.35' Inflow=0.45 cfs 0.037 af
Primary=0.45 cfs 0.037 af Secondary=0.00 cfs 0.000 af Outflow=0.45 cfs 0.037 af

Pond 35P: MH-41

Peak Elev=0.00'
12.0" Round Culvert n=0.012 L=100.0' S=0.0260 '/ Primary=0.00 cfs 0.000 af

Pond 37P: NEW CB-1

Peak Elev=269.60' Inflow=1.19 cfs 0.086 af
Primary=1.19 cfs 0.086 af Secondary=0.00 cfs 0.000 af Outflow=1.19 cfs 0.086 af

Pond 38P: NEW CB-1020

Peak Elev=269.35' Inflow=0.42 cfs 0.030 af
Primary=0.42 cfs 0.030 af Secondary=0.00 cfs 0.000 af Outflow=0.42 cfs 0.030 af

Pond 40P: FS MH 2

Peak Elev=244.72' Inflow=32.08 cfs 2.801 af
24.0" Round Culvert n=0.010 L=81.0' S=0.0198 '/ Outflow=32.08 cfs 2.801 af

Pond 41P: MH-30

Peak Elev=238.11' Inflow=32.26 cfs 2.815 af
48.0" x 36.0" Box Culvert n=0.025 L=48.0' S=0.0106 '/ Outflow=32.26 cfs 2.815 af

Pond 42P: CB-341

Peak Elev=242.61' Inflow=0.40 cfs 0.033 af
Primary=0.40 cfs 0.033 af Secondary=0.00 cfs 0.000 af Tertiary=0.00 cfs 0.000 af Outflow=0.40 cfs 0.033 af

Pond 43P: NEW MH

Peak Elev=238.55' Inflow=52.36 cfs 4.367 af
48.0" x 36.0" Box Culvert n=0.025 L=142.0' S=0.1056 '/ Outflow=52.36 cfs 4.367 af

Pond 44P: NEW CB

Peak Elev=240.90' Inflow=0.50 cfs 0.041 af
Primary=0.50 cfs 0.041 af Secondary=0.00 cfs 0.000 af Outflow=0.50 cfs 0.041 af

Pond 45P: STATION CB

Peak Elev=239.85' Inflow=1.01 cfs 0.082 af
Primary=1.01 cfs 0.082 af Secondary=0.00 cfs 0.000 af Outflow=1.01 cfs 0.082 af

Pond 46P: Wetland Area

Peak Elev=260.00' Storage=2 cf Inflow=7.89 cfs 0.674 af
48.0" x 60.0" Box Culvert n=0.017 L=40.0' S=0.2800 '/ Outflow=7.89 cfs 0.674 af

Pond 73P: MH-P2

Peak Elev=270.53' Inflow=17.45 cfs 1.339 af
24.0" Round Culvert n=0.012 L=76.0' S=0.0105 '/ Outflow=17.45 cfs 1.339 af

Pond 75P: CB-P1

Peak Elev=329.07' Inflow=5.92 cfs 0.455 af
Primary=5.92 cfs 0.455 af Secondary=0.00 cfs 0.000 af Outflow=5.92 cfs 0.455 af

Pond 76P: CB-P2

Peak Elev=323.54' Inflow=10.43 cfs 0.808 af
Primary=0.00 cfs 0.000 af Secondary=10.43 cfs 0.808 af Outflow=10.43 cfs 0.808 af

Pond 77P: CB-P3

Peak Elev=290.52' Inflow=1.65 cfs 0.137 af
Primary=1.65 cfs 0.137 af Secondary=0.00 cfs 0.000 af Outflow=1.65 cfs 0.137 af

Pond 78P: CB-P4

Peak Elev=282.35' Inflow=2.21 cfs 0.170 af
Primary=2.21 cfs 0.170 af Secondary=0.00 cfs 0.000 af Outflow=2.21 cfs 0.170 af

Pond 79P: CB-P5

Peak Elev=278.71' Inflow=0.92 cfs 0.097 af
Primary=0.92 cfs 0.097 af Secondary=0.00 cfs 0.000 af Outflow=0.92 cfs 0.097 af

High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Pond 80P: MH-P4

Peak Elev=315.69' Inflow=13.41 cfs 1.043 af
12.0" Round Culvert n=0.012 L=325.0' S=0.1025 '/ Outflow=13.41 cfs 1.043 af

Pond 81P: CB-742

Peak Elev=296.41' Inflow=3.37 cfs 0.270 af
Primary=3.37 cfs 0.270 af Secondary=0.00 cfs 0.000 af Outflow=3.37 cfs 0.270 af

Pond 82P: CB-741

Peak Elev=291.47' Inflow=5.53 cfs 0.457 af
Primary=5.53 cfs 0.457 af Secondary=0.00 cfs 0.000 af Outflow=5.53 cfs 0.457 af

Pond 83P: CB-740

Peak Elev=282.60' Inflow=7.91 cfs 0.647 af
Primary=7.91 cfs 0.647 af Secondary=0.00 cfs 0.000 af Outflow=7.91 cfs 0.647 af

Total Runoff Area = 20.415 ac Runoff Volume = 4.367 af Average Runoff Depth = 2.57"
61.40% Pervious = 12.534 ac 38.60% Impervious = 7.881 ac

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 40S: HS-1

Runoff = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af, Depth> 1.54"

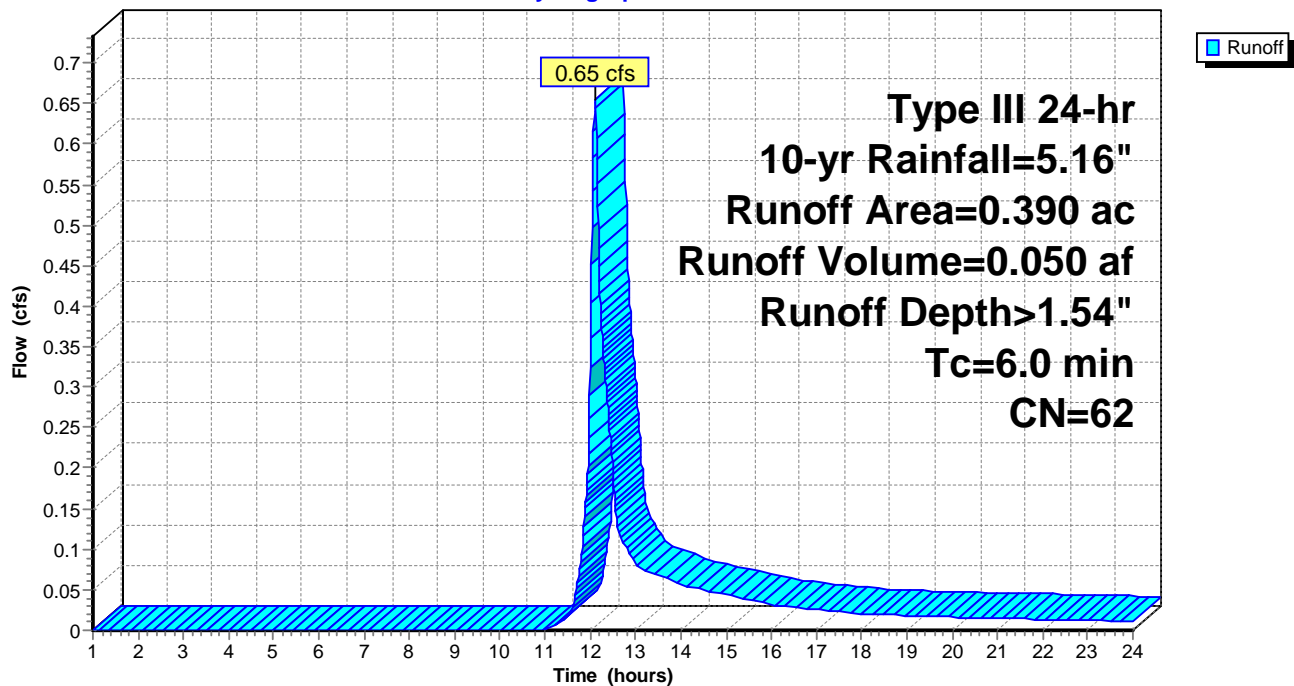
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.150	98	Paved parking, HSG B
0.240	39	>75% Grass cover, Good, HSG A
0.390	62	Weighted Average
0.240		61.54% Pervious Area
0.150		38.46% Impervious Area

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

Subcatchment 40S: HS-1

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 41S: HS-2

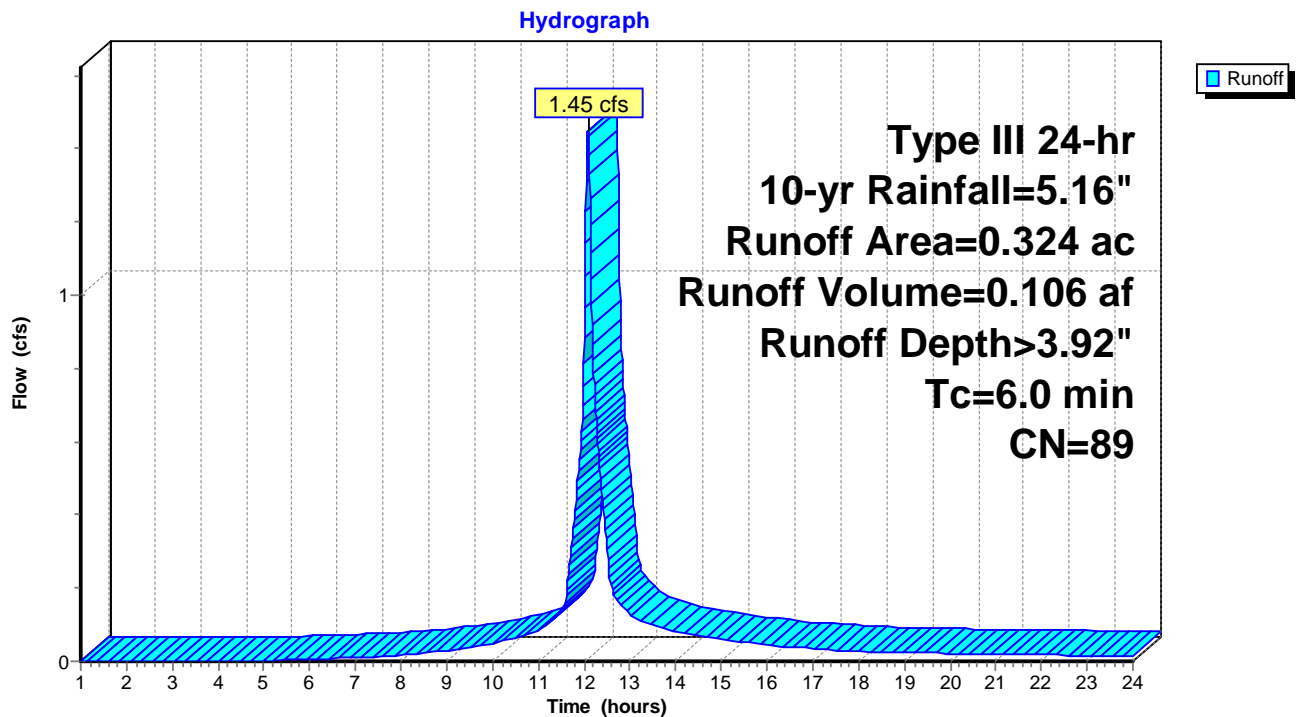
Runoff = 1.45 cfs @ 12.09 hrs, Volume= 0.106 af, Depth> 3.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.200	98	Paved parking, HSG C
0.124	74	>75% Grass cover, Good, HSG C
0.324	89	Weighted Average
0.124		38.27% Pervious Area
0.200		61.73% Impervious Area

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

Subcatchment 41S: HS-2



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 42S: HS-3

Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af, Depth> 4.24"

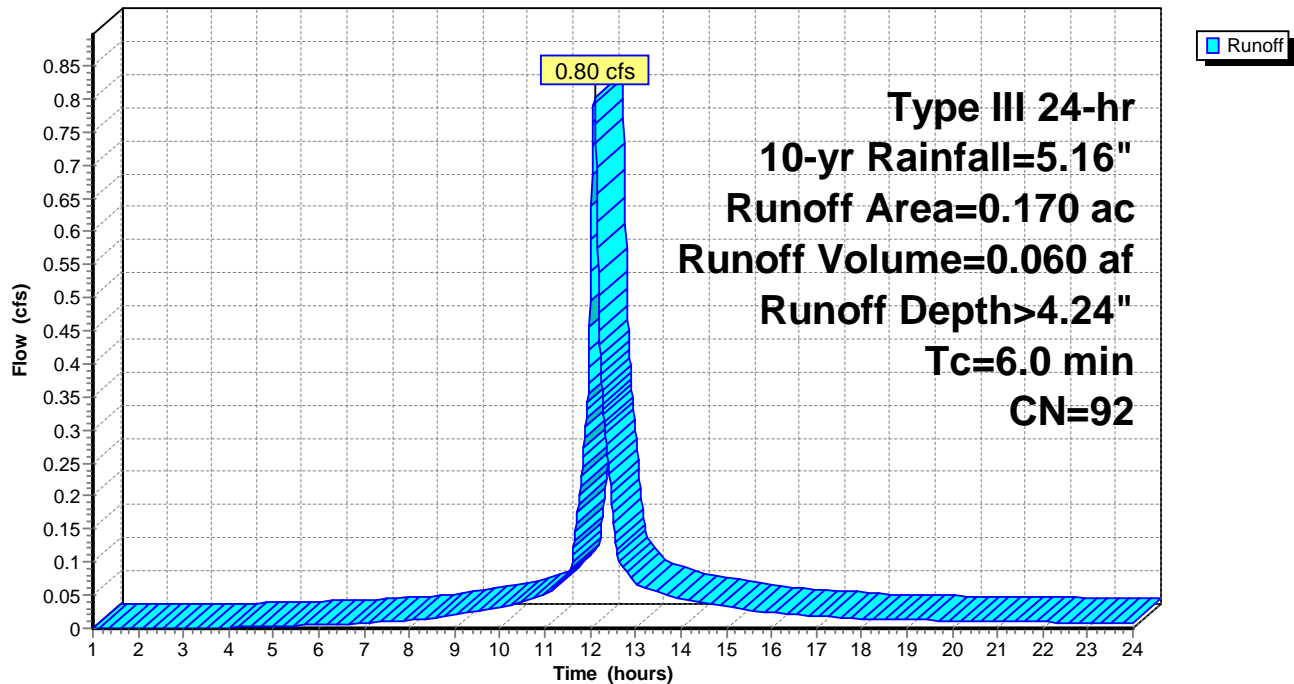
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.130	98	Paved parking, HSG C
0.040	74	>75% Grass cover, Good, HSG C
0.170	92	Weighted Average
0.040		23.53% Pervious Area
0.130		76.47% Impervious Area

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

Subcatchment 42S: HS-3

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 43S: HS-4

Runoff = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af, Depth> 4.35"

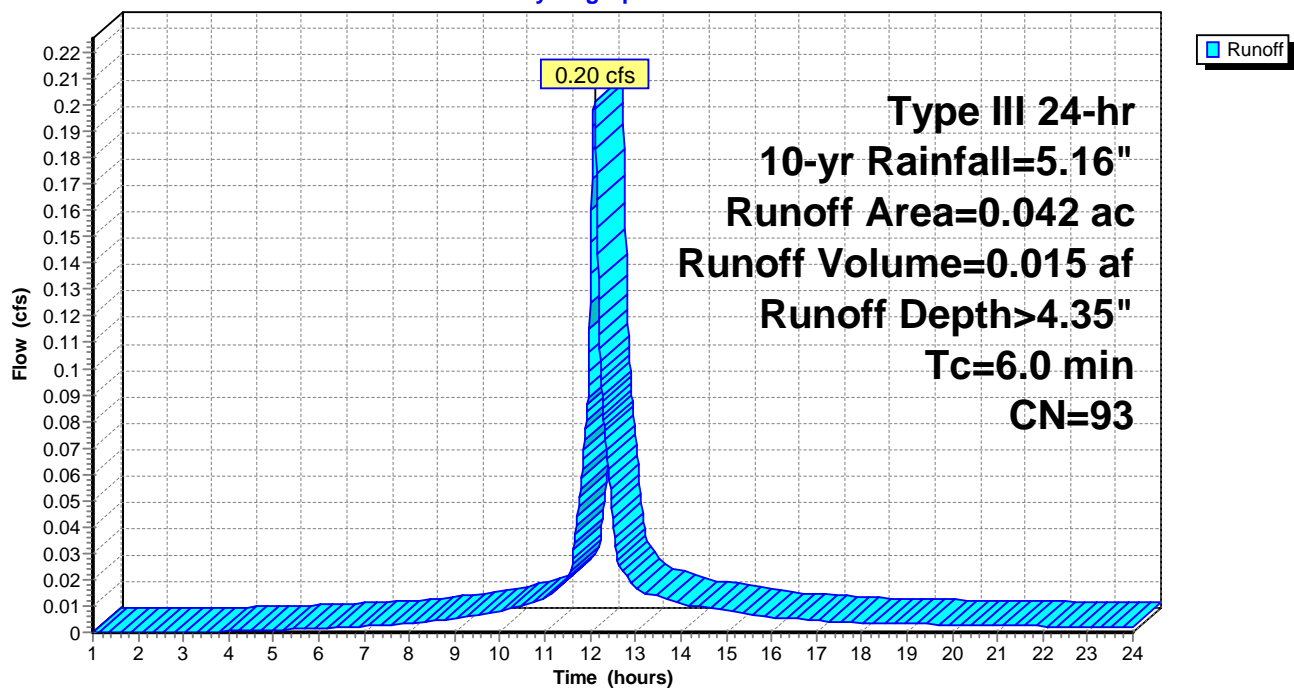
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.034	98	Paved parking, HSG C
0.008	74	>75% Grass cover, Good, HSG C
0.042	93	Weighted Average
0.008		19.05% Pervious Area
0.034		80.95% Impervious Area

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

Subcatchment 43S: HS-4

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 44S: HS-5

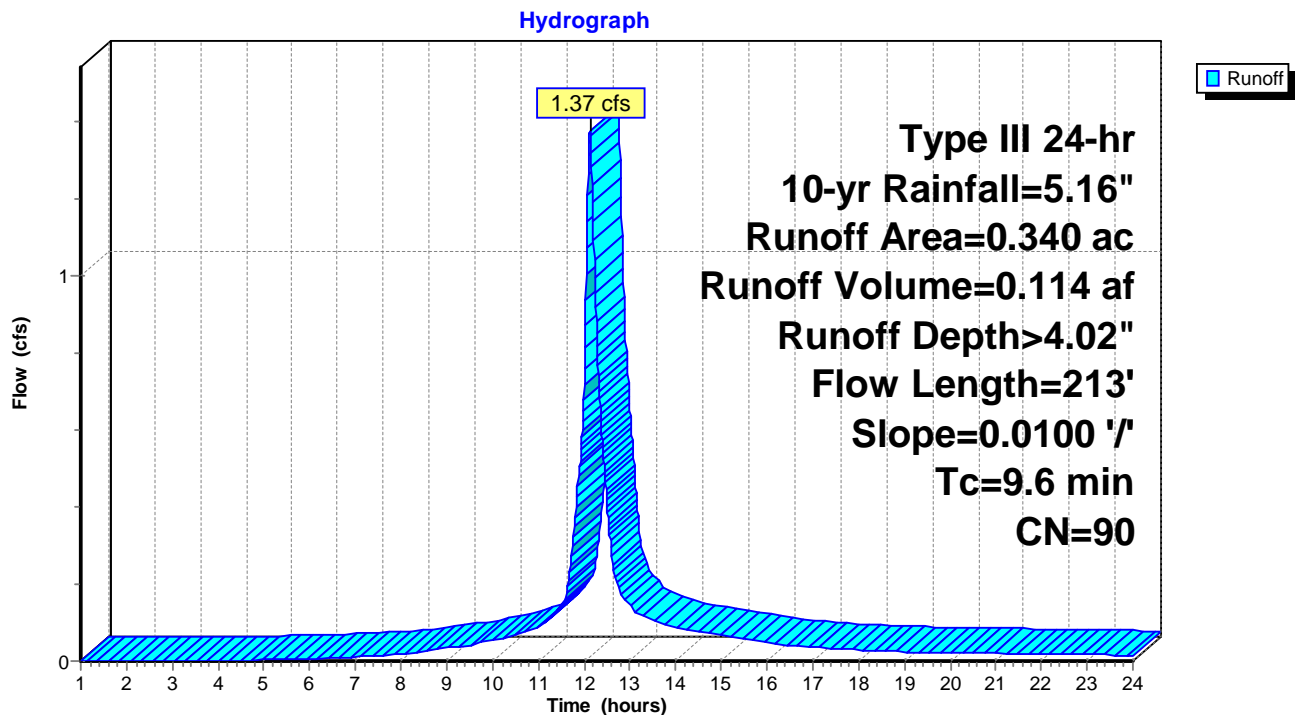
Runoff = 1.37 cfs @ 12.13 hrs, Volume= 0.114 af, Depth> 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG C
0.120	74	>75% Grass cover, Good, HSG C
0.340	90	Weighted Average
0.120		35.29% Pervious Area
0.220		64.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
1.4	58	0.0100	0.70		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.9	105	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.6	213	Total			

Subcatchment 44S: HS-5



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 46S: HS-7

Runoff = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af, Depth> 4.24"

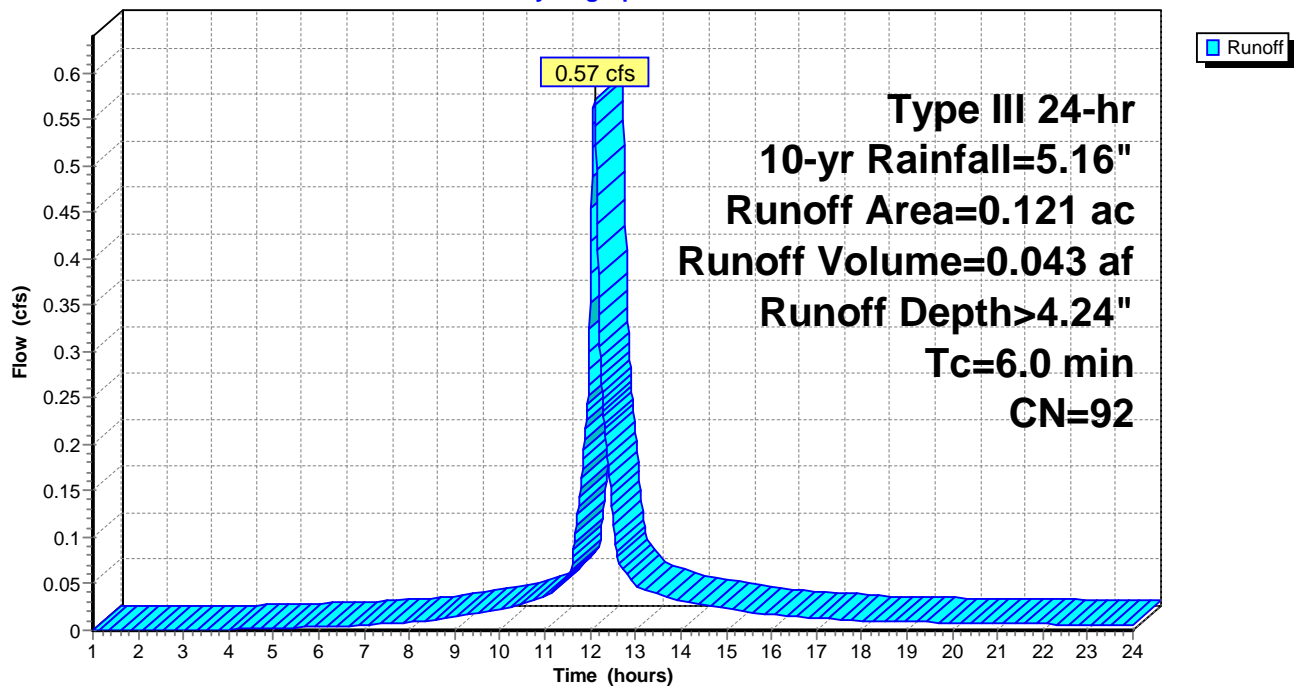
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.090	98	Paved parking, HSG C
0.031	74	>75% Grass cover, Good, HSG C
0.121	92	Weighted Average
0.031		25.62% Pervious Area
0.090		74.38% Impervious Area

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

Subcatchment 46S: HS-7

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 47S: HS-8

Runoff = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af, Depth> 4.24"

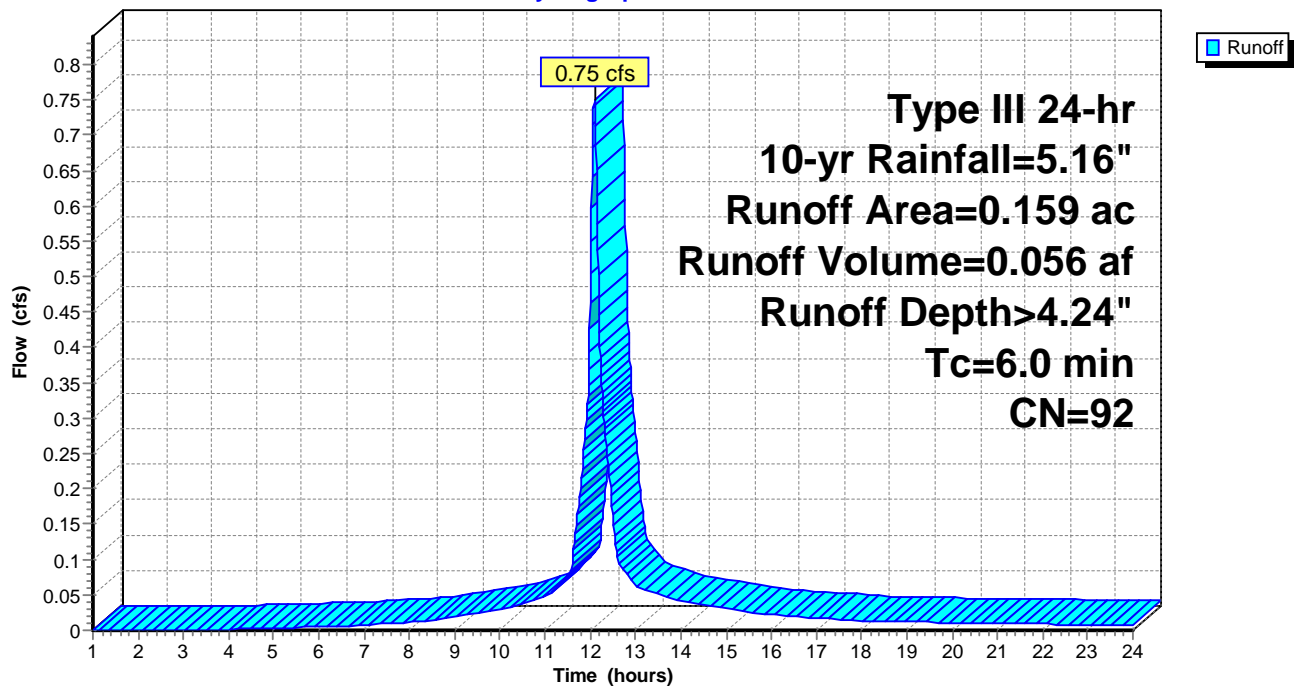
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.120	98	Paved parking, HSG C
0.039	74	>75% Grass cover, Good, HSG C
0.159	92	Weighted Average
0.039		24.53% Pervious Area
0.120		75.47% Impervious Area

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

Subcatchment 47S: HS-8

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 48S: HS-6a

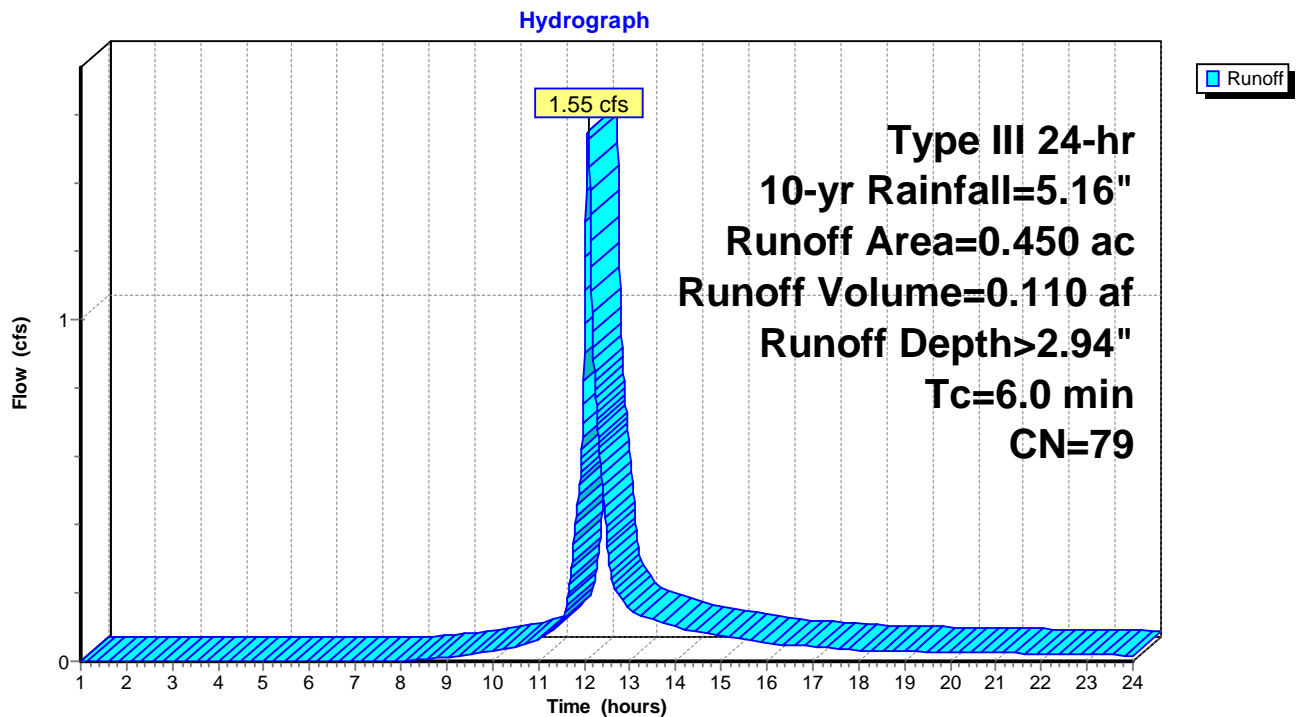
Runoff = 1.55 cfs @ 12.09 hrs, Volume= 0.110 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG C
0.350	74	>75% Grass cover, Good, HSG C
0.450	79	Weighted Average
0.350		77.78% Pervious Area
0.100		22.22% Impervious Area

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

Subcatchment 48S: HS-6a



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 49S: HS-10

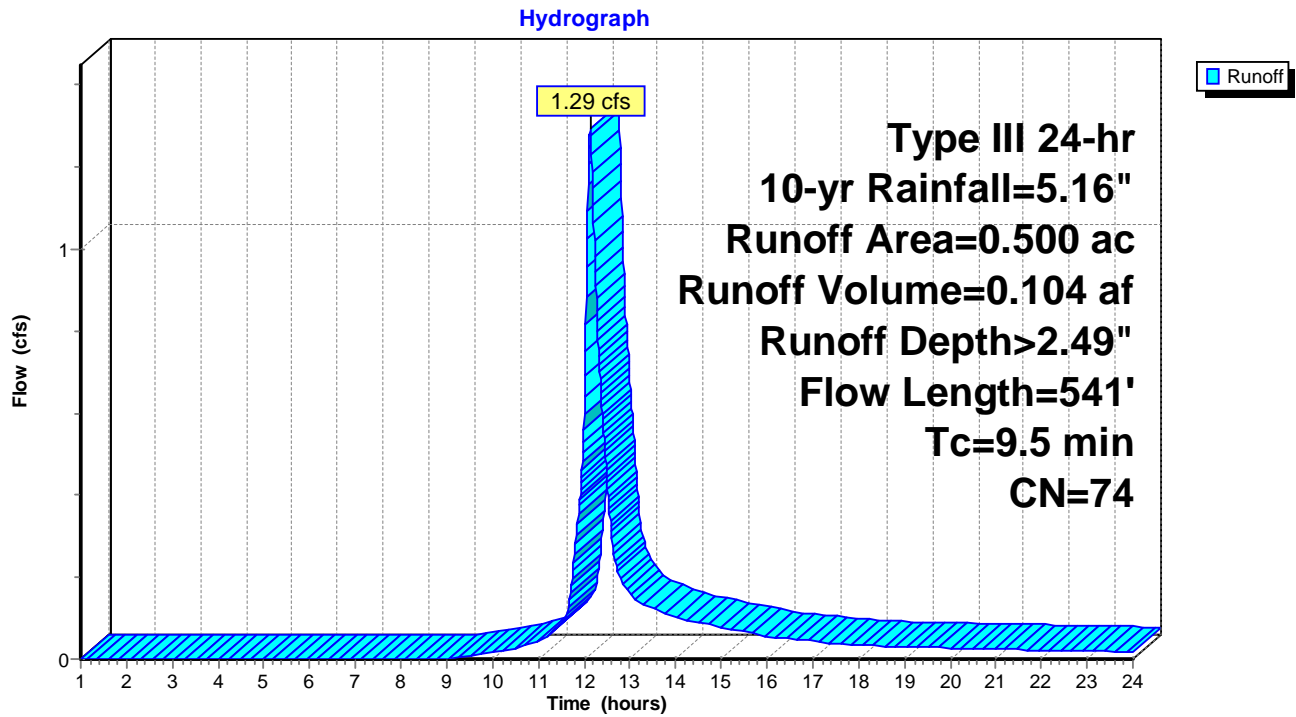
Runoff = 1.29 cfs @ 12.13 hrs, Volume= 0.104 af, Depth> 2.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.180	98	Paved parking, HSG B
0.320	61	>75% Grass cover, Good, HSG B
0.500	74	Weighted Average
0.320		64.00% Pervious Area
0.180		36.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
4.3	361	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.0	130	0.0110	2.13		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.5	541	Total			

Subcatchment 49S: HS-10



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 50S: PL-1

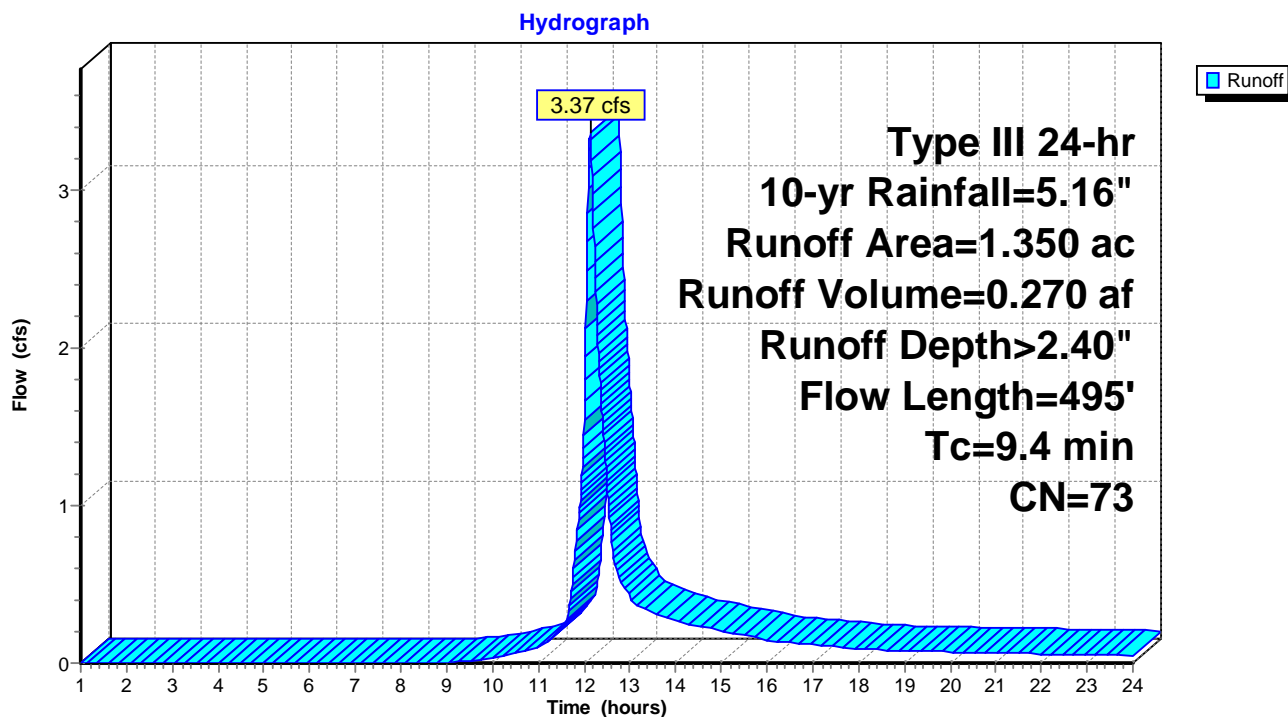
Runoff = 3.37 cfs @ 12.13 hrs, Volume= 0.270 af, Depth> 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.420	98	Paved parking, HSG B
0.930	61	>75% Grass cover, Good, HSG B
1.350	73	Weighted Average
0.930		68.89% Pervious Area
0.420		31.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0400	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
5.1	428	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.1	17	0.0200	2.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.4	495	Total			

Subcatchment 50S: PL-1



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 51S: PL-2

Runoff = 0.61 cfs @ 12.08 hrs, Volume= 0.049 af, Depth> 4.92"

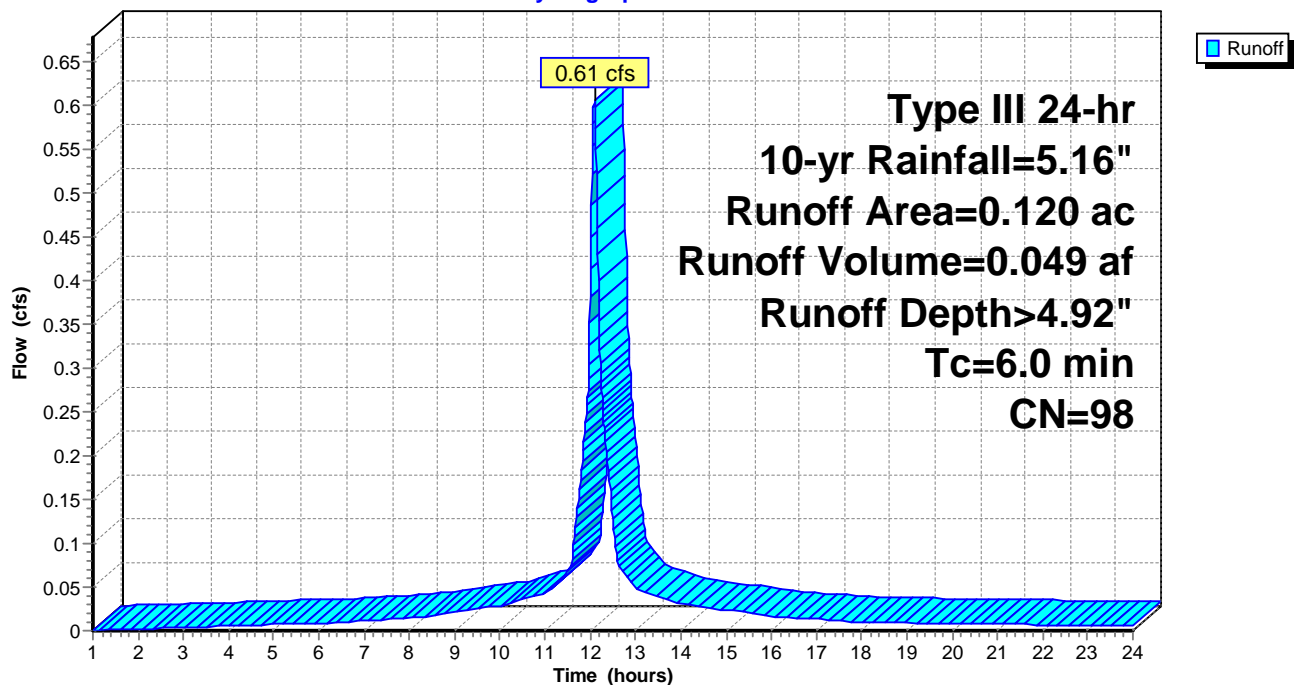
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.120	98	Paved parking, HSG B
0.120		100.00% Impervious Area

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

Subcatchment 51S: PL-2

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 52S: PL-3

Runoff = 0.26 cfs @ 12.08 hrs, Volume= 0.021 af, Depth> 4.92"

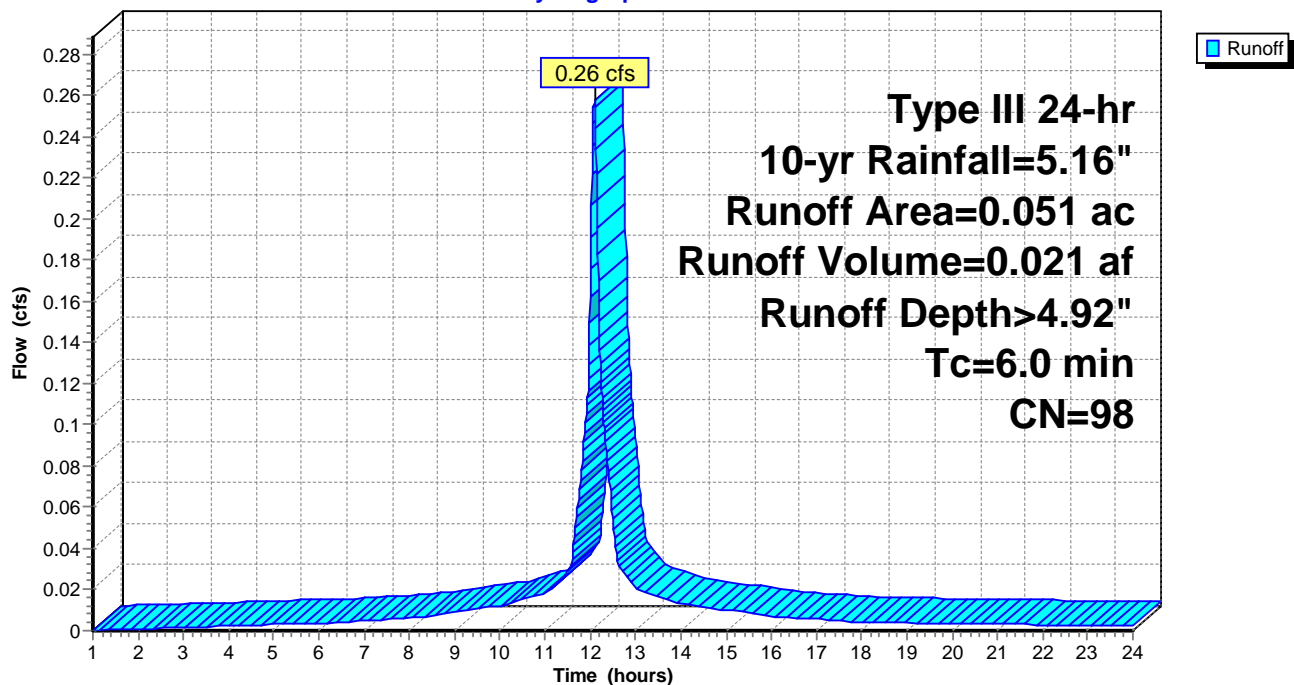
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.051	98	Paved parking, HSG B
0.051		100.00% Impervious Area

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

Subcatchment 52S: PL-3

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 53S: HS-6b

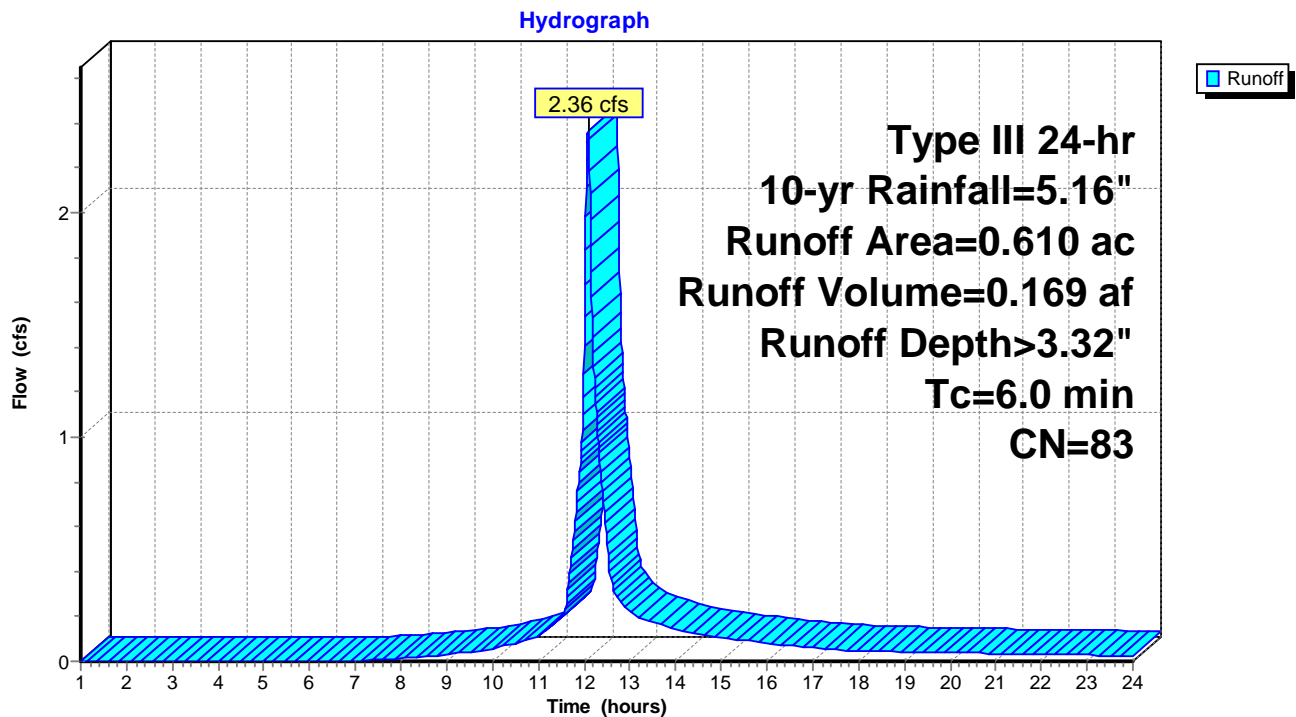
Runoff = 2.36 cfs @ 12.09 hrs, Volume= 0.169 af, Depth> 3.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG C
0.390	74	>75% Grass cover, Good, HSG C
0.610	83	Weighted Average
0.390		63.93% Pervious Area
0.220		36.07% Impervious Area

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

Subcatchment 53S: HS-6b



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 54S: PS-1

Runoff = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af, Depth> 2.84"

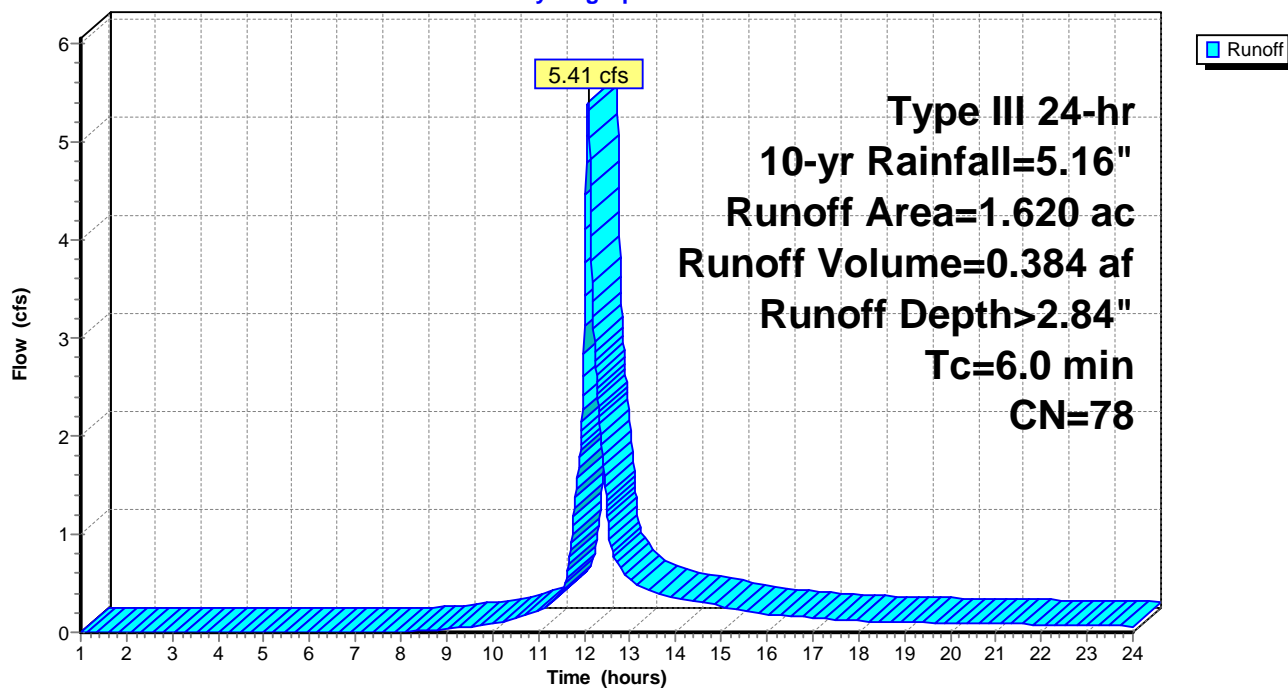
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.760	98	Paved parking, HSG B
0.860	61	>75% Grass cover, Good, HSG B
1.620	78	Weighted Average
0.860		53.09% Pervious Area
0.760		46.91% Impervious Area

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

Subcatchment 54S: PS-1

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 55S: PS-3

Runoff = 1.80 cfs @ 12.08 hrs, Volume= 0.141 af, Depth> 4.69"

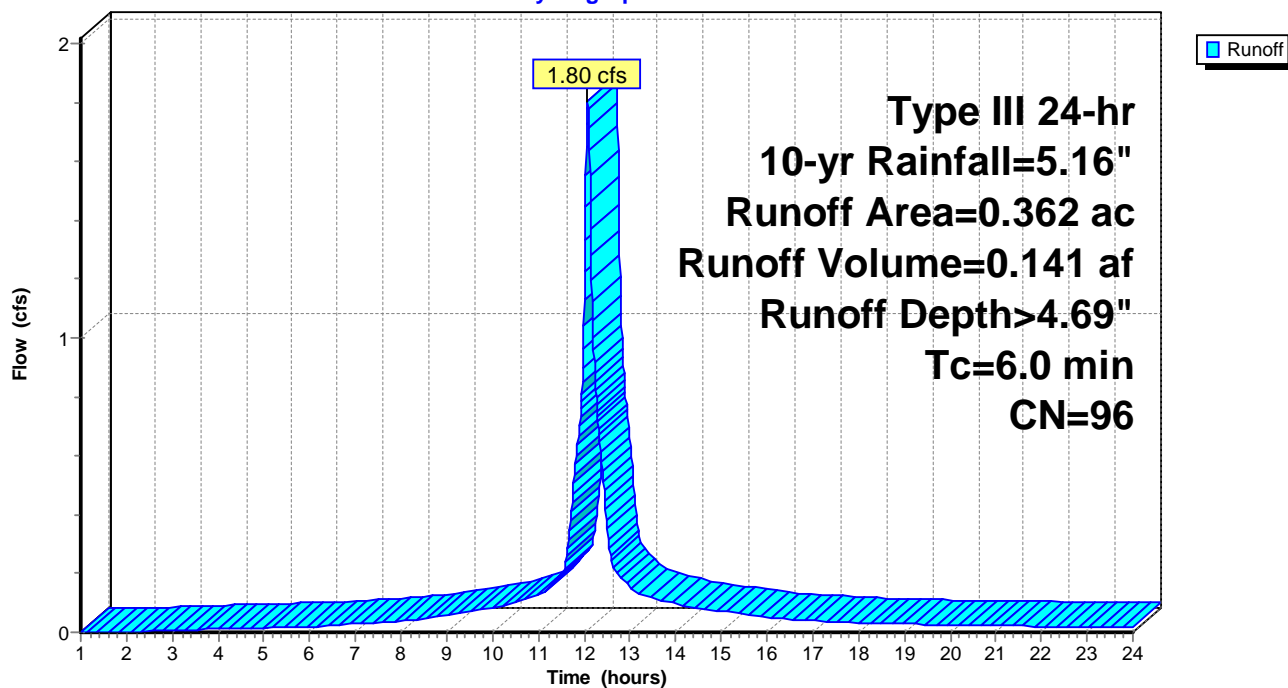
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.340	98	Paved parking, HSG A
0.022	61	>75% Grass cover, Good, HSG B
0.362	96	Weighted Average
0.022		6.08% Pervious Area
0.340		93.92% Impervious Area

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

Subcatchment 55S: PS-3

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 56S: MS-1

Runoff = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af, Depth> 4.92"

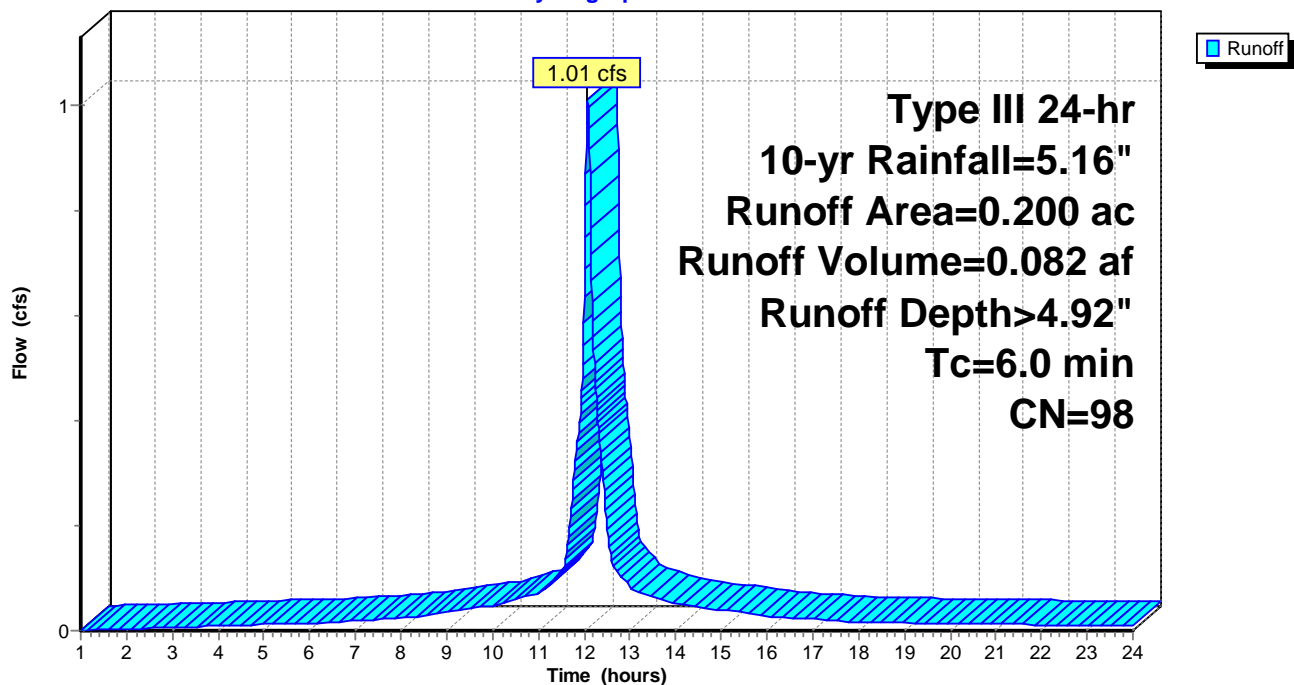
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.200	98	Paved parking, HSG A
0.200		100.00% Impervious Area

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

Subcatchment 56S: MS-1

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 57S: HS-9a

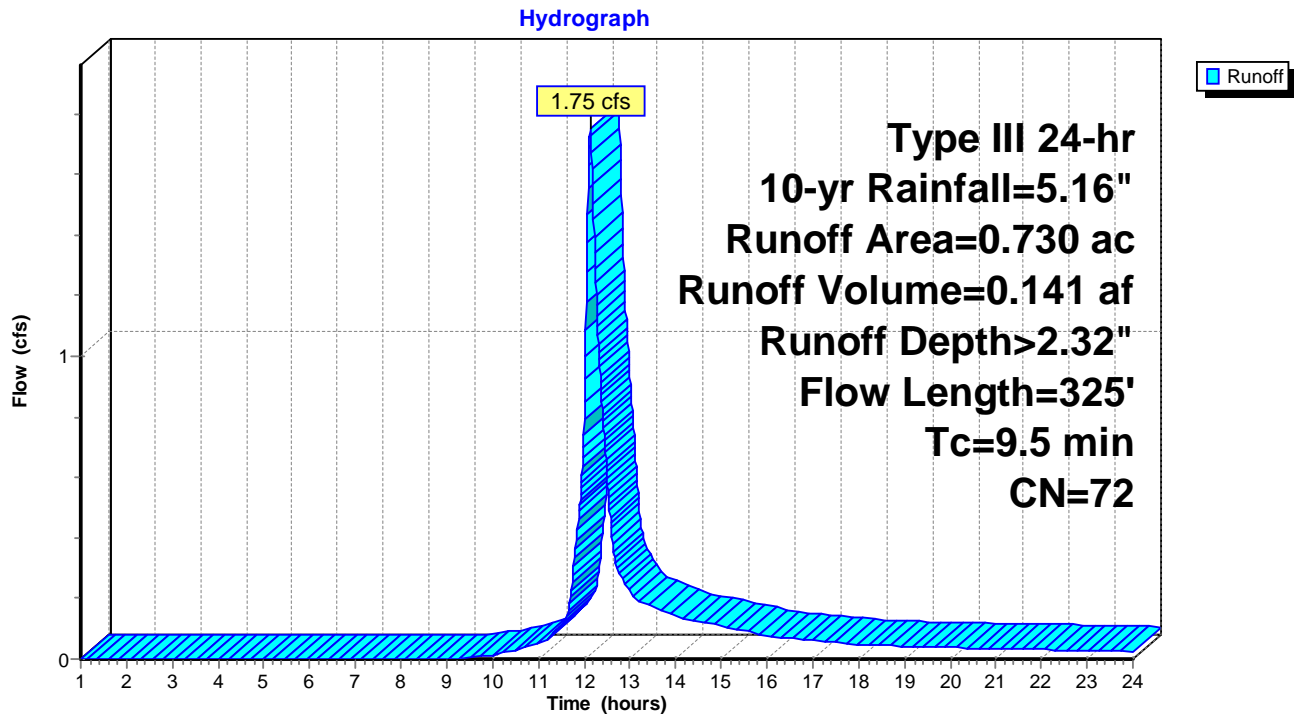
Runoff = 1.75 cfs @ 12.14 hrs, Volume= 0.141 af, Depth> 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG B
0.510	61	>75% Grass cover, Good, HSG B
0.730	72	Weighted Average
0.510		69.86% Pervious Area
0.220		30.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
3.4	200	0.0200	0.99		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.6	75	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.5	325	Total			

Subcatchment 57S: HS-9a



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 58S: MS-6

Runoff = 0.18 cfs @ 12.08 hrs, Volume= 0.015 af, Depth> 4.92"

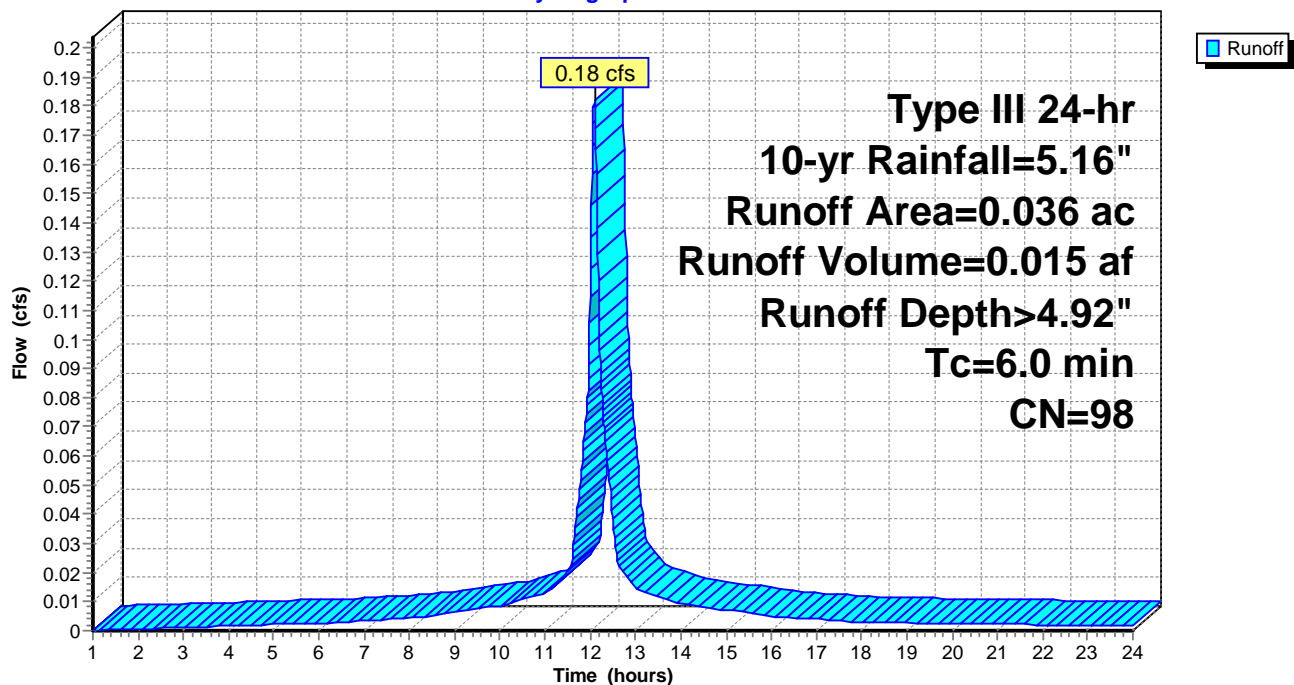
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.036	98	Paved parking, HSG A
0.036		100.00% Impervious Area

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

Subcatchment 58S: MS-6

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 59S: MS-8

Runoff = 0.40 cfs @ 12.08 hrs, Volume= 0.033 af, Depth> 4.92"

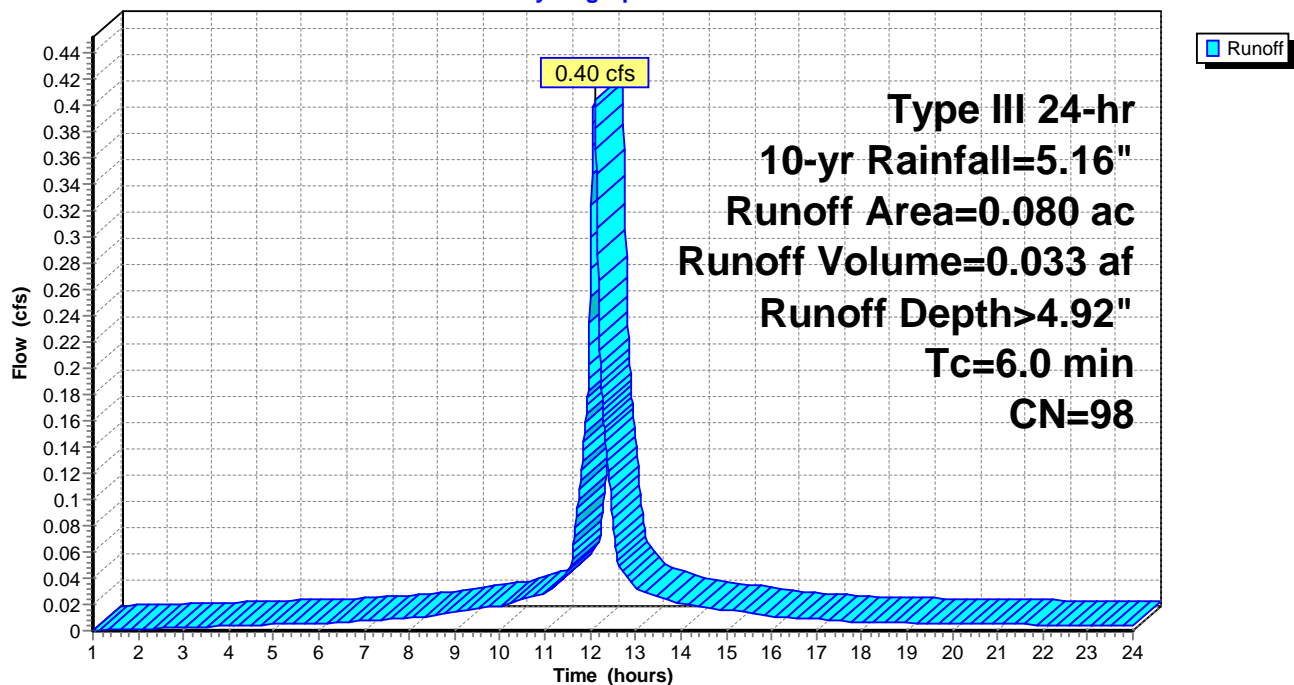
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.080	98	Paved parking, HSG A
0.080		100.00% Impervious Area

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

Subcatchment 59S: MS-8

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 60S: MS-7

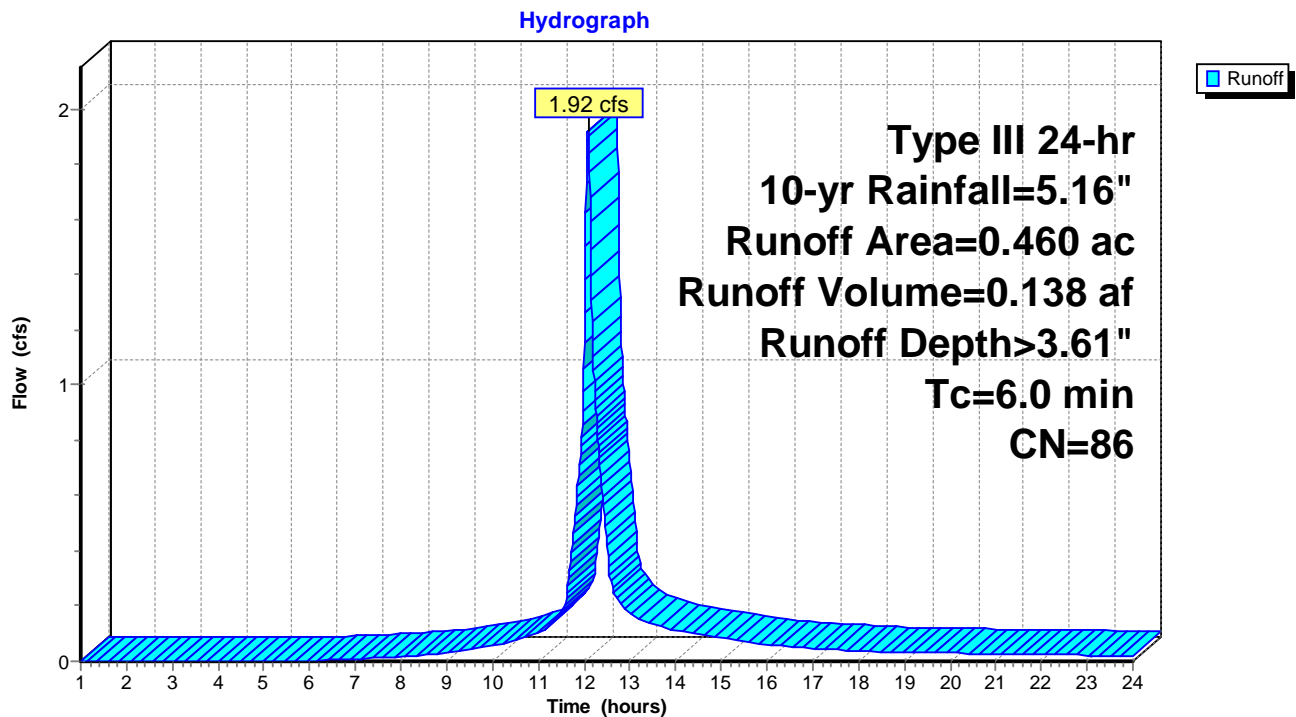
Runoff = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.370	98	Paved parking, HSG A
0.090	39	>75% Grass cover, Good, HSG A
0.460	86	Weighted Average
0.090		19.57% Pervious Area
0.370		80.43% Impervious Area

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

Subcatchment 60S: MS-7



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 61S: MS-5

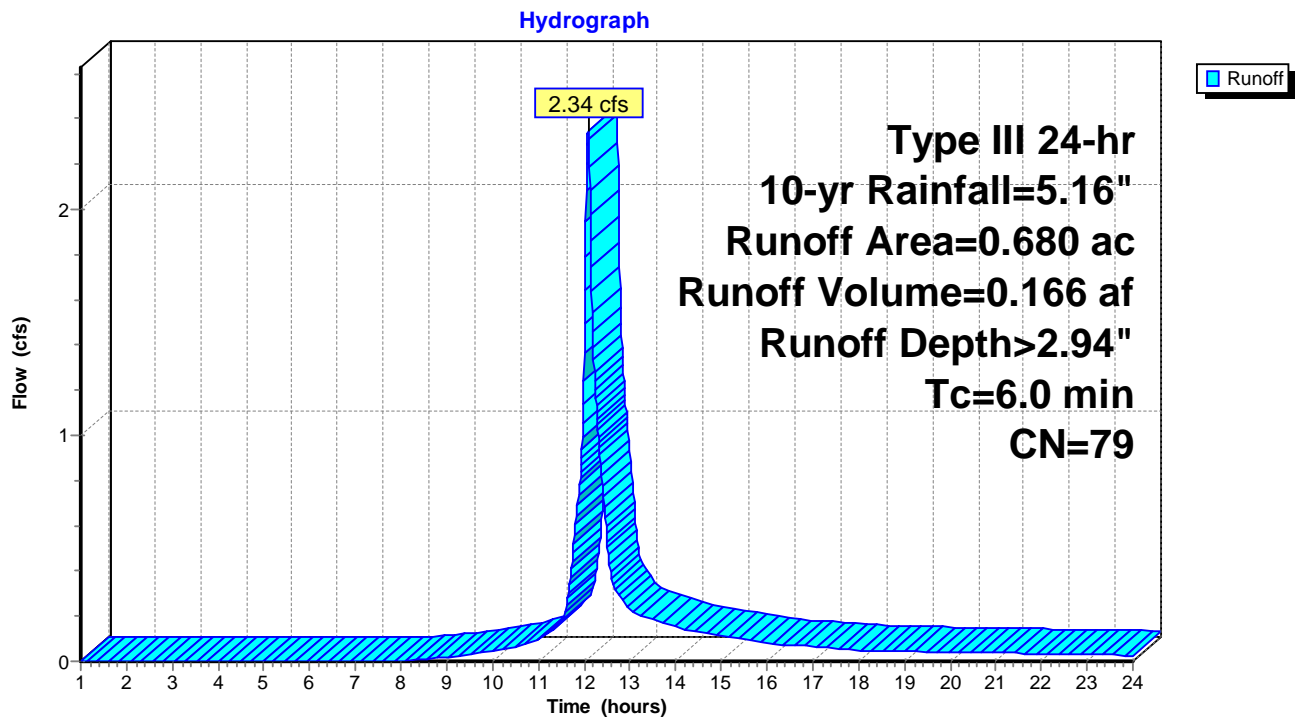
Runoff = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.460	98	Paved parking, HSG A
0.220	39	>75% Grass cover, Good, HSG A
0.680	79	Weighted Average
0.220		32.35% Pervious Area
0.460		67.65% Impervious Area

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

Subcatchment 61S: MS-5



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 62S: MS-4

Runoff = 0.79 cfs @ 12.09 hrs, Volume= 0.056 af, Depth> 2.58"

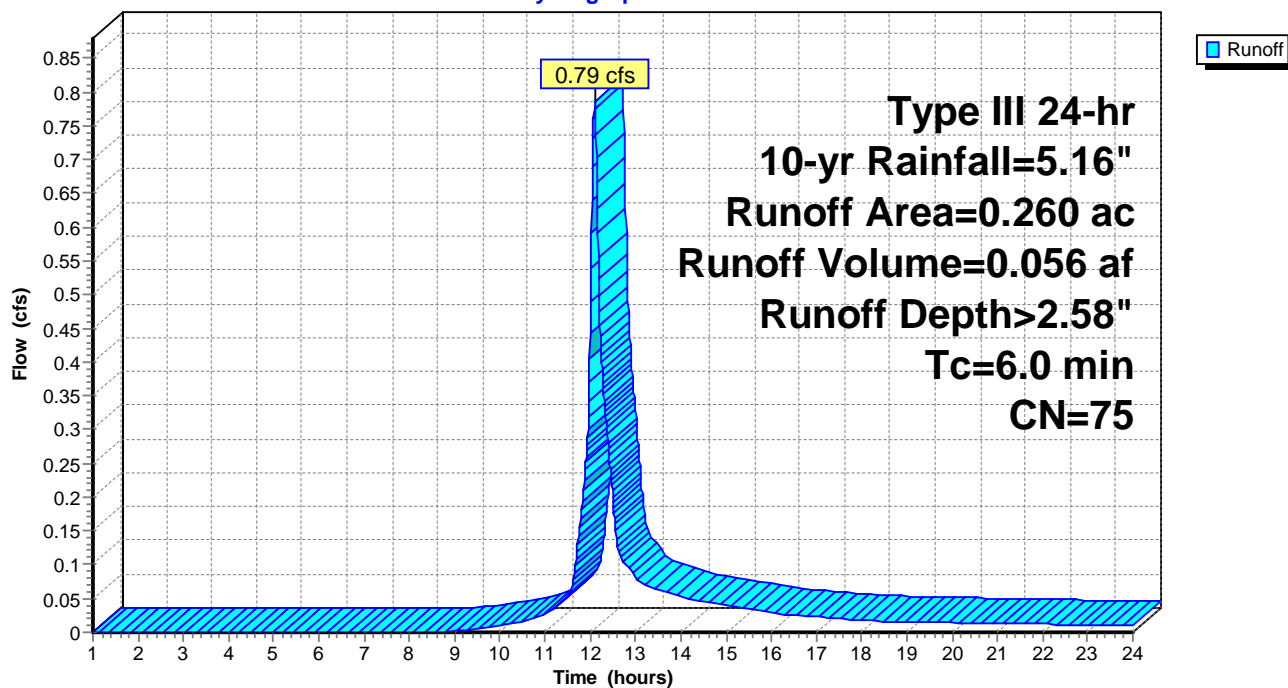
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.160	98	Paved parking, HSG A
0.100	39	>75% Grass cover, Good, HSG A
0.260	75	Weighted Average
0.100		38.46% Pervious Area
0.160		61.54% Impervious Area

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

Subcatchment 62S: MS-4

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 63S: MS-3

Runoff = 0.88 cfs @ 12.09 hrs, Volume= 0.062 af, Depth> 3.12"

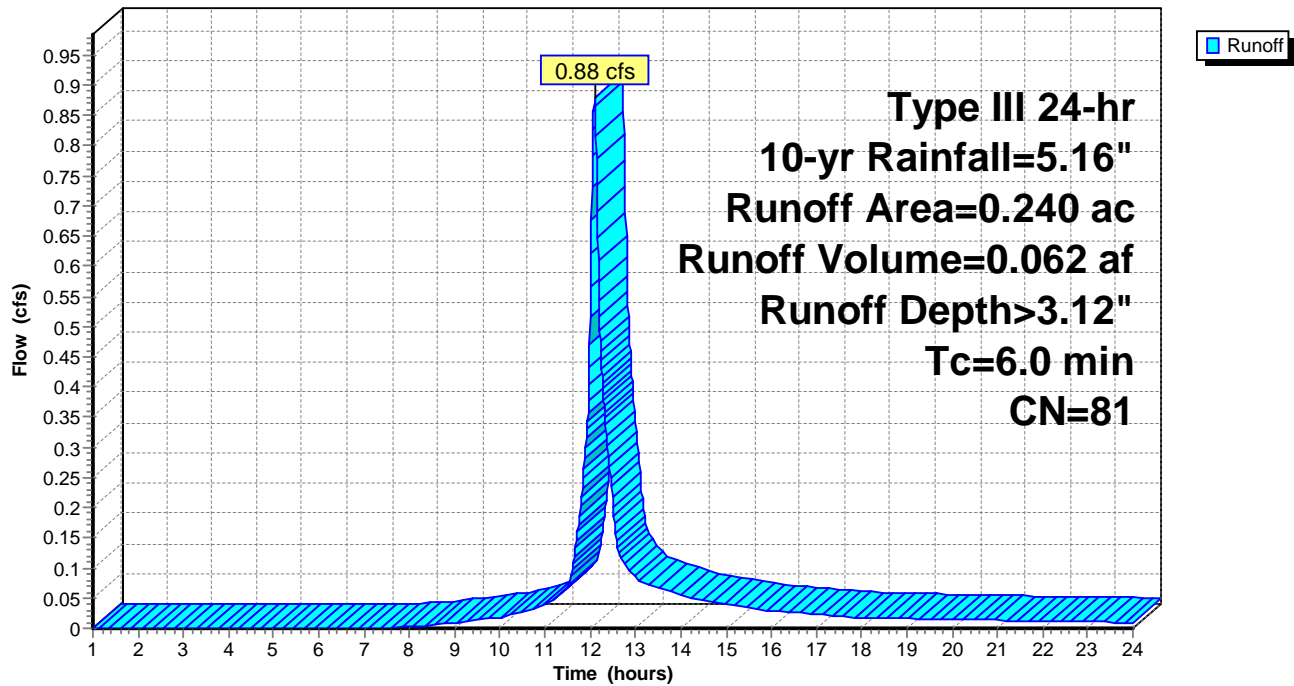
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.170	98	Paved parking, HSG A
0.070	39	>75% Grass cover, Good, HSG A
0.240	81	Weighted Average
0.070		29.17% Pervious Area
0.170		70.83% Impervious Area

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

Subcatchment 63S: MS-3

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 64S: HS-11

Runoff = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af, Depth> 2.32"

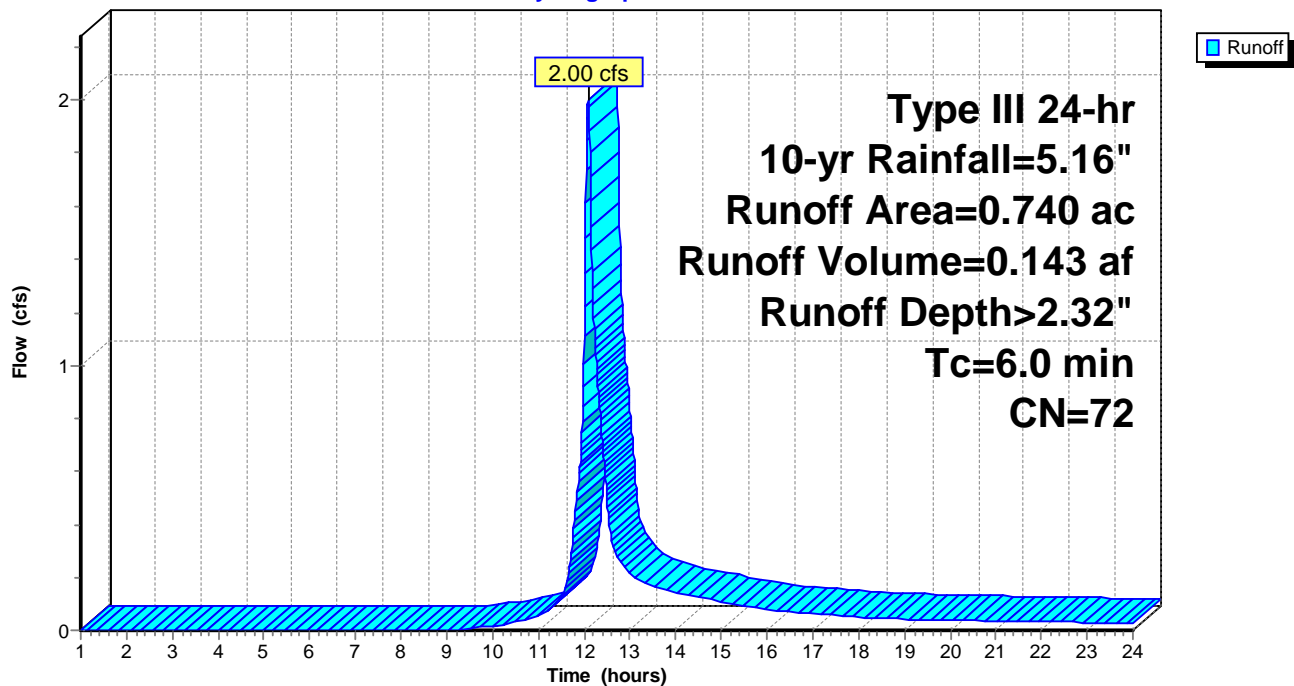
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG B
0.520	61	>75% Grass cover, Good, HSG B
0.740	72	Weighted Average
0.520		70.27% Pervious Area
0.220		29.73% Impervious Area

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

Subcatchment 64S: HS-11

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 65S: HS-12

Runoff = 0.45 cfs @ 12.08 hrs, Volume= 0.037 af, Depth> 4.92"

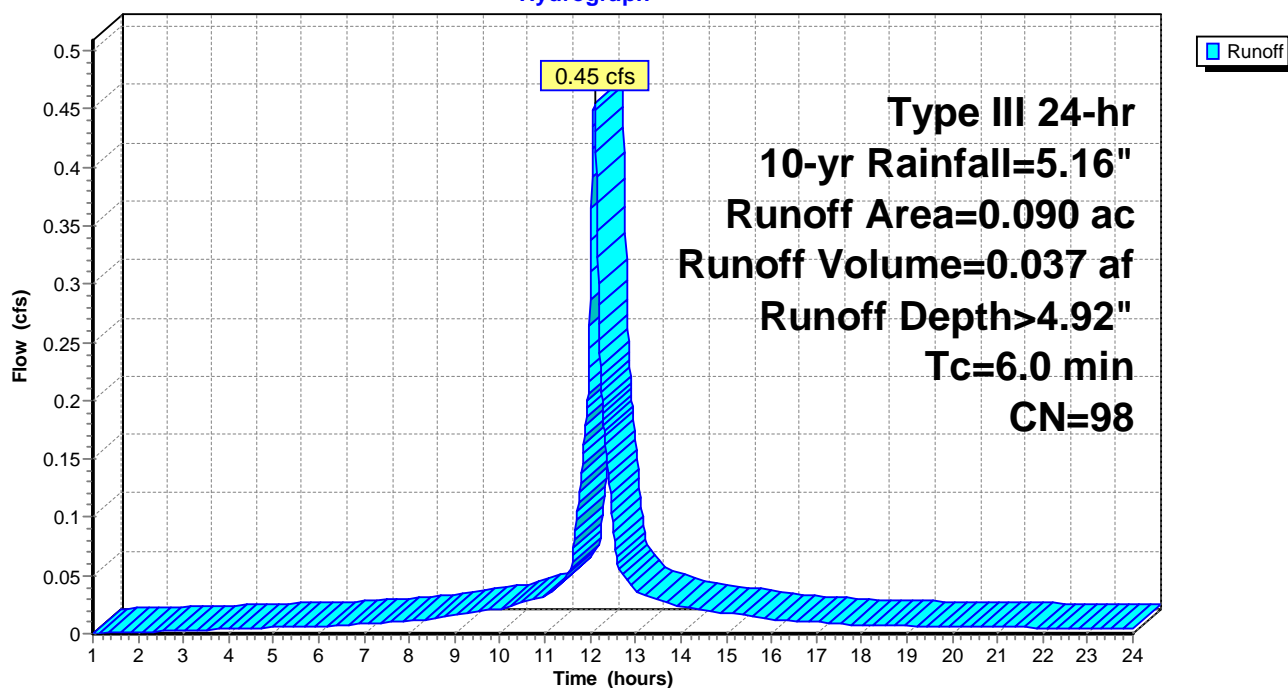
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.090	98	Paved parking, HSG B
0.090		100.00% Impervious Area

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

Subcatchment 65S: HS-12

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 66S: HS-14

Runoff = 1.19 cfs @ 12.09 hrs, Volume= 0.086 af, Depth> 2.24"

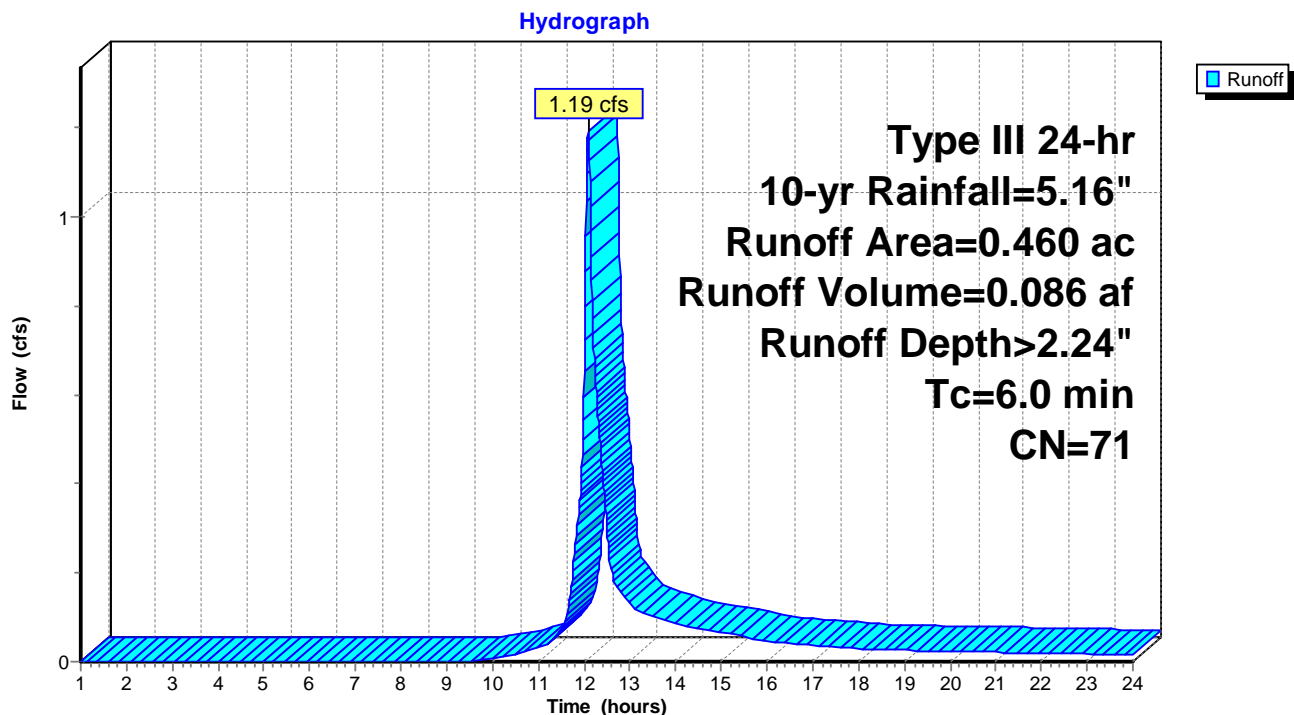
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.250	98	Unconnected pavement, HSG A
0.210	39	>75% Grass cover, Good, HSG A
0.460	71	Weighted Average
0.210		45.65% Pervious Area
0.250		54.35% Impervious Area
0.250		100.00% Unconnected

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

Subcatchment 66S: HS-14



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 67S: HS-13

Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Depth> 3.61"

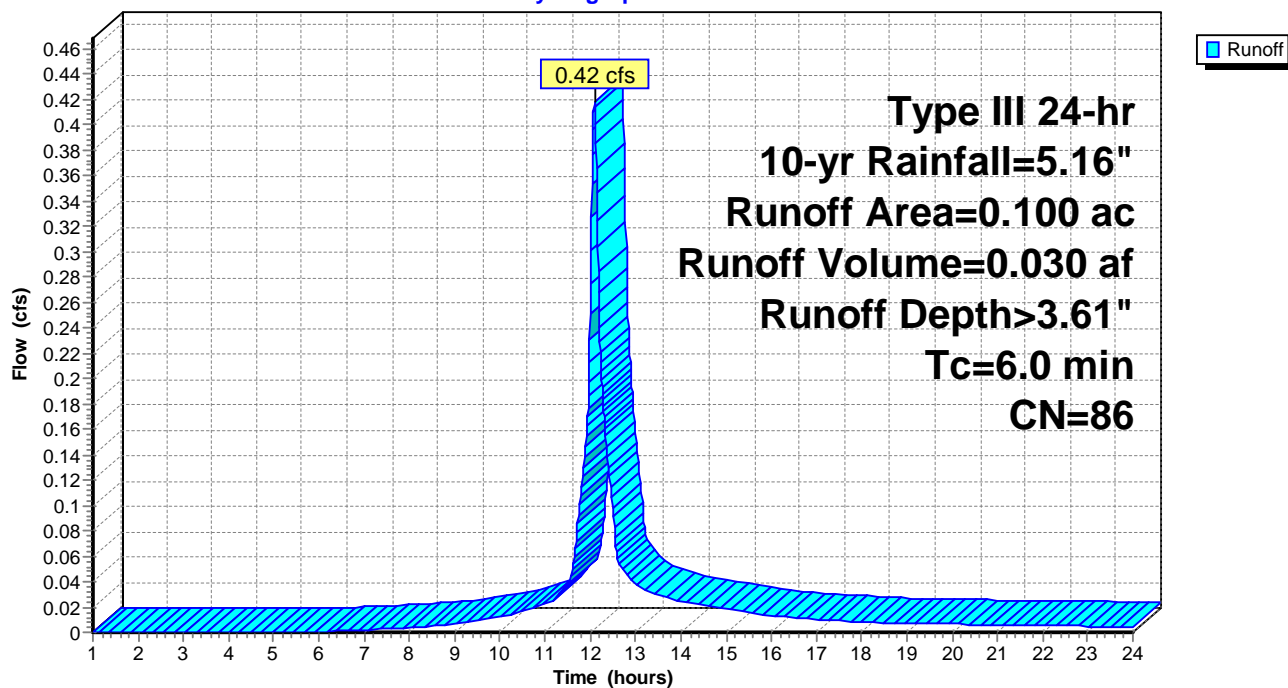
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.080	98	Paved parking, HSG A
0.020	39	>75% Grass cover, Good, HSG A
0.100	86	Weighted Average
0.020		20.00% Pervious Area
0.080		80.00% Impervious Area

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

Subcatchment 67S: HS-13

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 68S: MS-9

Runoff = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af, Depth> 4.92"

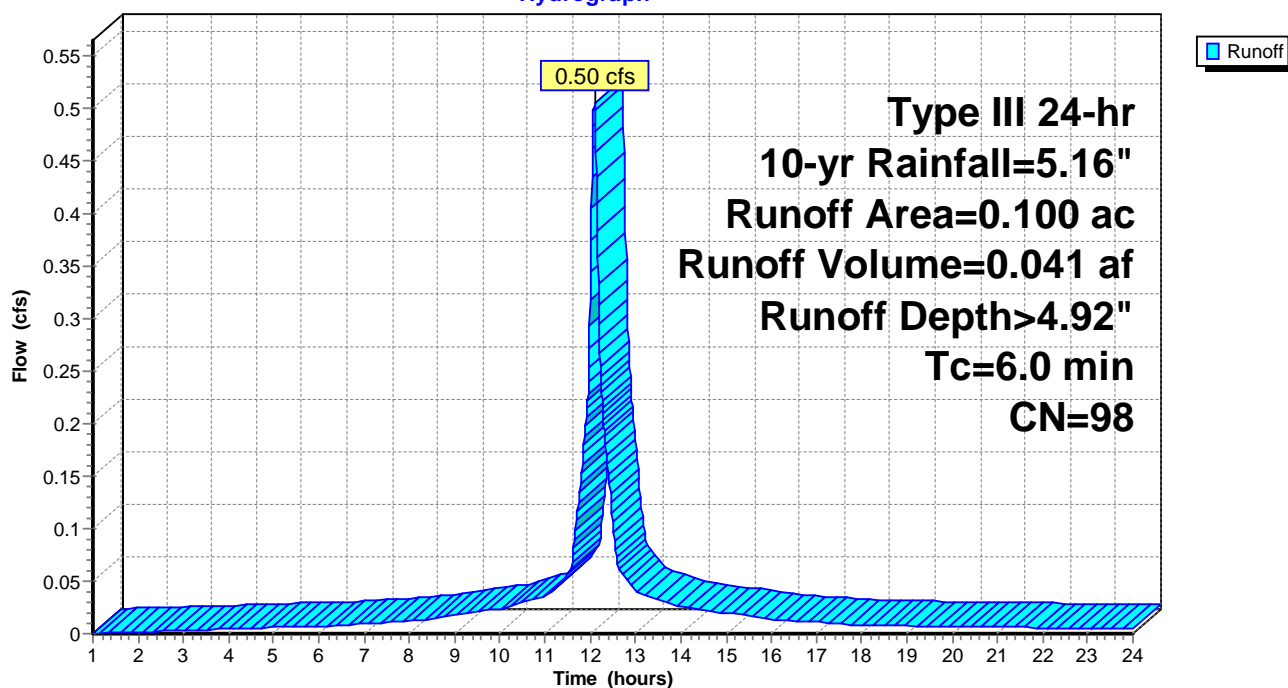
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.100	98	Paved parking, HSG A
0.100		100.00% Impervious Area

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

Subcatchment 68S: MS-9

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 69S: M-10

Runoff = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af, Depth> 4.92"

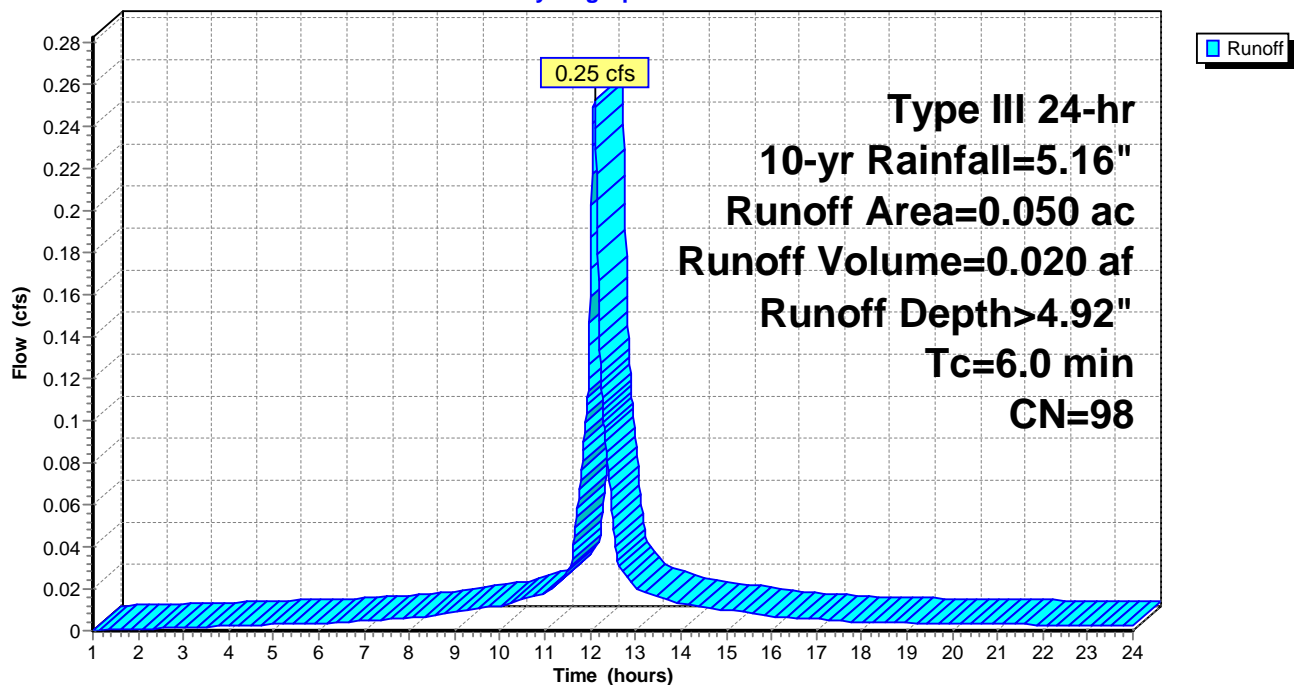
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.050	98	Paved parking, HSG A
0.050		100.00% Impervious Area

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

Subcatchment 69S: M-10

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 70S: MS-11

Runoff = 1.51 cfs @ 12.08 hrs, Volume= 0.123 af, Depth> 4.92"

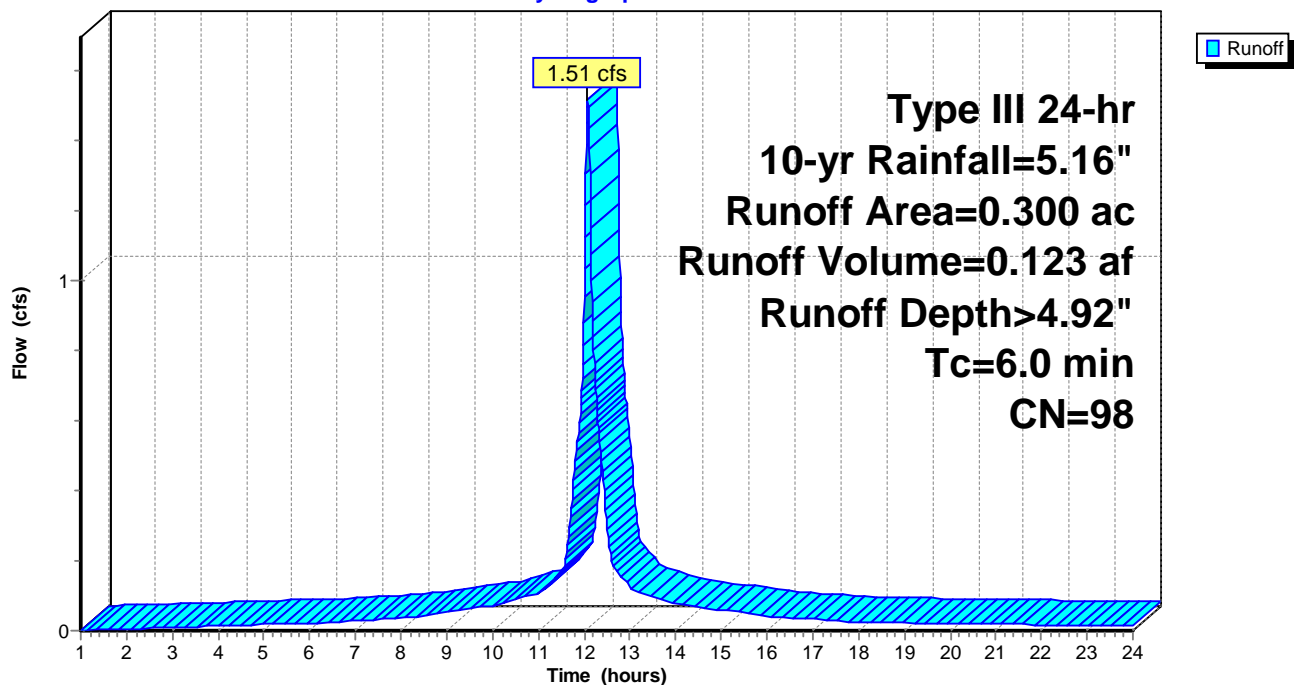
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.300	98	Paved parking, HSG A
0.300		100.00% Impervious Area

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

Subcatchment 70S: MS-11

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 71S: Wetlands/Woods

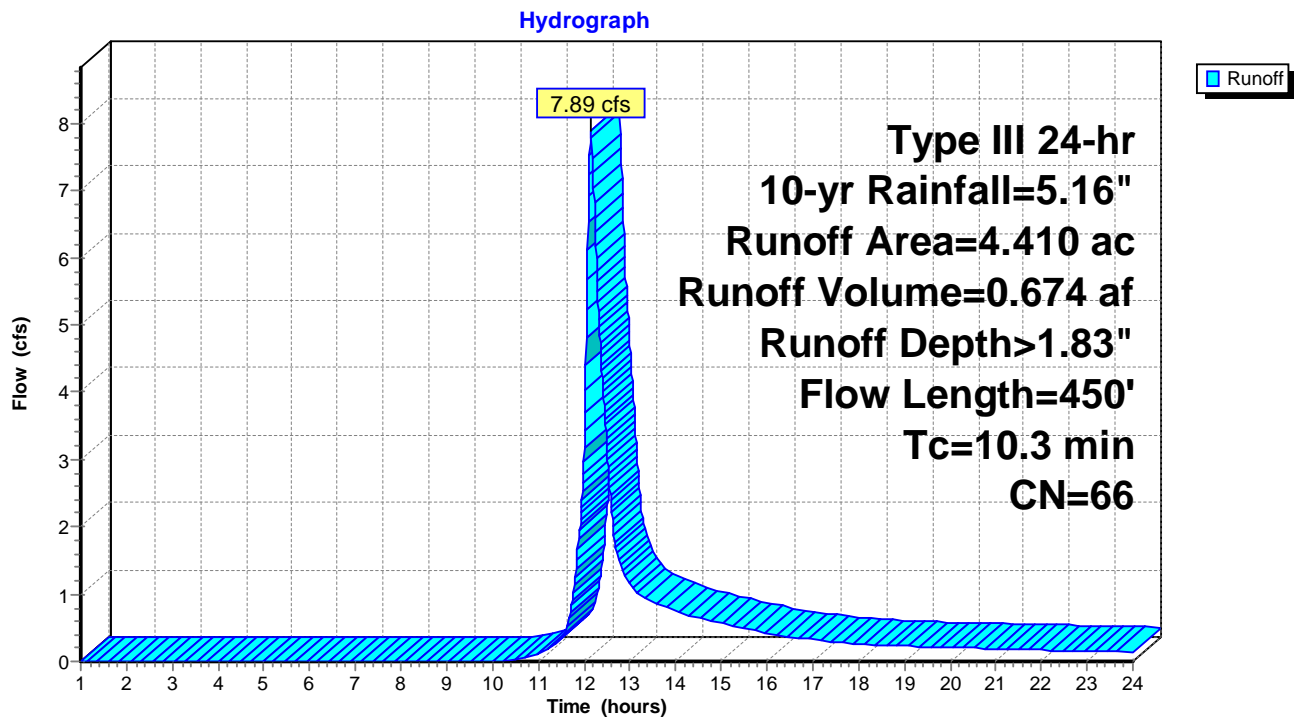
Runoff = 7.89 cfs @ 12.15 hrs, Volume= 0.674 af, Depth> 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.830	98	Paved parking, HSG B
3.580	58	Woods/grass comb., Good, HSG B
4.410	66	Weighted Average
3.580		81.18% Pervious Area
0.830		18.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	50	0.1100	0.14		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.34"
4.2	400	0.1000	1.58		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
10.3	450	Total			

Subcatchment 71S: Wetlands/Woods



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 72S: HS-9b

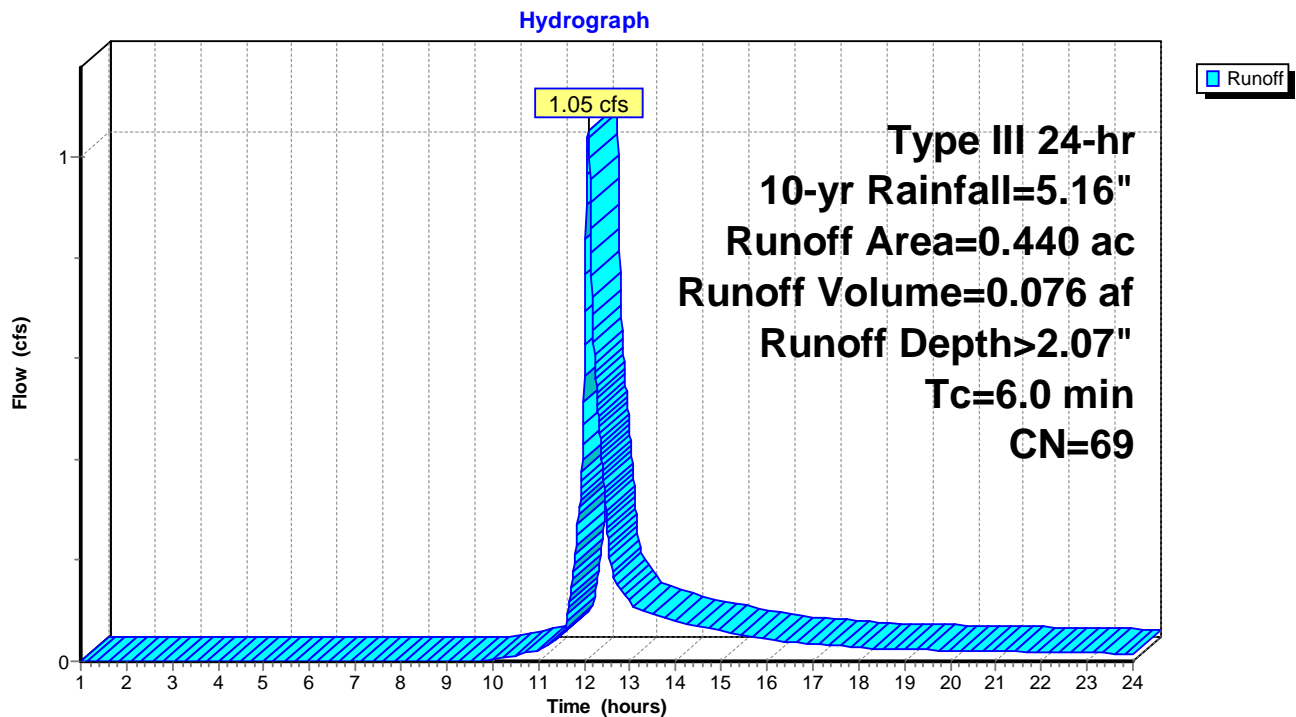
Runoff = 1.05 cfs @ 12.09 hrs, Volume= 0.076 af, Depth> 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.090	98	Paved parking, HSG B
0.350	61	>75% Grass cover, Good, HSG B
0.440	69	Weighted Average
0.350		79.55% Pervious Area
0.090		20.45% Impervious Area

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

Subcatchment 72S: HS-9b



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 73S: PS-2a

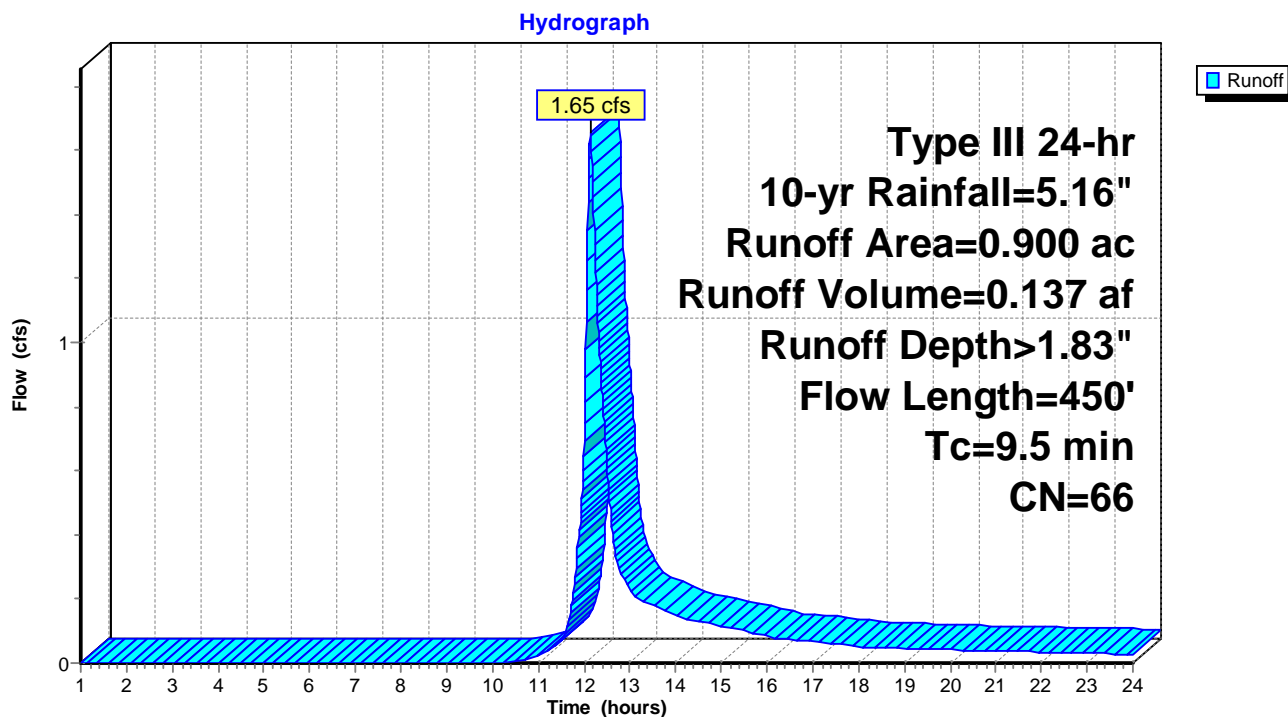
Runoff = 1.65 cfs @ 12.14 hrs, Volume= 0.137 af, Depth> 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.120	98	Paved parking, HSG B
0.780	61	>75% Grass cover, Good, HSG B
0.900	66	Weighted Average
0.780		86.67% Pervious Area
0.120		13.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
3.6	300	0.0400	1.40		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.4	100	0.0400	4.06		Shallow Concentrated Flow, Paved Kv= 20.3 fps
9.5	450	Total			

Subcatchment 73S: PS-2a



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 74S: MS-2

Runoff = 2.02 cfs @ 12.08 hrs, Volume= 0.164 af, Depth> 4.92"

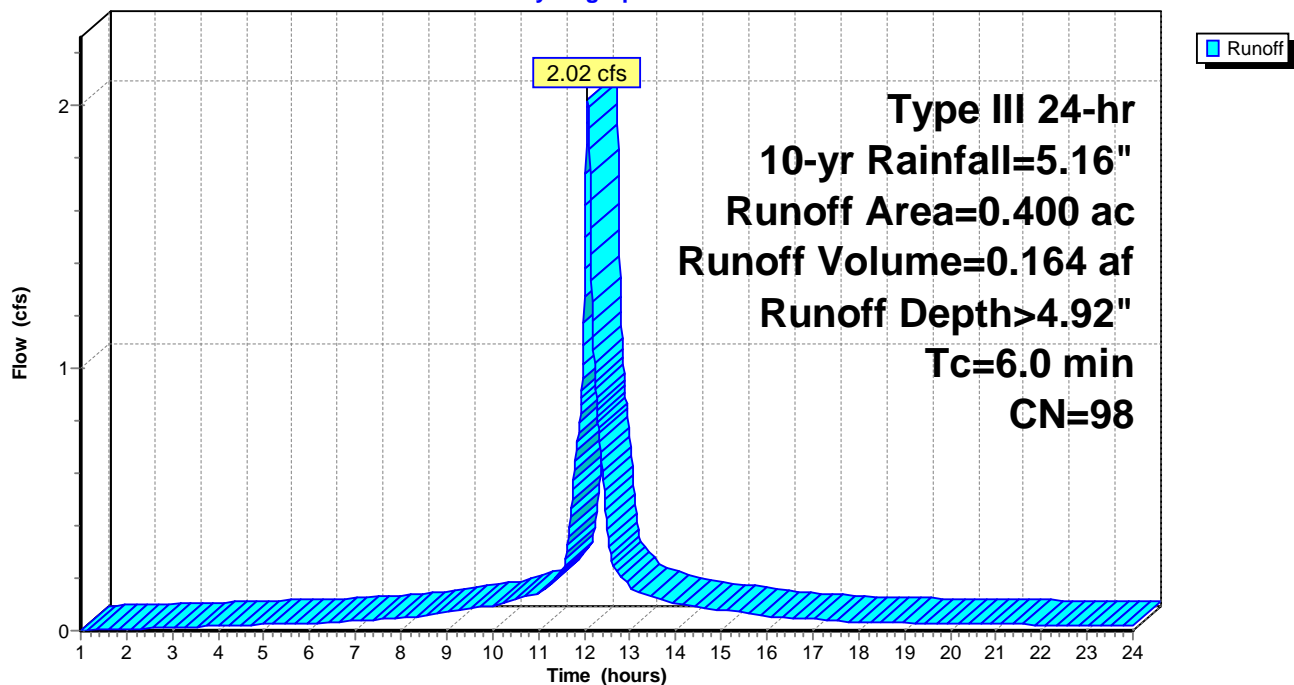
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.400	98	Paved parking, HSG A
0.400		100.00% Impervious Area

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

Subcatchment 74S: MS-2

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 76S: PS-2c

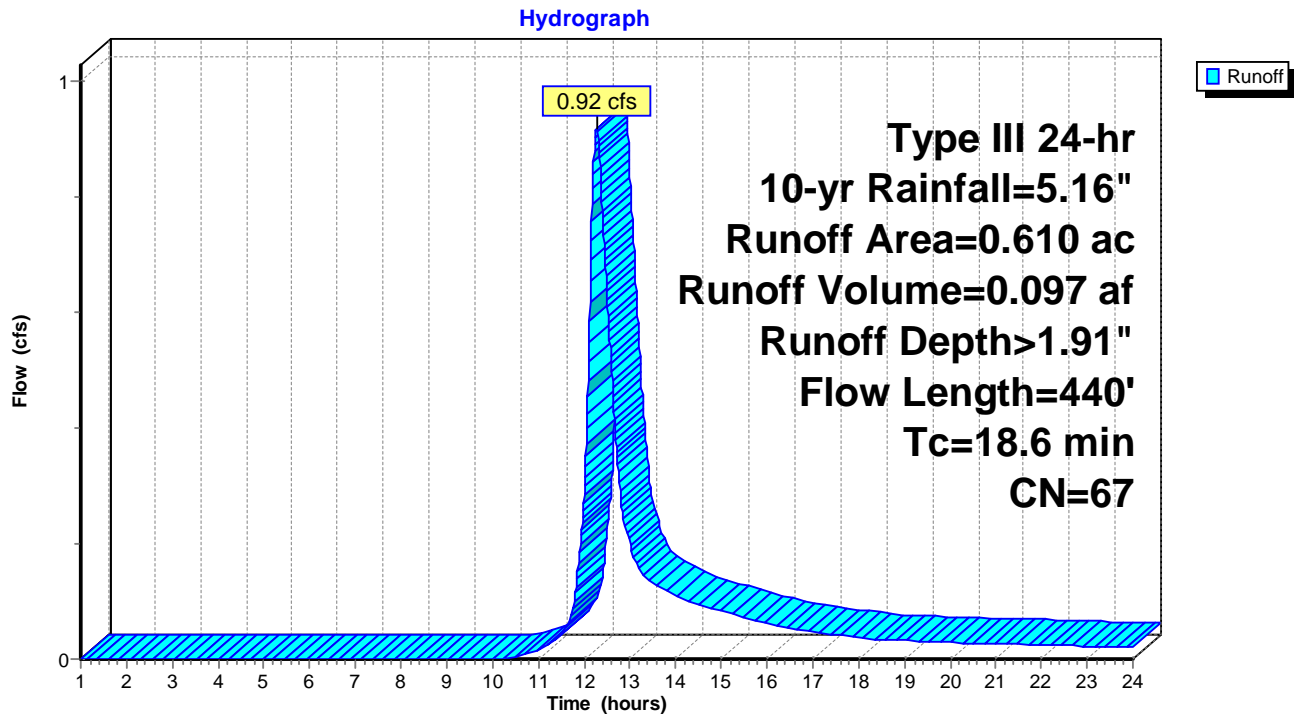
Runoff = 0.92 cfs @ 12.27 hrs, Volume= 0.097 af, Depth> 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.140	98	Paved parking, HSG B
0.470	58	Woods/grass comb., Good, HSG B
0.610	67	Weighted Average
0.470		77.05% Pervious Area
0.140		22.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.9	50	0.0100	0.05		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.34"
2.2	250	0.1500	1.94		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.5	140	0.0500	4.54		Shallow Concentrated Flow, Paved Kv= 20.3 fps
18.6	440	Total			

Subcatchment 76S: PS-2c



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 77S: PS-2d

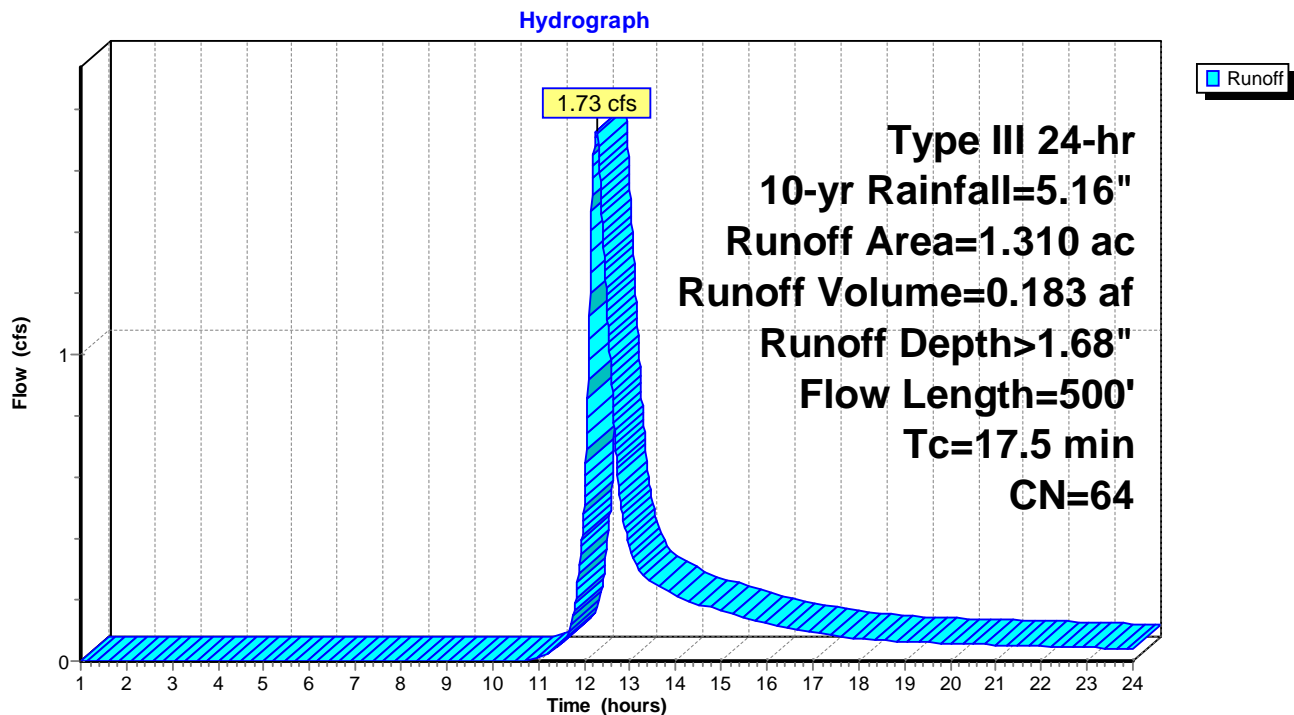
Runoff = 1.73 cfs @ 12.26 hrs, Volume= 0.183 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.210	98	Paved parking, HSG B
1.100	58	Woods/grass comb., Good, HSG B
1.310	64	Weighted Average
1.100		83.97% Pervious Area
0.210		16.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	50	0.0200	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.34"
2.6	110	0.0200	0.71		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
2.8	340	0.0100	2.03		Shallow Concentrated Flow, Paved Kv= 20.3 fps
17.5	500	Total			

Subcatchment 77S: PS-2d



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Subcatchment 78S: PS-2b

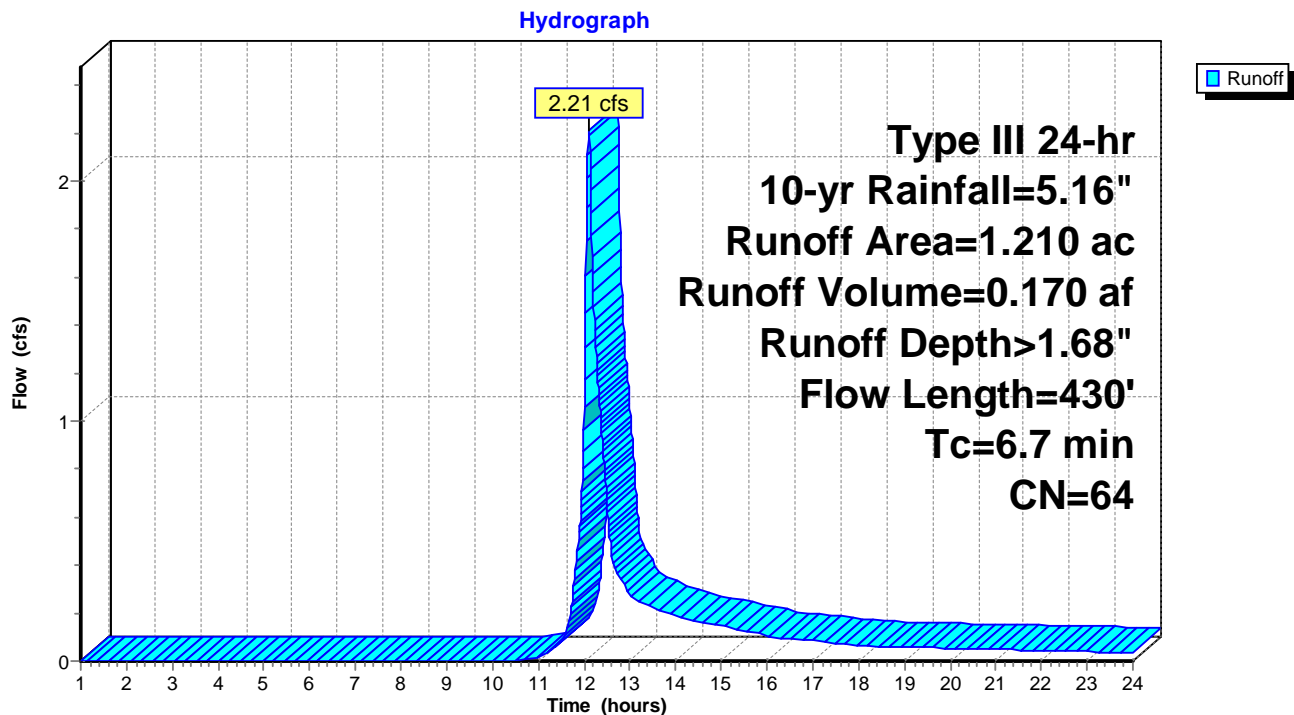
Runoff = 2.21 cfs @ 12.11 hrs, Volume= 0.170 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.16"

Area (ac)	CN	Description
0.170	98	Paved parking, HSG B
1.040	58	Woods/grass comb., Good, HSG B
1.210	64	Weighted Average
1.040		85.95% Pervious Area
0.170		14.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	50	0.0500	0.22		Sheet Flow, Grass: Short n= 0.150 P2= 3.34"
2.7	300	0.1400	1.87		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.2	80	0.1400	7.60		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.7	430	Total			

Subcatchment 78S: PS-2b



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 1P: CB-1031

[57] Hint: Peaked at 334.54' (Flood elevation advised)

Inflow Area = 0.390 ac, 38.46% Impervious, Inflow Depth > 1.54" for 10-yr event
Inflow = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af
Outflow = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min
Primary = 0.65 cfs @ 12.10 hrs, Volume= 0.050 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 334.54' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	334.20'	15.0" Round RCP_Round 15" L= 82.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 334.20' / 331.40' S= 0.0341 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	337.60'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.65 cfs @ 12.10 hrs HW=334.54' (Free Discharge)

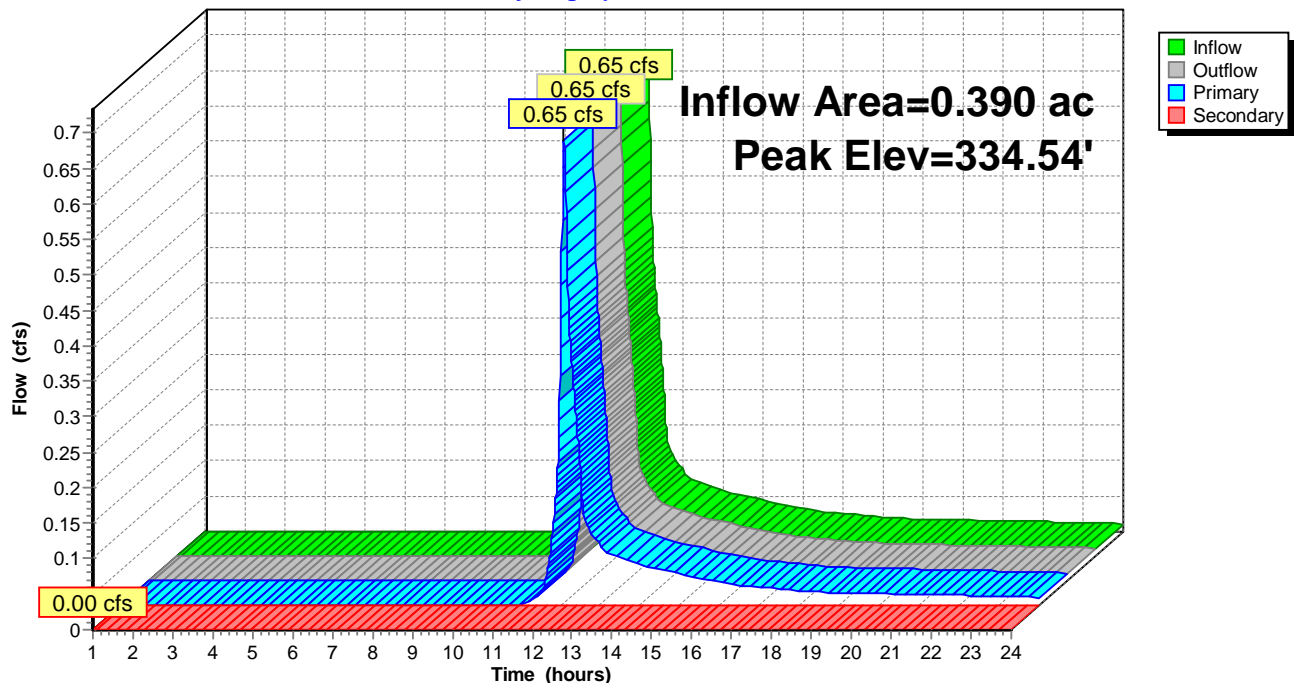
↑1=RCP_Round 15" (Inlet Controls 0.65 cfs @ 2.46 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=334.20' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 1P: CB-1031

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 2P: MH-43

[79] Warning: Submerged Pond 3P Primary device # 1 INLET by 0.34'

Inflow Area = 0.884 ac, 54.30% Impervious, Inflow Depth > 2.93" for 10-yr event
Inflow = 2.90 cfs @ 12.09 hrs, Volume= 0.216 af
Outflow = 2.90 cfs @ 12.09 hrs, Volume= 0.216 af, Atten= 0%, Lag= 0.0 min
Primary = 2.90 cfs @ 12.09 hrs, Volume= 0.216 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 331.15' @ 12.09 hrs

Flood Elev= 335.45'

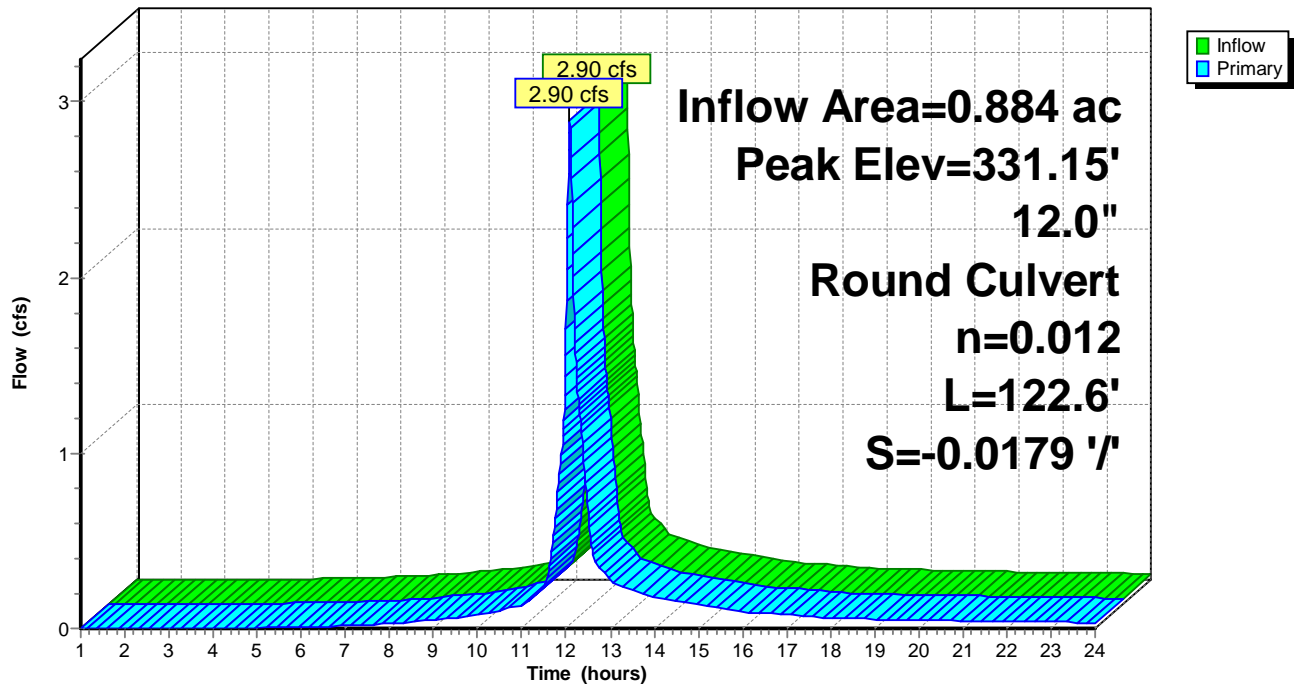
Device	Routing	Invert	Outlet Devices
#1	Primary	330.20'	12.0" Round RCP_Round 12" L= 122.6' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 328.00' / 330.20' S= -0.0179 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.89 cfs @ 12.09 hrs HW=331.14' (Free Discharge)

↑1=RCP_Round 12" (Outlet Controls 2.89 cfs @ 3.68 fps)

Pond 2P: MH-43

Hydrograph



High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 3P: CB-1030

[57] Hint: Peaked at 331.57' (Flood elevation advised)

Inflow Area = 0.494 ac, 66.80% Impervious, Inflow Depth > 4.03" for 10-yr event
Inflow = 2.25 cfs @ 12.08 hrs, Volume= 0.166 af
Outflow = 2.25 cfs @ 12.08 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.0 min
Primary = 2.25 cfs @ 12.08 hrs, Volume= 0.166 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 331.57' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	330.80'	15.0" Round RCP_Round 15" L= 15.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 330.80' / 330.60' S= 0.0133 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	335.02'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	335.02'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.24 cfs @ 12.08 hrs HW=331.57' (Free Discharge)

↑**1=RCP_Round 15"** (Barrel Controls 2.24 cfs @ 4.07 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.80' (Free Discharge)

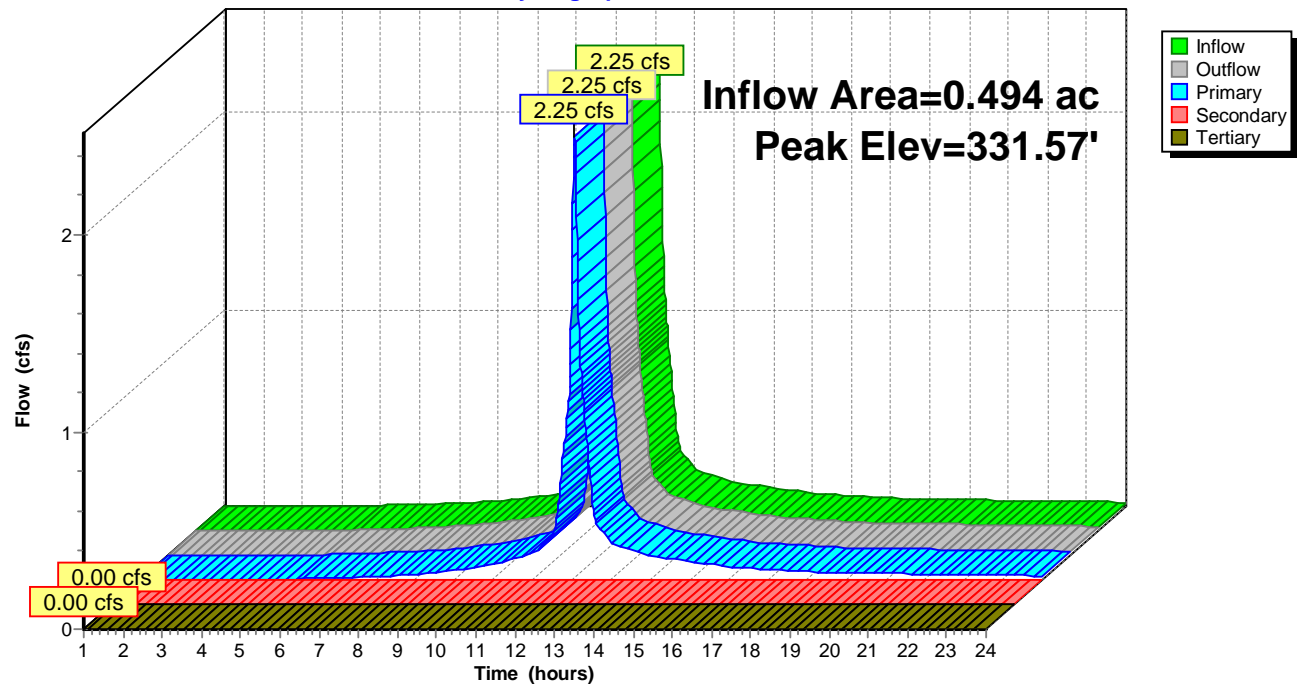
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.80' (Free Discharge)

↑**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 3P: CB-1030

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 4P: CB-1029

[57] Hint: Peaked at 334.52' (Flood elevation advised)

Inflow Area = 0.170 ac, 76.47% Impervious, Inflow Depth > 4.24" for 10-yr event
Inflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af
Outflow = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min
Primary = 0.80 cfs @ 12.08 hrs, Volume= 0.060 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 334.52' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	333.90'	12.0" Round CMP_Round 12" L= 22.5' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 333.90' / 333.70' S= 0.0089 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	334.92'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.80 cfs @ 12.08 hrs HW=334.52' (Free Discharge)

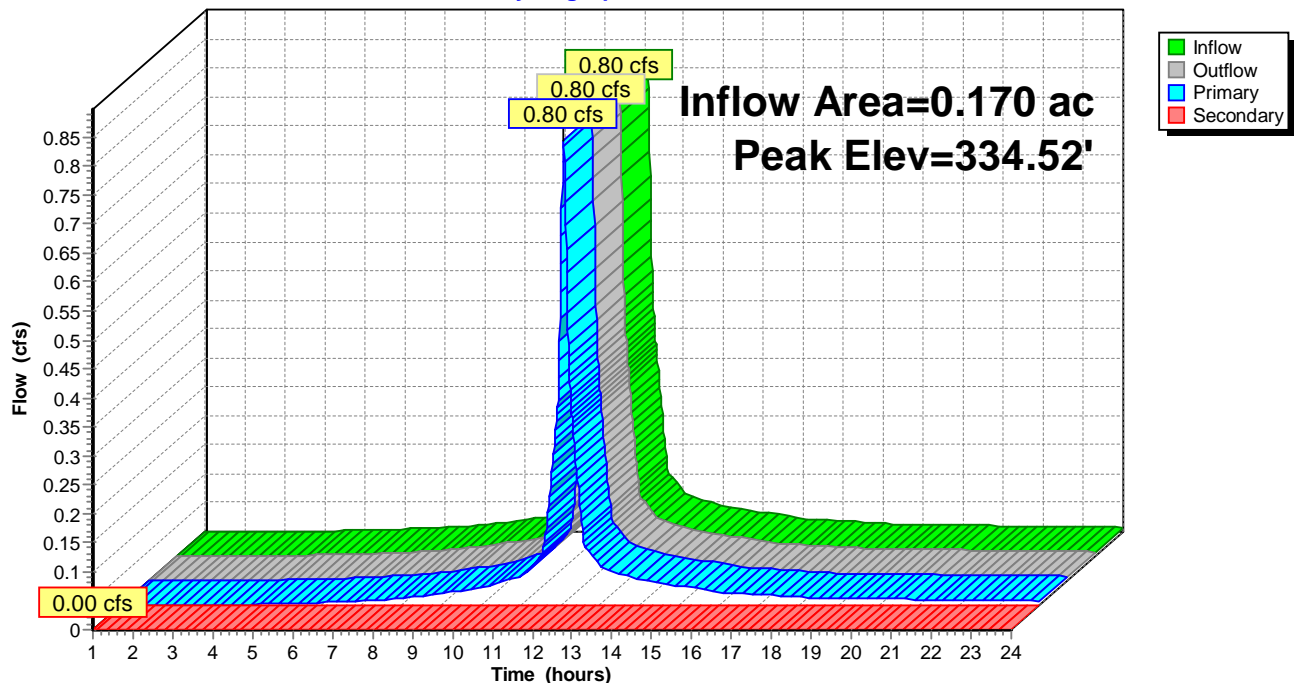
↑1=CMP_Round 12" (Barrel Controls 0.80 cfs @ 2.22 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=333.90' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 4P: CB-1029

Hydrograph



High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 5P: CB-1027

[57] Hint: Peaked at 331.18' (Flood elevation advised)

[81] Warning: Exceeded Pond 2P by 0.16' @ 12.17 hrs

[81] Warning: Exceeded Pond 6P by 0.29' @ 12.10 hrs

Inflow Area = 1.266 ac, 57.98% Impervious, Inflow Depth > 3.27" for 10-yr event
Inflow = 4.37 cfs @ 12.10 hrs, Volume= 0.345 af
Outflow = 4.37 cfs @ 12.10 hrs, Volume= 0.345 af, Atten= 0%, Lag= 0.0 min
Primary = 4.37 cfs @ 12.10 hrs, Volume= 0.345 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 331.18' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	330.20'	15.0" Round RCP_Round 15" L= 150.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 330.20' / 327.90' S= 0.0153 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	333.34'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	333.37'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=4.37 cfs @ 12.10 hrs HW=331.18' (Free Discharge)

↑**1=RCP_Round 15"** (Inlet Controls 4.37 cfs @ 4.22 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.20' (Free Discharge)

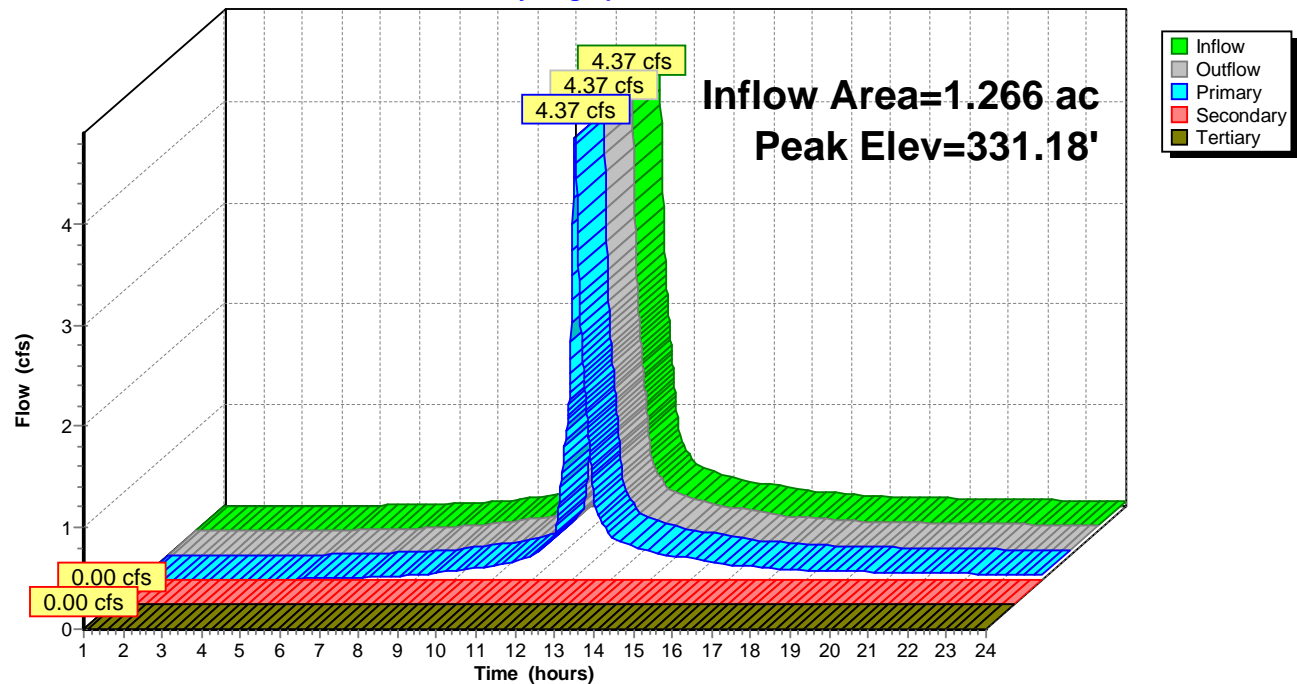
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.20' (Free Discharge)

↑**3=Orifice/Grate** (Controls 0.00 cfs)

Pond 5P: CB-1027

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 6P: CB-1028

[57] Hint: Peaked at 330.89' (Flood elevation advised)

Inflow Area = 0.042 ac, 80.95% Impervious, Inflow Depth > 4.35" for 10-yr event
Inflow = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af
Outflow = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 330.89' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	330.60'	12.0" Round CMP_Round 12" L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 330.60' / 330.30' S= 0.0107 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	333.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.20 cfs @ 12.08 hrs HW=330.89' (Free Discharge)

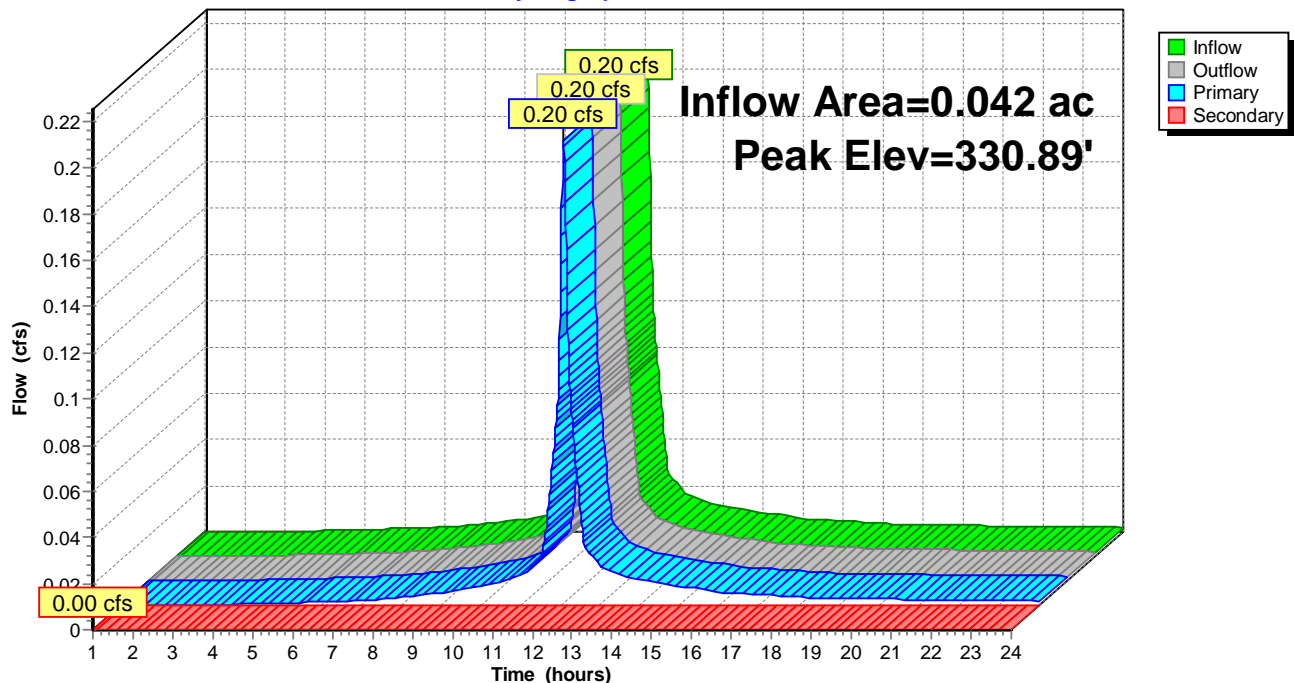
↑1=CMP_Round 12" (Barrel Controls 0.20 cfs @ 1.58 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=330.60' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 6P: CB-1028

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 7P: CB-1026

[57] Hint: Peaked at 327.49' (Flood elevation advised)

[79] Warning: Submerged Pond 8P Primary device # 1 OUTLET by 2.18'

[79] Warning: Submerged Pond 75P Primary device # 1 OUTLET by 2.28'

Inflow Area = 2.447 ac, 46.75% Impervious, Inflow Depth > 3.27" for 10-yr event
Inflow = 8.84 cfs @ 12.09 hrs, Volume= 0.667 af
Outflow = 8.84 cfs @ 12.09 hrs, Volume= 0.667 af, Atten= 0%, Lag= 0.0 min
Primary = 8.84 cfs @ 12.09 hrs, Volume= 0.667 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 327.49' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	325.10'	15.0" Round RCP_Round 15" L= 98.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 325.10' / 323.70' S= 0.0143 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	328.24'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	328.24'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=8.83 cfs @ 12.09 hrs HW=327.48' (Free Discharge)

↑ **1=RCP_Round 15"** (Barrel Controls 8.83 cfs @ 7.20 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=325.10' (Free Discharge)

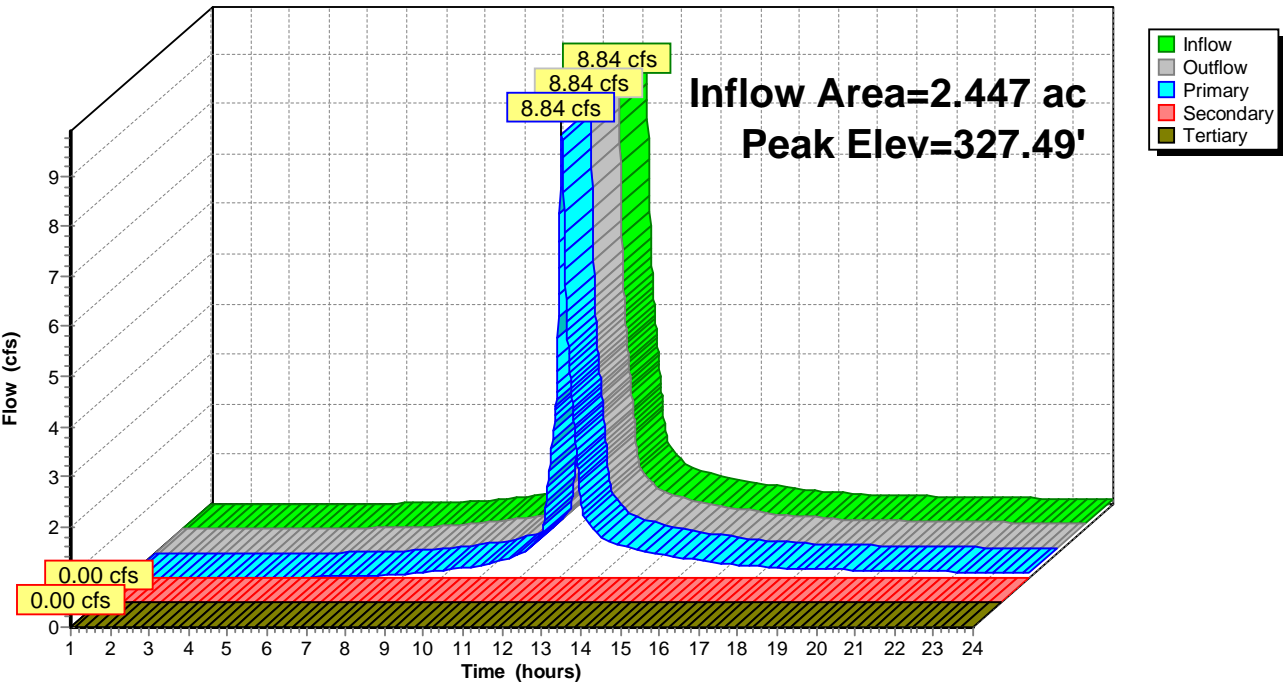
↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=325.10' (Free Discharge)

↑ **3=Orifice/Grate** (Controls 0.00 cfs)

Pond 7P: CB-1026

Hydrograph



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Summary for Pond 8P: CB-1025

[57] Hint: Peaked at 328.53' (Flood elevation advised)

Inflow Area = 0.121 ac, 74.38% Impervious, Inflow Depth > 4.24" for 10-yr event
Inflow = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af
Outflow = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af, Atten= 0%, Lag= 0.0 min
Primary = 0.57 cfs @ 12.08 hrs, Volume= 0.043 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 328.53' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	328.10'	12.0" Round CMP_Round 12" L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 328.10' / 325.30' S= 0.0933 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	330.99'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.57 cfs @ 12.08 hrs HW=328.53' (Free Discharge)

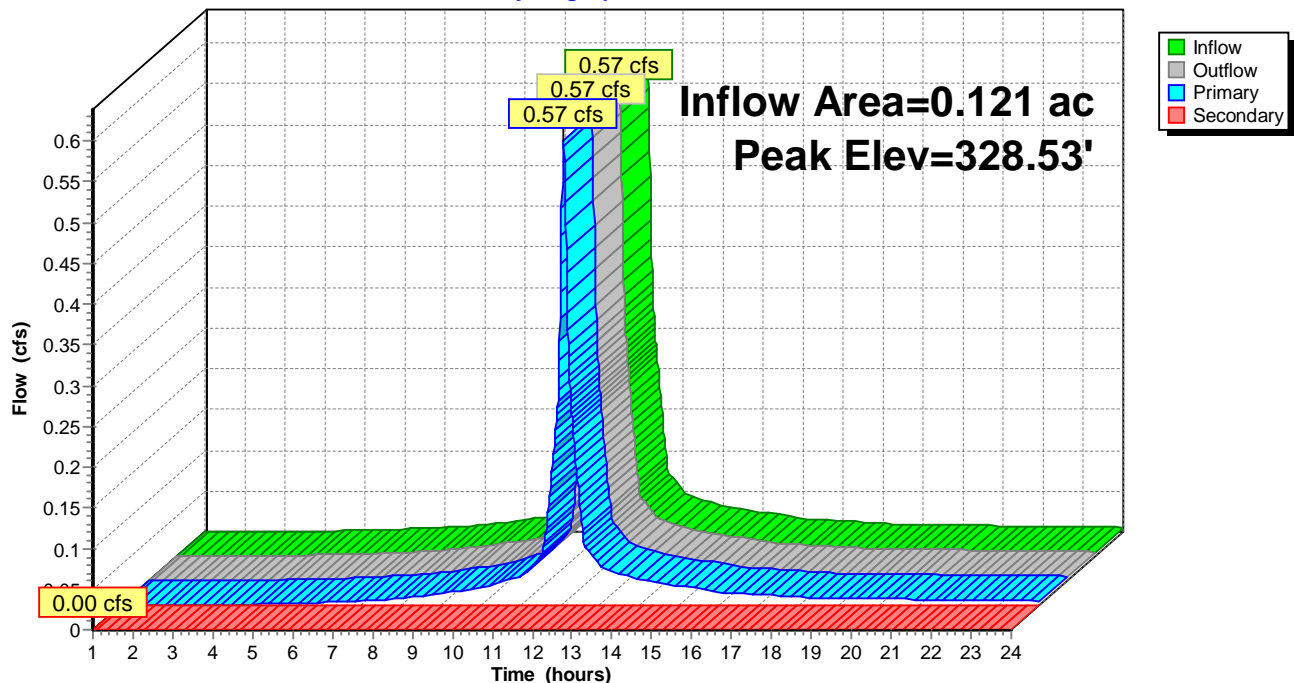
↑**1=CMP_Round 12"** (Inlet Controls 0.57 cfs @ 1.76 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=328.10' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 8P: CB-1025

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 9P: CB-1023

[57] Hint: Peaked at 308.67' (Flood elevation advised)

[81] Warning: Exceeded Pond 10P by 1.47' @ 12.10 hrs

[79] Warning: Submerged Pond 76P Primary device # 1 OUTLET by 1.97'

Inflow Area = 3.776 ac, 41.68% Impervious, Inflow Depth > 2.99" for 10-yr event
Inflow = 12.21 cfs @ 12.10 hrs, Volume= 0.940 af
Outflow = 12.21 cfs @ 12.10 hrs, Volume= 0.940 af, Atten= 0%, Lag= 0.0 min
Primary = 12.21 cfs @ 12.10 hrs, Volume= 0.940 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 308.67' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	306.60'	18.0" Round RCP_Round 18" L= 60.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 306.60' / 303.70' S= 0.0483 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Secondary	309.73'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	309.73'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=12.20 cfs @ 12.10 hrs HW=308.67' (Free Discharge)

↑ **1=RCP_Round 18"** (Inlet Controls 12.20 cfs @ 6.90 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=306.60' (Free Discharge)

↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=306.60' (Free Discharge)

↑ **3=Orifice/Grate** (Controls 0.00 cfs)

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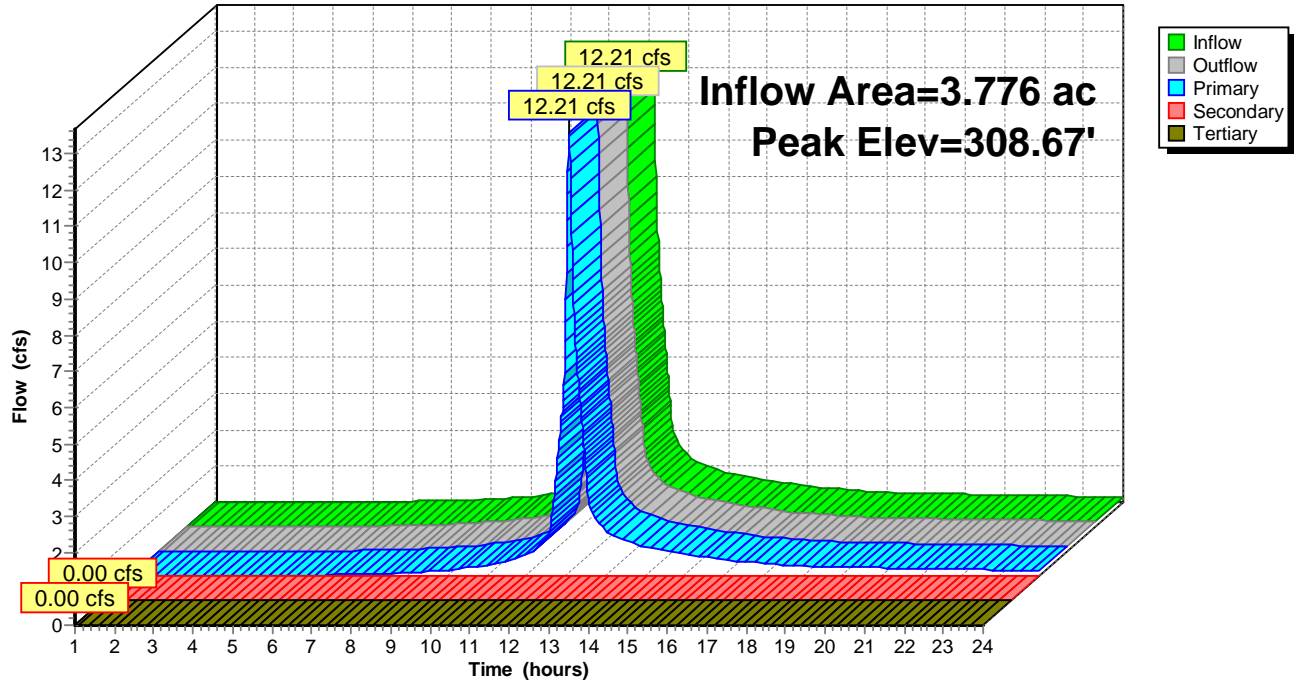
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 9P: CB-1023

Hydrograph



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Summary for Pond 10P: CB-1022

[57] Hint: Peaked at 307.20' (Flood elevation advised)

Inflow Area = 0.159 ac, 75.47% Impervious, Inflow Depth > 4.24" for 10-yr event
Inflow = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af
Outflow = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
Primary = 0.75 cfs @ 12.08 hrs, Volume= 0.056 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 307.20' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	306.70'	12.0" Round CMP_Round 12" L= 30.8' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 306.40' / 306.70' S= -0.0097 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	309.39'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.75 cfs @ 12.08 hrs HW=307.20' (Free Discharge)

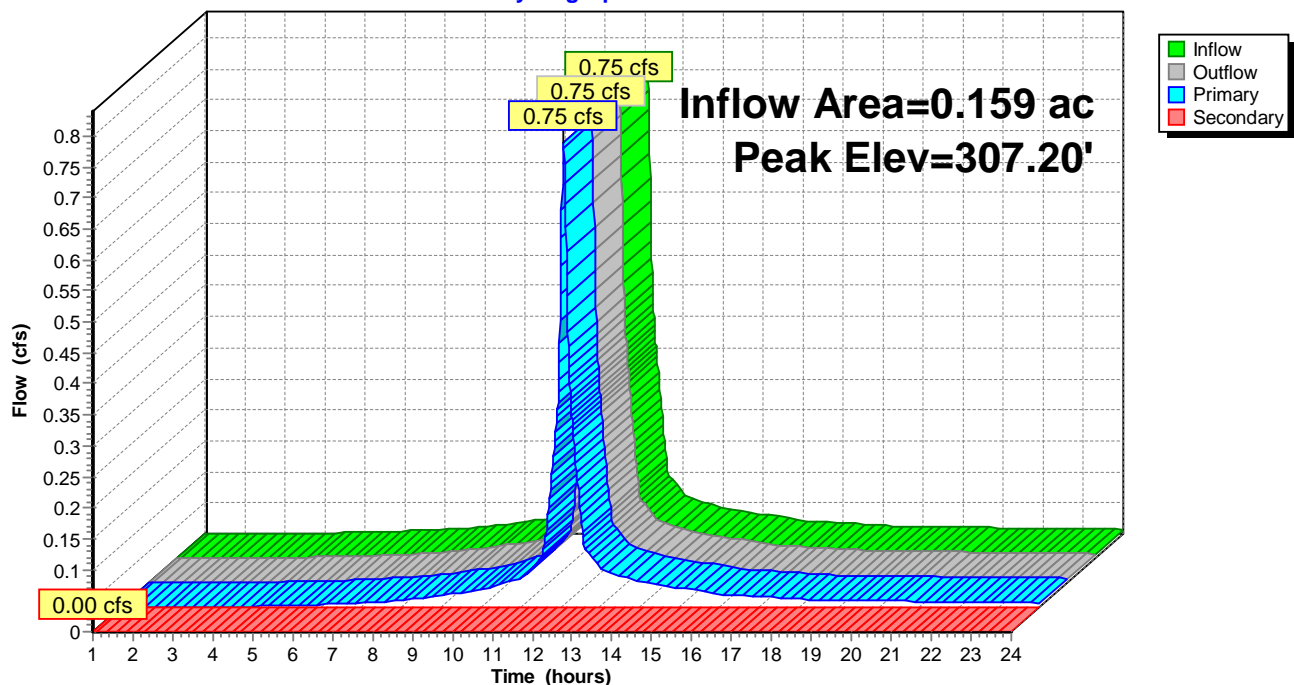
↑**1=CMP_Round 12"** (Inlet Controls 0.75 cfs @ 1.90 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=306.70' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 10P: CB-1022

Hydrograph



High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 11P: CB-1024

[57] Hint: Peaked at 306.54' (Flood elevation advised)

[79] Warning: Submerged Pond 9P Primary device # 1 OUTLET by 2.84'

Inflow Area = 4.276 ac, 41.02% Impervious, Inflow Depth > 2.93" for 10-yr event
Inflow = 13.41 cfs @ 12.10 hrs, Volume= 1.043 af
Outflow = 13.41 cfs @ 12.10 hrs, Volume= 1.043 af, Atten= 0%, Lag= 0.0 min
Primary = 13.41 cfs @ 12.10 hrs, Volume= 1.043 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 306.54' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	303.70'	18.0" Round RCP_Round 18" L= 26.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 303.70' / 303.60' S= 0.0038 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Secondary	306.66'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	306.66'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=13.40 cfs @ 12.10 hrs HW=306.53' (Free Discharge)

↑**1=RCP_Round 18"** (Barrel Controls 13.40 cfs @ 7.58 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=303.70' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=303.70' (Free Discharge)

↑**3=Orifice/Grate** (Controls 0.00 cfs)

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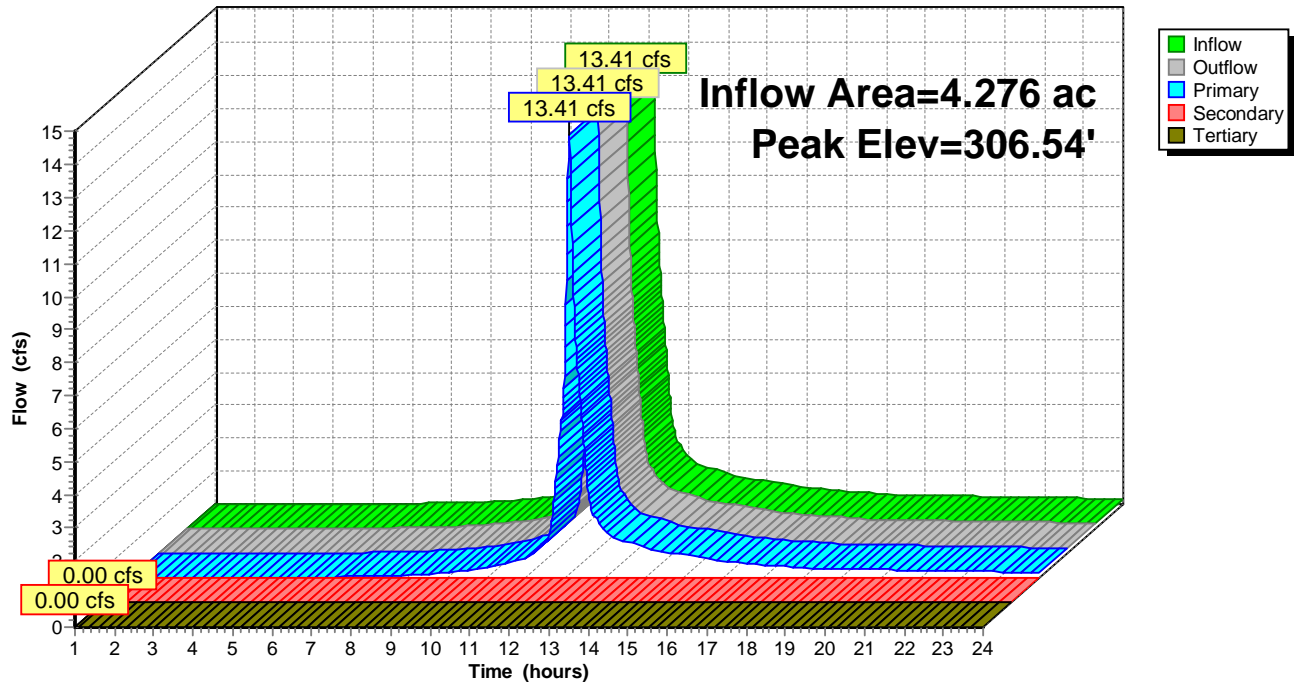
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 11P: CB-1024

Hydrograph



Summary for Pond 12P: MH-42

[43] Hint: Has no inflow (Outflow=Zero)

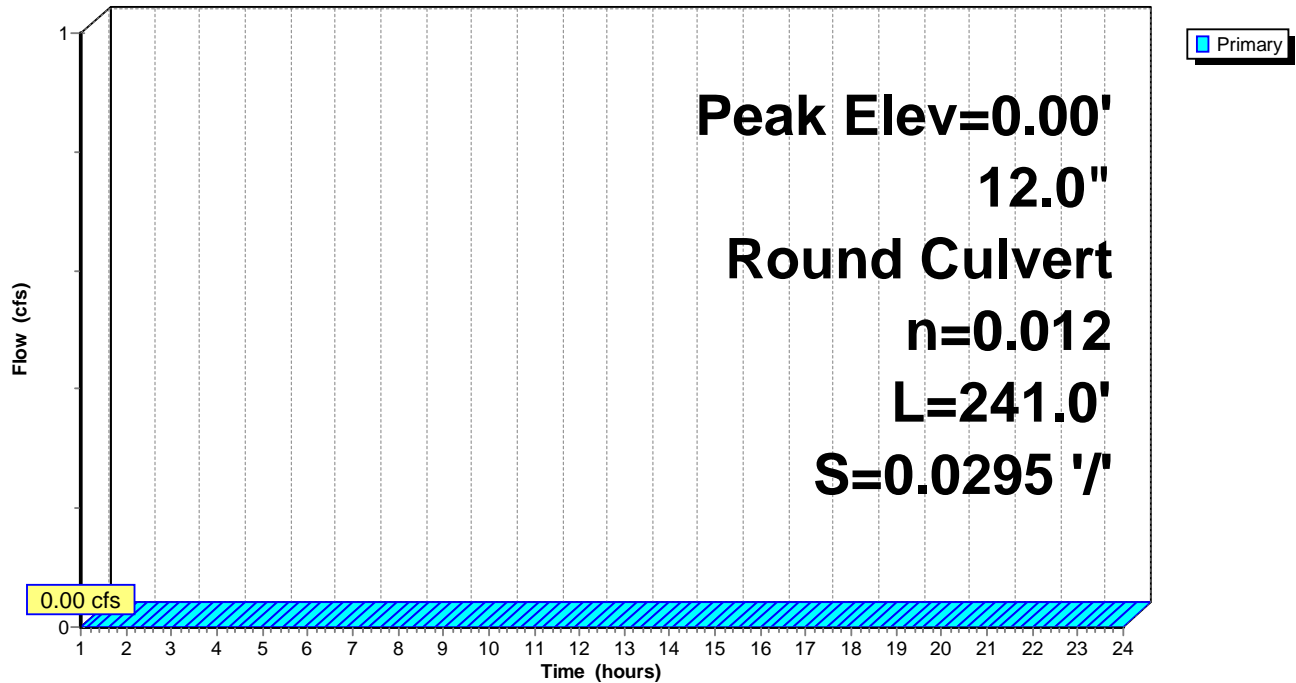
Device	Routing	Invert	Outlet Devices
#1	Primary	302.50'	12.0" Round RCP_Round 12" L= 241.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 302.50' / 295.40' S= 0.0295 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=0.00' (Free Discharge)

↑1=RCP_Round 12" (Controls 0.00 cfs)

Pond 12P: MH-42

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 16P: MH-327

[79] Warning: Submerged Pond 17P Primary device # 1 INLET by 0.02'

[81] Warning: Exceeded Pond 79P by 0.54' @ 12.10 hrs

[79] Warning: Submerged Pond 83P Primary device # 1 OUTLET by 1.82'

Inflow Area = 7.171 ac, 27.76% Impervious, Inflow Depth > 2.19" for 10-yr event
Inflow = 14.71 cfs @ 12.11 hrs, Volume= 1.312 af
Outflow = 14.71 cfs @ 12.11 hrs, Volume= 1.312 af, Atten= 0%, Lag= 0.0 min
Primary = 14.71 cfs @ 12.11 hrs, Volume= 1.312 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 279.12' @ 12.11 hrs

Flood Elev= 281.72'

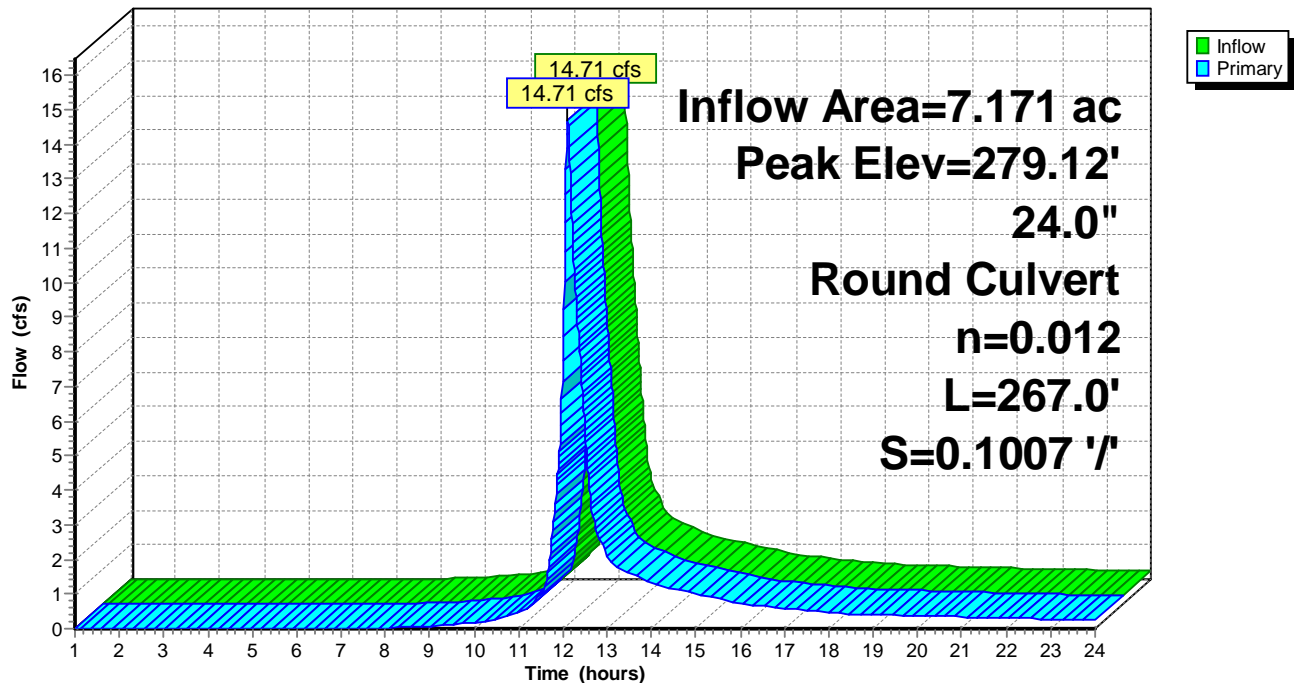
Device	Routing	Invert	Outlet Devices
#1	Primary	277.50'	24.0" Round RCP_Round 24" L= 267.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 277.50' / 250.60' S= 0.1007 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=14.69 cfs @ 12.11 hrs HW=279.11' (Free Discharge)

↑1=RCP_Round 24" (Inlet Controls 14.69 cfs @ 5.41 fps)

Pond 16P: MH-327

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 17P: CB-738

[57] Hint: Peaked at 281.41' (Flood elevation advised)

[81] Warning: Exceeded Pond 18P by 0.10' @ 12.16 hrs

Inflow Area = 2.930 ac, 33.11% Impervious, Inflow Depth > 2.32" for 10-yr event
Inflow = 6.35 cfs @ 12.10 hrs, Volume= 0.567 af
Outflow = 6.35 cfs @ 12.10 hrs, Volume= 0.567 af, Atten= 0%, Lag= 0.0 min
Primary = 6.35 cfs @ 12.10 hrs, Volume= 0.567 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 281.41' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	279.10'	12.0" Round 12" VC L= 14.2' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 279.10' / 278.10' S= 0.0704 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.79 sf
#2	Secondary	281.99'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.34 cfs @ 12.10 hrs HW=281.40' (Free Discharge)

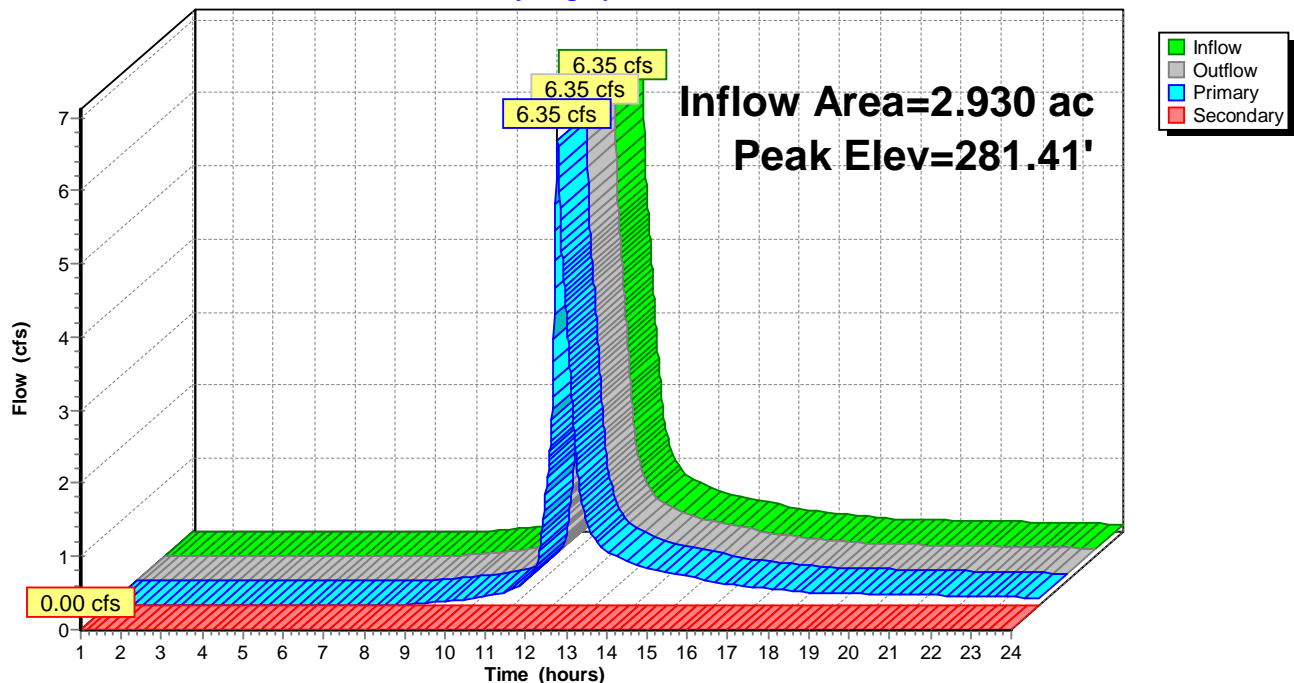
↑1=12" VC (Inlet Controls 6.34 cfs @ 8.08 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=279.10' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 17P: CB-738

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 18P: CB-737

[57] Hint: Peaked at 281.45' (Flood elevation advised)

Inflow Area = 1.620 ac, 46.91% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af
Outflow = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af, Atten= 0%, Lag= 0.0 min
Primary = 5.41 cfs @ 12.09 hrs, Volume= 0.384 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 281.45' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	279.60'	12.0" Round RCP_Round 12" L= 23.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 279.60' / 279.10' S= 0.0213 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	282.47'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.41 cfs @ 12.09 hrs HW=281.45' (Free Discharge)

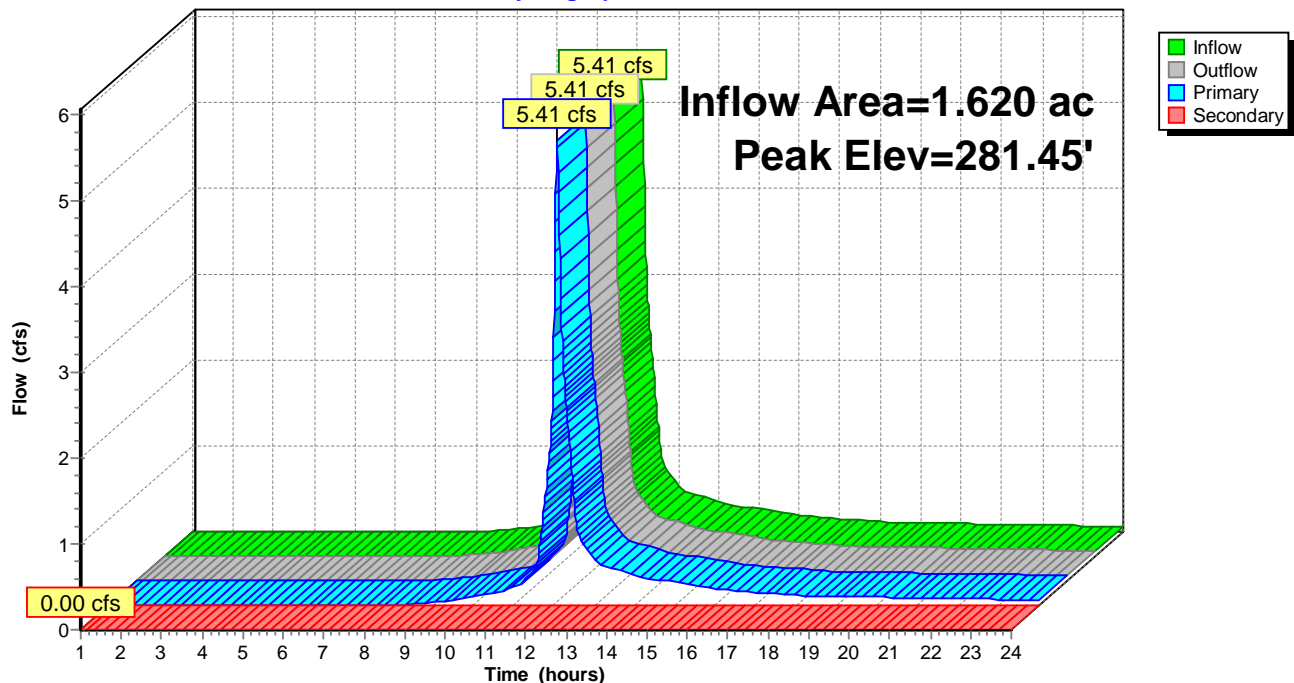
↑1=RCP_Round 12" (Barrel Controls 5.41 cfs @ 6.89 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=279.60' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 18P: CB-737

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 19P: MH-328

[79] Warning: Submerged Pond 16P Primary device # 1 OUTLET by 1.97'

Inflow Area = 7.533 ac, 30.94% Impervious, Inflow Depth > 2.31" for 10-yr event
Inflow = 16.41 cfs @ 12.11 hrs, Volume= 1.453 af
Outflow = 16.41 cfs @ 12.11 hrs, Volume= 1.453 af, Atten= 0%, Lag= 0.0 min
Primary = 16.41 cfs @ 12.11 hrs, Volume= 1.453 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 252.57' @ 12.11 hrs

Flood Elev= 254.76'

Device	Routing	Invert	Outlet Devices
#1	Primary	250.60'	30.0" Round RCP_Round 30" L= 14.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 250.60' / 250.50' S= 0.0071 ' S= 0.0071 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf
#2	Secondary	253.75'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=16.40 cfs @ 12.11 hrs HW=252.57' (Free Discharge)

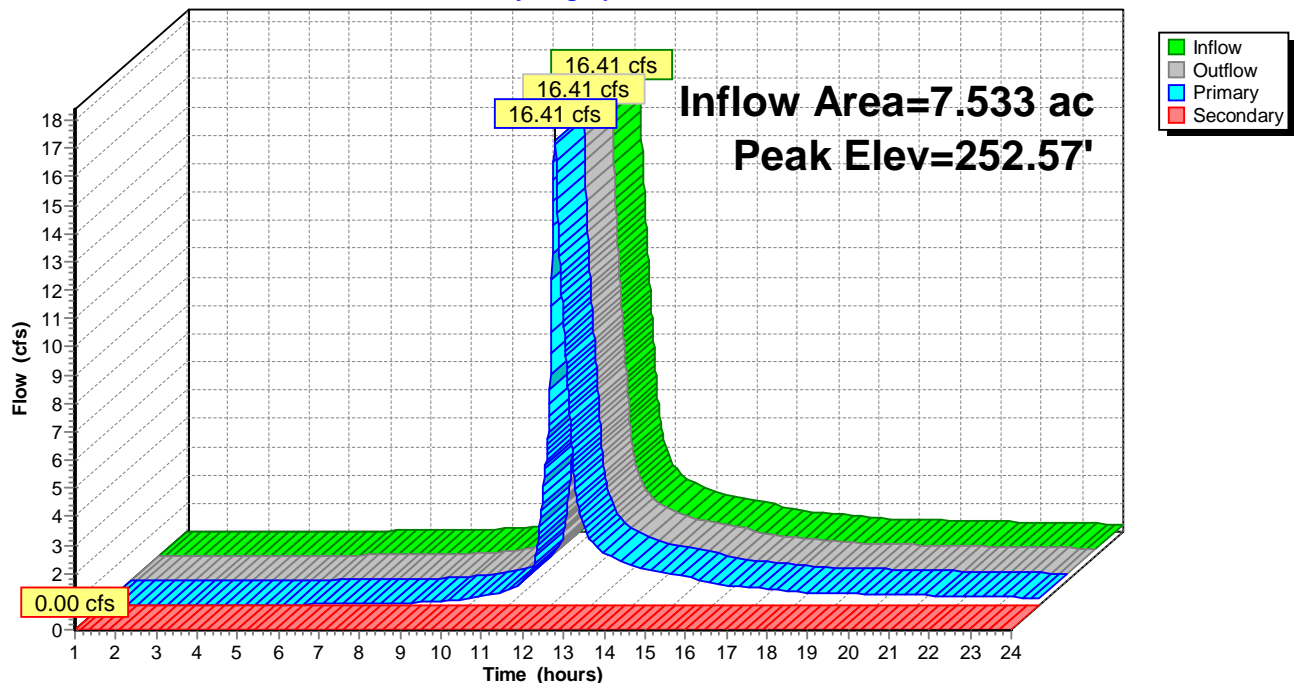
↑1=RCP_Round 30" (Barrel Controls 16.40 cfs @ 5.43 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=250.60' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 19P: MH-328

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 20P: MH-329

[79] Warning: Submerged Pond 46P Primary device # 1 OUTLET by 1.66'

Inflow Area = 11.943 ac, 26.47% Impervious, Inflow Depth > 2.14" for 10-yr event
Inflow = 23.84 cfs @ 12.12 hrs, Volume= 2.126 af
Outflow = 23.84 cfs @ 12.12 hrs, Volume= 2.126 af, Atten= 0%, Lag= 0.0 min
Primary = 23.84 cfs @ 12.12 hrs, Volume= 2.126 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 245.46' @ 12.12 hrs

Flood Elev= 254.38'

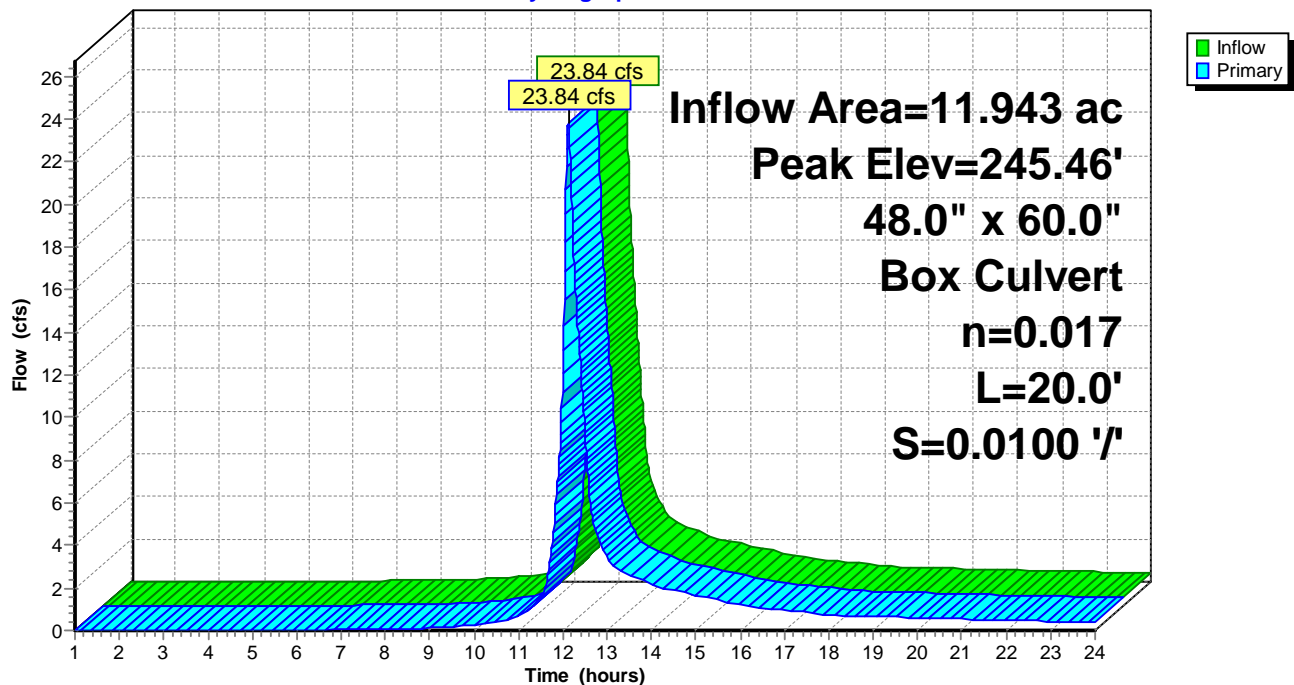
Device	Routing	Invert	Outlet Devices
#1	Primary	243.80'	48.0" W x 60.0" H Box Culvert L= 20.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 243.80' / 243.60' S= 0.0100 '/' Cc= 0.900 n= 0.017 Concrete, unfinished, Flow Area= 20.00 sf

Primary OutFlow Max=23.81 cfs @ 12.12 hrs HW=245.46' (Free Discharge)

↑1=Culvert (Barrel Controls 23.81 cfs @ 4.77 fps)

Pond 20P: MH-329

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 21P: CB-1589

[57] Hint: Peaked at 246.29' (Flood elevation advised)

Inflow Area = 0.050 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af
Outflow = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
Primary = 0.25 cfs @ 12.08 hrs, Volume= 0.020 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 246.29' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	246.00'	10.0" Round 10" VC L= 4.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 246.00' / 245.96' S= 0.0100 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.55 sf
#2	Secondary	247.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.25 cfs @ 12.08 hrs HW=246.29' (Free Discharge)

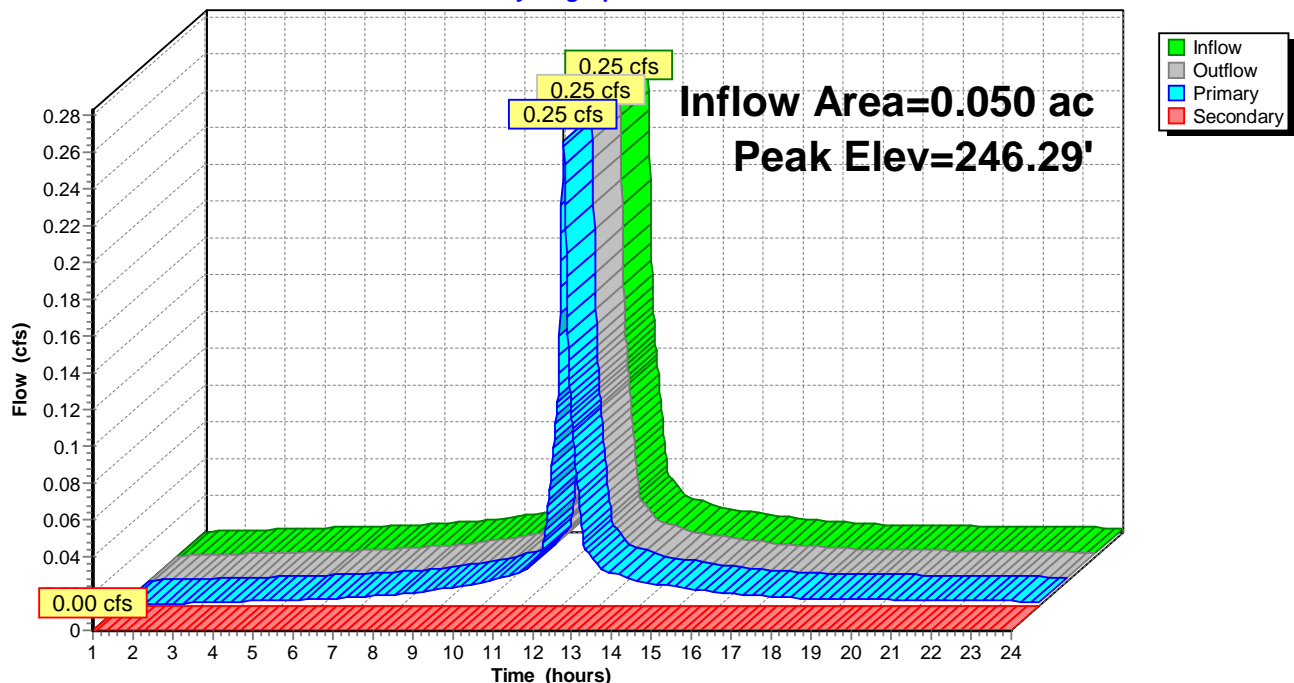
↑ **1=10" VC** (Barrel Controls 0.25 cfs @ 2.20 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=246.01' (Free Discharge)

↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Pond 21P: CB-1589

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 22P: MH-29

[79] Warning: Submerged Pond 20P Primary device # 1 INLET by 0.68'

[81] Warning: Exceeded Pond 45P by 4.66' @ 12.12 hrs

Inflow Area = 12.493 ac, 29.70% Impervious, Inflow Depth > 2.26" for 10-yr event
Inflow = 26.36 cfs @ 12.12 hrs, Volume= 2.352 af
Outflow = 26.36 cfs @ 12.12 hrs, Volume= 2.352 af, Atten= 0%, Lag= 0.0 min
Primary = 26.36 cfs @ 12.12 hrs, Volume= 2.352 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 244.48' @ 12.12 hrs

Flood Elev= 245.50'

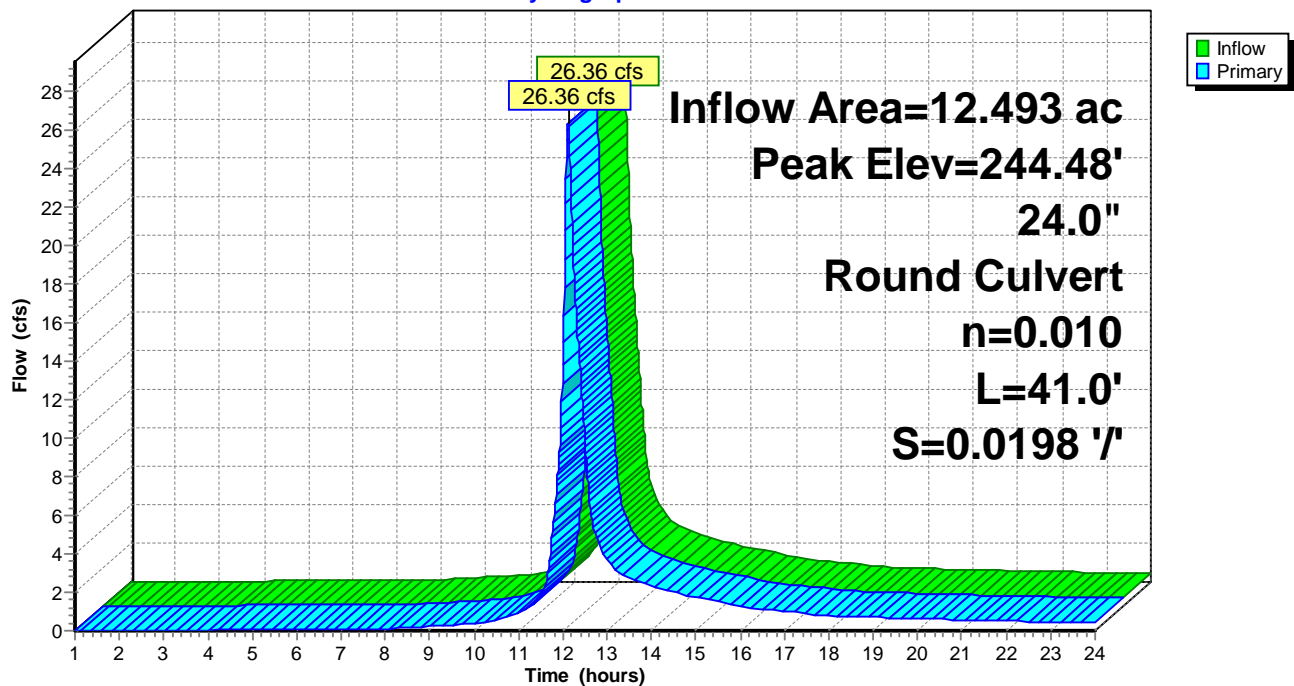
Device	Routing	Invert	Outlet Devices
#1	Primary	238.61'	24.0" Round 24" HDPE L= 41.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 238.61' / 237.80' S= 0.0198 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=26.34 cfs @ 12.12 hrs HW=244.47' (Free Discharge)

↑1=24" HDPE (Inlet Controls 26.34 cfs @ 8.38 fps)

Pond 22P: MH-29

Hydrograph



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Summary for Pond 23P: FS MH 1

[79] Warning: Submerged Pond 22P Primary device # 1 INLET by 4.96'

Inflow Area = 12.493 ac, 29.70% Impervious, Inflow Depth > 2.26" for 10-yr event
Inflow = 26.36 cfs @ 12.12 hrs, Volume= 2.352 af
Outflow = 26.36 cfs @ 12.12 hrs, Volume= 2.352 af, Atten= 0%, Lag= 0.0 min
Primary = 26.36 cfs @ 12.12 hrs, Volume= 2.352 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 243.57' @ 12.12 hrs

Flood Elev= 246.80'

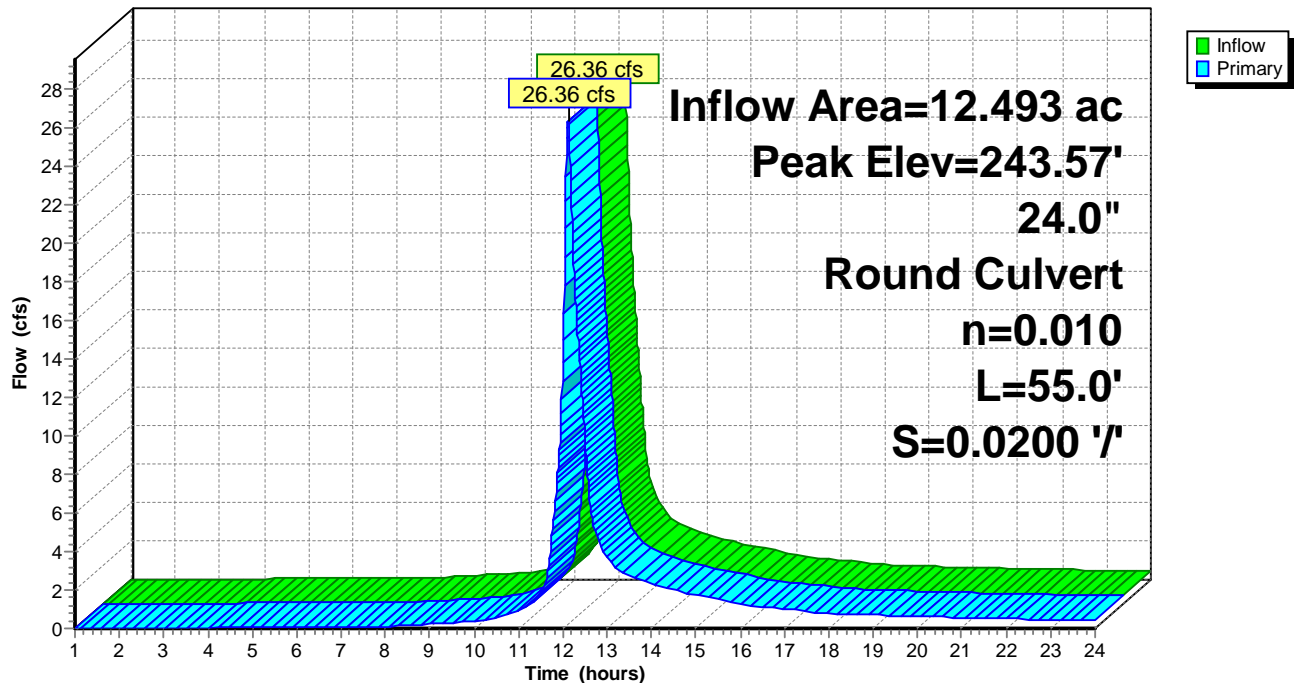
Device	Routing	Invert	Outlet Devices
#1	Primary	237.70'	24.0" Round 24" HDPE L= 55.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 237.70' / 236.60' S= 0.0200 '/ Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=26.34 cfs @ 12.12 hrs HW=243.56' (Free Discharge)

↑1=24" HDPE (Inlet Controls 26.34 cfs @ 8.38 fps)

Pond 23P: FS MH 1

Hydrograph



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Summary for Pond 24P: CB

[57] Hint: Peaked at 247.99' (Flood elevation advised)

[79] Warning: Submerged Pond 30P Primary device # 1 OUTLET by 7.59'

Inflow Area = 1.580 ac, 75.32% Impervious, Inflow Depth > 3.41" for 10-yr event
Inflow = 6.03 cfs @ 12.09 hrs, Volume= 0.449 af
Outflow = 6.03 cfs @ 12.09 hrs, Volume= 0.449 af, Atten= 0%, Lag= 0.0 min
Primary = 6.03 cfs @ 12.09 hrs, Volume= 0.449 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 247.99' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	246.70'	15.0" Round RCP_Round 15" L= 37.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 246.70' / 241.30' S= 0.1459 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	250.02'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

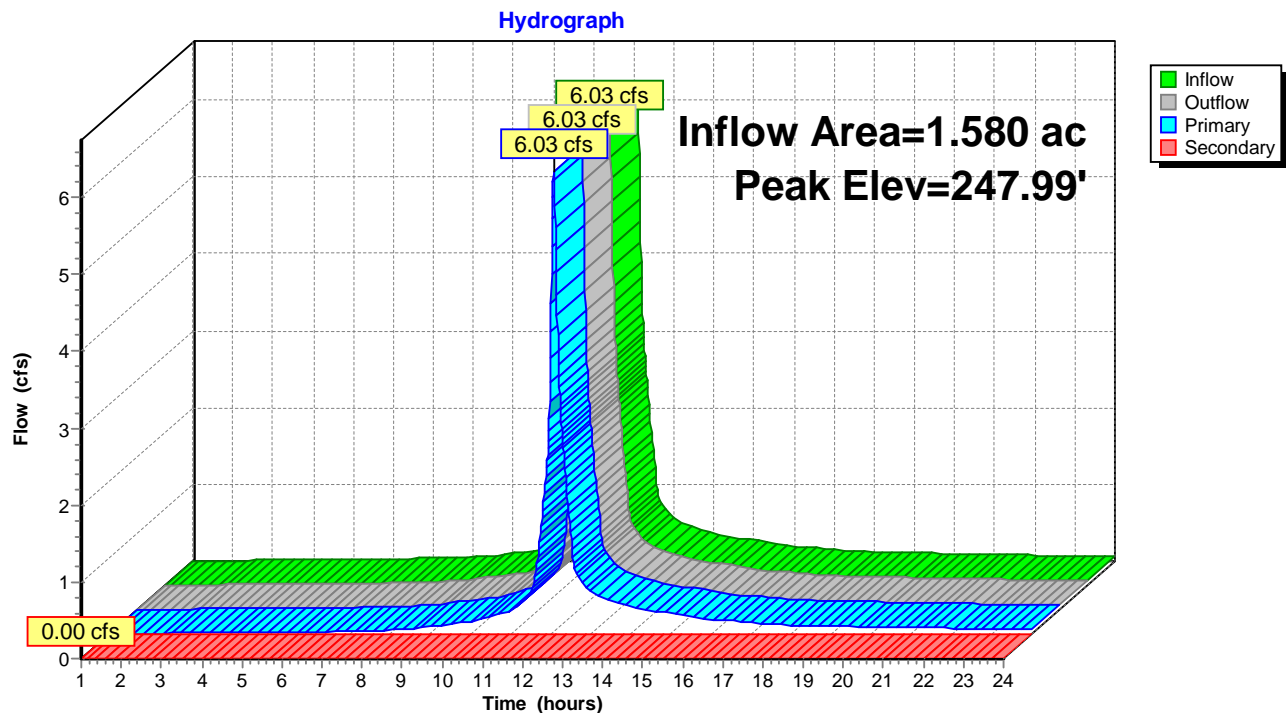
Primary OutFlow Max=6.02 cfs @ 12.09 hrs HW=247.99' (Free Discharge)

↑1=RCP_Round 15" (Inlet Controls 6.02 cfs @ 4.90 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=246.71' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 24P: CB



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 25P: CB-340

[57] Hint: Peaked at 242.31' (Flood elevation advised)

Inflow Area = 0.036 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
 Inflow = 0.18 cfs @ 12.08 hrs, Volume= 0.015 af
 Outflow = 0.18 cfs @ 12.08 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.18 cfs @ 12.08 hrs, Volume= 0.015 af
 Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
 Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 242.31' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	242.03'	12.0" Round RCP_Round 12" L= 27.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 242.00' / 242.03' S= -0.0011 ' / Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	244.40'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	244.40'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.18 cfs @ 12.08 hrs HW=242.31' (Free Discharge)↑ **1=RCP_Round 12"** (Barrel Controls 0.18 cfs @ 1.33 fps)**Secondary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=242.03' (Free Discharge)↑ **2=Orifice/Grate** (Controls 0.00 cfs)**Tertiary OutFlow** Max=0.00 cfs @ 1.00 hrs HW=242.03' (Free Discharge)↑ **3=Orifice/Grate** (Controls 0.00 cfs)

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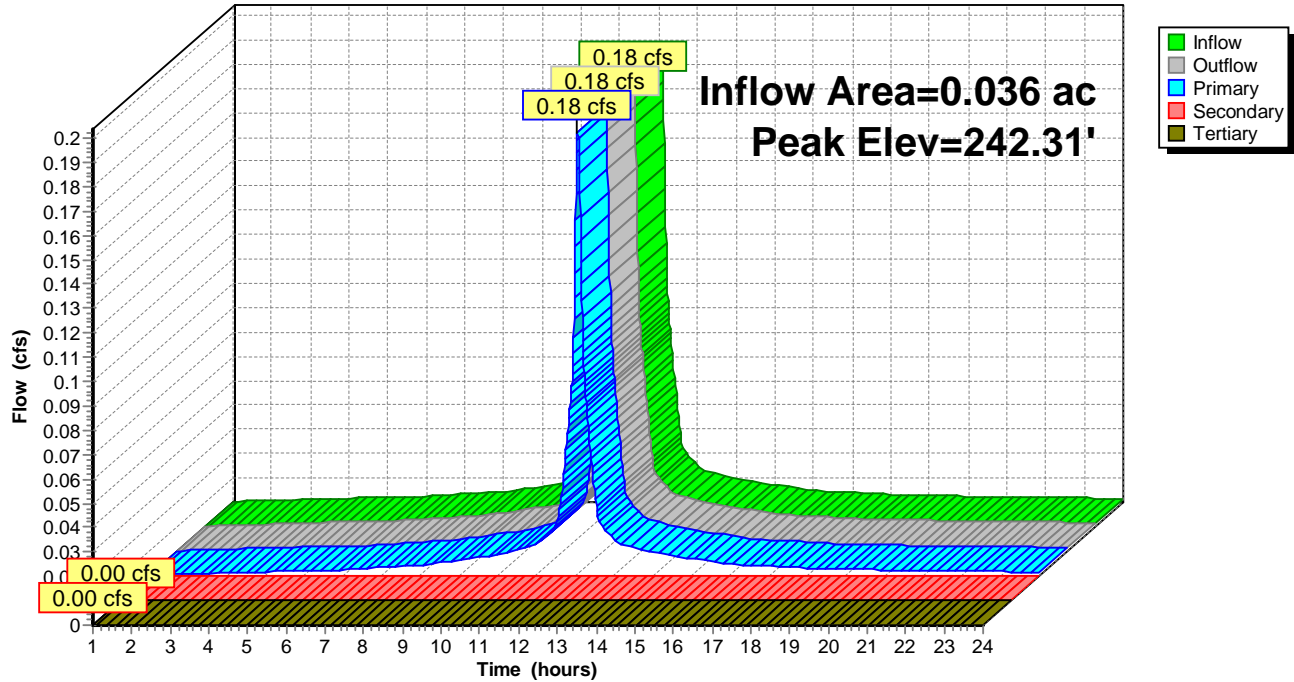
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 25P: CB-340

Hydrograph



High Park Street Drainage - Proposed June 2022

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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 26P: MH-P1

[81] Warning: Exceeded Pond 33P by 0.70' @ 12.10 hrs

[81] Warning: Exceeded Pond 34P by 1.14' @ 12.10 hrs

[79] Warning: Submerged Pond 80P Primary device # 1 OUTLET by 1.58'

Inflow Area = 5.106 ac, 40.42% Impervious, Inflow Depth > 2.87" for 10-yr event
Inflow = 15.85 cfs @ 12.10 hrs, Volume= 1.223 af
Outflow = 15.85 cfs @ 12.10 hrs, Volume= 1.223 af, Atten= 0%, Lag= 0.0 min
Primary = 15.85 cfs @ 12.10 hrs, Volume= 1.223 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 271.48' @ 12.10 hrs

Flood Elev= 273.50'

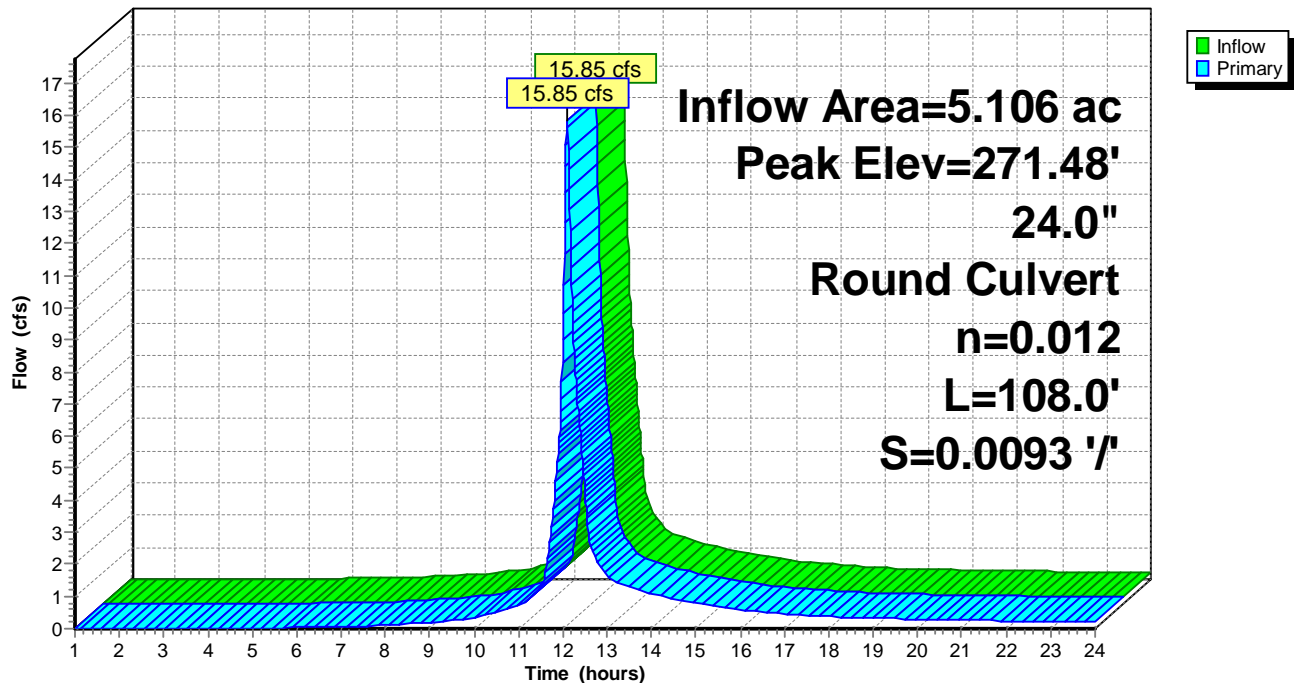
Device	Routing	Invert	Outlet Devices
#1	Primary	269.60'	24.0" Round RCP_Round 24" L= 108.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 269.60' / 268.60' S= 0.0093 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=15.83 cfs @ 12.10 hrs HW=271.48' (Free Discharge)

↑1=RCP_Round 24" (Barrel Controls 15.83 cfs @ 6.69 fps)

Pond 26P: MH-P1

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 27P: MH-120

[79] Warning: Submerged Pond 29P Primary device # 1 OUTLET by 1.64'

[81] Warning: Exceeded Pond 42P by 0.03' @ 12.10 hrs

Inflow Area = 5.746 ac, 43.06% Impervious, Inflow Depth > 2.86" for 10-yr event
Inflow = 17.85 cfs @ 12.10 hrs, Volume= 1.372 af
Outflow = 17.85 cfs @ 12.10 hrs, Volume= 1.372 af, Atten= 0%, Lag= 0.0 min
Primary = 17.85 cfs @ 12.10 hrs, Volume= 1.372 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 242.64' @ 12.10 hrs

Flood Elev= 244.38'

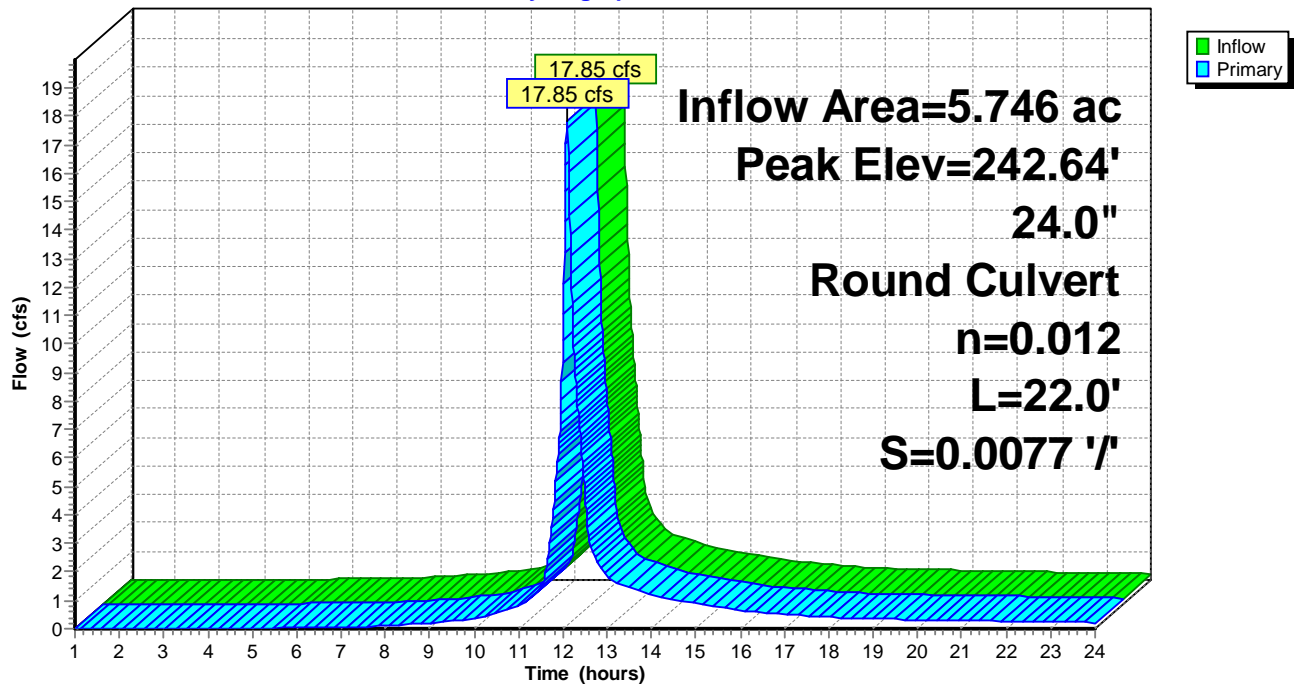
Device	Routing	Invert	Outlet Devices
#1	Primary	240.24'	24.0" Round RCP_Round 24" L= 22.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 240.24' / 240.07' S= 0.0077 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=17.82 cfs @ 12.10 hrs HW=242.64' (Free Discharge)

↑1=RCP_Round 24" (Barrel Controls 17.82 cfs @ 5.98 fps)

Pond 27P: MH-120

Hydrograph



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Summary for Pond 28P: CB-342

[57] Hint: Peaked at 242.75' (Flood elevation advised)

Inflow Area = 0.460 ac, 80.43% Impervious, Inflow Depth > 3.61" for 10-yr event
Inflow = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af
Outflow = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min
Primary = 1.92 cfs @ 12.09 hrs, Volume= 0.138 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 242.75' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	241.80'	12.0" Round 12" HDPE L= 14.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 241.80' / 241.70' S= 0.0071 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	244.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.92 cfs @ 12.09 hrs HW=242.75' (Free Discharge)

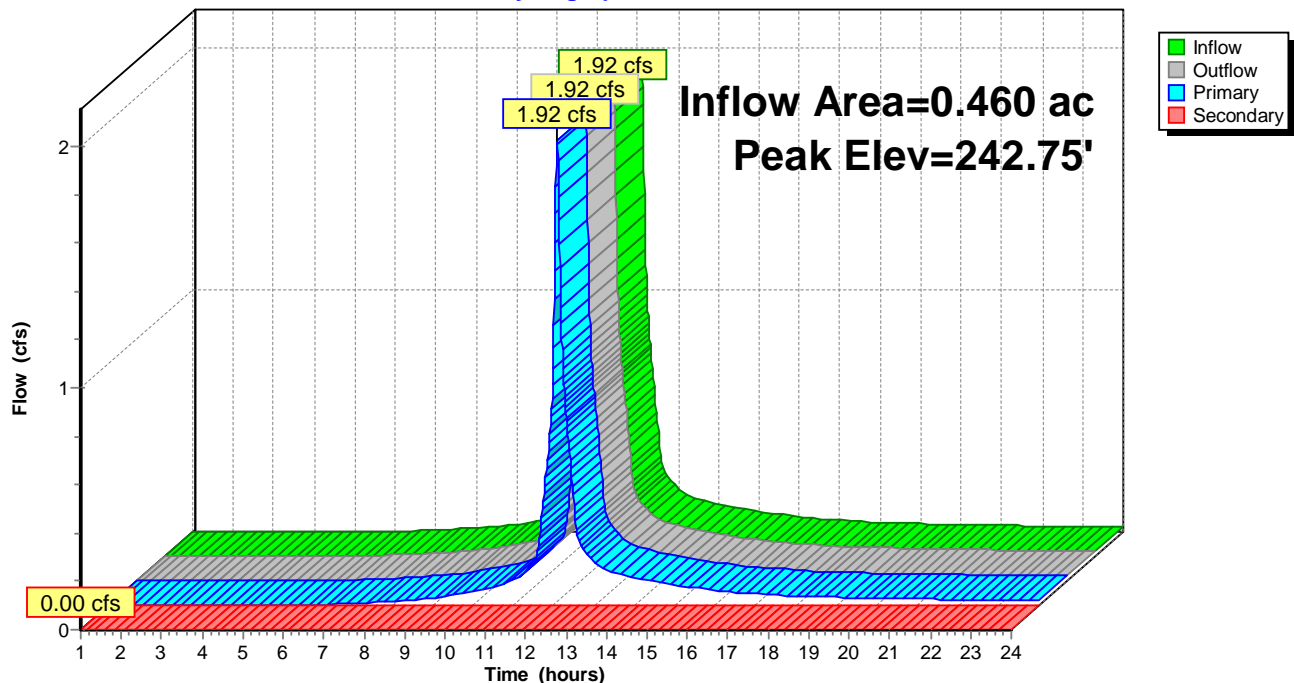
↑1=12" HDPE (Barrel Controls 1.92 cfs @ 3.21 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=241.80' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 28P: CB-342

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 29P: MH-P3

[79] Warning: Submerged Pond 73P Primary device # 1 INLET by 0.94'

Inflow Area = 5.666 ac, 42.25% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 17.45 cfs @ 12.10 hrs, Volume= 1.339 af
Outflow = 17.45 cfs @ 12.10 hrs, Volume= 1.339 af, Atten= 0%, Lag= 0.0 min
Primary = 17.45 cfs @ 12.10 hrs, Volume= 1.339 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 269.44' @ 12.10 hrs

Flood Elev= 275.00'

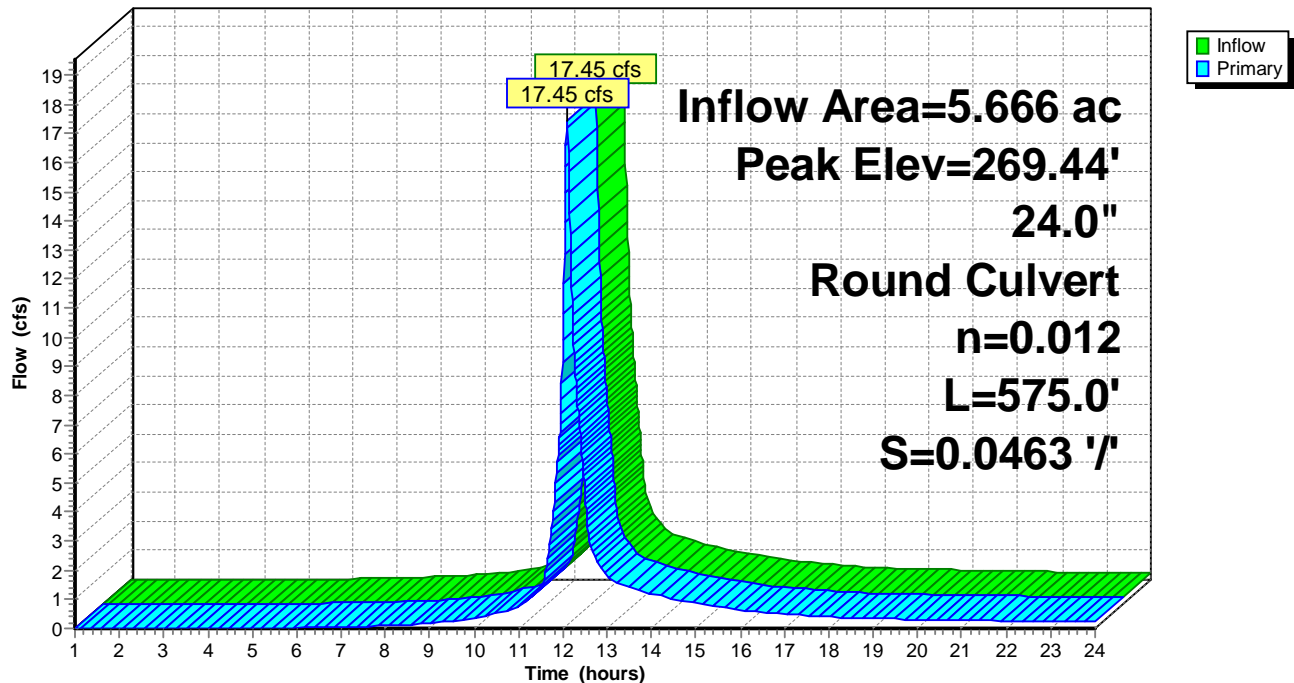
Device	Routing	Invert	Outlet Devices
#1	Primary	267.60'	24.0" Round RCP_Round 24" L= 575.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 267.60' / 241.00' S= 0.0463 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=17.43 cfs @ 12.10 hrs HW=269.44' (Free Discharge)

↑1=RCP_Round 24" (Inlet Controls 17.43 cfs @ 5.77 fps)

Pond 29P: MH-P3

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 30P: CB-339

[57] Hint: Peaked at 252.12' (Flood elevation advised)

[79] Warning: Submerged Pond 31P Primary device # 1 OUTLET by 1.12'

Inflow Area = 1.180 ac, 66.95% Impervious, Inflow Depth > 2.90" for 10-yr event
Inflow = 4.01 cfs @ 12.09 hrs, Volume= 0.285 af
Outflow = 4.01 cfs @ 12.09 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min
Primary = 4.01 cfs @ 12.09 hrs, Volume= 0.285 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 252.12' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	250.90'	12.0" Round RCP_Round 12" L= 58.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 250.90' / 240.40' S= 0.1810 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	254.31'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

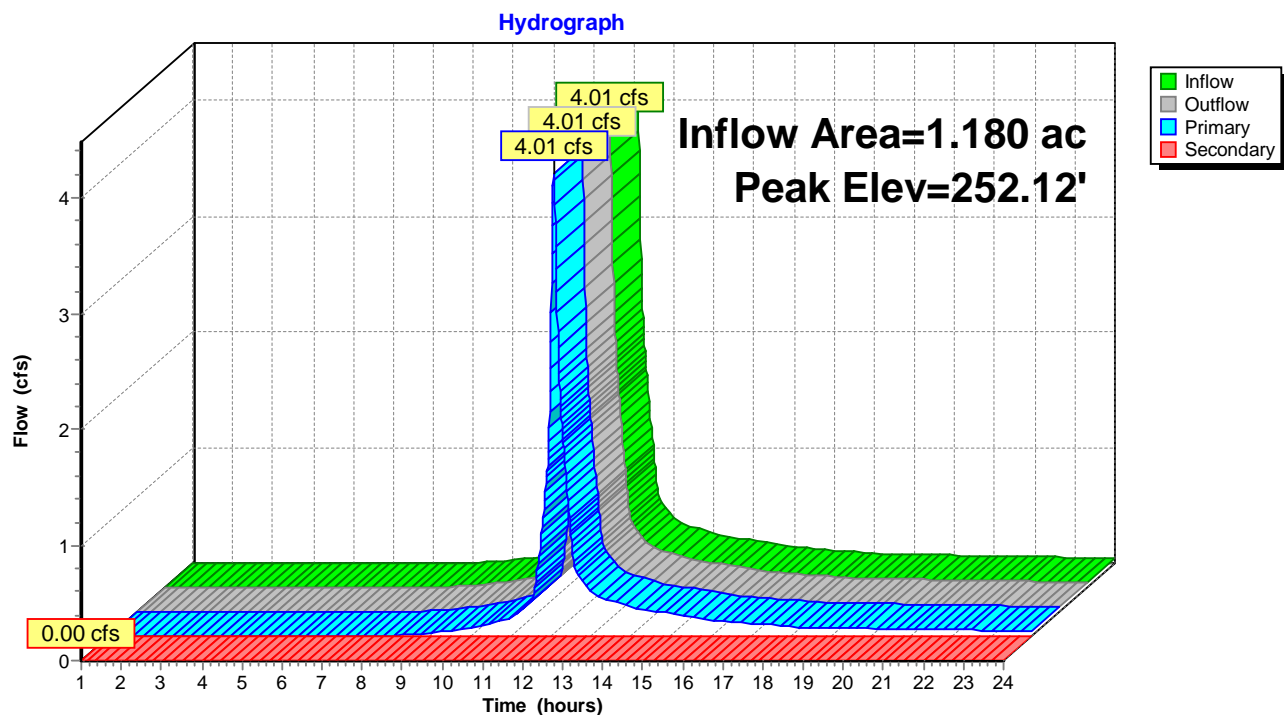
Primary OutFlow Max=4.01 cfs @ 12.09 hrs HW=252.12' (Free Discharge)

↑1=RCP_Round 12" (Inlet Controls 4.01 cfs @ 5.10 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=250.90' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 30P: CB-339



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 31P: CB-338

[57] Hint: Peaked at 263.83' (Flood elevation advised)

[79] Warning: Submerged Pond 32P Primary device # 1 OUTLET by 0.13'

Inflow Area = 0.940 ac, 65.96% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 3.13 cfs @ 12.09 hrs, Volume= 0.222 af
Outflow = 3.13 cfs @ 12.09 hrs, Volume= 0.222 af, Atten= 0%, Lag= 0.0 min
Primary = 3.13 cfs @ 12.09 hrs, Volume= 0.222 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 263.83' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	262.90'	12.0" Round RCP_Round 12" L= 178.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 262.90' / 251.00' S= 0.0666 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	266.19'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

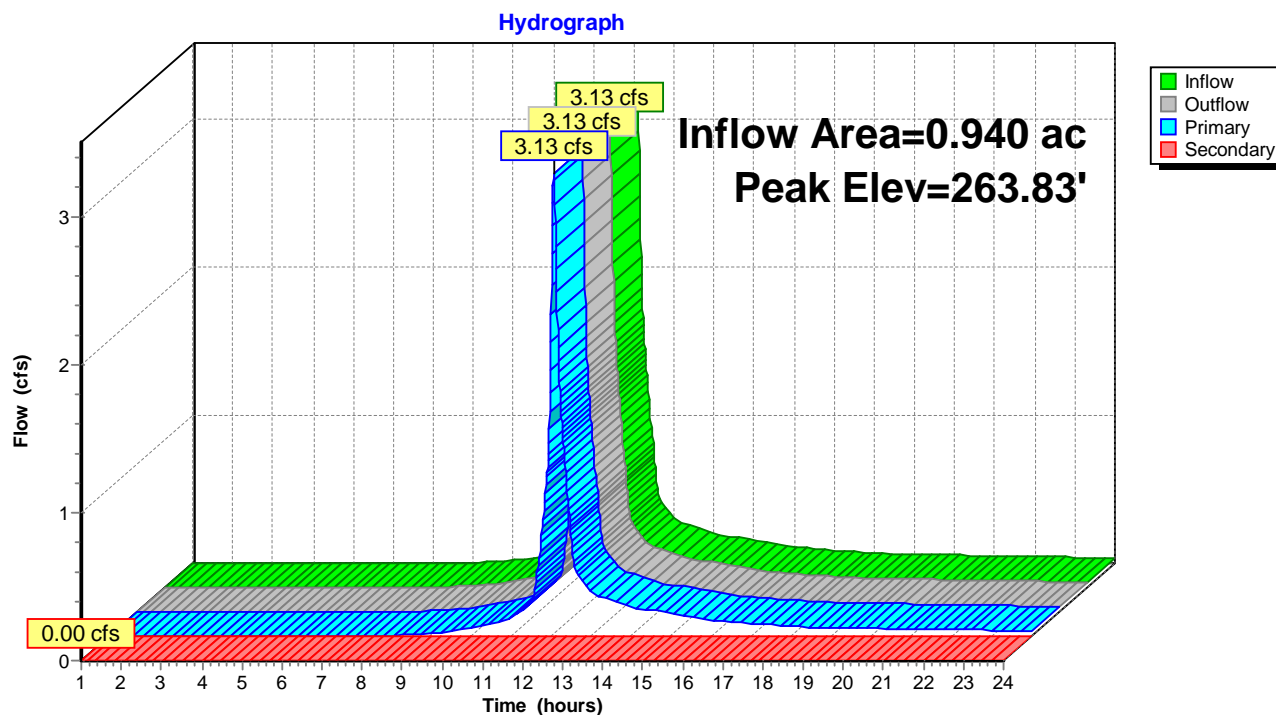
Primary OutFlow Max=3.13 cfs @ 12.09 hrs HW=263.83' (Free Discharge)

↑1=RCP_Round 12" (Inlet Controls 3.13 cfs @ 4.11 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=262.90' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 31P: CB-338



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 32P: CB-337

[57] Hint: Peaked at 264.98' (Flood elevation advised)

Inflow Area = 0.680 ac, 67.65% Impervious, Inflow Depth > 2.94" for 10-yr event
Inflow = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af
Outflow = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.0 min
Primary = 2.34 cfs @ 12.09 hrs, Volume= 0.166 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 264.98' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	264.10'	12.0" Round RCP_Round 12" L= 44.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 264.10' / 263.70' S= 0.0091 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	266.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	266.00'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=2.34 cfs @ 12.09 hrs HW=264.98' (Free Discharge)

↑**1=RCP_Round 12"** (Barrel Controls 2.34 cfs @ 4.29 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=264.10' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=264.10' (Free Discharge)

↑**3=Orifice/Grate** (Controls 0.00 cfs)

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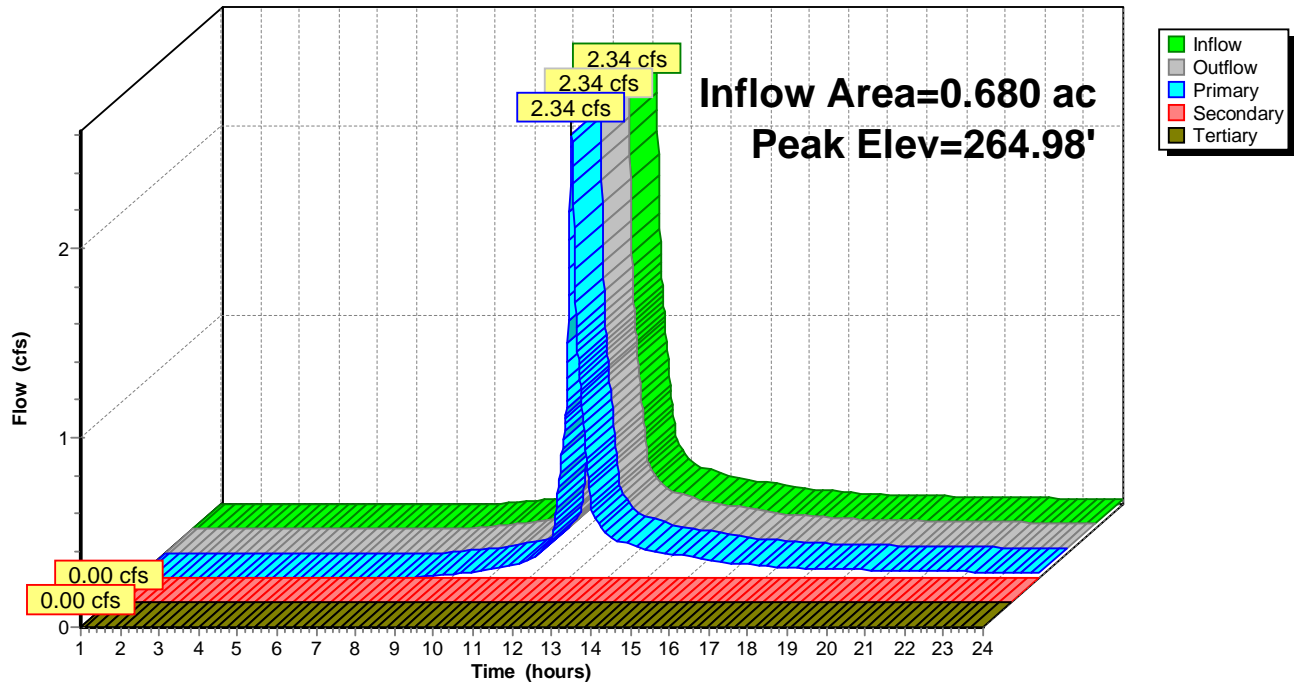
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 32P: CB-337

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 33P: NEW CB-2

[57] Hint: Peaked at 270.78' (Flood elevation advised)

Inflow Area = 0.740 ac, 29.73% Impervious, Inflow Depth > 2.32" for 10-yr event
Inflow = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af
Outflow = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min
Primary = 2.00 cfs @ 12.09 hrs, Volume= 0.143 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 270.78' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	270.00'	12.0" Round RCP_Round 12" L= 26.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 270.00' / 269.70' S= 0.0115 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	274.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

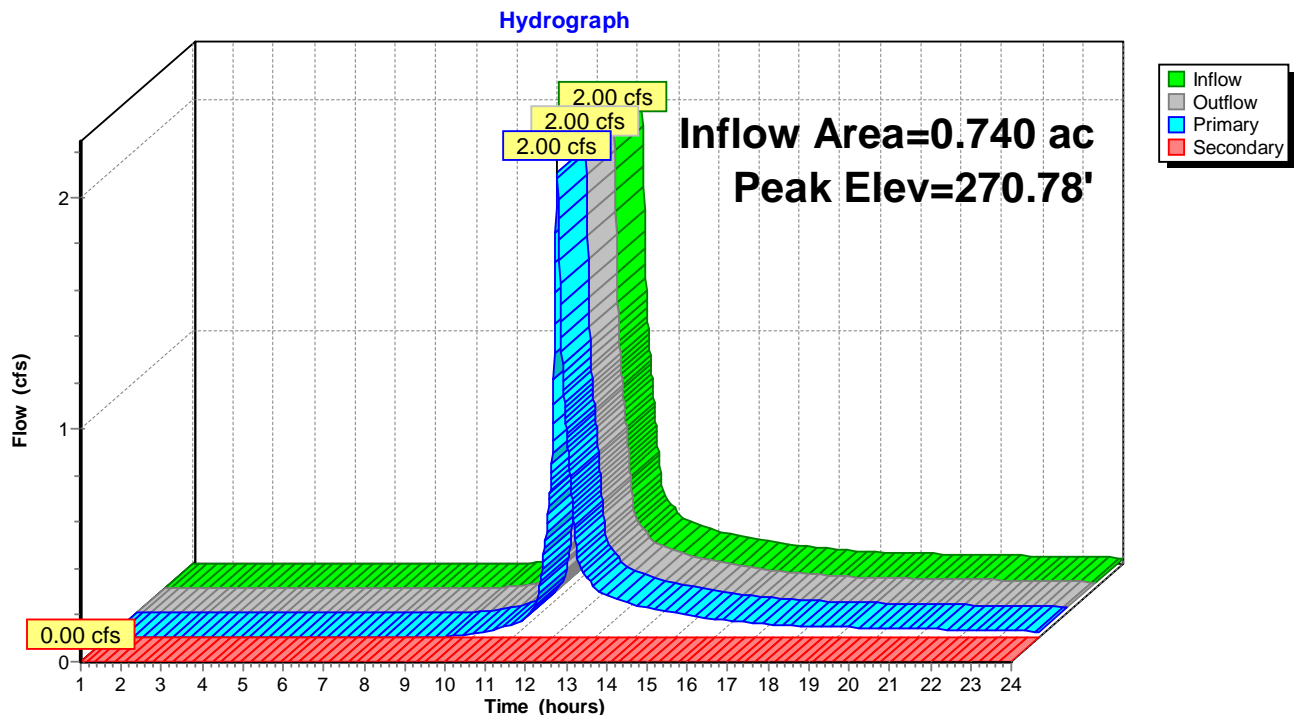
Primary OutFlow Max=2.00 cfs @ 12.09 hrs HW=270.78' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 2.00 cfs @ 4.19 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=270.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 33P: NEW CB-2



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Summary for Pond 34P: NEW CB-1021

[57] Hint: Peaked at 270.35' (Flood elevation advised)

Inflow Area = 0.090 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 0.45 cfs @ 12.08 hrs, Volume= 0.037 af
Outflow = 0.45 cfs @ 12.08 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min
Primary = 0.45 cfs @ 12.08 hrs, Volume= 0.037 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 270.35' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	270.00'	12.0" Round RCP_Round 12" L= 7.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 270.00' / 269.90' S= 0.0143 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	274.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

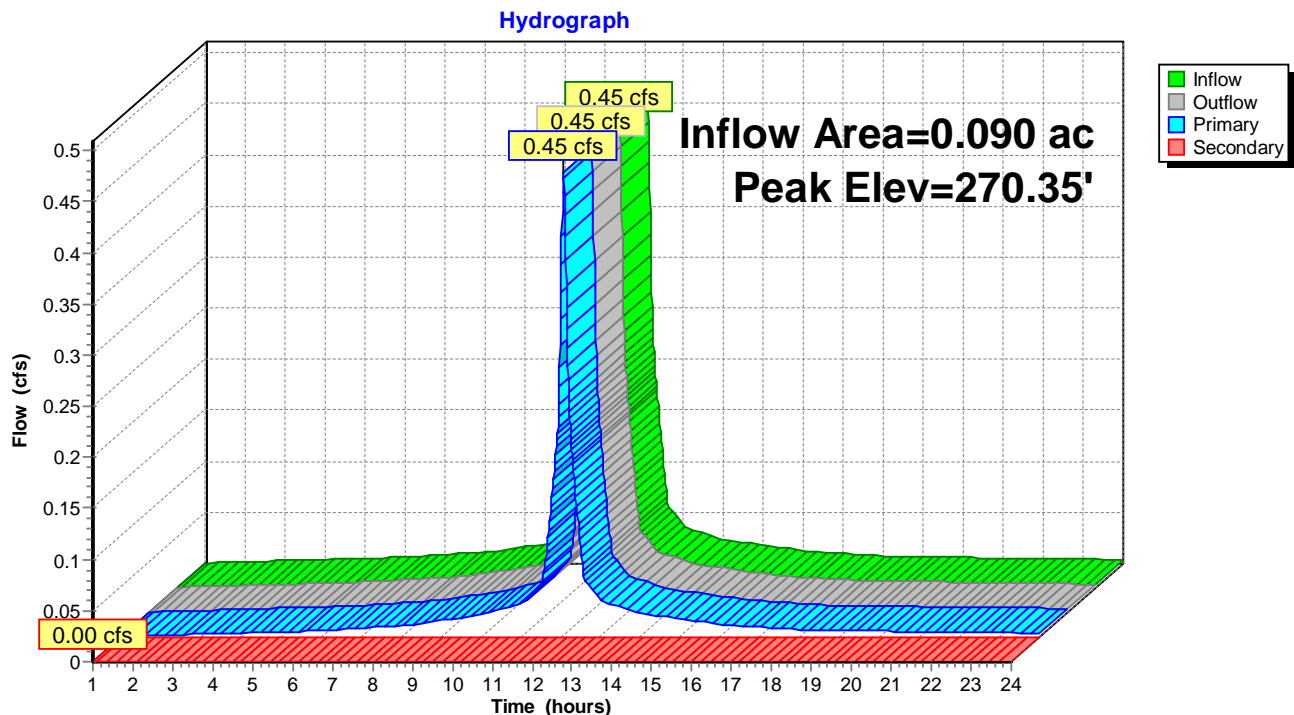
Primary OutFlow Max=0.45 cfs @ 12.08 hrs HW=270.35' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 0.45 cfs @ 2.78 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=270.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 34P: NEW CB-1021



Summary for Pond 35P: MH-41

[43] Hint: Has no inflow (Outflow=Zero)

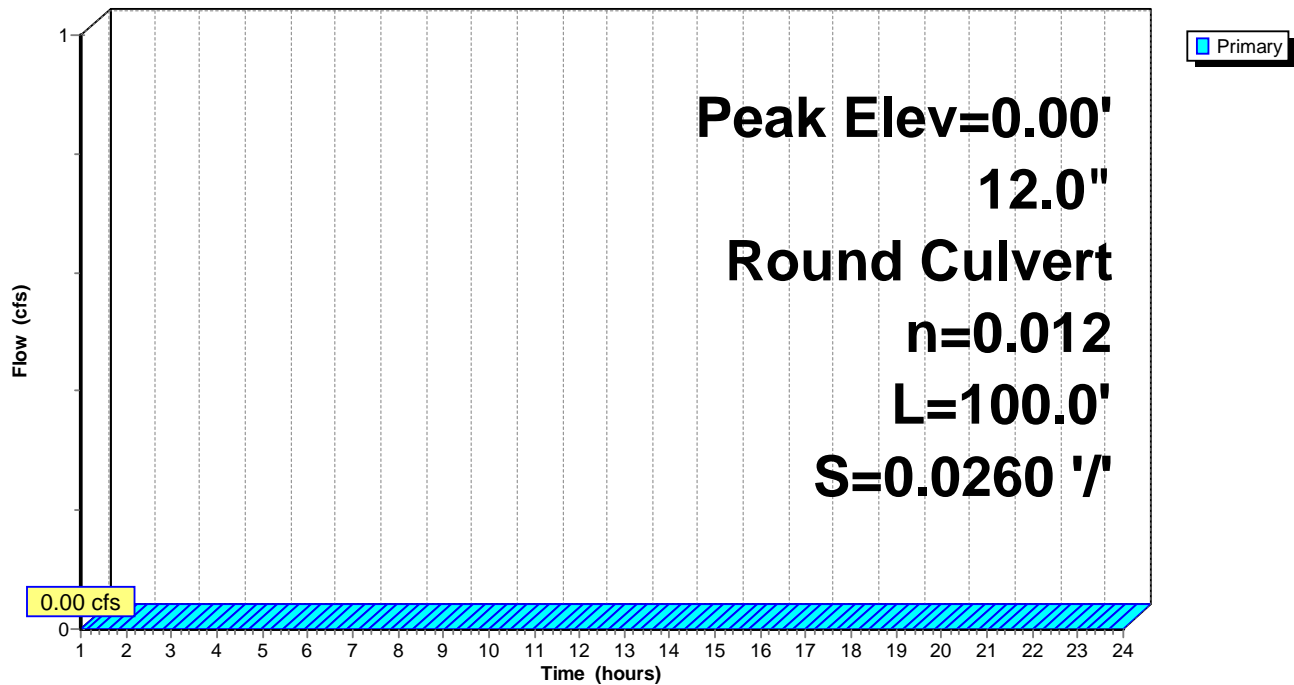
Device	Routing	Invert	Outlet Devices
#1	Primary	267.60'	12.0" Round RCP_Round 12" L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 267.60' / 265.00' S= 0.0260 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=0.00' (Free Discharge)

↑1=RCP_Round 12" (Controls 0.00 cfs)

Pond 35P: MH-41

Hydrograph



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Summary for Pond 37P: NEW CB-1

[57] Hint: Peaked at 269.60' (Flood elevation advised)

Inflow Area = 0.460 ac, 54.35% Impervious, Inflow Depth > 2.24" for 10-yr event
Inflow = 1.19 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 1.19 cfs @ 12.09 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
Primary = 1.19 cfs @ 12.09 hrs, Volume= 0.086 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 269.60' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	269.00'	12.0" Round RCP_Round 12" L= 21.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 269.00' / 268.80' S= 0.0095 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	273.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

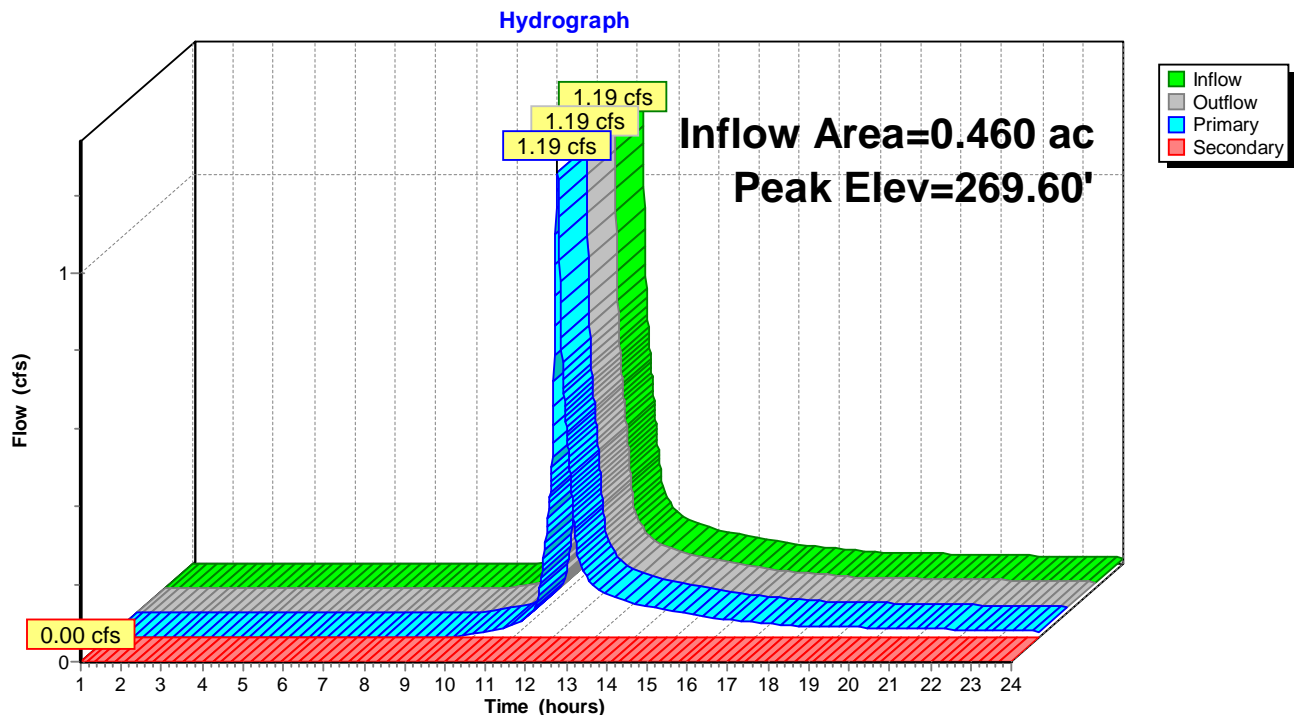
Primary OutFlow Max=1.19 cfs @ 12.09 hrs HW=269.60' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 1.19 cfs @ 3.51 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=269.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 37P: NEW CB-1



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Summary for Pond 38P: NEW CB-1020

[57] Hint: Peaked at 269.35' (Flood elevation advised)

Inflow Area = 0.100 ac, 80.00% Impervious, Inflow Depth > 3.61" for 10-yr event
Inflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af
Outflow = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.42 cfs @ 12.09 hrs, Volume= 0.030 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 269.35' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	269.00'	12.0" Round RCP_Round 12" L= 15.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 269.00' / 268.90' S= 0.0067 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	273.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

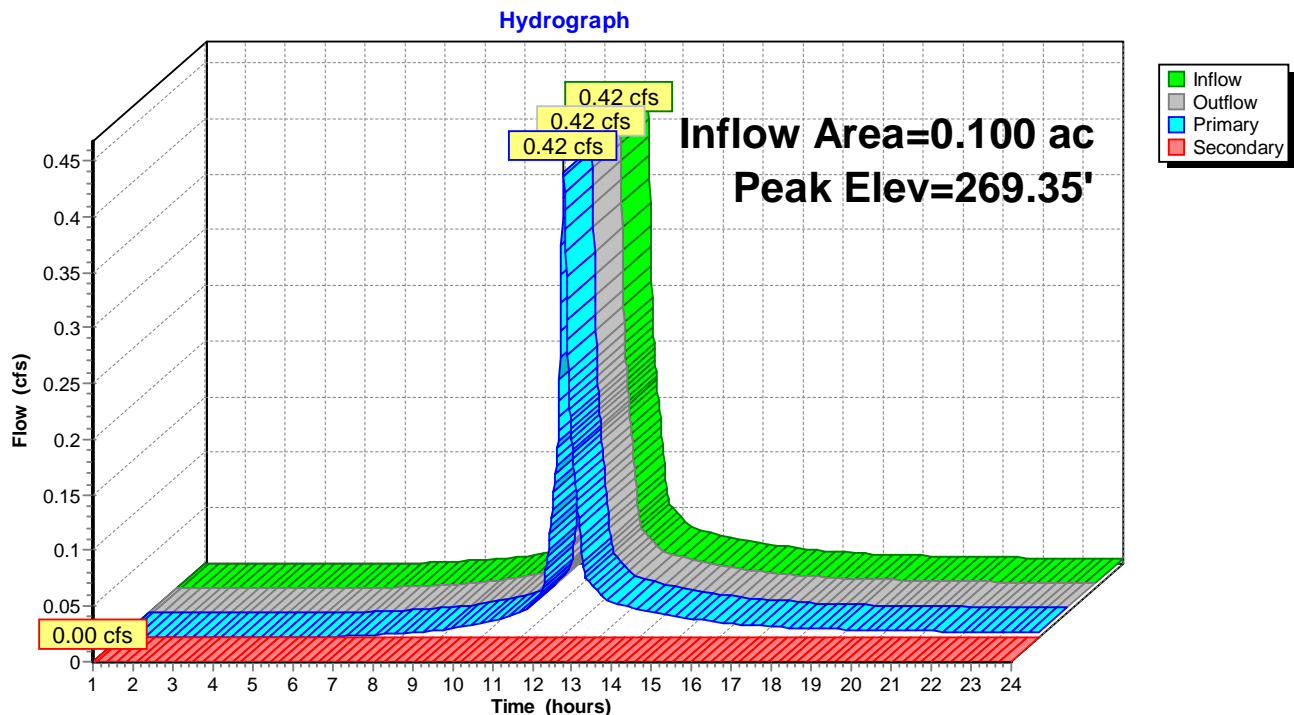
Primary OutFlow Max=0.42 cfs @ 12.09 hrs HW=269.35' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 0.42 cfs @ 2.49 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=269.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 38P: NEW CB-1020



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Summary for Pond 40P: FS MH 2

[81] Warning: Exceeded Pond 23P by 1.21' @ 12.10 hrs

[79] Warning: Submerged Pond 24P Primary device # 1 OUTLET by 3.42'

Inflow Area = 14.073 ac, 34.83% Impervious, Inflow Depth > 2.39" for 10-yr event
Inflow = 32.08 cfs @ 12.11 hrs, Volume= 2.801 af
Outflow = 32.08 cfs @ 12.11 hrs, Volume= 2.801 af, Atten= 0%, Lag= 0.0 min
Primary = 32.08 cfs @ 12.11 hrs, Volume= 2.801 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 244.72' @ 12.11 hrs

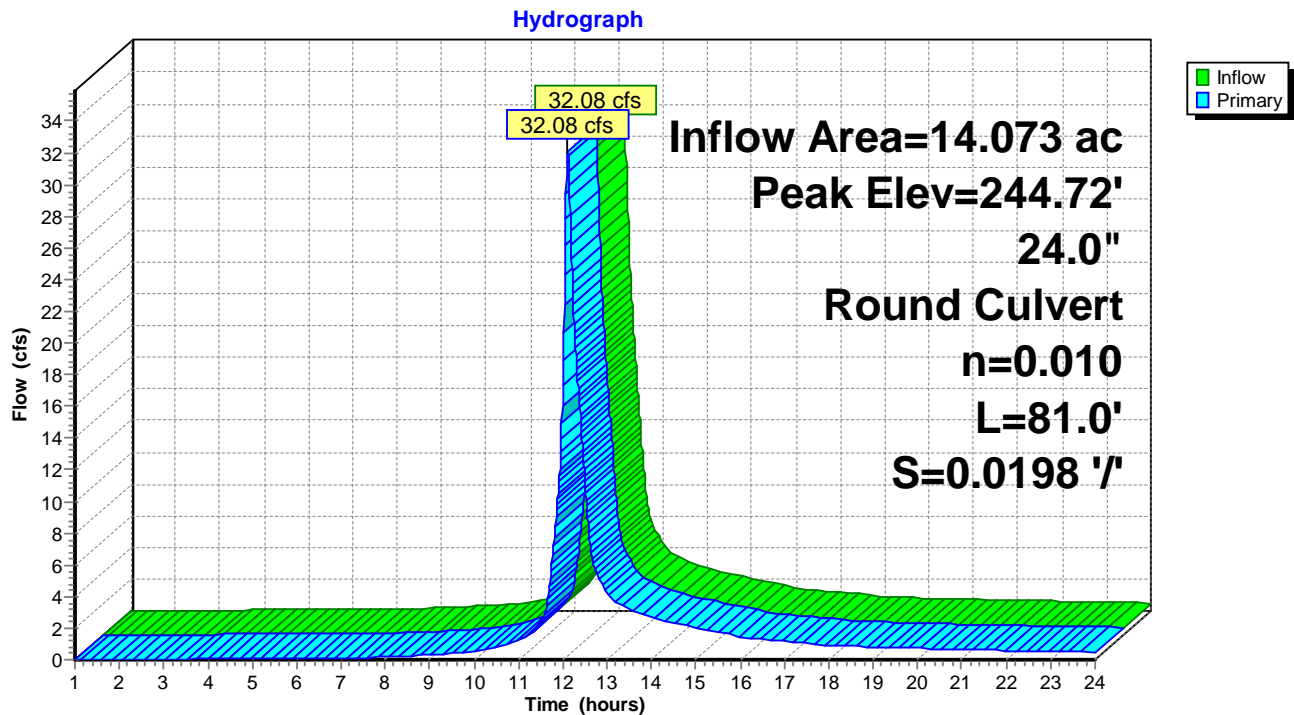
Flood Elev= 247.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	236.50'	24.0" Round 24" HDPE L= 81.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 236.50' / 234.90' S= 0.0198 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=32.08 cfs @ 12.11 hrs HW=244.72' (Free Discharge)

↑1=24" HDPE (Inlet Controls 32.08 cfs @ 10.21 fps)

Pond 40P: FS MH 2



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Summary for Pond 41P: MH-30

[79] Warning: Submerged Pond 40P Primary device # 1 INLET by 1.61'

Inflow Area = 14.109 ac, 34.99% Impervious, Inflow Depth > 2.39" for 10-yr event
Inflow = 32.26 cfs @ 12.11 hrs, Volume= 2.815 af
Outflow = 32.26 cfs @ 12.11 hrs, Volume= 2.815 af, Atten= 0%, Lag= 0.0 min
Primary = 32.26 cfs @ 12.11 hrs, Volume= 2.815 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 238.11' @ 12.11 hrs

Flood Elev= 244.73'

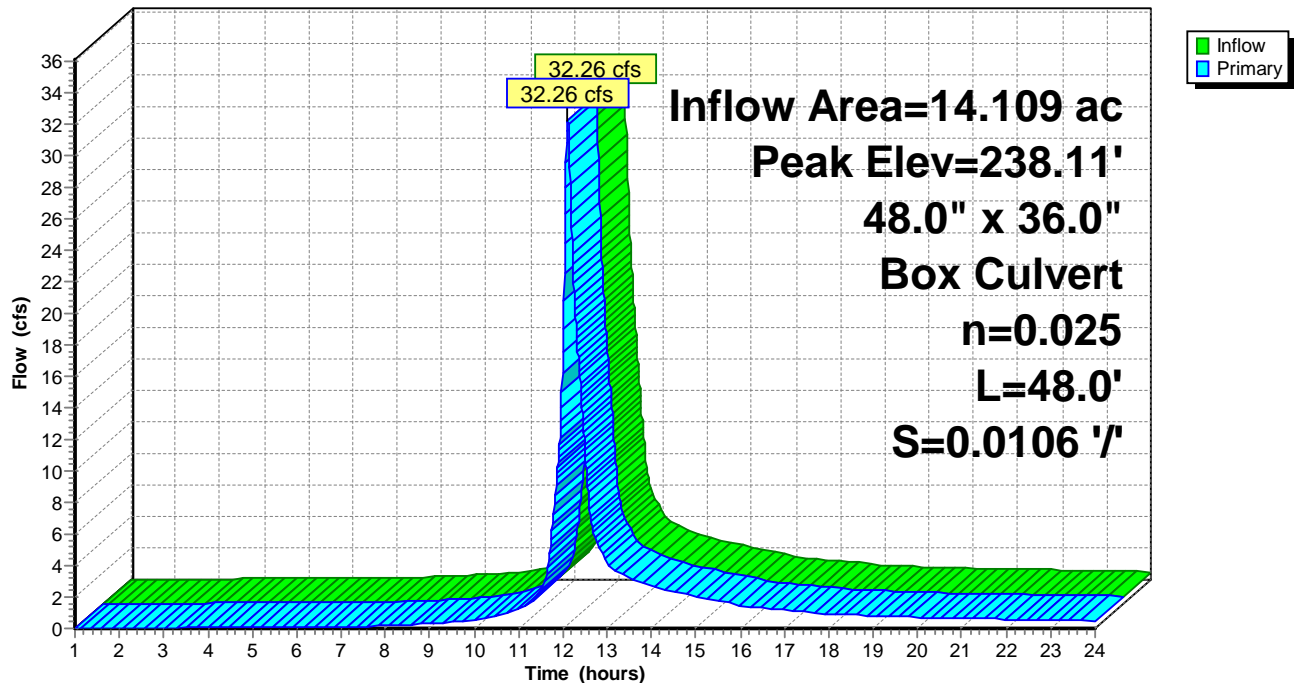
Device	Routing	Invert	Outlet Devices
#1	Primary	236.01'	48.0" W x 36.0" H Box masonry rock culvert L= 48.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 236.01' / 235.50' S= 0.0106 '/' Cc= 0.900 n= 0.025 Rubble masonry, cemented, Flow Area= 12.00 sf

Primary OutFlow Max=32.25 cfs @ 12.11 hrs HW=238.11' (Free Discharge)

↑=masonry rock culvert (Barrel Controls 32.25 cfs @ 5.12 fps)

Pond 41P: MH-30

Hydrograph



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 42P: CB-341

[57] Hint: Peaked at 242.61' (Flood elevation advised)

Inflow Area = 0.080 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 0.40 cfs @ 12.08 hrs, Volume= 0.033 af
Outflow = 0.40 cfs @ 12.08 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min
Primary = 0.40 cfs @ 12.08 hrs, Volume= 0.033 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Tertiary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 242.61' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	242.30'	12.0" Round 12" clay L= 22.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 242.30' / 242.03' S= 0.0123 '/' Cc= 0.900 n= 0.013 Clay tile, Flow Area= 0.79 sf
#2	Secondary	244.10'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Tertiary	244.10'	24.0" W x 2.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.40 cfs @ 12.08 hrs HW=242.61' (Free Discharge)

↑ **1=12" clay** (Barrel Controls 0.40 cfs @ 2.87 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=242.30' (Free Discharge)

↑ **2=Orifice/Grate** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 1.00 hrs HW=242.30' (Free Discharge)

↑ **3=Orifice/Grate** (Controls 0.00 cfs)

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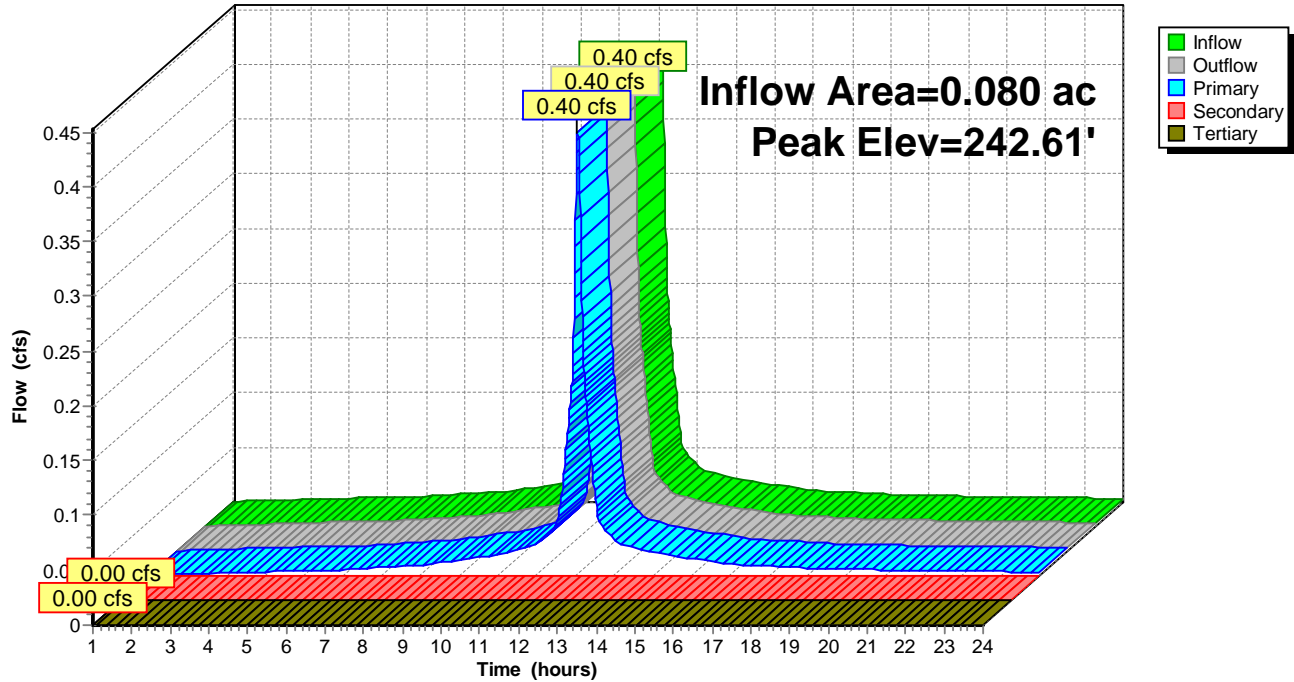
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 42P: CB-341

Hydrograph



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Summary for Pond 43P: NEW MH

[81] Warning: Exceeded Pond 41P by 0.46' @ 12.08 hrs

Inflow Area = 20.415 ac, 38.60% Impervious, Inflow Depth > 2.57" for 10-yr event
Inflow = 52.36 cfs @ 12.10 hrs, Volume= 4.367 af
Outflow = 52.36 cfs @ 12.10 hrs, Volume= 4.367 af, Atten= 0%, Lag= 0.0 min
Primary = 52.36 cfs @ 12.10 hrs, Volume= 4.367 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 238.55' @ 12.10 hrs

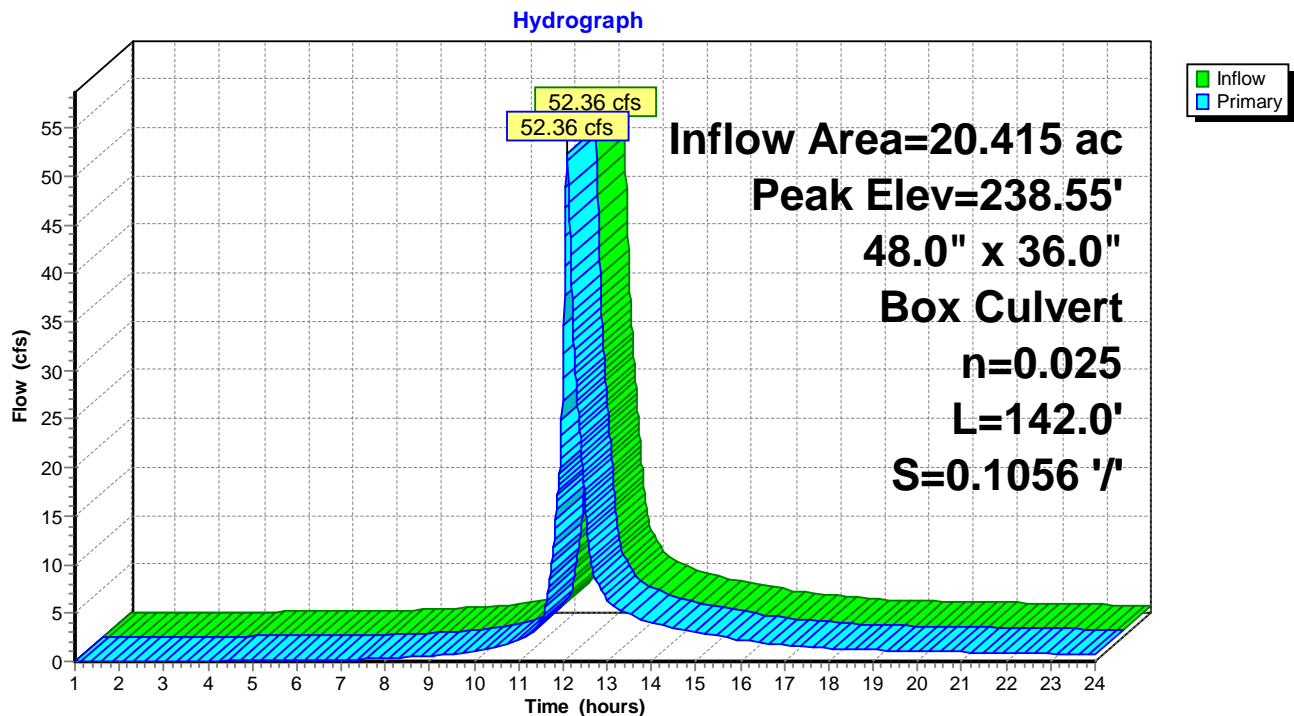
Flood Elev= 244.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	236.00'	48.0" W x 36.0" H Box masonry rock culvert L= 142.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 236.00' / 221.00' S= 0.1056 '/' Cc= 0.900 n= 0.025 Rubble masonry, cemented, Flow Area= 12.00 sf

Primary OutFlow Max=52.29 cfs @ 12.10 hrs HW=238.55' (Free Discharge)

↑1=masonry rock culvert (Inlet Controls 52.29 cfs @ 5.13 fps)

Pond 43P: NEW MH



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Summary for Pond 44P: NEW CB

[57] Hint: Peaked at 240.90' (Flood elevation advised)

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af
Outflow = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.50 cfs @ 12.08 hrs, Volume= 0.041 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 240.90' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	240.50'	12.0" Round 12" HDPE L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 240.50' / 240.20' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	244.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

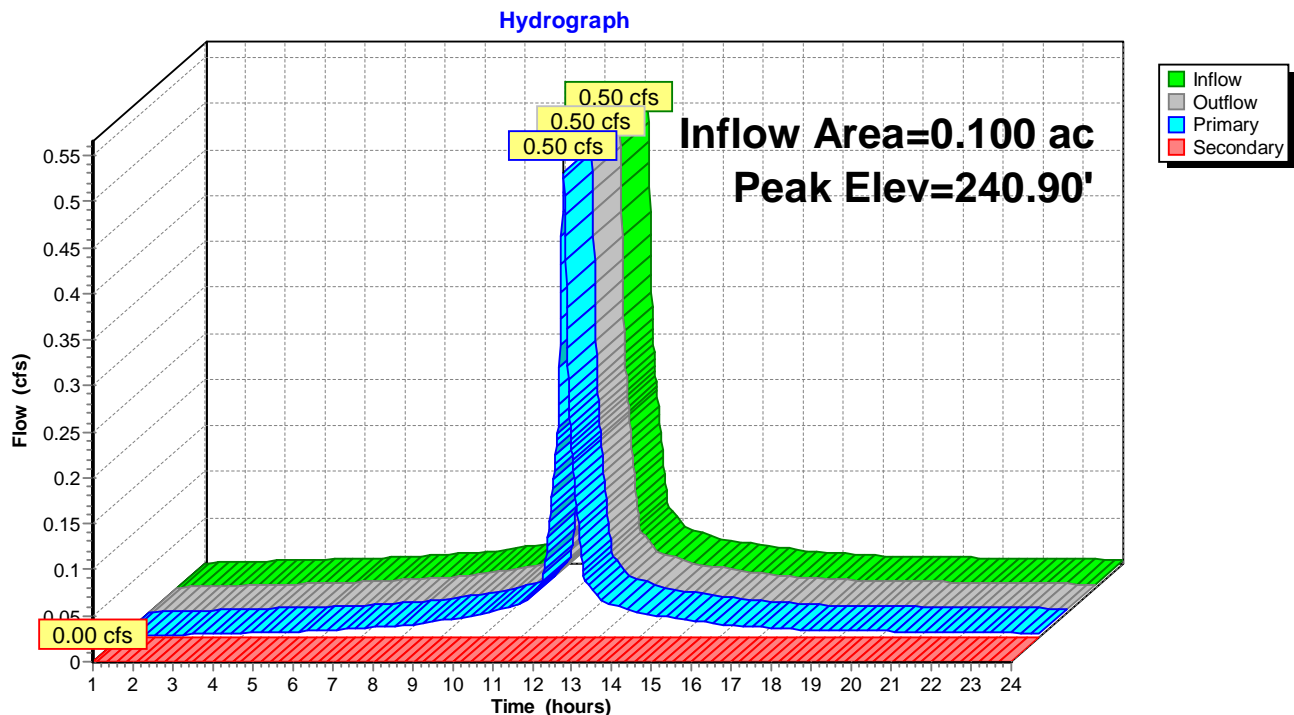
Primary OutFlow Max=0.50 cfs @ 12.08 hrs HW=240.90' (Free Discharge)

↑1=12" HDPE (Inlet Controls 0.50 cfs @ 1.70 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=240.50' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 44P: NEW CB



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Summary for Pond 45P: STATION CB

[57] Hint: Peaked at 239.85' (Flood elevation advised)

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 4.92" for 10-yr event
Inflow = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af
Outflow = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min
Primary = 1.01 cfs @ 12.08 hrs, Volume= 0.082 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 239.85' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	239.26'	12.0" Round 12" HDPE L= 23.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 239.26' / 238.80' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Secondary	244.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

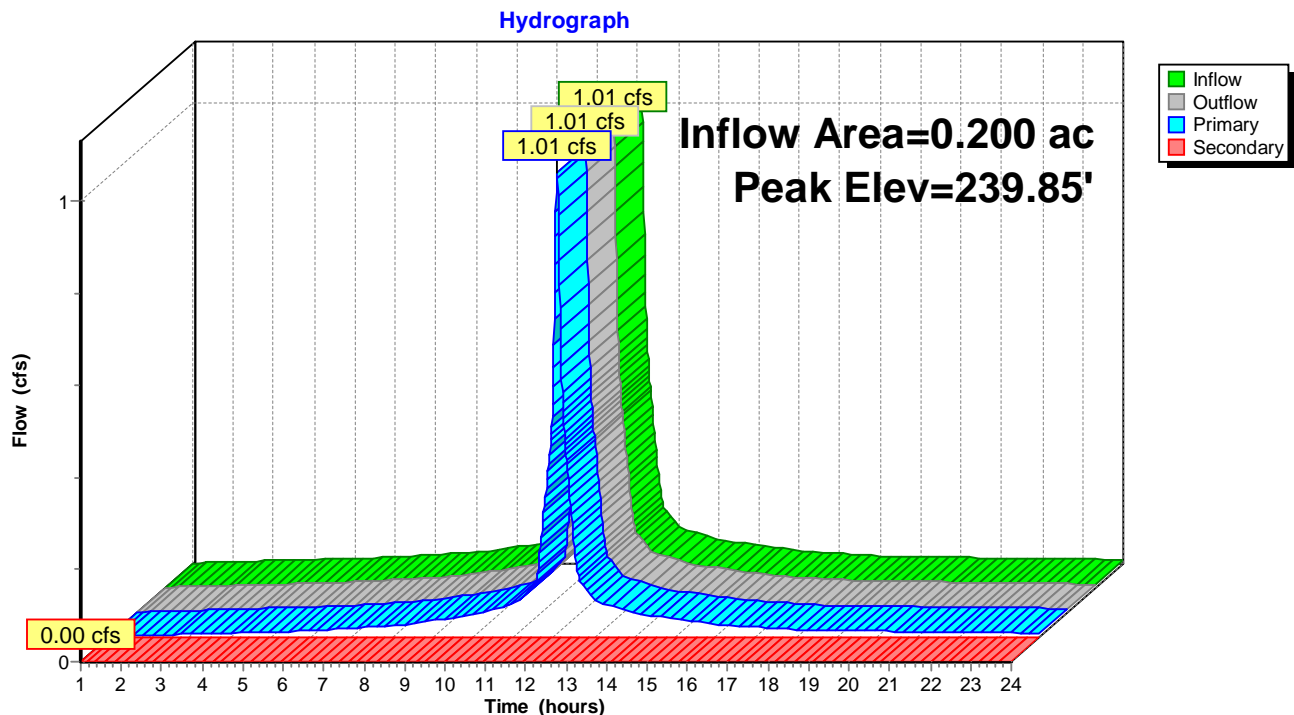
Primary OutFlow Max=1.01 cfs @ 12.08 hrs HW=239.85' (Free Discharge)

↑1=12" HDPE (Inlet Controls 1.01 cfs @ 2.07 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=239.26' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 45P: STATION CB



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Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 46P: Wetland Area

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 4.410 ac, 18.82% Impervious, Inflow Depth > 1.83" for 10-yr event
 Inflow = 7.89 cfs @ 12.15 hrs, Volume= 0.674 af
 Outflow = 7.89 cfs @ 12.15 hrs, Volume= 0.674 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.89 cfs @ 12.15 hrs, Volume= 0.674 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 260.00' @ 12.15 hrs Surf.Area= 594 sf Storage= 2 cf

Plug-Flow detention time= 0.0 min calculated for 0.674 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (858.7 - 858.7)

Volume	Invert	Avail.Storage	Storage Description
#1	260.00'	13,859 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
260.00	592	0	0
261.00	1,184	888	888
262.00	1,981	1,583	2,471
263.00	3,003	2,492	4,963
264.00	4,316	3,660	8,622
265.00	6,157	5,237	13,859

Device	Routing	Invert	Outlet Devices
#1	Primary	255.00'	48.0" W x 60.0" H Box Culvert L= 40.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 255.00' / 243.80' S= 0.2800 '/' Cc= 0.900 n= 0.017, Flow Area= 20.00 sf

Primary OutFlow Max=143.67 cfs @ 12.15 hrs HW=260.00' (Free Discharge)**↑1=Culvert** (Inlet Controls 143.67 cfs @ 7.18 fps)

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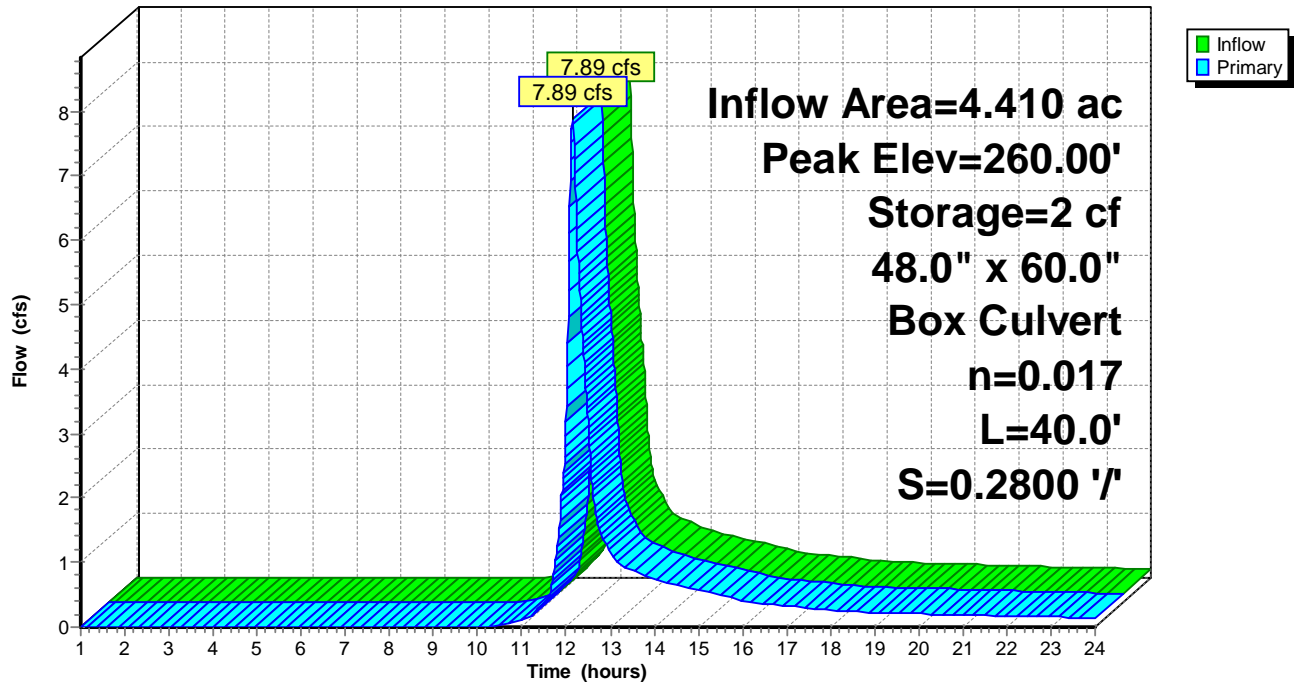
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 46P: Wetland Area

Hydrograph



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Summary for Pond 73P: MH-P2

[79] Warning: Submerged Pond 26P Primary device # 1 INLET by 0.93'

[81] Warning: Exceeded Pond 37P by 0.94' @ 12.10 hrs

[81] Warning: Exceeded Pond 38P by 1.18' @ 12.10 hrs

Inflow Area = 5.666 ac, 42.25% Impervious, Inflow Depth > 2.84" for 10-yr event
Inflow = 17.45 cfs @ 12.10 hrs, Volume= 1.339 af
Outflow = 17.45 cfs @ 12.10 hrs, Volume= 1.339 af, Atten= 0%, Lag= 0.0 min
Primary = 17.45 cfs @ 12.10 hrs, Volume= 1.339 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 270.53' @ 12.10 hrs

Flood Elev= 273.50'

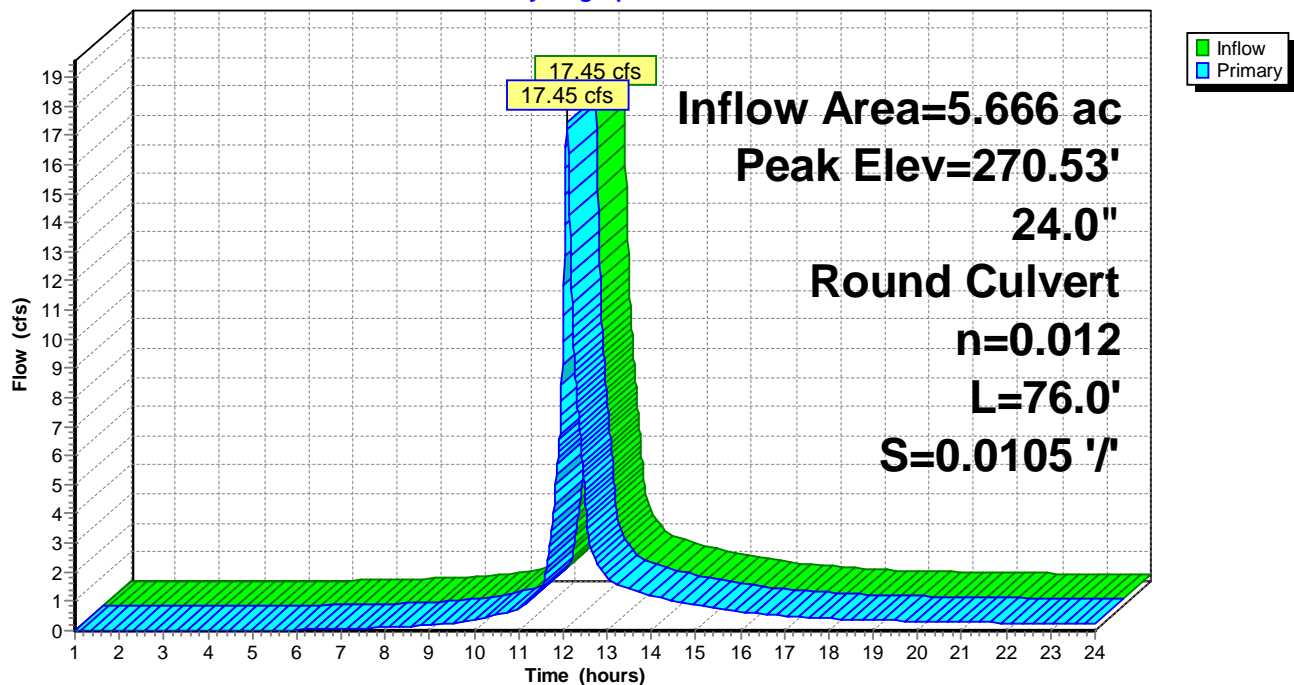
Device	Routing	Invert	Outlet Devices
#1	Primary	268.50'	24.0" Round RCP_Round 24" L= 76.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 268.50' / 267.70' S= 0.0105 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=17.43 cfs @ 12.10 hrs HW=270.53' (Free Discharge)

↑1=RCP_Round 24" (Barrel Controls 17.43 cfs @ 6.79 fps)

Pond 73P: MH-P2

Hydrograph



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Summary for Pond 75P: CB-P1

[57] Hint: Peaked at 329.07' (Flood elevation advised)

[79] Warning: Submerged Pond 5P Primary device # 1 OUTLET by 1.17'

Inflow Area = 1.716 ac, 48.60% Impervious, Inflow Depth > 3.18" for 10-yr event
Inflow = 5.92 cfs @ 12.09 hrs, Volume= 0.455 af
Outflow = 5.92 cfs @ 12.09 hrs, Volume= 0.455 af, Atten= 0%, Lag= 0.0 min
Primary = 5.92 cfs @ 12.09 hrs, Volume= 0.455 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 329.07' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	327.80'	15.0" Round RCP_Round 15" L= 175.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 327.80' / 325.20' S= 0.0149 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	332.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

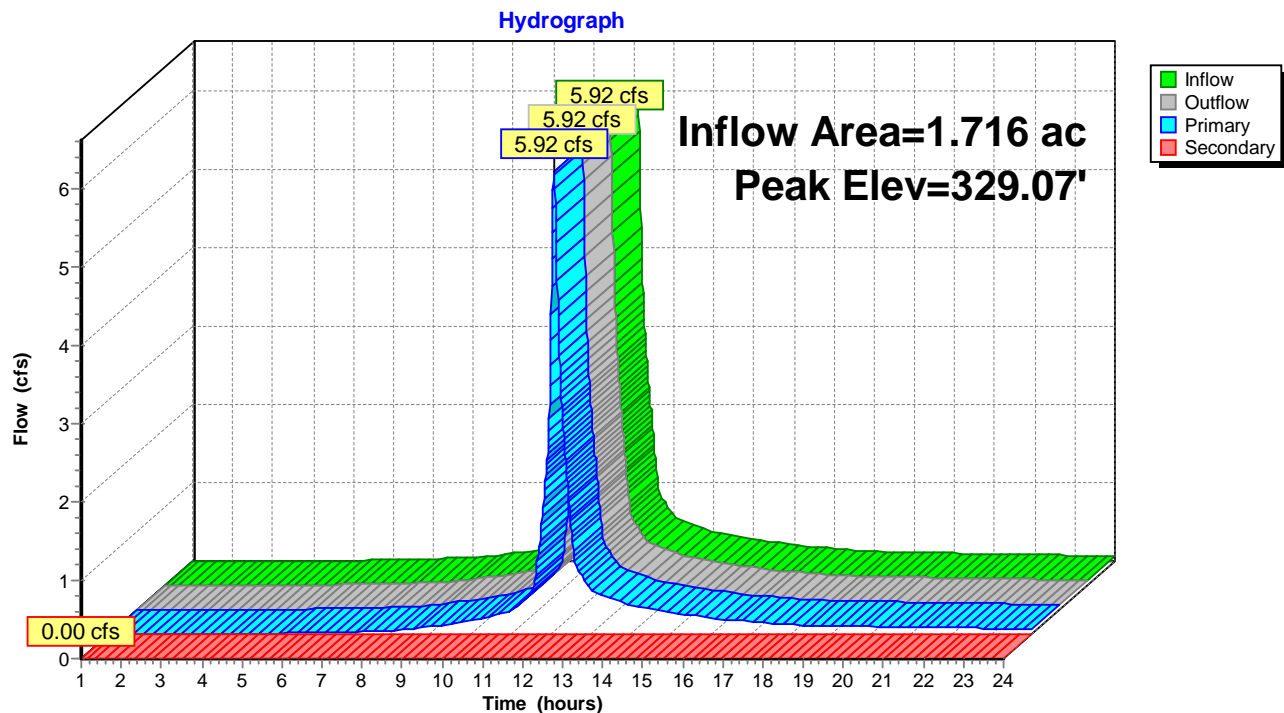
Primary OutFlow Max=5.91 cfs @ 12.09 hrs HW=329.06' (Free Discharge)

↑1=RCP_Round 15" (Inlet Controls 5.91 cfs @ 4.81 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=327.80' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 75P: CB-P1



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Summary for Pond 76P: CB-P2

[57] Hint: Peaked at 323.54' (Flood elevation advised)

Inflow Area = 3.177 ac, 42.93% Impervious, Inflow Depth > 3.05" for 10-yr event
Inflow = 10.43 cfs @ 12.10 hrs, Volume= 0.808 af
Outflow = 10.43 cfs @ 12.10 hrs, Volume= 0.808 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Secondary = 10.43 cfs @ 12.10 hrs, Volume= 0.808 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 323.54' @ 12.10 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	323.60'	15.0" Round RCP_Round 15" L= 230.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 323.60' / 306.70' S= 0.0735 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf
#2	Secondary	323.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.00 cfs @ 1.00 hrs HW=323.00' (Free Discharge)

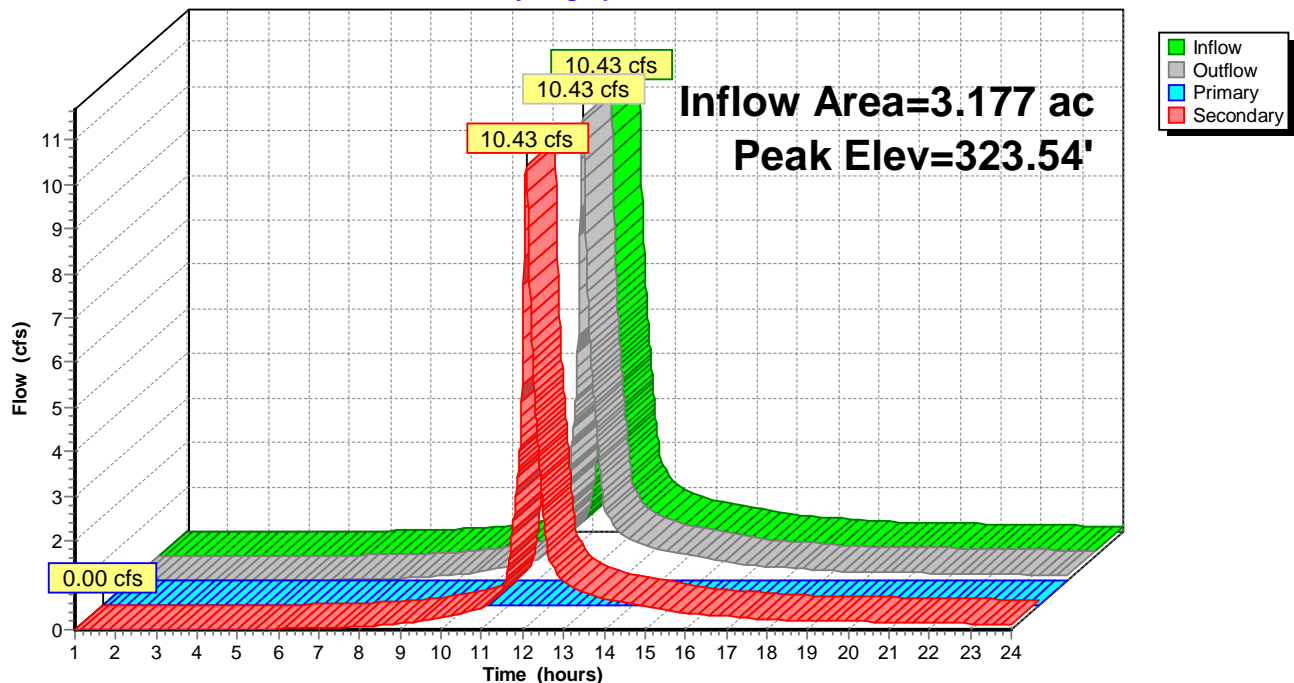
↑1=RCP_Round 15" (Controls 0.00 cfs)

Secondary OutFlow Max=10.41 cfs @ 12.10 hrs HW=323.54' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 10.41 cfs @ 2.41 fps)

Pond 76P: CB-P2

Hydrograph



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Summary for Pond 77P: CB-P3

[57] Hint: Peaked at 290.52' (Flood elevation advised)

Inflow Area = 0.900 ac, 13.33% Impervious, Inflow Depth > 1.83" for 10-yr event
Inflow = 1.65 cfs @ 12.14 hrs, Volume= 0.137 af
Outflow = 1.65 cfs @ 12.14 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min
Primary = 1.65 cfs @ 12.14 hrs, Volume= 0.137 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 290.52' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	289.80'	12.0" Round RCP_Round 12" L= 18.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 289.80' / 289.60' S= 0.0111 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	294.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.65 cfs @ 12.14 hrs HW=290.52' (Free Discharge)

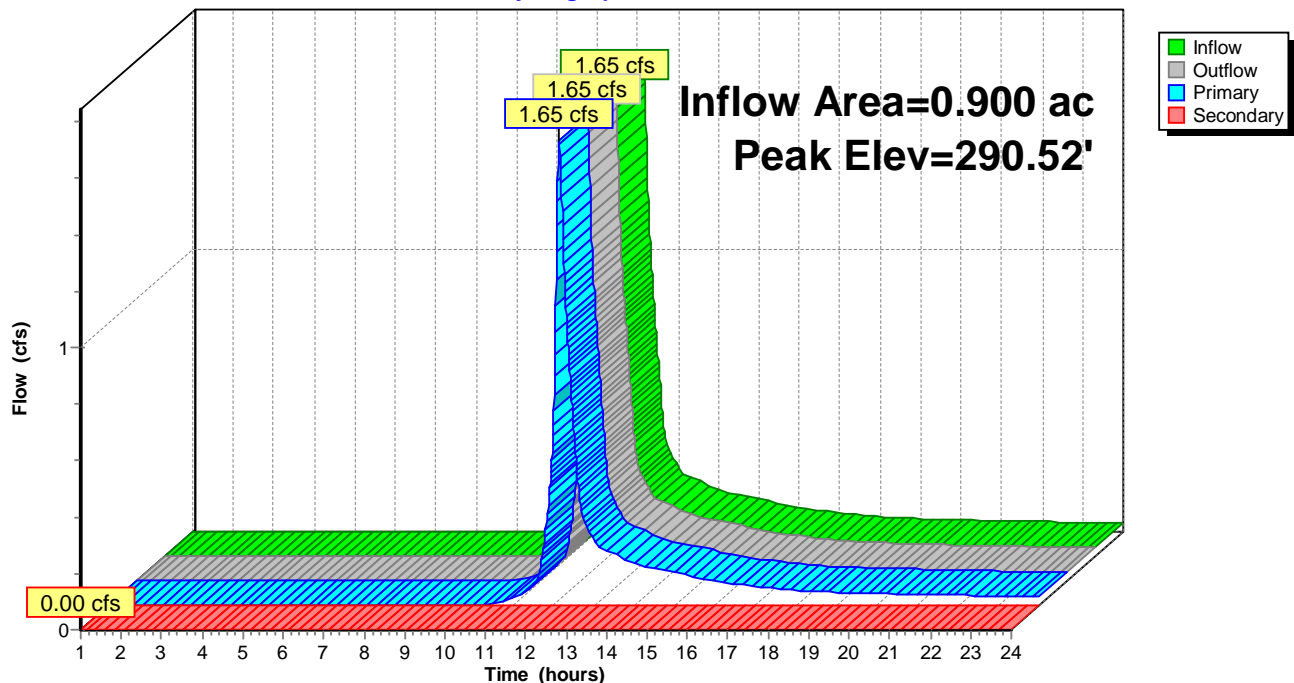
↑1=RCP_Round 12" (Barrel Controls 1.65 cfs @ 3.84 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=289.80' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 77P: CB-P3

Hydrograph



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Summary for Pond 78P: CB-P4

[57] Hint: Peaked at 282.35' (Flood elevation advised)

Inflow Area = 1.210 ac, 14.05% Impervious, Inflow Depth > 1.68" for 10-yr event
Inflow = 2.21 cfs @ 12.11 hrs, Volume= 0.170 af
Outflow = 2.21 cfs @ 12.11 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 2.21 cfs @ 12.11 hrs, Volume= 0.170 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 282.35' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	281.40'	12.0" Round RCP_Round 12" L= 18.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 281.40' / 281.30' S= 0.0056 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	285.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

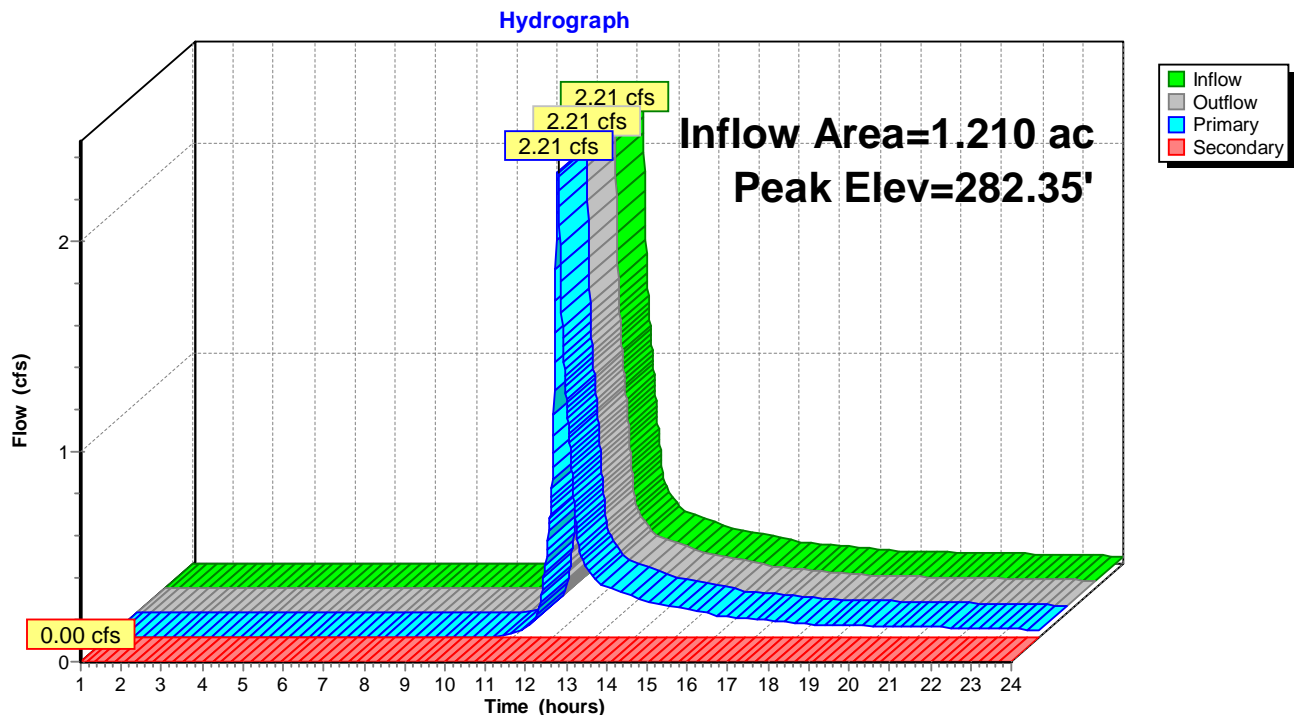
Primary OutFlow Max=2.21 cfs @ 12.11 hrs HW=282.35' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 2.21 cfs @ 3.70 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=281.40' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 78P: CB-P4



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Summary for Pond 79P: CB-P5

[57] Hint: Peaked at 278.71' (Flood elevation advised)

Inflow Area = 0.610 ac, 22.95% Impervious, Inflow Depth > 1.91" for 10-yr event
Inflow = 0.92 cfs @ 12.27 hrs, Volume= 0.097 af
Outflow = 0.92 cfs @ 12.27 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
Primary = 0.92 cfs @ 12.27 hrs, Volume= 0.097 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 278.71' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	278.20'	12.0" Round RCP_Round 12" L= 20.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 278.20' / 278.00' S= 0.0100 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	282.00'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.92 cfs @ 12.27 hrs HW=278.71' (Free Discharge)

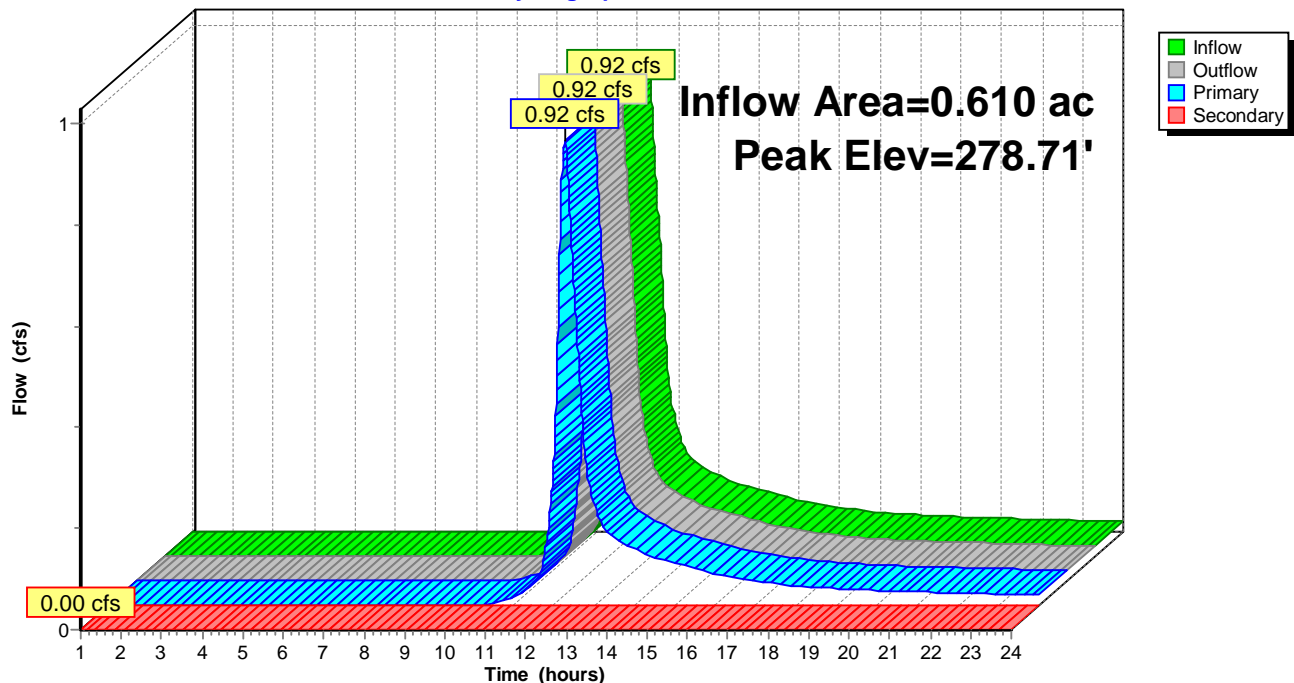
↑1=RCP_Round 12" (Barrel Controls 0.92 cfs @ 3.34 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=278.20' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 79P: CB-P5

Hydrograph



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Summary for Pond 80P: MH-P4

[58] Hint: Peaked 9.19' above defined flood level

[81] Warning: Exceeded Pond 10P by 8.49' @ 12.10 hrs

[81] Warning: Exceeded Pond 11P by 9.15' @ 12.10 hrs

Inflow Area = 4.276 ac, 41.02% Impervious, Inflow Depth > 2.93" for 10-yr event
Inflow = 13.41 cfs @ 12.10 hrs, Volume= 1.043 af
Outflow = 13.41 cfs @ 12.10 hrs, Volume= 1.043 af, Atten= 0%, Lag= 0.0 min
Primary = 13.41 cfs @ 12.10 hrs, Volume= 1.043 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 315.69' @ 12.10 hrs

Flood Elev= 306.50'

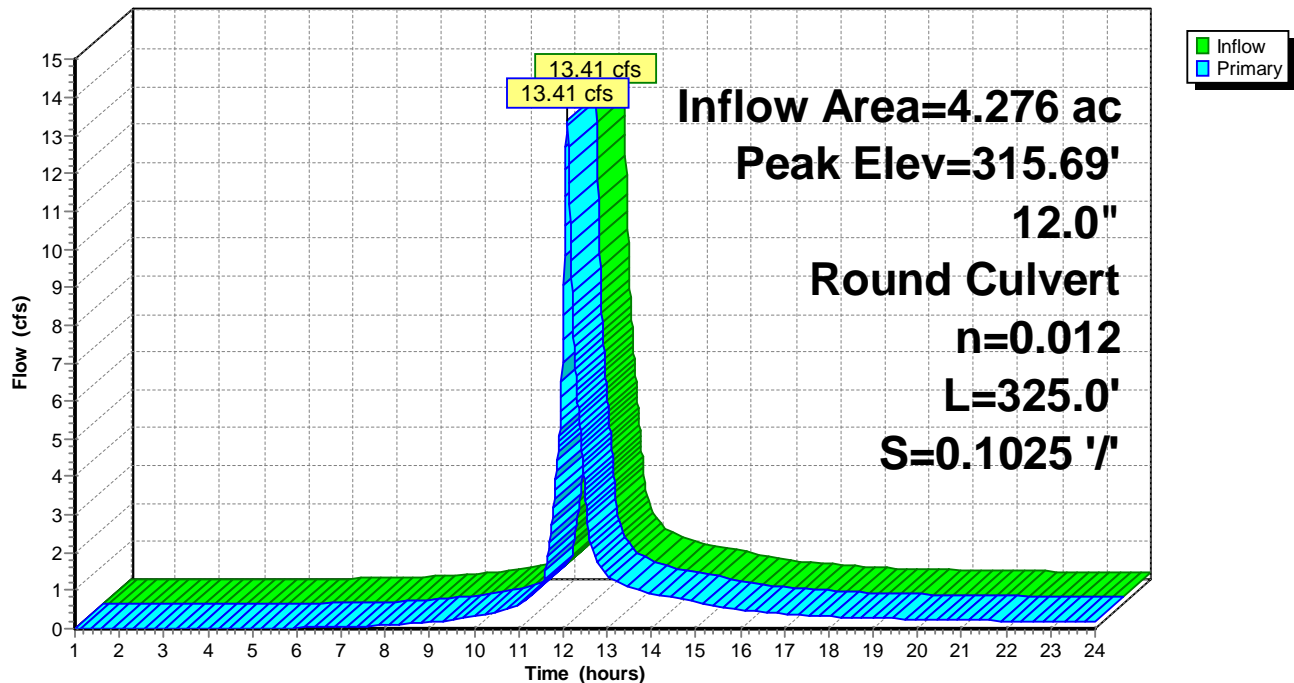
Device	Routing	Invert	Outlet Devices
#1	Primary	303.20'	12.0" Round RCP_Round 12" L= 325.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 303.20' / 269.90' S= 0.1025 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=13.40 cfs @ 12.10 hrs HW=315.64' (Free Discharge)

↑1=RCP_Round 12" (Barrel Controls 13.40 cfs @ 17.06 fps)

Pond 80P: MH-P4

Hydrograph



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Summary for Pond 81P: CB-742

[57] Hint: Peaked at 296.41' (Flood elevation advised)

[79] Warning: Submerged Pond 12P Primary device # 1 OUTLET by 1.01'

Inflow Area = 1.350 ac, 31.11% Impervious, Inflow Depth > 2.40" for 10-yr event
Inflow = 3.37 cfs @ 12.13 hrs, Volume= 0.270 af
Outflow = 3.37 cfs @ 12.13 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min
Primary = 3.37 cfs @ 12.13 hrs, Volume= 0.270 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 296.41' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	295.40'	12.0" Round RCP_Round 12" L= 69.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 295.40' / 289.60' S= 0.0841 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	299.61'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

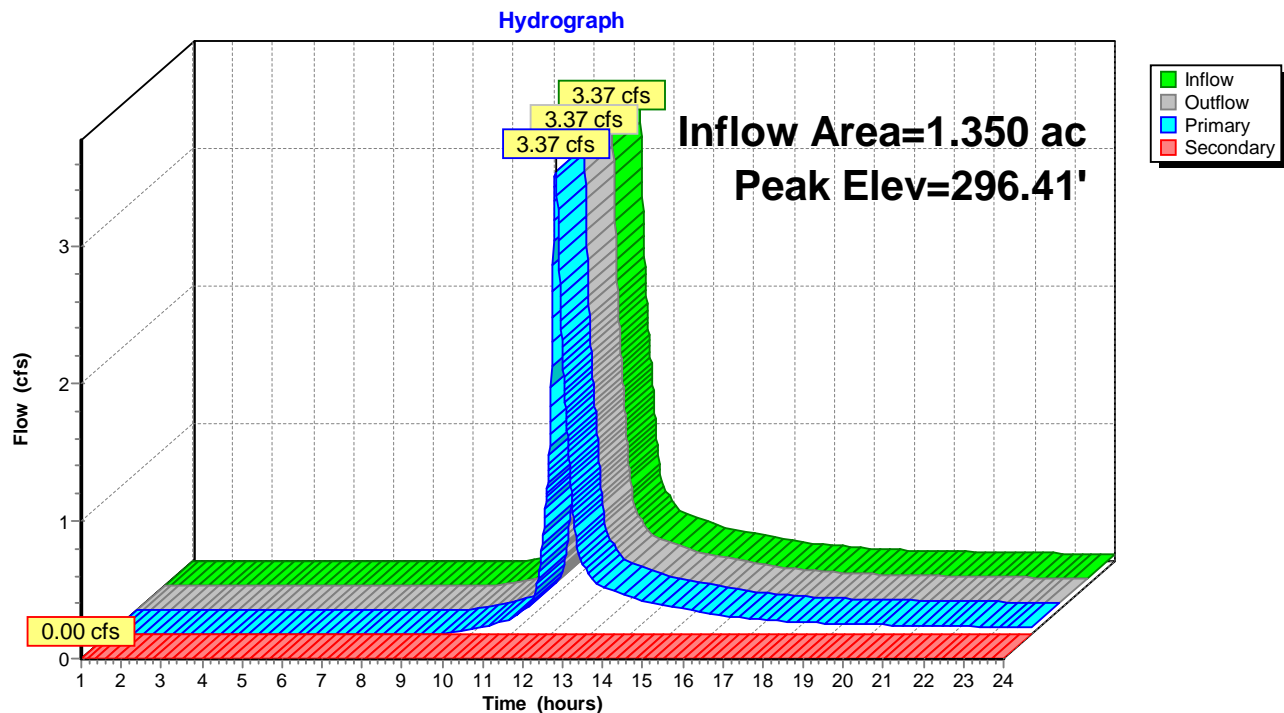
Primary OutFlow Max=3.36 cfs @ 12.13 hrs HW=296.41' (Free Discharge)

↑1=RCP_Round 12" (Inlet Controls 3.36 cfs @ 4.28 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=295.40' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 81P: CB-742



High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 82P: CB-741

[57] Hint: Peaked at 291.47' (Flood elevation advised)

[81] Warning: Exceeded Pond 77P by 0.96' @ 12.13 hrs

[79] Warning: Submerged Pond 81P Primary device # 1 OUTLET by 1.87'

Inflow Area = 2.370 ac, 27.85% Impervious, Inflow Depth > 2.31" for 10-yr event
Inflow = 5.53 cfs @ 12.13 hrs, Volume= 0.457 af
Outflow = 5.53 cfs @ 12.13 hrs, Volume= 0.457 af, Atten= 0%, Lag= 0.0 min
Primary = 5.53 cfs @ 12.13 hrs, Volume= 0.457 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 291.47' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	289.60'	12.0" Round RCP_Round 12" L= 135.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 289.60' / 281.30' S= 0.0615 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Secondary	294.15'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.53 cfs @ 12.13 hrs HW=291.47' (Free Discharge)

↑**1=RCP_Round 12"** (Inlet Controls 5.53 cfs @ 7.04 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=289.60' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

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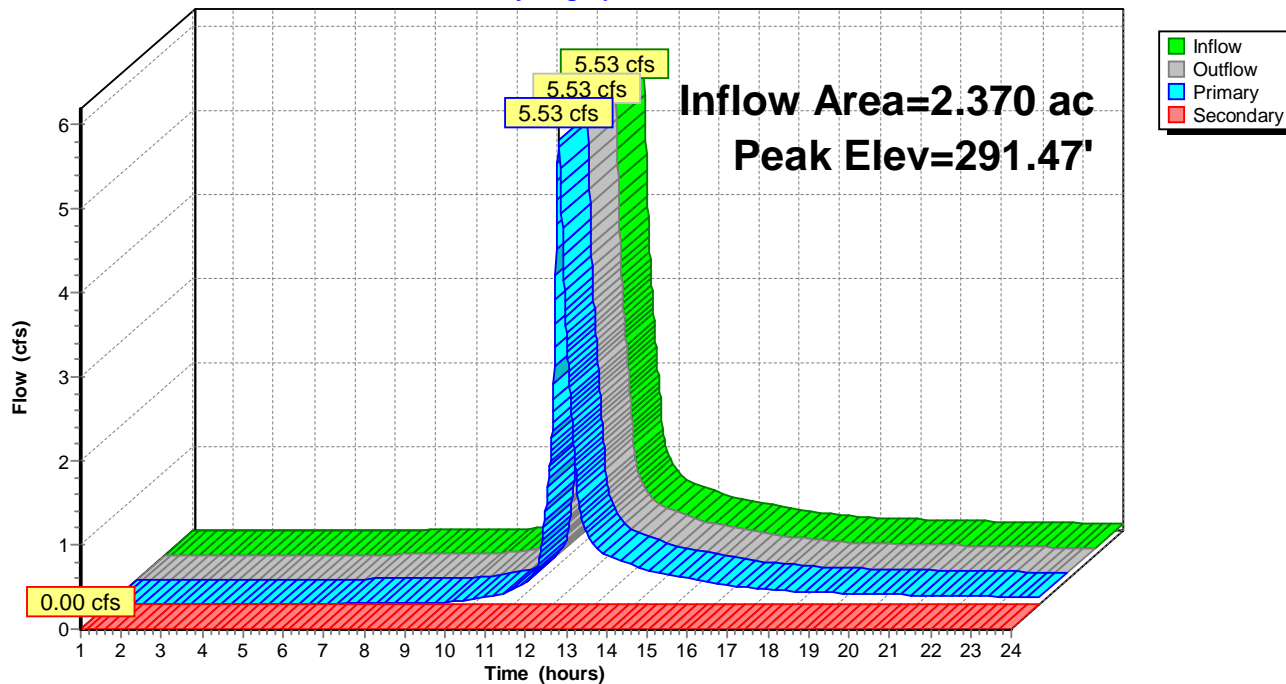
Type III 24-hr 10-yr Rainfall=5.16"

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Pond 82P: CB-741

Hydrograph



High Park Street Drainage - Proposed June 2022

Type III 24-hr 10-yr Rainfall=5.16"

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Summary for Pond 83P: CB-740

[57] Hint: Peaked at 282.60' (Flood elevation advised)

[81] Warning: Exceeded Pond 78P by 0.29' @ 12.15 hrs

[79] Warning: Submerged Pond 82P Primary device # 1 OUTLET by 1.30'

Inflow Area = 3.631 ac, 24.26% Impervious, Inflow Depth > 2.14" for 10-yr event
Inflow = 7.91 cfs @ 12.12 hrs, Volume= 0.647 af
Outflow = 7.91 cfs @ 12.12 hrs, Volume= 0.647 af, Atten= 0%, Lag= 0.0 min
Primary = 7.91 cfs @ 12.12 hrs, Volume= 0.647 af
Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 282.60' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	281.30'	18.0" Round Culvert L= 133.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 281.30' / 277.30' S= 0.0301 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf
#2	Secondary	285.33'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.90 cfs @ 12.12 hrs HW=282.60' (Free Discharge)

↑**1=Culvert** (Inlet Controls 7.90 cfs @ 4.85 fps)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=281.30' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

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Type III 24-hr 10-yr Rainfall=5.16"

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Pond 83P: CB-740

Hydrograph

