

STORMWATER STATEMENT

for

Proposed McDonald's Restaurant with Drive-Thru Improvements

Prepared for:

**McDonald's USA, LLC.
78 U.S. ROUTE 9
Block 268, Lot 62 & 80
Township of Marlboro
Monmouth County, New Jersey**

Prepared by:

BOHLER //

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BENJ #: J180406

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1. Introduction

The subject property is located at 78 US Route 9 in the Township of Marlboro, Monmouth County, New Jersey. The property is identified as Block 268 Lot 62 & 80 on the Township of Marlboro Tax Map. The overall subject property is approx. 39.90 acres; however, the application proposes improvements within the McDonald's lease area of approx. 1.334 acres and will hereafter be referred to as "the site".

The scope of this study includes analysis of the existing drainage characteristics of the site area compared with post development drainage conditions. The remainder of the subject property outside of the site, shall remain mostly undisturbed and any proposed improvements will not affect the drainage characteristics on the remainder of the subject property.

The construction of these improvements on the site will decrease the impervious area of the site by approximately 3,528 SF and will disturb approx. 1.3 acres. The NJDEP defines "Major Development" as any "development" that provides for ultimately disturbing one or more acres of land or increasing impervious surface by one-quarter acre or more. Therefore, this development qualifies as a major development by the NJDEP and will be required to meet the requirements set forth by all reviewing jurisdictional agencies and the NJDEP Stormwater Regulations.

2. Existing Site Conditions

The site that is being analyzed includes 1.047 acres of impervious area and, in the existing condition, contains a McDonald's Restaurant with drive-thru, concrete sidewalk, curbs, and asphalt parking areas. The site's existing drainage pattern consists of three (3) drainage areas: Drainage Area #1A (EDA 1A), Drainage Area #1B (EDA 1B), and Drainage Area #2. Currently, the generated on site stormwater flows into the conveyances systems located on site or overland into the existing drainage system located in the right-of-way of US Route 9. An Existing Drainage Area Map is included in the appendix of this report.

- **Existing Drainage Area #1A:**

Located at the center of the proposed site, Existing Drainage Area #1A contains 0.704 acres, of which 0.660 acres are impervious surface. The topography of the area slopes from East to West from a maximum elevation of approximately 113.00 to a minimum elevation of 108.00. A CN value of 80 and 98 were used for pervious and impervious areas, respectively with an assumed time of concentration of 6 minutes. The runoff from Existing Drainage Area #1A flows overland to inlets located throughout the site and through the existing conveyance system to the inlet located within the right-of-way of US Route 9.

- **Existing Drainage Area #1B:**

Located at West and South of the proposed site, Existing Drainage Area #1B contains 0.200 acres which is 100% pervious area. The topography of the area slopes from east to west from a maximum elevation of approximately 110.00 to a minimum elevation of 105.30. A CN value of 80 was used for the pervious area with an assumed time of concentration of 6 minutes. The runoff from Existing Drainage Area #1B flows overland to right-of-way of Route 9 and will flow into the inlet located in front of the site within the right-of-way of US Route 9.

- **Existing Drainage Area #2:**

Located at the North of the proposed site, Existing Drainage Area #2 contains 0.451 acres of which 0.387 acres is impervious area. The topography of the area slopes from east to northwest from a maximum elevation of 112.50 to a minimum elevation of 109.00. A CN value of 39, 80, and 98 were used for pervious A type soils, pervious D type soils and impervious areas, respectively, with an assumed time of concentration of 6 minutes. The runoff from Existing Drainage Area #2 flows overland to an inlet located north of the site and through the existing conveyance system to an inlet located within the US Route 9 downstream of the site.

3. Proposed Site Conditions

The post development conditions includes a new McDonald's Restaurant with drive-thru, concrete sidewalk, curbs, and asphalt parking areas. **The post-development decreases the impervious area on-site by 3,528 SF.** The proposed site is designed in a manner that maintains the existing drainage pattern allowing runoff to flow into the proposed drainage system to the right-of-way of US Route 9. A Proposed Drainage Area Map is included in the appendix of this report.

- **Proposed Drainage Area #1A:**

Located at the center of the proposed site, Proposed Drainage Area #1A contains 0.712 acres, of which 0.613 acres are impervious surface. The topography of the area slopes from East to West from a maximum elevation of approximately 113.00 to a minimum elevation of 109.50. A CN value of 39, 80 and 98 were used for pervious A type soils, pervious D type soils and impervious areas, respectively with an assumed time of concentration of 6 minutes. The runoff from Proposed Drainage Area #1A flows overland to inlets located throughout the site and through the existing conveyance system to the inlet located within the right-of-way of US Route 9.

- **Proposed Drainage Area #1B:**

Located at West and South of the proposed site, Proposed Drainage Area #1B contains 0.192 acres which is 100% pervious area. The topography of the area slopes from east to west from a maximum elevation of approximately 111.40 to a minimum elevation of 105.30. A CN value of 80 was used for the pervious area with an assumed time of concentration of 6 minutes. The

runoff from Proposed Drainage Area #1B flows overland to right-of-way of Route 9 and will flow into the inlet located in front of the site within the right-of-way of US Route 9.

- **Proposed Drainage Area #2:**

Located at the North of the proposed site, Proposed Drainage Area #2 contains 0.451 acres of which 0.353 acres is impervious area. The topography of the area slopes from east to northwest from a maximum elevation of 112.50 to a minimum elevation of 110.30. A CN value of 39, 80, and 98 were used for pervious A type soils, pervious D type soils and impervious areas, respectively, with an assumed time of concentration of 6 minutes. The runoff from Proposed Drainage Area #2 flows overland to an inlet located north of the site and through the existing conveyance system to an inlet located within the US Route 9 downstream of the site.

4. Quantity Reduction

The NJDEP Stormwater Management Rules dictate that the runoff quantity reduction standards (N.J.A.C. 7:8-5.4(a)3) apply only if there is a net increase of 10,890 sf (0.25 Ac.) or more of impervious surface coverage or if there is a disturbance of 43,560 sf (1.00 Ac.) or more of land area.

The project as designed will involve the disturbance of 1.30 Ac. and a net decrease of 3,528 SF of impervious area. The proposed runoff from all drainage areas of Drainage Area #1A, #1B and #2 meets the stormwater management criteria set forth in NJAC § 7:8-5.4(a)3.i. The proposed runoff hydrographs for the drainage area do not exceed the existing runoff hydrographs for the same storm events at any point along the hydrograph. Thus, the project will comply with quantity reduction standards. Pre- and post- development hydrographs for the 2-, 10-, and 100- year storm are included in the appendix of this report.

DATA	EXISTING DRAINAGE AREA #1A	PROPOSED DRAINAGE AREA #1A	EXISTING DRAINAGE AREA #1B	PROPOSED DRAINAGE AREA #1B	EXISTING DRAINAGE AREA #2	PROPOSED DRAINAGE AREA #2
Area (AC)	0.704	0.712	0.200	0.192	0.451	0.451
Impervious (AC)	0.66	0.613	0	0	0.387	0.353
Tc (min)	6	6	6	6	6	6
2 Yr. Flow (CFS)	1.97	1.92	0.32	0.31	1.18	1.13
10 Yr. Flow (CFS)	3.1	3.07	0.64	0.61	1.89	1.85
100 Yr. Flow (CFS)	5.37	5.37	1.31	1.26	3.34	3.31

5. Groundwater Recharge

The NJDEP Stormwater Management Rules dictates that the groundwater recharge standards (N.J.A.C. 7:8-5.4(a)2) apply only if there is a net increase 10,890 sf (0.25 Ac.) or more of impervious surface coverage or there is a disturbance of 43,560 sf (1.00 Ac.) or more of land area.

The project as designed will involve the disturbance of approx. 1.3 Ac. and a net decrease of 3,528 SF of impervious area. The project will comply with the groundwater recharge standards where 100% of the site's average annual pre-developed groundwater recharge volume will be maintained after development and therefore the project will comply with the groundwater recharge standards. A completed NJDEP Groundwater Recharge Spreadsheet can be found in the appendix of this report.

6. Water Quality

The NJDEP Stormwater Management Rules dictates that the water quality standards (N.J.A.C. 7:8-5.5) apply only if there is a net increase of 10,890 SF (0.25 Ac.) or more of impervious surface coverage.

The project as designed will involve a net decrease of 3,528 SF of impervious area, therefore the project will comply with the water quality standards for the proposed development.

7. Pipe Sizing

Calculations for sizing the stormwater pipe network associated with the proposed stormwater conveyance system can be found in the Appendix of this report. The Rational Method has been used to size the storm piping for the 25-year storm event. The calculations are conservatively based on a time of concentration of 10 minutes to any inlet. Under existing conditions, a 24" RCP pipe collects stormwater runoff from other areas located within the shopping center and is routed through the site. Under proposed conditions, a portion of existing conveyance systems will be re-routed due to the proposed configuration of the site, however, the size of the pipe will be maintained. An Inlet Area Map is included in the appendix.

8. Soil Erosion and Sediment Control

The Soil Erosion and Sediment Control plans and details are included within the Site Plan documents prepared by Bohler Engineering and must be followed throughout construction. Silt fences, stabilized construction entrances, a temporary stockpile and inlet filters are proposed during construction. This report and the Site Plan documents prepared by Bohler Engineering are being submitted to the Freehold Soil Conservation District for approval.

9. Non-Structure Stormwater Management Control Measures

In accordance with the NJDEP regulations and the latest New Jersey Stormwater Best Management Practices Manual, several non-structural stormwater management strategies have been incorporated into the design of the site and are listed below:

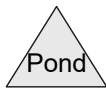
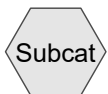
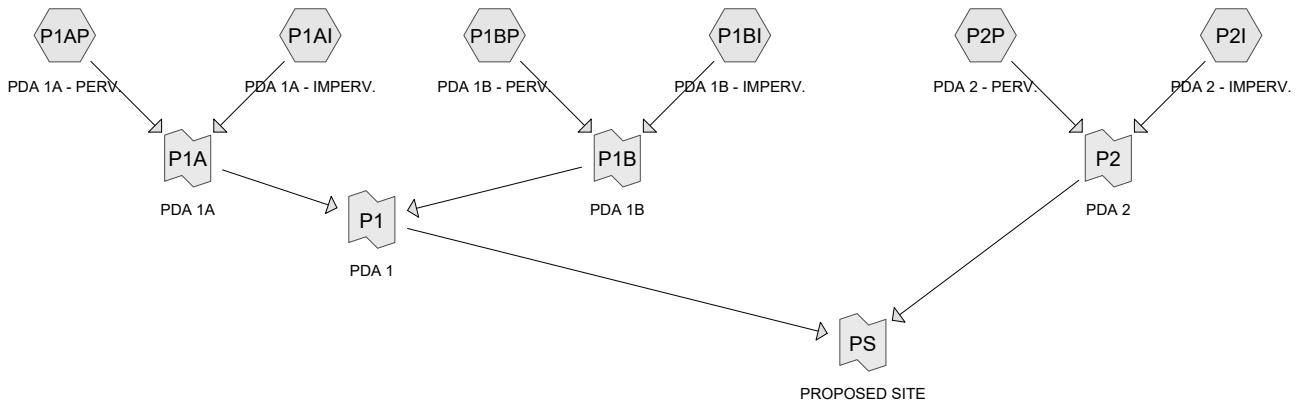
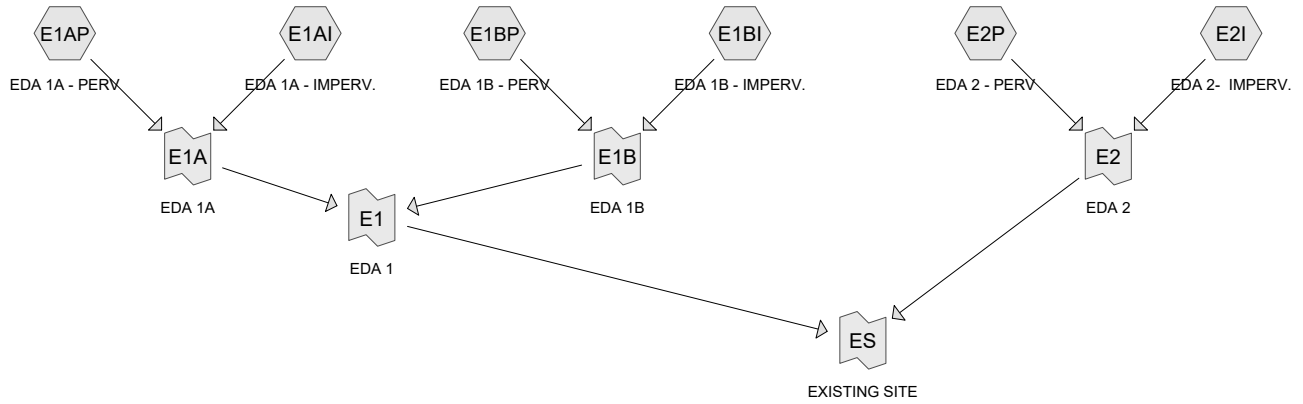
- **Vegetation and Landscaping:** A comprehensive Landscape Plan has been incorporated into the design of the proposed improvements on the site that provides low maintenance landscaping. The use of lawn areas has been minimized where applicable and fertilizers and pesticides are to be used sparingly.
- **Native Ground Cover:** Native plants including ground cover, shrubs and trees instead of turf grass have been proposed as part of the landscape design for the site. The native plantings will also require little or no irrigation once they are established.
- **Minimize Land Disturbance:** The proposed design of the site incorporates the preservation of existing vegetative areas that will remain undisturbed.
- **Impervious Area Management** - Streets, Sidewalks, and Parking, Driveway Areas: As part of the proposed site design, the minimum allowable parking and drive aisle sizes, in accordance with local ordinances, are used in lieu of larger stalls and aisles to reduce the amount of impervious surface in the post-development condition. Under post-development conditions, the impervious coverage will be reduced compared to existing conditions.
- **Preventative Source Controls:** The proposed development complies with this strategy by providing dumpster area located on site.

10. Conclusion

In summary, the proposed site improvements illustrated on the drawings prepared by Bohler Engineering NJ, LLC meet the requirements set forth by all reviewing jurisdictional agencies and the NJDEP Stormwater Regulations. The existing drainage patterns are being maintained, runoff rates for the drainage areas are being reduced, groundwater recharge is being maintained, and water quality measures are not required for the property in question. Our office anticipates no negative impacts to the surrounding areas.

APPENDIX

Drainage Area Hydrographs



Routing Diagram for EX-PR(balance)
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EX-PR(balance)

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.155	HSG A	E2I, E2P, P1AI, P1AP, P2I, P2P
0.000	HSG B	
0.000	HSG C	
2.555	HSG D	E1AI, E1AP, E1BP, E2I, E2P, P1AI, P1AP, P1BP, P2I, P2P
0.000	Other	
2.710		TOTAL AREA

EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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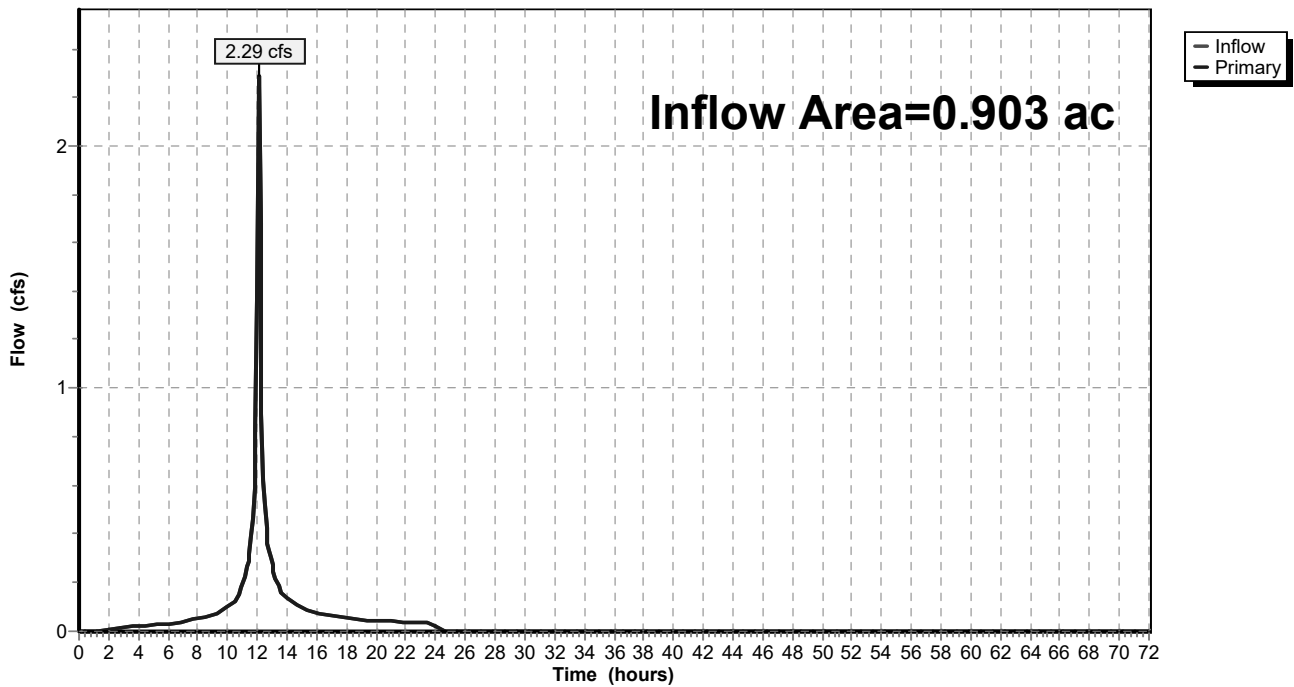
Summary for Link E1: EDA 1

Inflow Area = 0.903 ac, 73.09% Impervious, Inflow Depth = 2.71" for 2-Year event
Inflow = 2.29 cfs @ 12.11 hrs, Volume= 0.204 af
Primary = 2.29 cfs @ 12.11 hrs, Volume= 0.204 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1: EDA 1

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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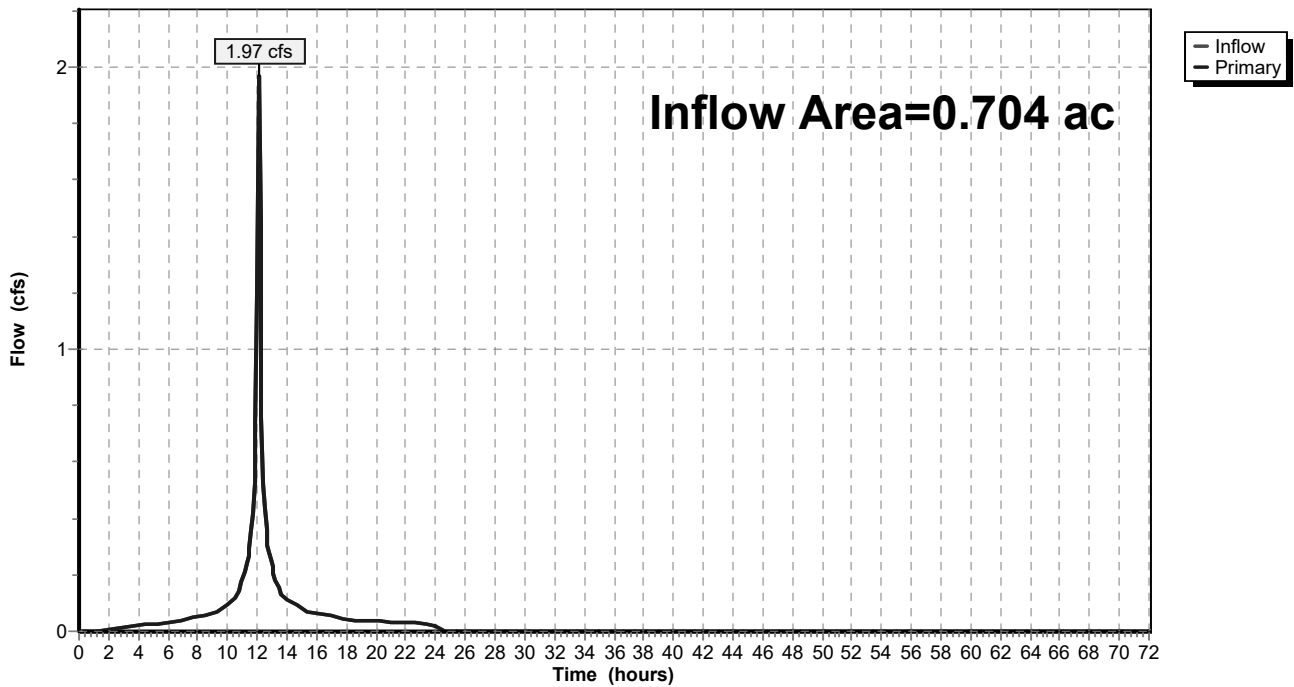
Summary for Link E1A: EDA 1A

Inflow Area = 0.704 ac, 93.75% Impervious, Inflow Depth = 3.05" for 2-Year event
Inflow = 1.97 cfs @ 12.11 hrs, Volume= 0.179 af
Primary = 1.97 cfs @ 12.11 hrs, Volume= 0.179 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1A: EDA 1A

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment E1A1: EDA 1A - IMPERV.

Runoff = 1.90 cfs @ 12.11 hrs, Volume= 0.173 af, Depth= 3.15"

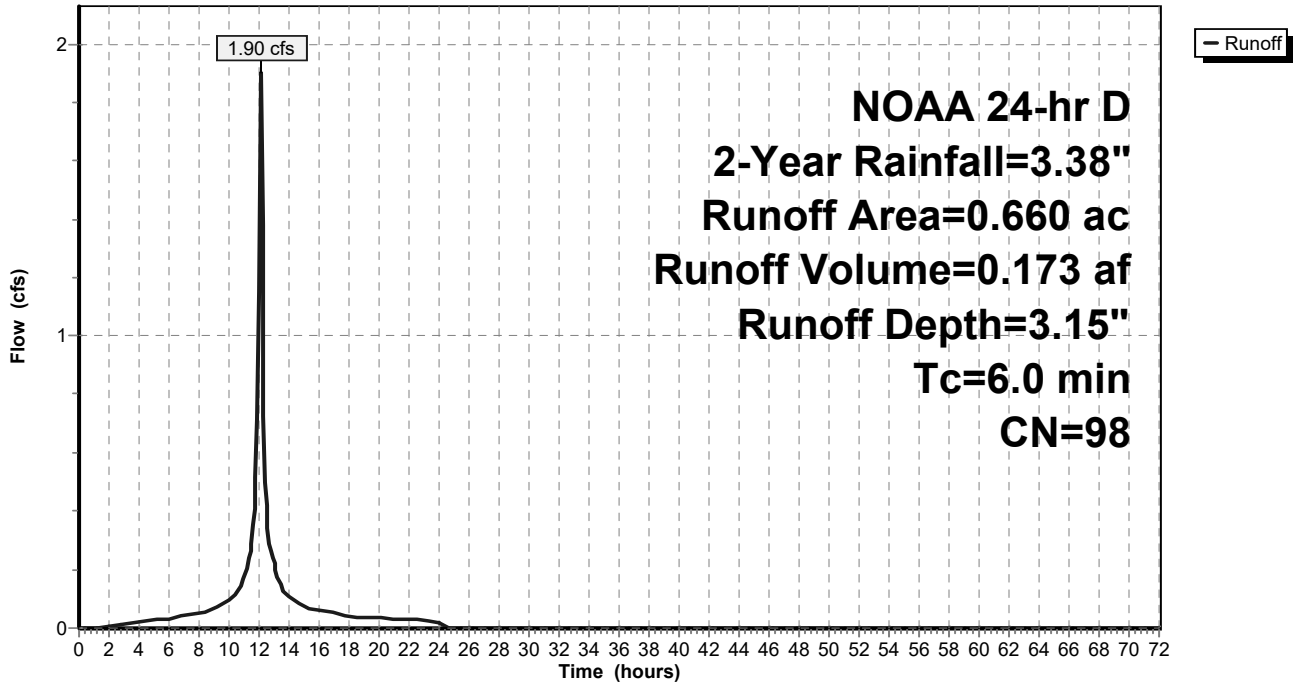
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.660	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.660	98	Weighted Average
0.660		100.00% Impervious Area
0.660		100.00% Unconnected

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

Subcatchment E1A1: EDA 1A - IMPERV.

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment E1AP: EDA 1A - PERV

Runoff = 0.07 cfs @ 12.12 hrs, Volume= 0.006 af, Depth= 1.54"

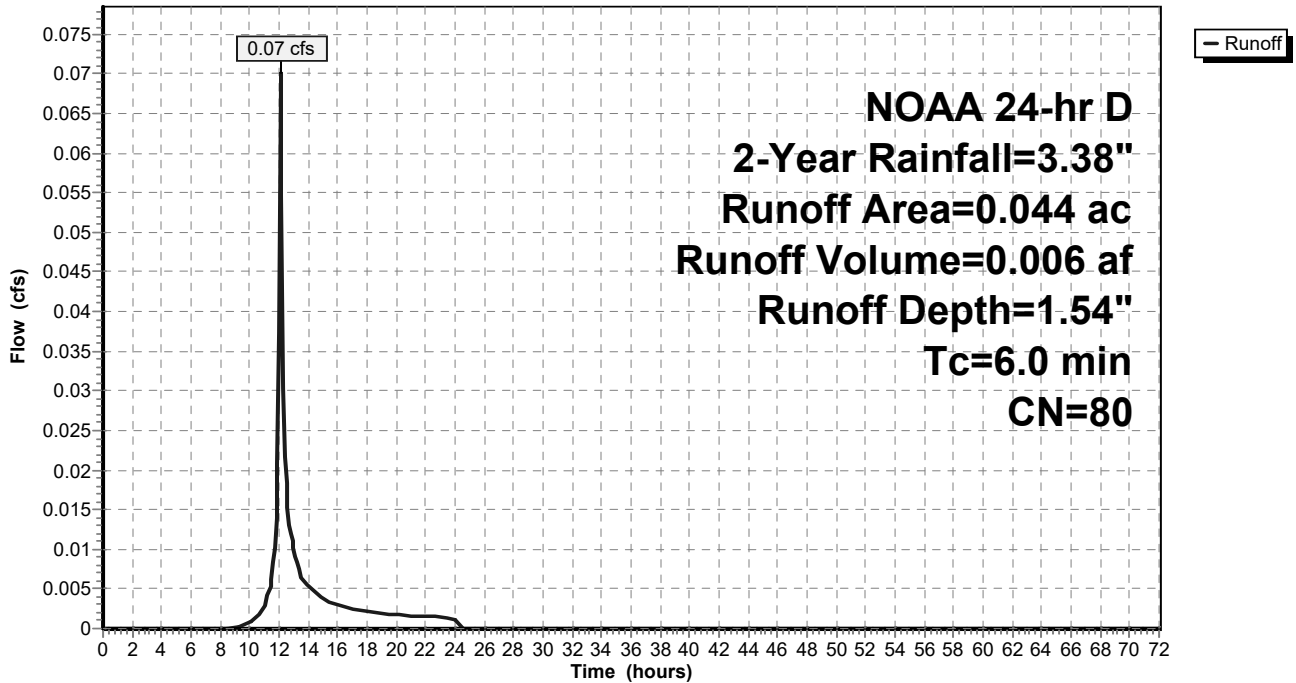
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.044	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.044	80	Weighted Average
0.044		100.00% Pervious Area

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

Subcatchment E1AP: EDA 1A - PERV

Hydrograph



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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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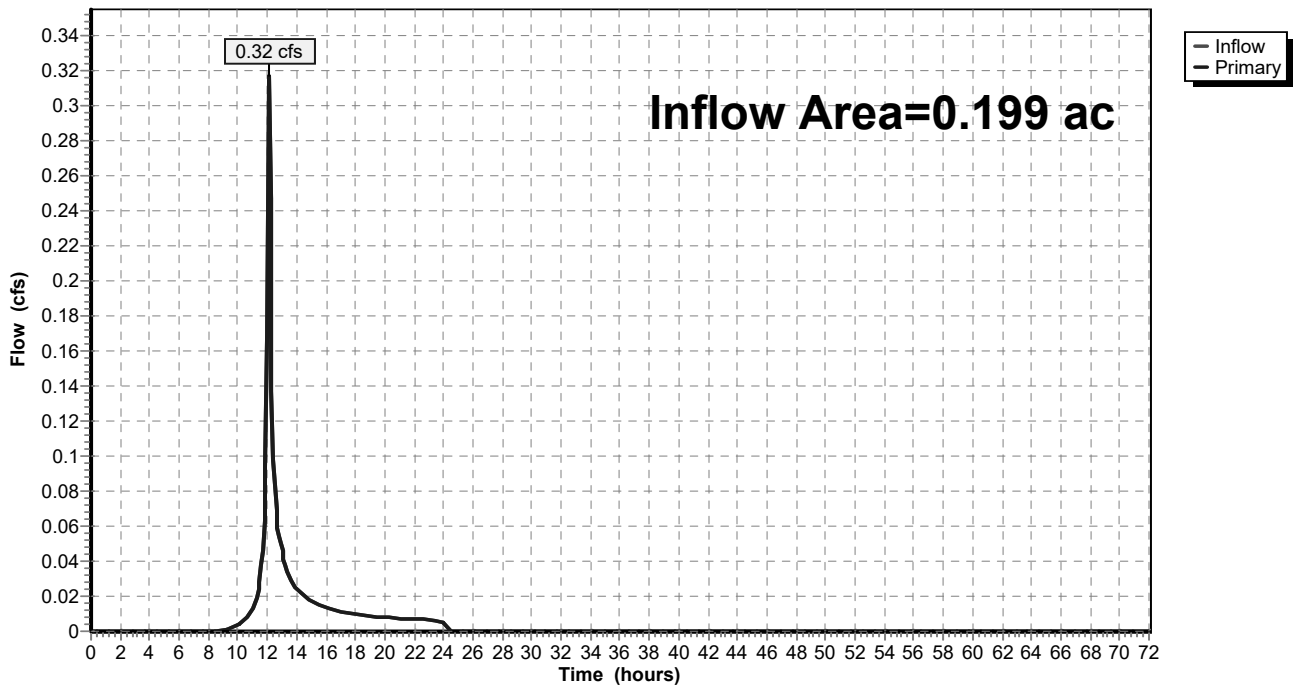
Summary for Link E1B: EDA 1B

Inflow Area = 0.199 ac, 0.00% Impervious, Inflow Depth = 1.54" for 2-Year event
Inflow = 0.32 cfs @ 12.12 hrs, Volume= 0.026 af
Primary = 0.32 cfs @ 12.12 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1B: EDA 1B

Hydrograph



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2-Year Storm Drainage Runoff

NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment E1BI: EDA 1B - IMPERV.

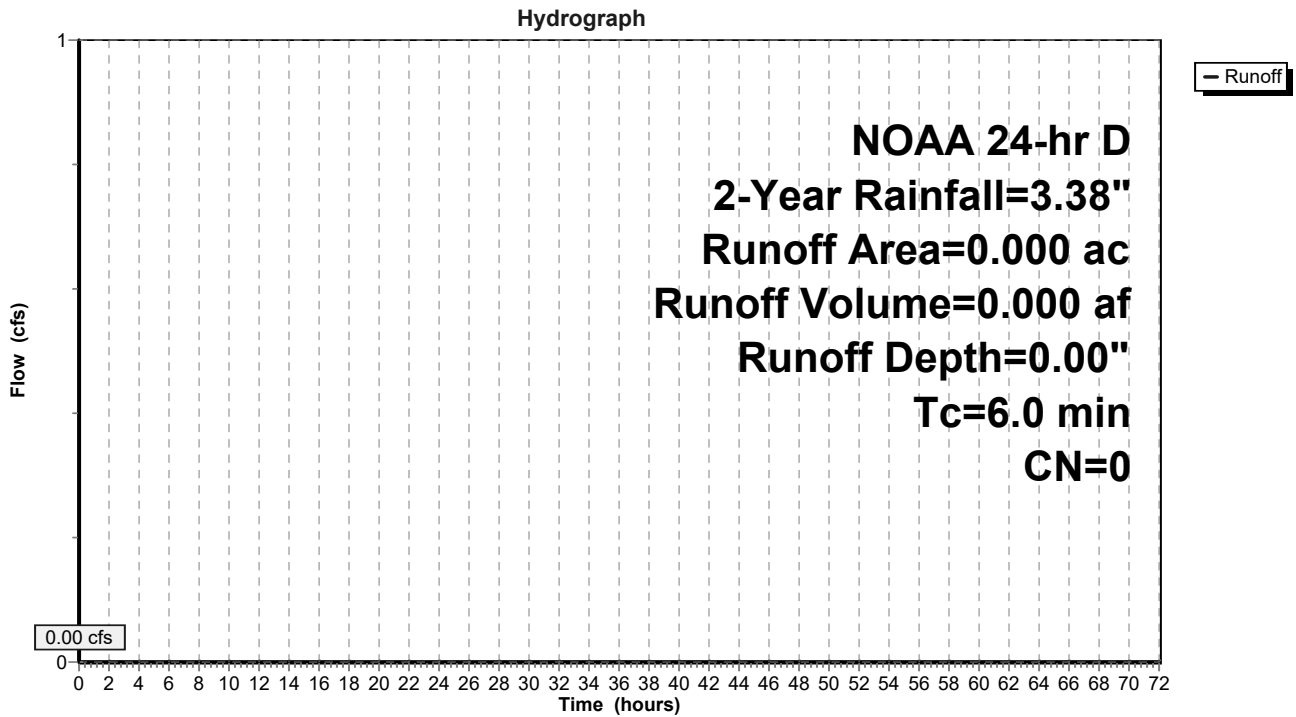
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment E1BI: EDA 1B - IMPERV.



EX-PR(balance)

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2-Year Storm Drainage Runoff

NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment E1BP: EDA 1B - PERV

Runoff = 0.32 cfs @ 12.12 hrs, Volume= 0.026 af, Depth= 1.54"

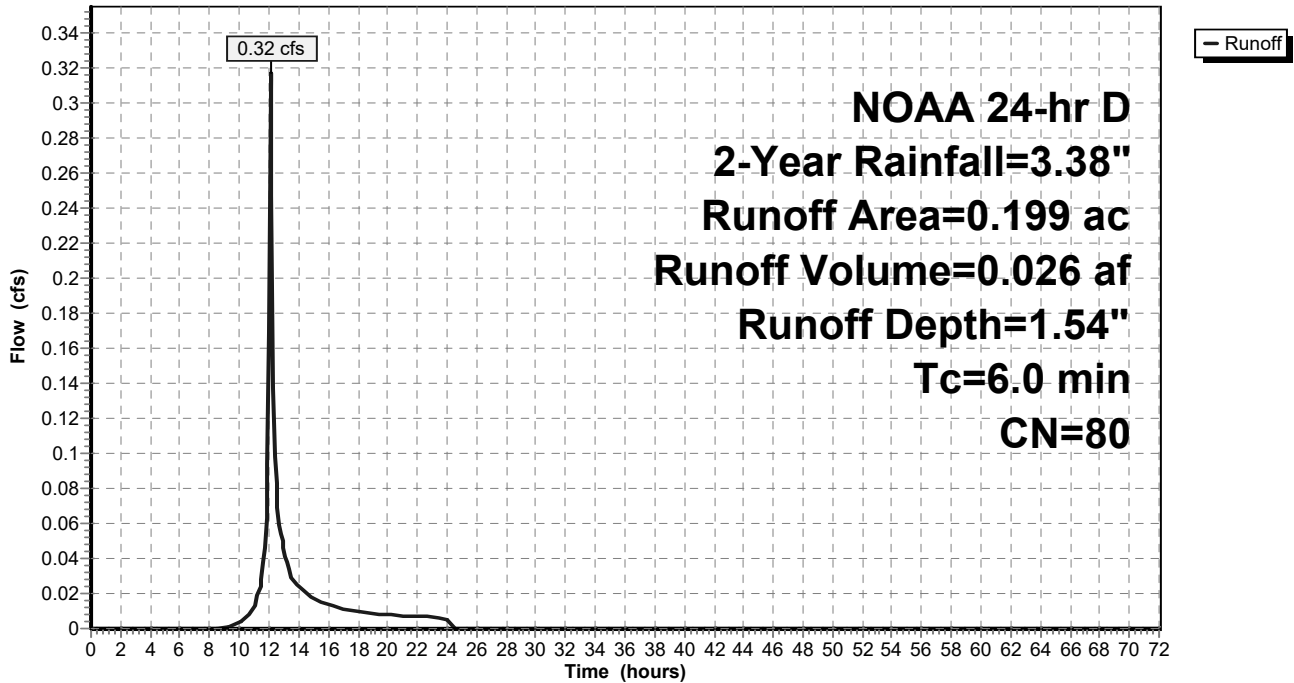
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.199	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.199	80	Weighted Average
0.199		100.00% Pervious Area

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

Subcatchment E1BP: EDA 1B - PERV

Hydrograph



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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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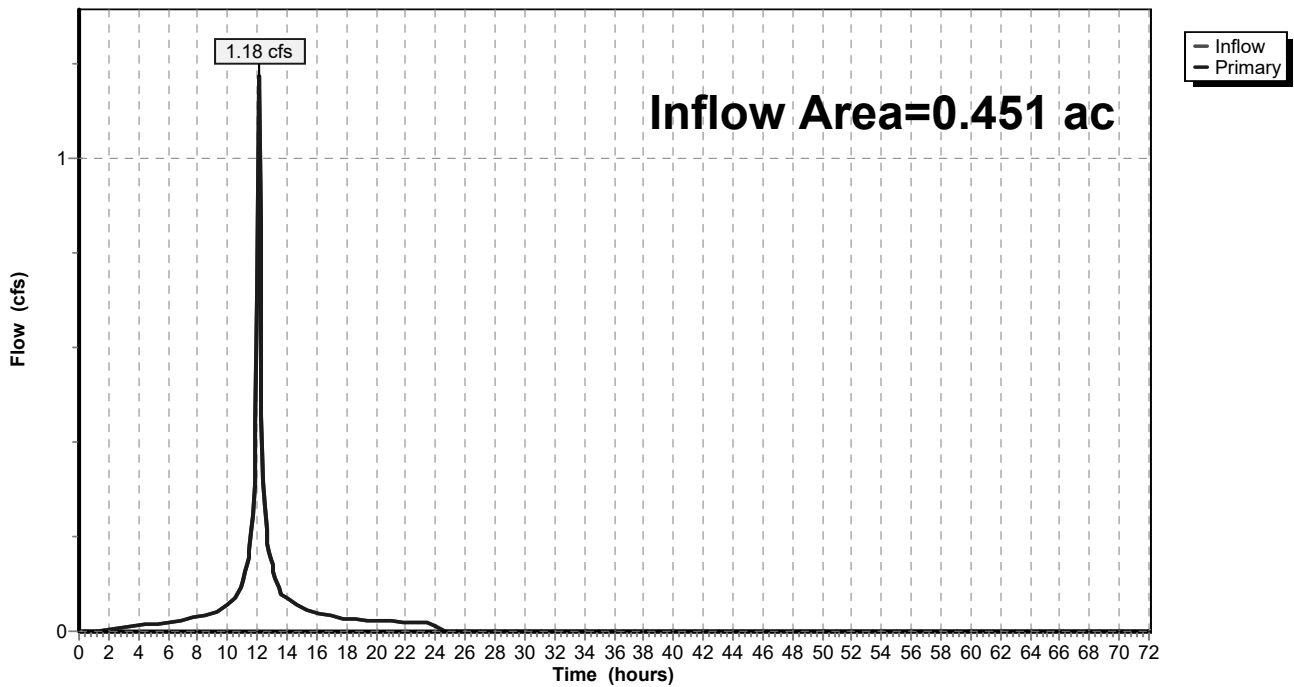
Summary for Link E2: EDA 2

Inflow Area = 0.451 ac, 85.81% Impervious, Inflow Depth = 2.84" for 2-Year event
Inflow = 1.18 cfs @ 12.11 hrs, Volume= 0.107 af
Primary = 1.18 cfs @ 12.11 hrs, Volume= 0.107 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E2: EDA 2

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment E2I: EDA 2- IMPERV.

Runoff = 1.12 cfs @ 12.11 hrs, Volume= 0.101 af, Depth= 3.15"

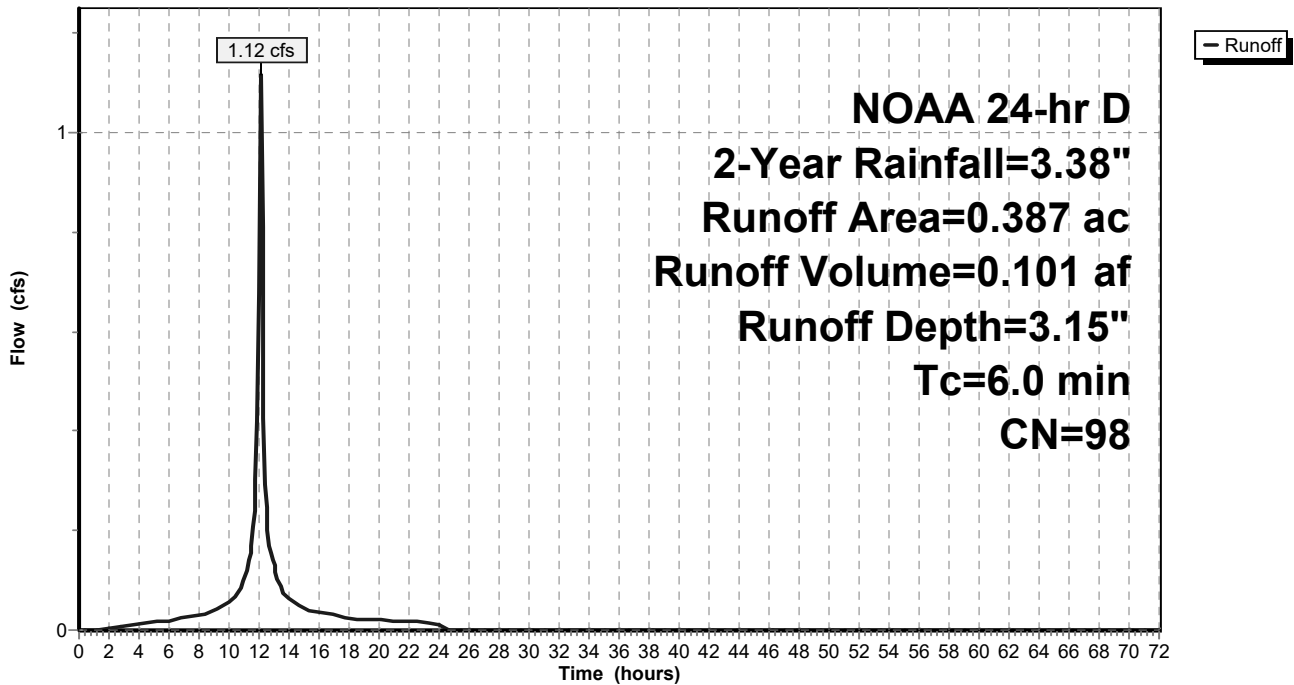
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.323	98	Unconnected pavement, HSG D
0.064	98	Unconnected pavement, HSG A
0.387	98	Weighted Average
0.387		100.00% Impervious Area
0.387		100.00% Unconnected

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

Subcatchment E2I: EDA 2- IMPERV.

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff

NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment E2P: EDA 2 - PERV

Runoff = 0.06 cfs @ 12.13 hrs, Volume= 0.005 af, Depth= 0.99"

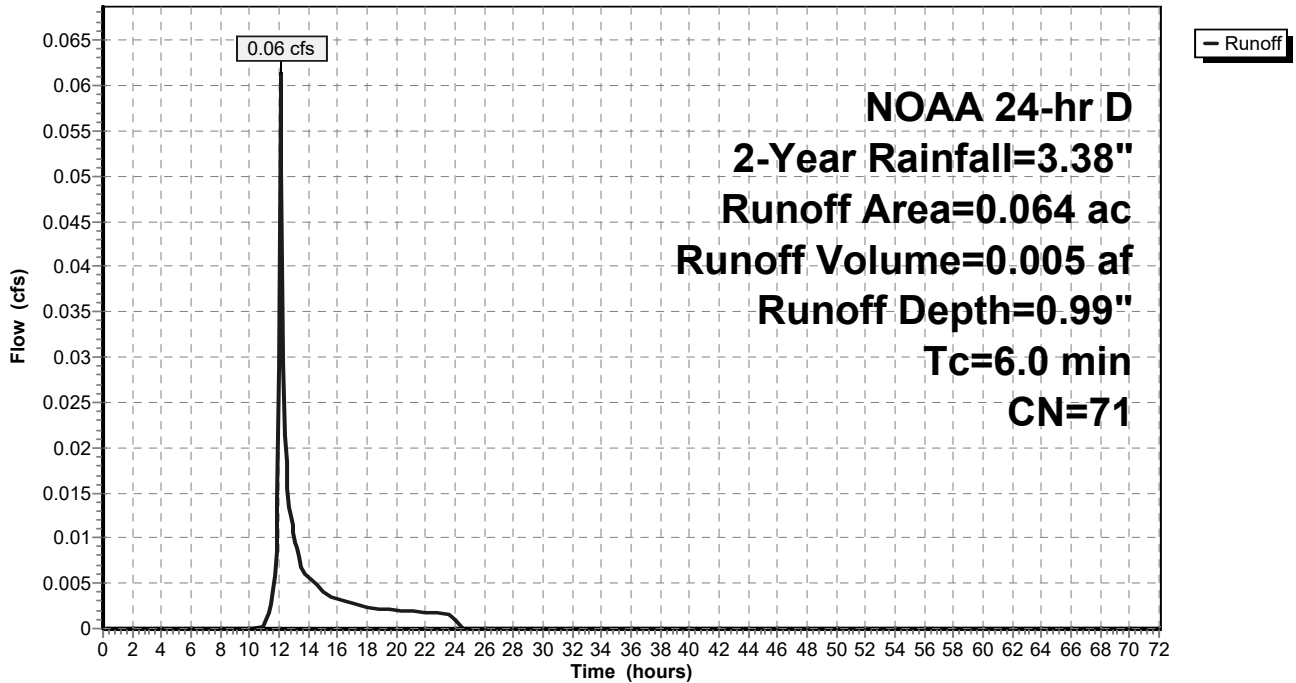
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.064	71	Weighted Average
0.064		100.00% Pervious Area

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

Subcatchment E2P: EDA 2 - PERV

Hydrograph



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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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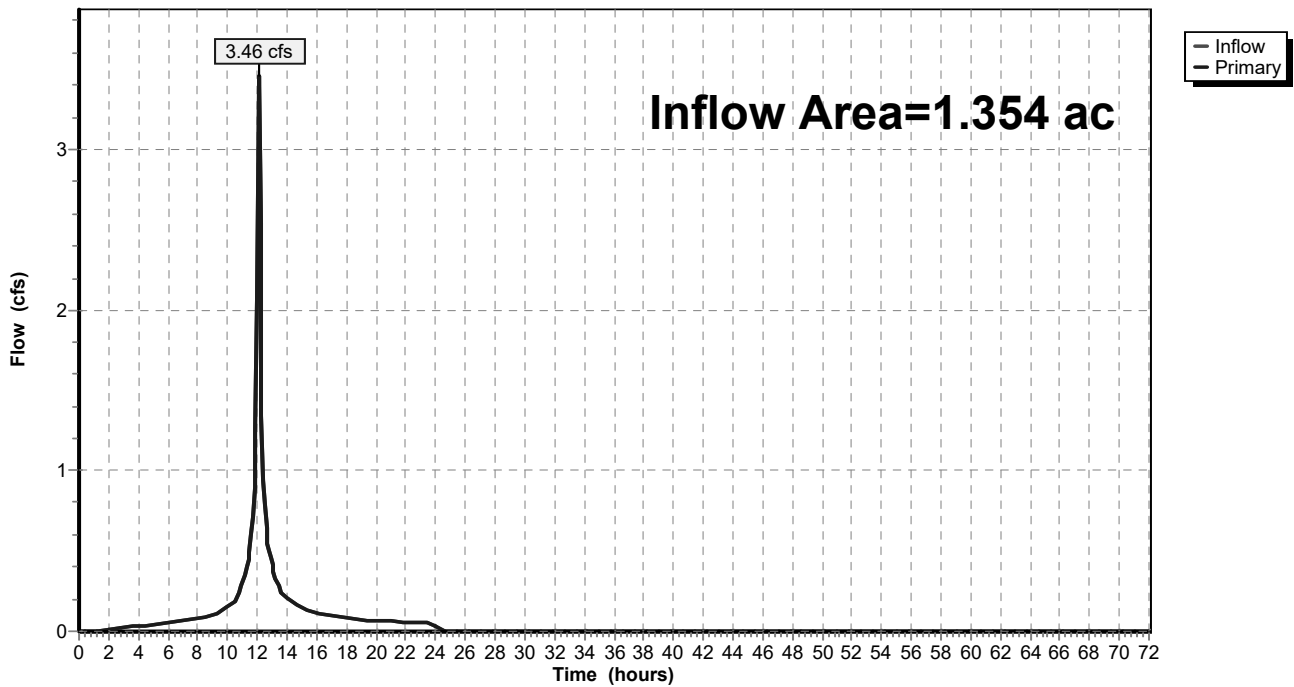
Summary for Link ES: EXISTING SITE

Inflow Area = 1.354 ac, 77.33% Impervious, Inflow Depth = 2.76" for 2-Year event
Inflow = 3.46 cfs @ 12.11 hrs, Volume= 0.311 af
Primary = 3.46 cfs @ 12.11 hrs, Volume= 0.311 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link ES: EXISTING SITE

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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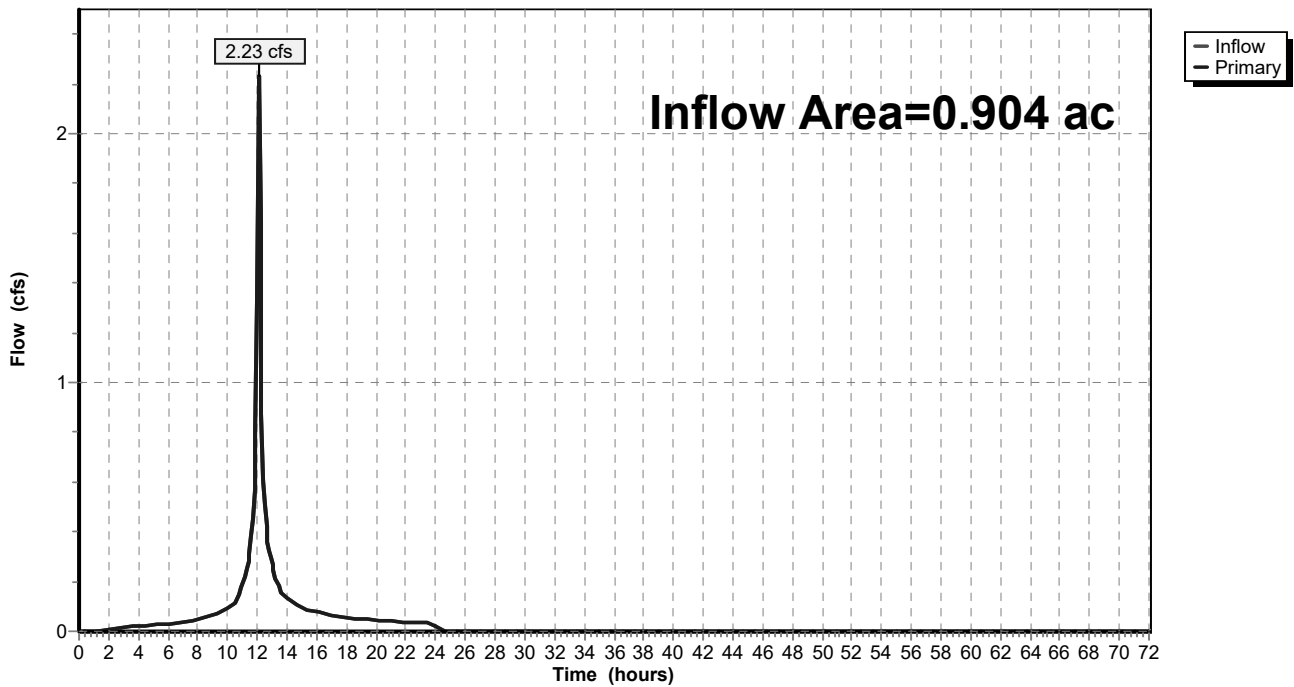
Summary for Link P1: PDA 1

Inflow Area = 0.904 ac, 67.92% Impervious, Inflow Depth = 2.63" for 2-Year event
Inflow = 2.23 cfs @ 12.11 hrs, Volume= 0.198 af
Primary = 2.23 cfs @ 12.11 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1: PDA 1

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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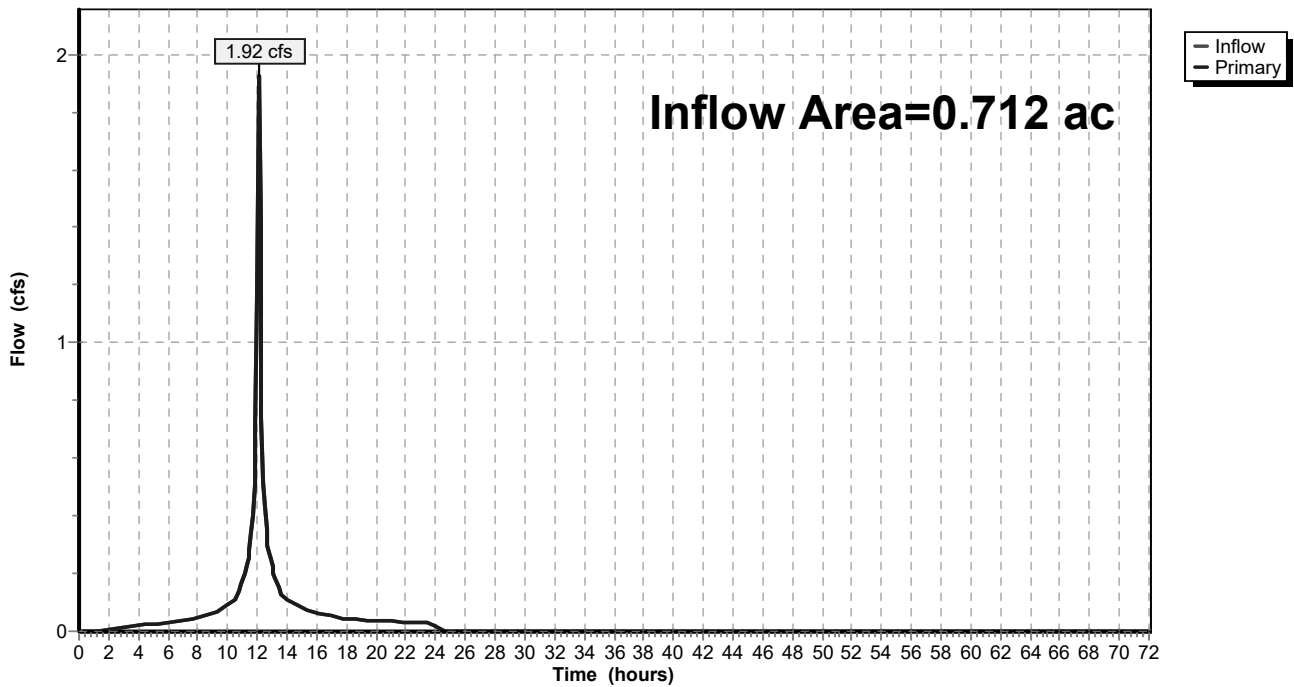
Summary for Link P1A: PDA 1A

Inflow Area = 0.712 ac, 86.24% Impervious, Inflow Depth = 2.93" for 2-Year event
Inflow = 1.92 cfs @ 12.11 hrs, Volume= 0.174 af
Primary = 1.92 cfs @ 12.11 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1A: PDA 1A

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff

NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment P1AI: PDA 1A - IMPERV.

Runoff = 1.77 cfs @ 12.11 hrs, Volume= 0.161 af, Depth= 3.15"

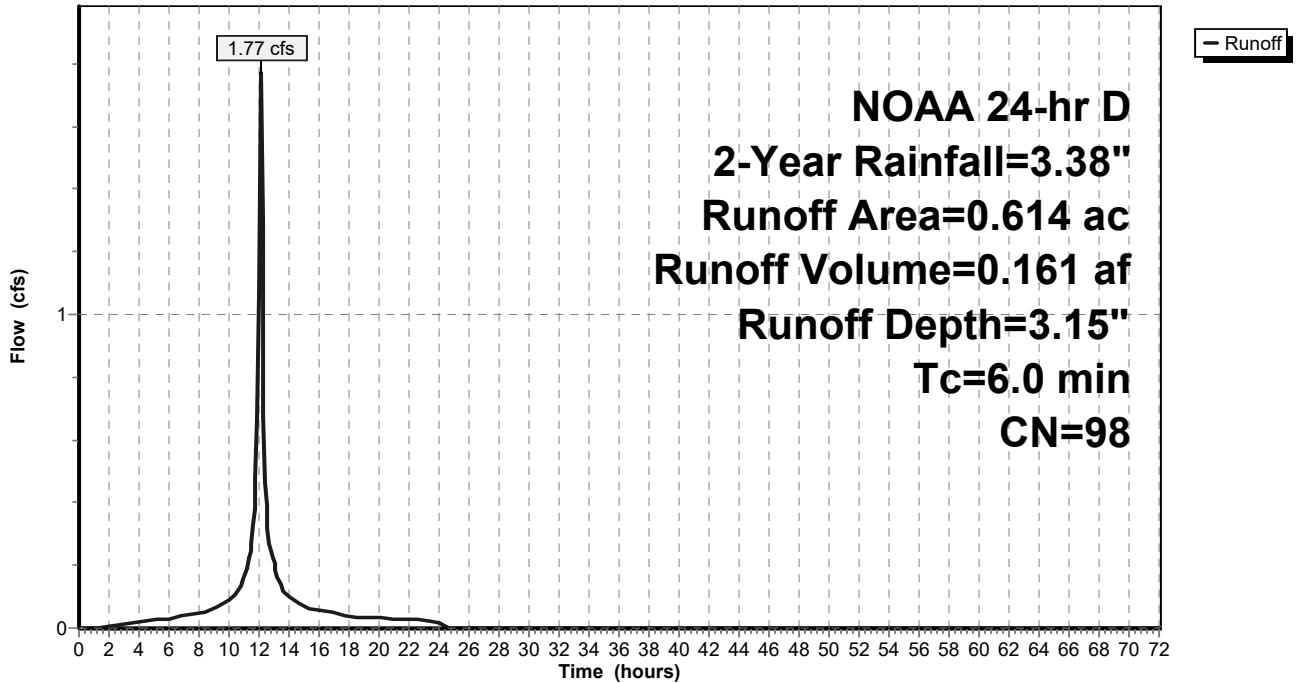
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.597	98	Unconnected pavement, HSG D
0.017	98	Unconnected pavement, HSG A
0.614	98	Weighted Average
0.614		100.00% Impervious Area
0.614		100.00% Unconnected

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

Subcatchment P1AI: PDA 1A - IMPERV.

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment P1AP: PDA 1A - PERV.

Runoff = 0.16 cfs @ 12.12 hrs, Volume= 0.013 af, Depth= 1.54"

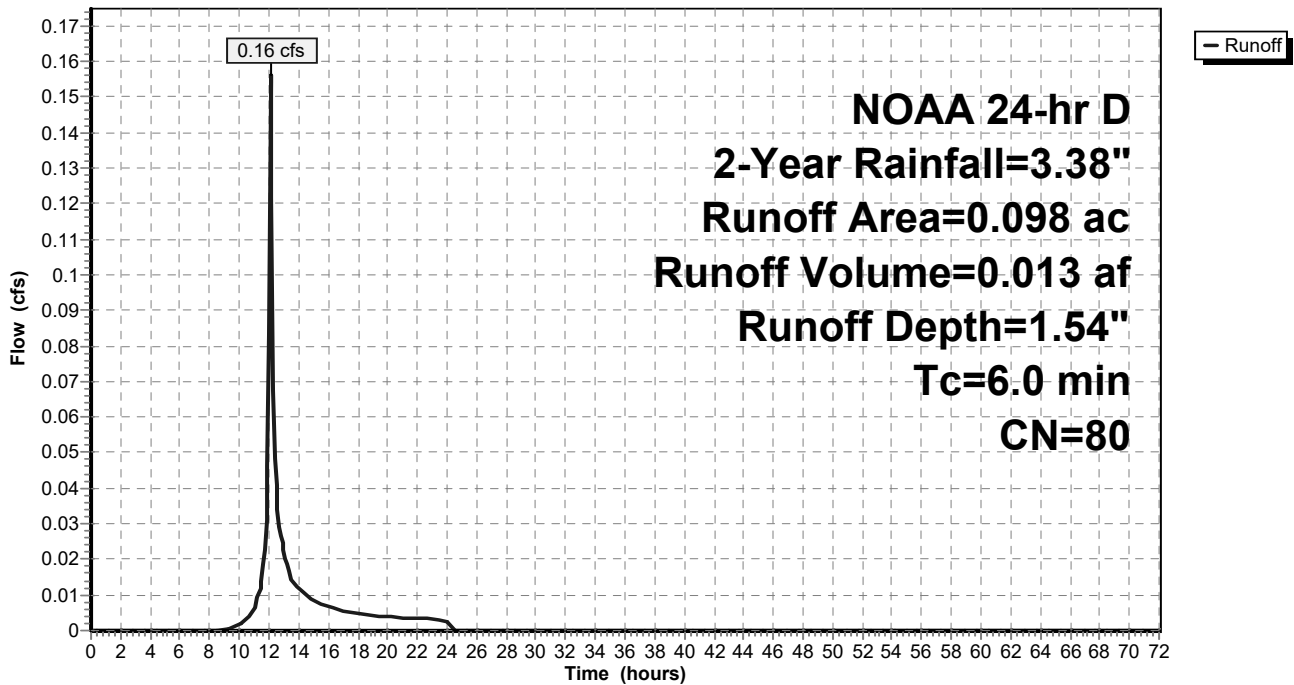
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.097	80	>75% Grass cover, Good, HSG D
0.001	39	>75% Grass cover, Good, HSG A
0.098	80	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P1AP: PDA 1A - PERV.

Hydrograph



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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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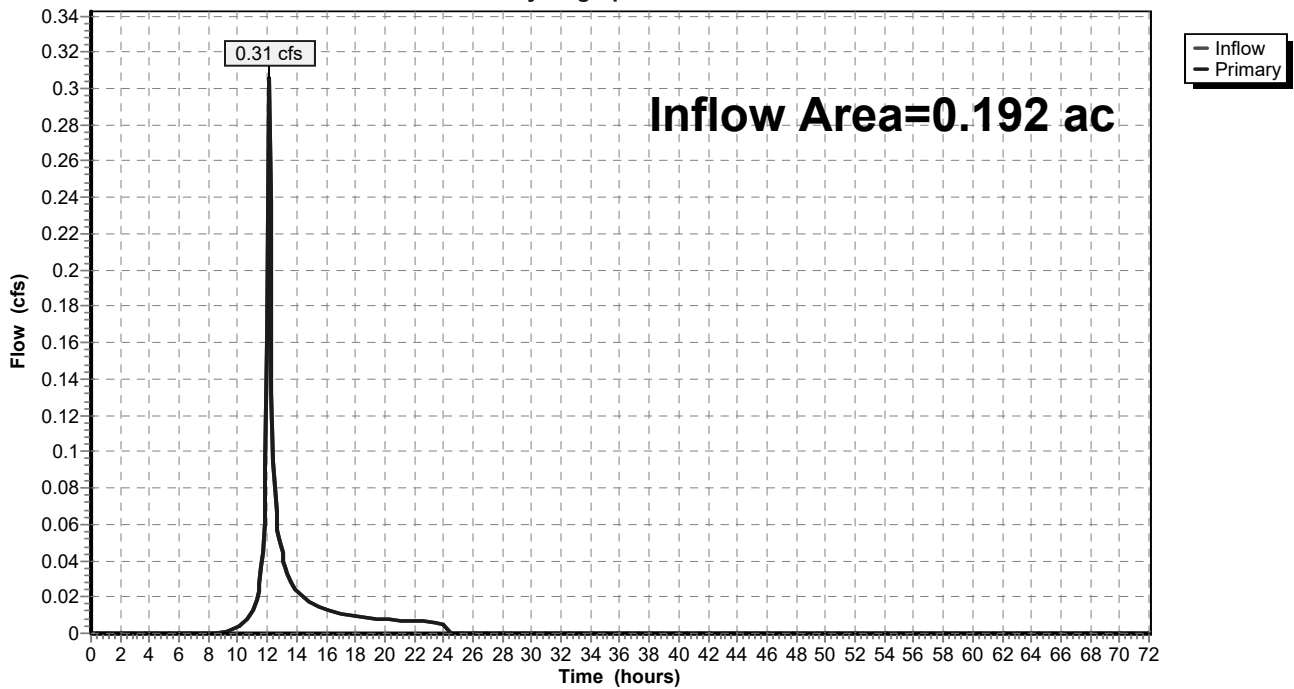
Summary for Link P1B: PDA 1B

Inflow Area = 0.192 ac, 0.00% Impervious, Inflow Depth = 1.54" for 2-Year event
Inflow = 0.31 cfs @ 12.12 hrs, Volume= 0.025 af
Primary = 0.31 cfs @ 12.12 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1B: PDA 1B

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment P1BI: PDA 1B - IMPERV.

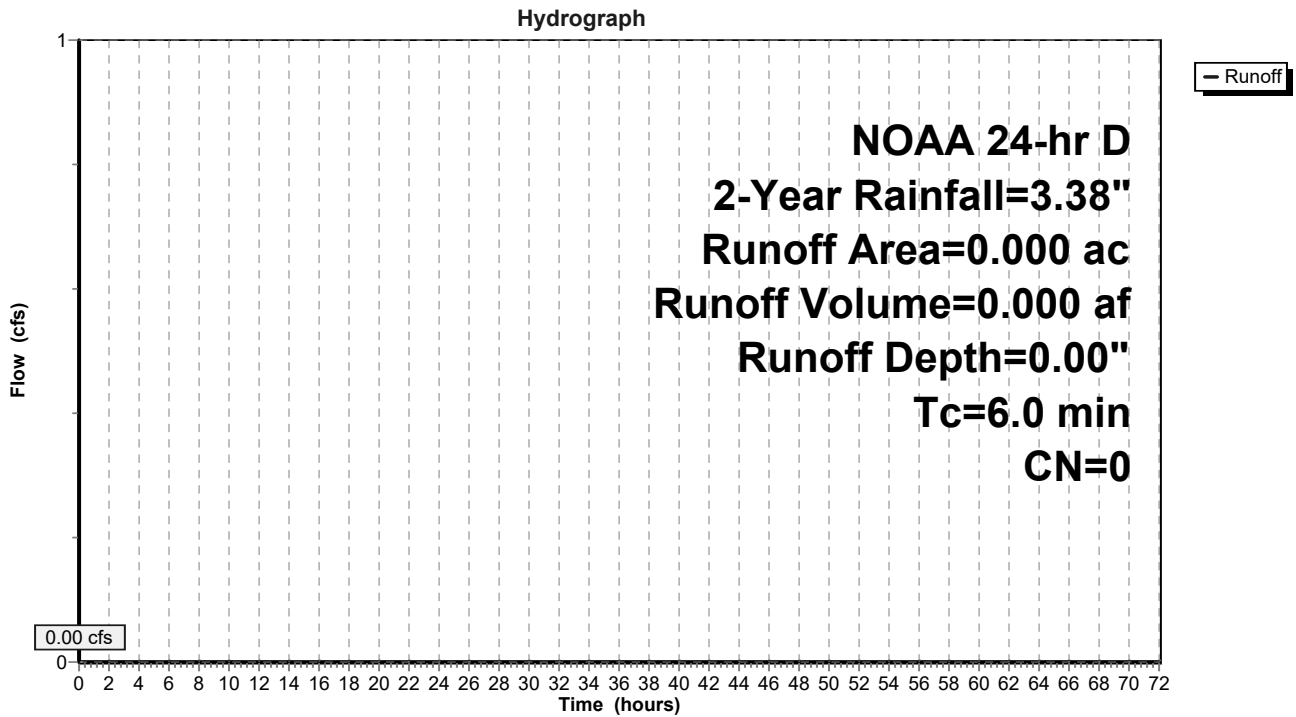
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment P1BI: PDA 1B - IMPERV.



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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment P1BP: PDA 1B - PERV.

Runoff = 0.31 cfs @ 12.12 hrs, Volume= 0.025 af, Depth= 1.54"

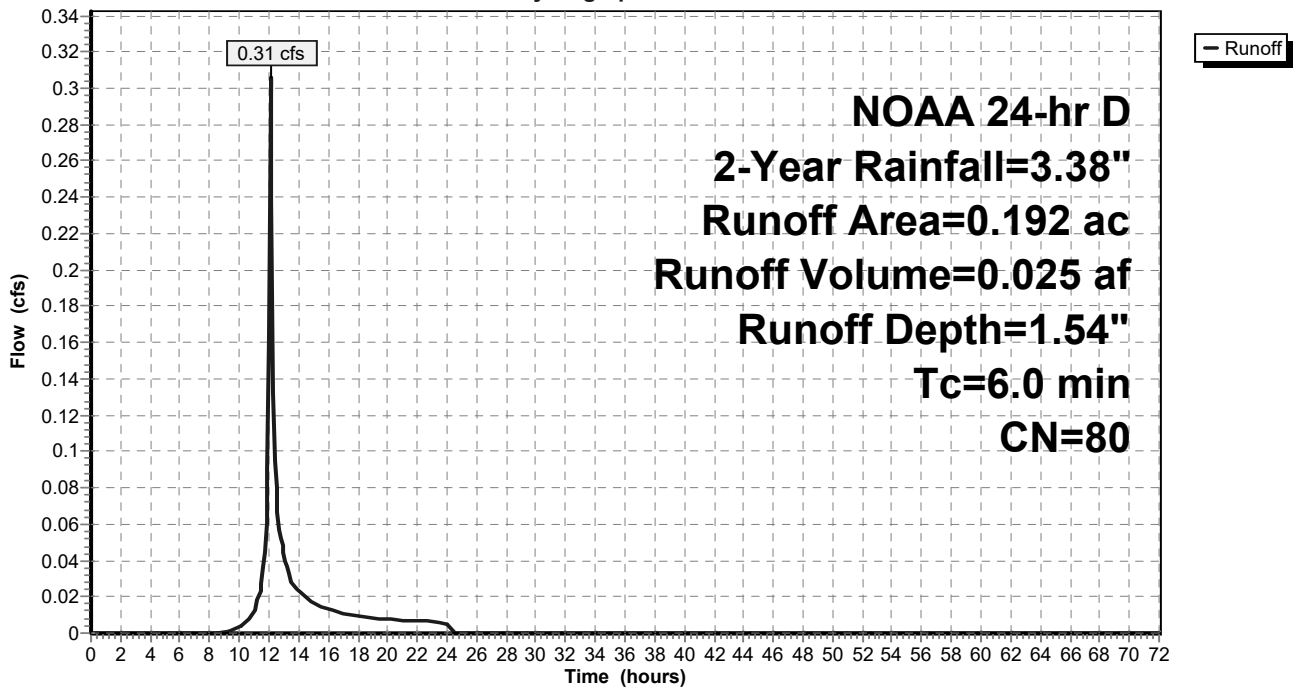
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.176	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.016	80	>75% Grass cover, Good, HSG D
0.192	80	Weighted Average
0.192		100.00% Pervious Area

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

Subcatchment P1BP: PDA 1B - PERV.

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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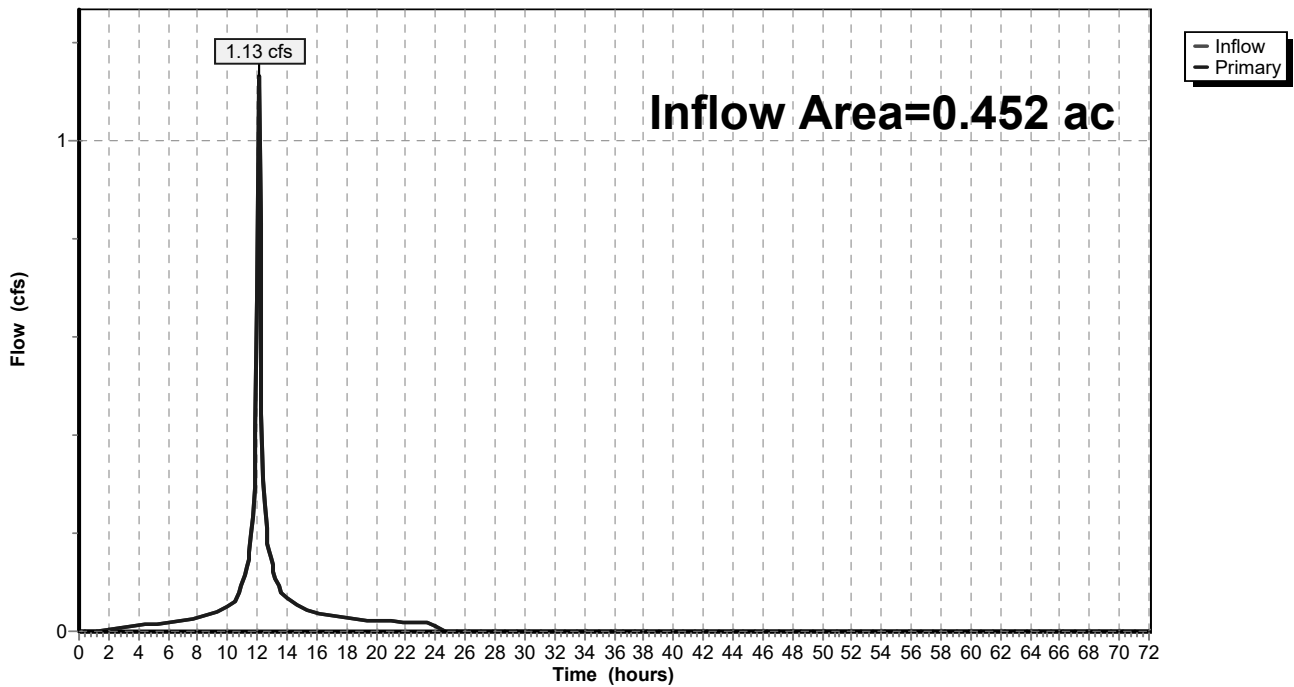
Summary for Link P2: PDA 2

Inflow Area = 0.452 ac, 78.32% Impervious, Inflow Depth = 2.72" for 2-Year event
Inflow = 1.13 cfs @ 12.11 hrs, Volume= 0.102 af
Primary = 1.13 cfs @ 12.11 hrs, Volume= 0.102 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P2: PDA 2

Hydrograph



EX-PR(balance)

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2-Year Storm Drainage Runoff

NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment P2I: PDA 2 - IMPERV.

Runoff = 1.02 cfs @ 12.11 hrs, Volume= 0.093 af, Depth= 3.15"

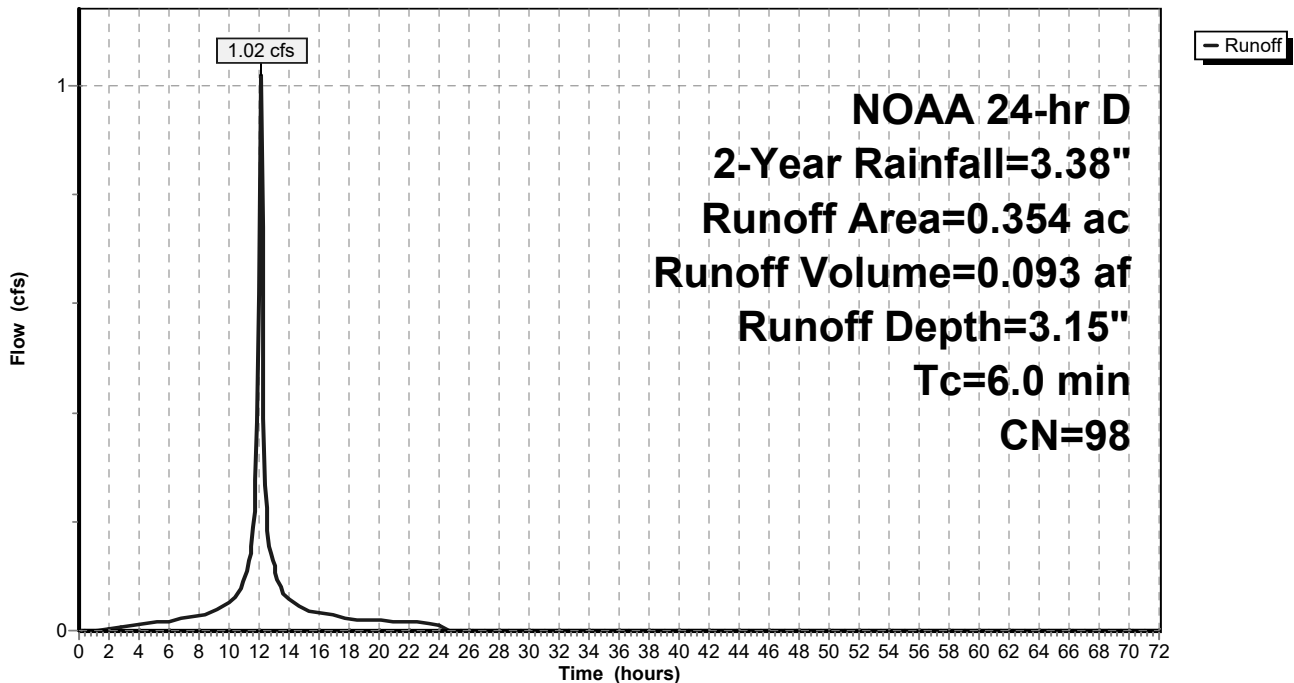
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.291	98	Unconnected pavement, HSG D
0.045	98	Unconnected pavement, HSG A
0.018	98	Unconnected pavement, HSG D
0.354	98	Weighted Average
0.354		100.00% Impervious Area
0.354		100.00% Unconnected

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

Subcatchment P2I: PDA 2 - IMPERV.

Hydrograph



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2-Year Storm Drainage Runoff

NOAA 24-hr D 2-Year Rainfall=3.38"

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Summary for Subcatchment P2P: PDA 2 - PERV.

Runoff = 0.11 cfs @ 12.12 hrs, Volume= 0.009 af, Depth= 1.16"

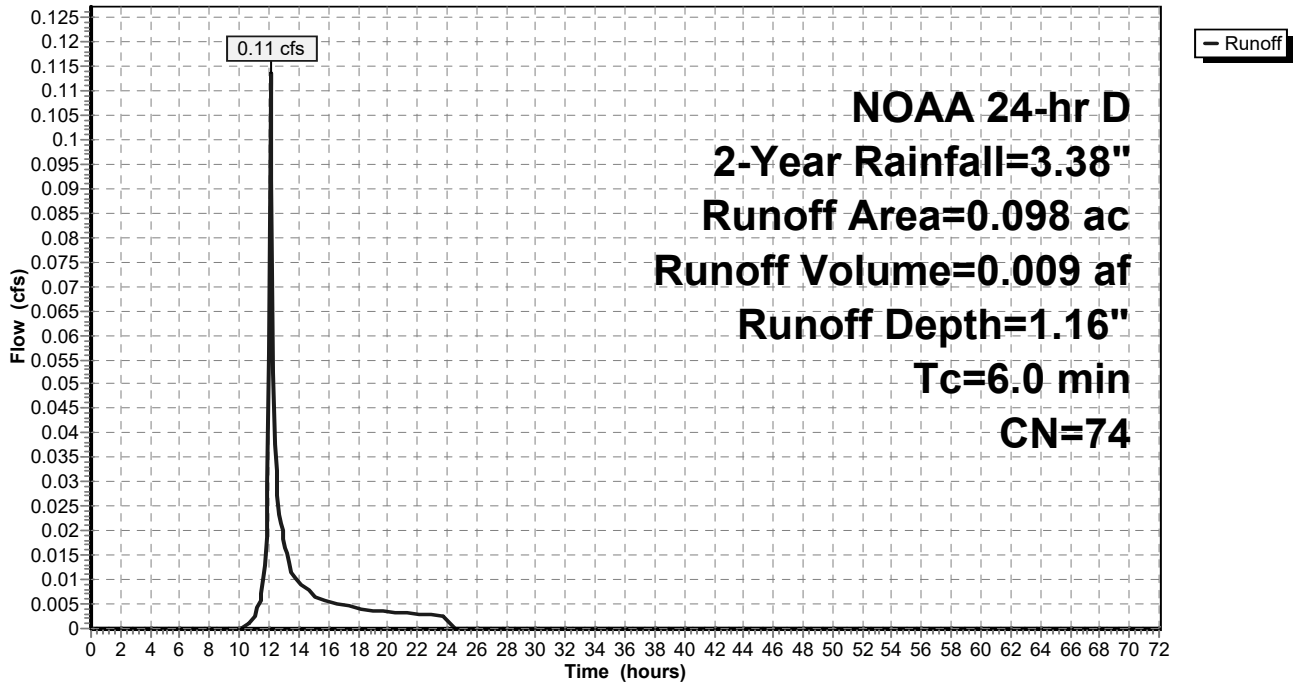
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 2-Year Rainfall=3.38"

Area (ac)	CN	Description
0.084	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.098	74	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P2P: PDA 2 - PERV.

Hydrograph



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2-Year Storm Drainage Runoff
NOAA 24-hr D 2-Year Rainfall=3.38"

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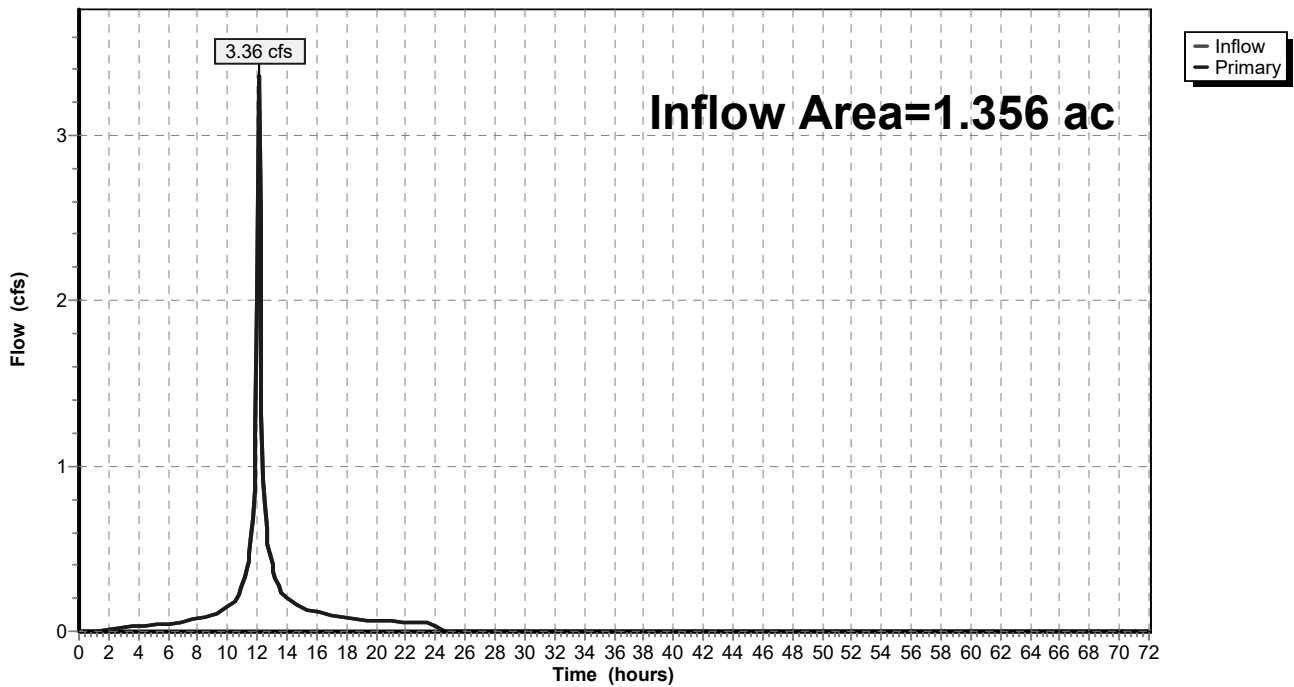
Summary for Link PS: PROPOSED SITE

Inflow Area = 1.356 ac, 71.39% Impervious, Inflow Depth = 2.66" for 2-Year event
Inflow = 3.36 cfs @ 12.11 hrs, Volume= 0.301 af
Primary = 3.36 cfs @ 12.11 hrs, Volume= 0.301 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link PS: PROPOSED SITE

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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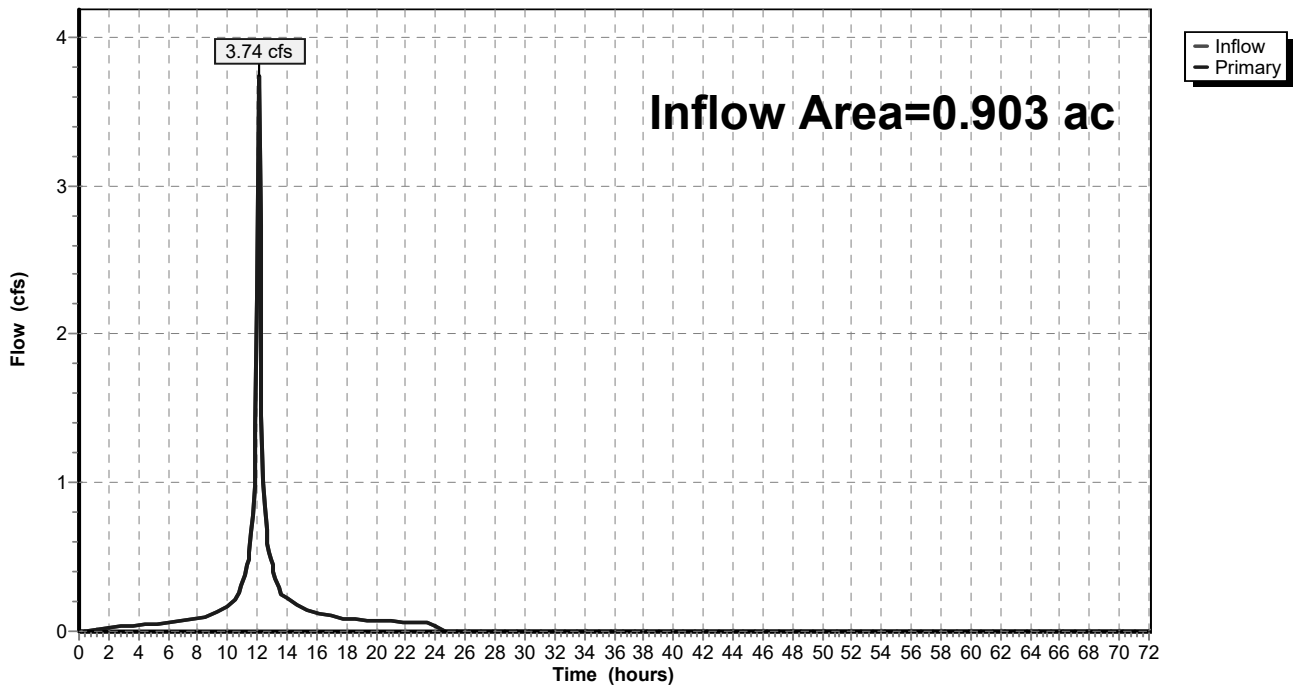
Summary for Link E1: EDA 1

Inflow Area = 0.903 ac, 73.09% Impervious, Inflow Depth = 4.48" for 10-Year event
Inflow = 3.74 cfs @ 12.11 hrs, Volume= 0.337 af
Primary = 3.74 cfs @ 12.11 hrs, Volume= 0.337 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1: EDA 1

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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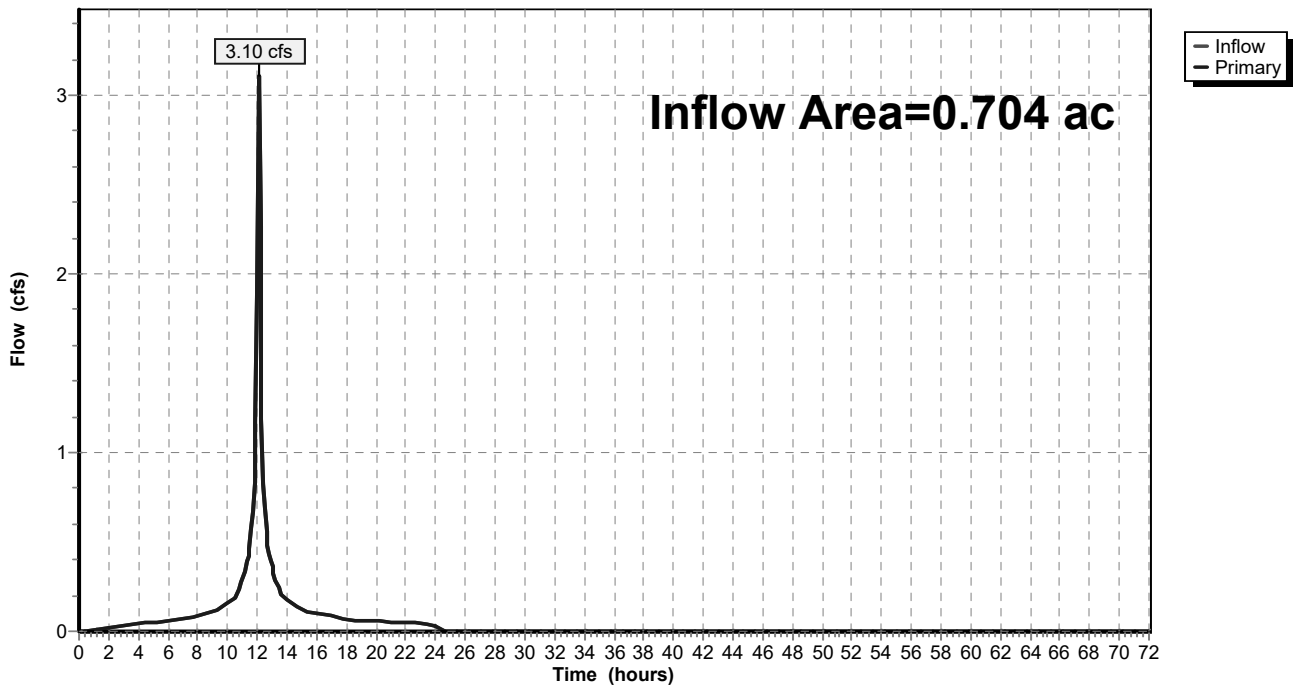
Summary for Link E1A: EDA 1A

Inflow Area = 0.704 ac, 93.75% Impervious, Inflow Depth = 4.87" for 10-Year event
Inflow = 3.10 cfs @ 12.11 hrs, Volume= 0.286 af
Primary = 3.10 cfs @ 12.11 hrs, Volume= 0.286 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1A: EDA 1A

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment E1A1: EDA 1A - IMPERV.

Runoff = 2.96 cfs @ 12.11 hrs, Volume= 0.275 af, Depth= 4.99"

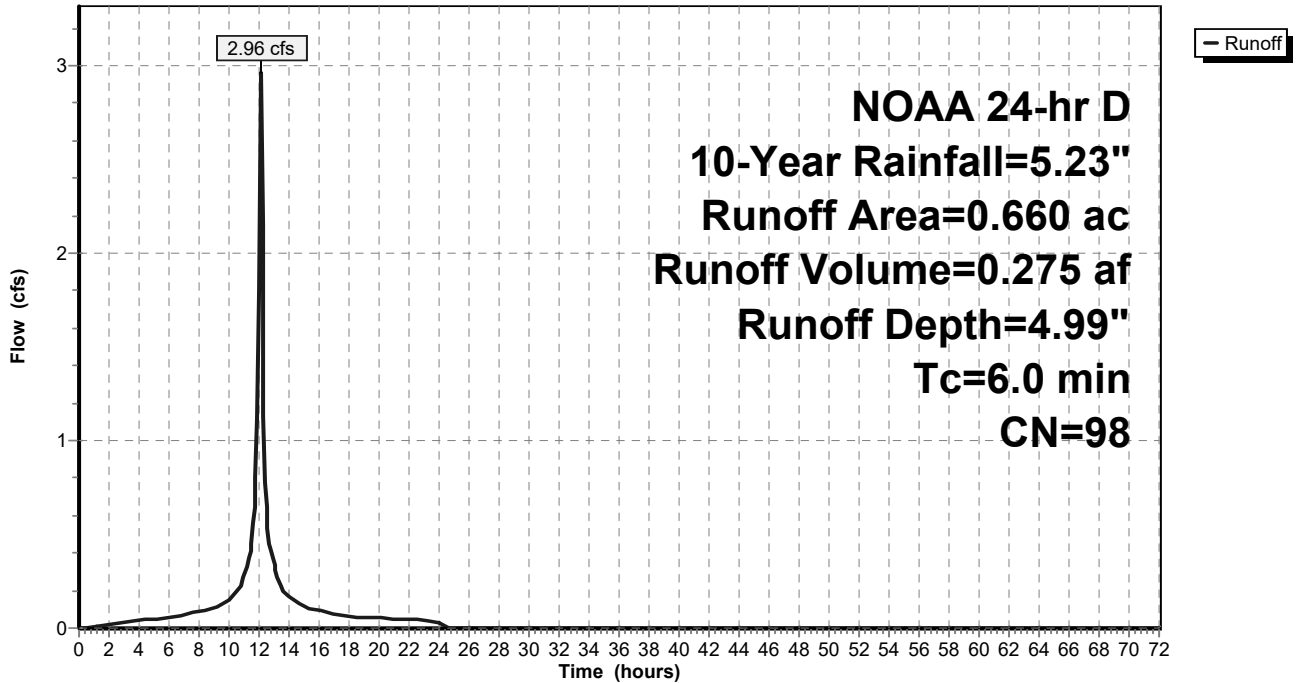
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.660	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.660	98	Weighted Average
0.660		100.00% Impervious Area
0.660		100.00% Unconnected

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

Subcatchment E1A1: EDA 1A - IMPERV.

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment E1AP: EDA 1A - PERV

Runoff = 0.14 cfs @ 12.11 hrs, Volume= 0.011 af, Depth= 3.09"

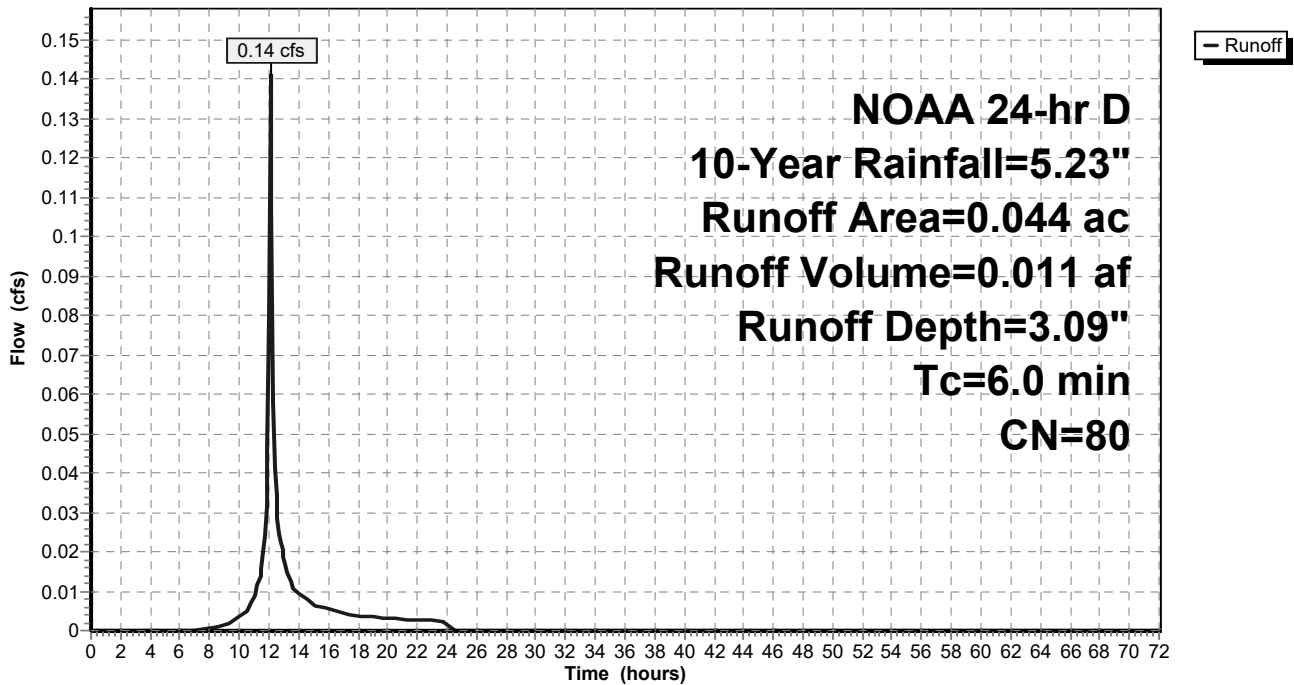
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.044	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.044	80	Weighted Average
0.044		100.00% Pervious Area

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

Subcatchment E1AP: EDA 1A - PERV

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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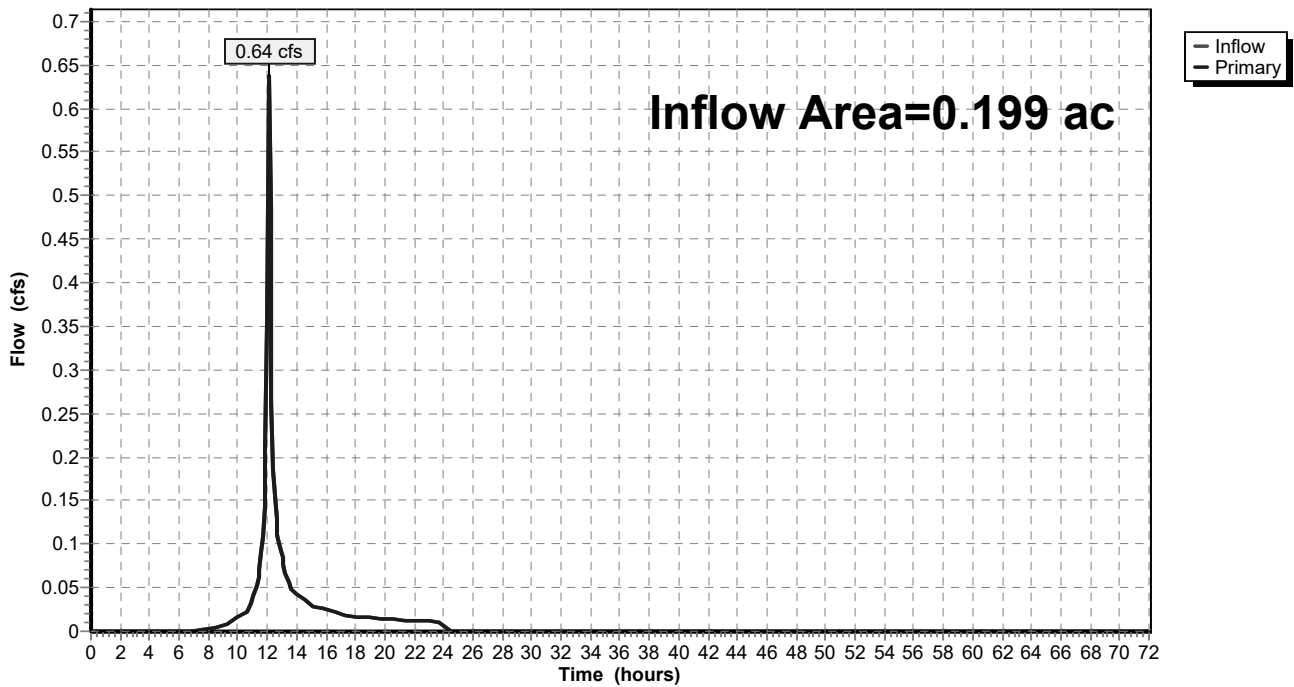
Summary for Link E1B: EDA 1B

Inflow Area = 0.199 ac, 0.00% Impervious, Inflow Depth = 3.09" for 10-Year event
Inflow = 0.64 cfs @ 12.11 hrs, Volume= 0.051 af
Primary = 0.64 cfs @ 12.11 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1B: EDA 1B

Hydrograph



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NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment E1BI: EDA 1B - IMPERV.

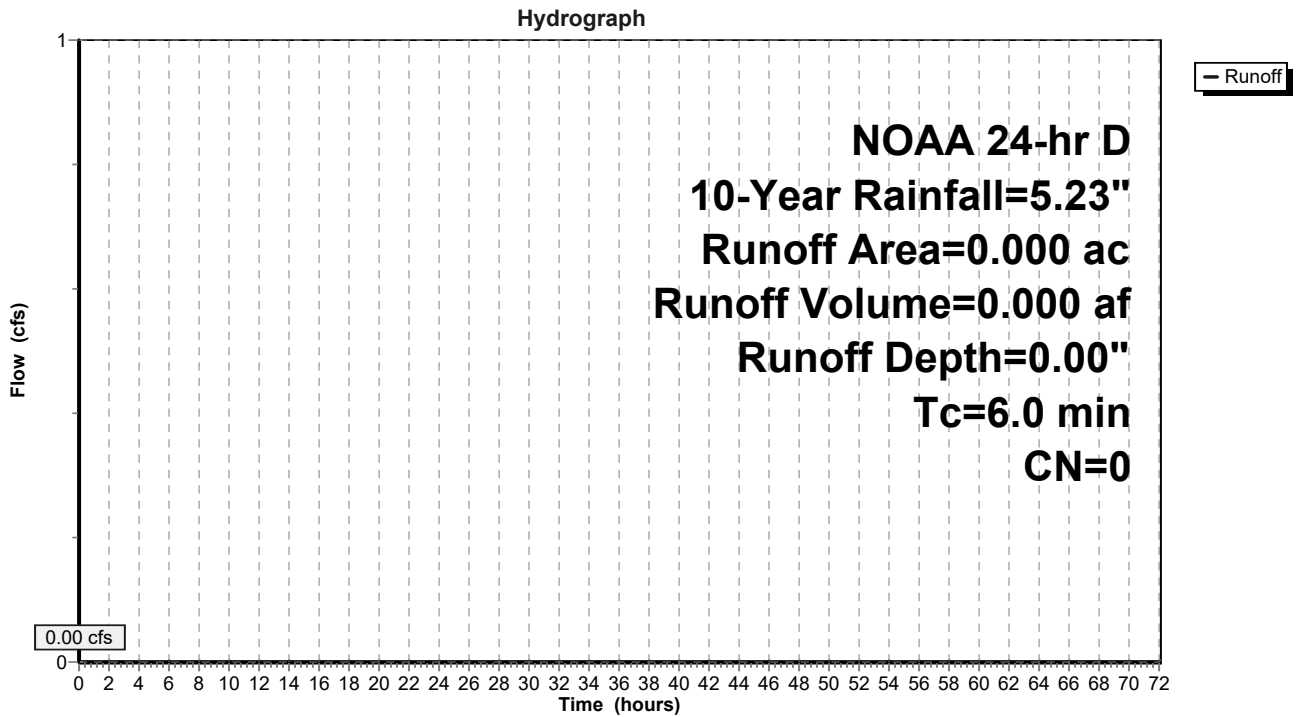
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment E1BI: EDA 1B - IMPERV.



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NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment E1BP: EDA 1B - PERV

Runoff = 0.64 cfs @ 12.11 hrs, Volume= 0.051 af, Depth= 3.09"

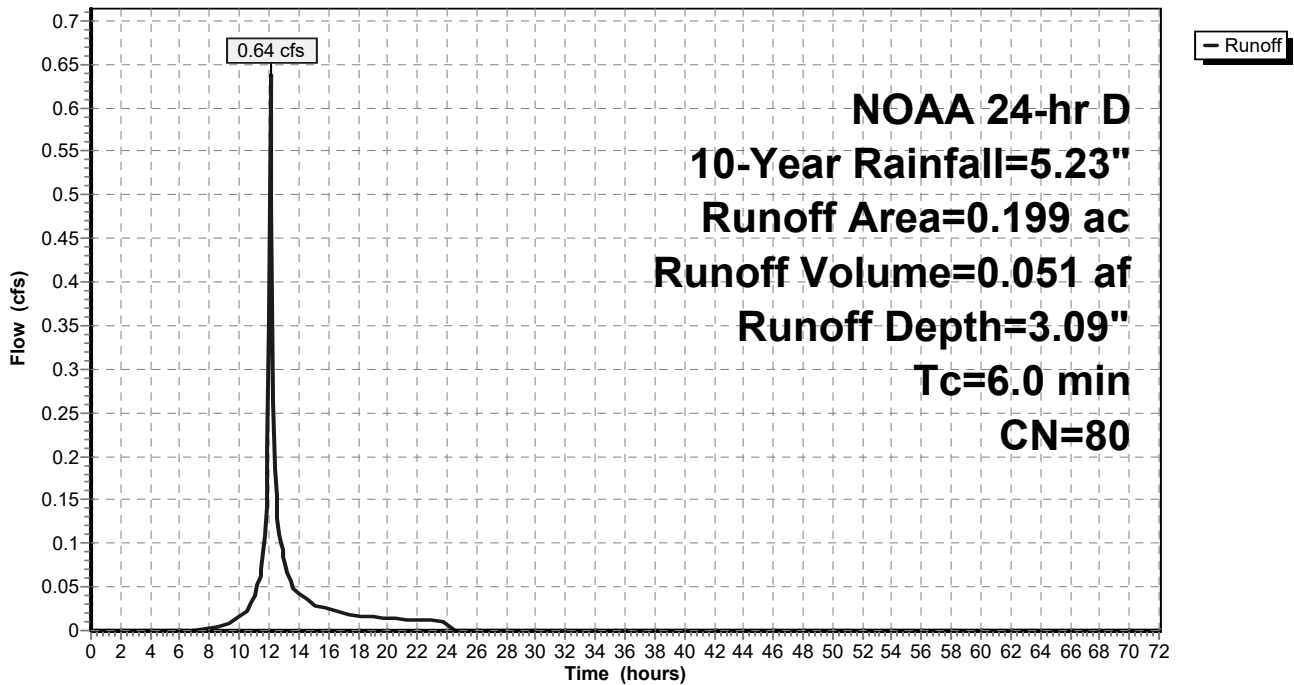
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.199	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.199	80	Weighted Average
0.199		100.00% Pervious Area

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

Subcatchment E1BP: EDA 1B - PERV

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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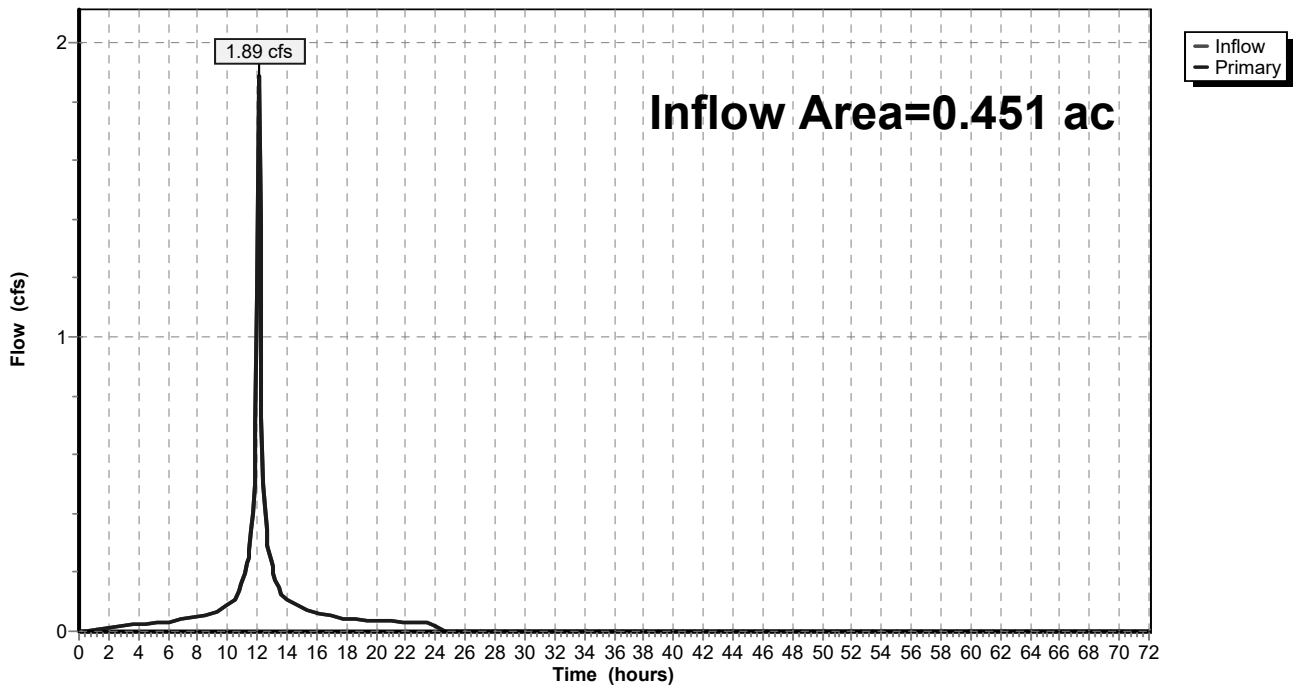
Summary for Link E2: EDA 2

Inflow Area = 0.451 ac, 85.81% Impervious, Inflow Depth = 4.61" for 10-Year event
Inflow = 1.89 cfs @ 12.11 hrs, Volume= 0.173 af
Primary = 1.89 cfs @ 12.11 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E2: EDA 2

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff

NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment E2I: EDA 2- IMPERV.

Runoff = 1.74 cfs @ 12.11 hrs, Volume= 0.161 af, Depth= 4.99"

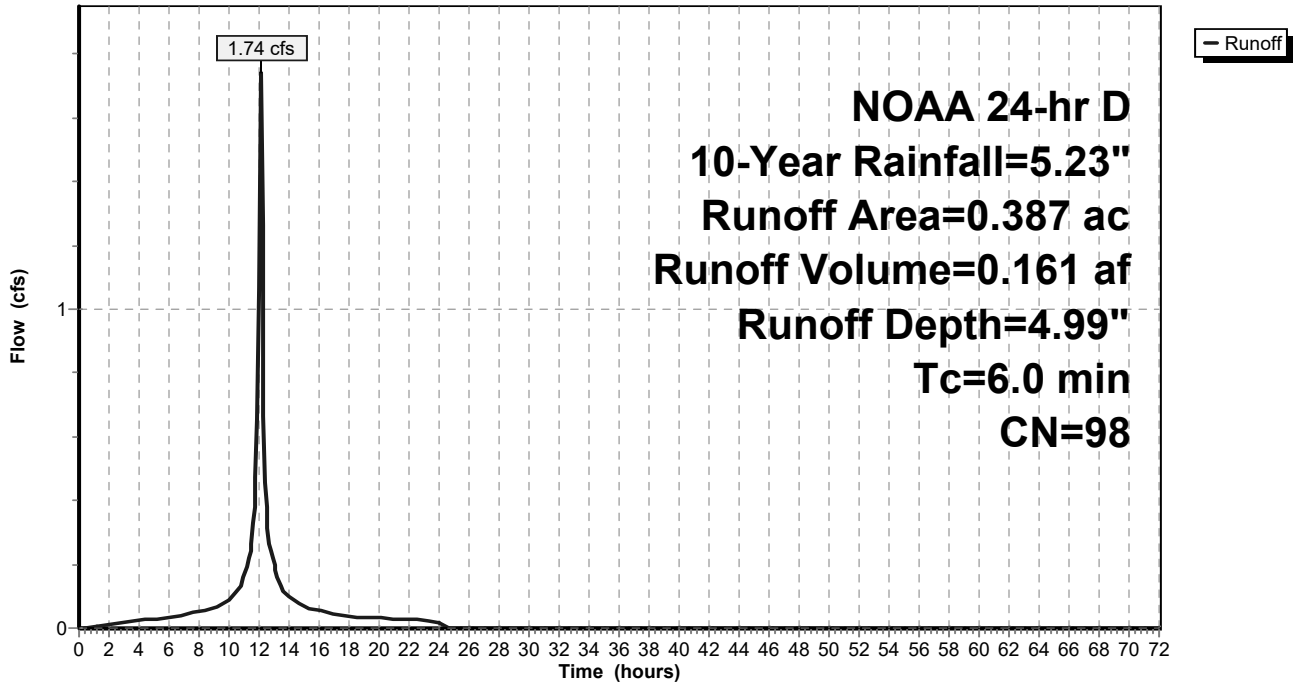
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.323	98	Unconnected pavement, HSG D
0.064	98	Unconnected pavement, HSG A
0.387	98	Weighted Average
0.387		100.00% Impervious Area
0.387		100.00% Unconnected

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

Subcatchment E2I: EDA 2- IMPERV.

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff

NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment E2P: EDA 2 - PERV

Runoff = 0.15 cfs @ 12.12 hrs, Volume= 0.012 af, Depth= 2.29"

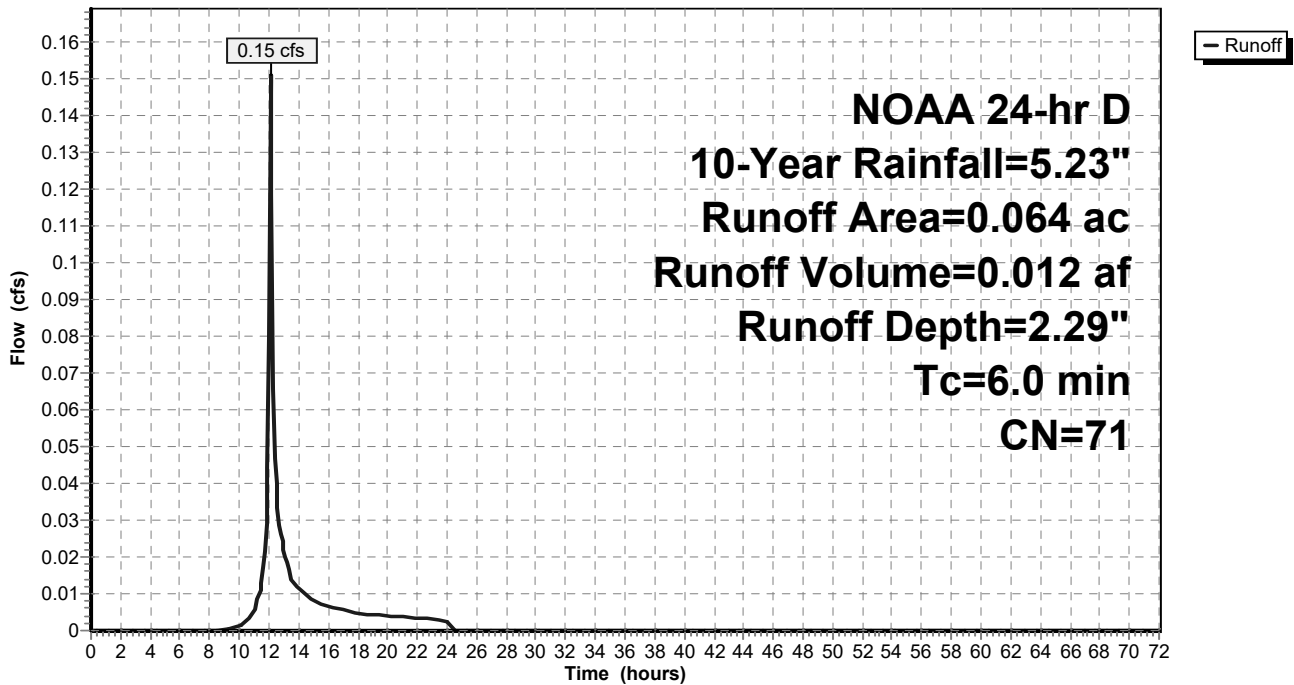
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.064	71	Weighted Average
0.064		100.00% Pervious Area

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

Subcatchment E2P: EDA 2 - PERV

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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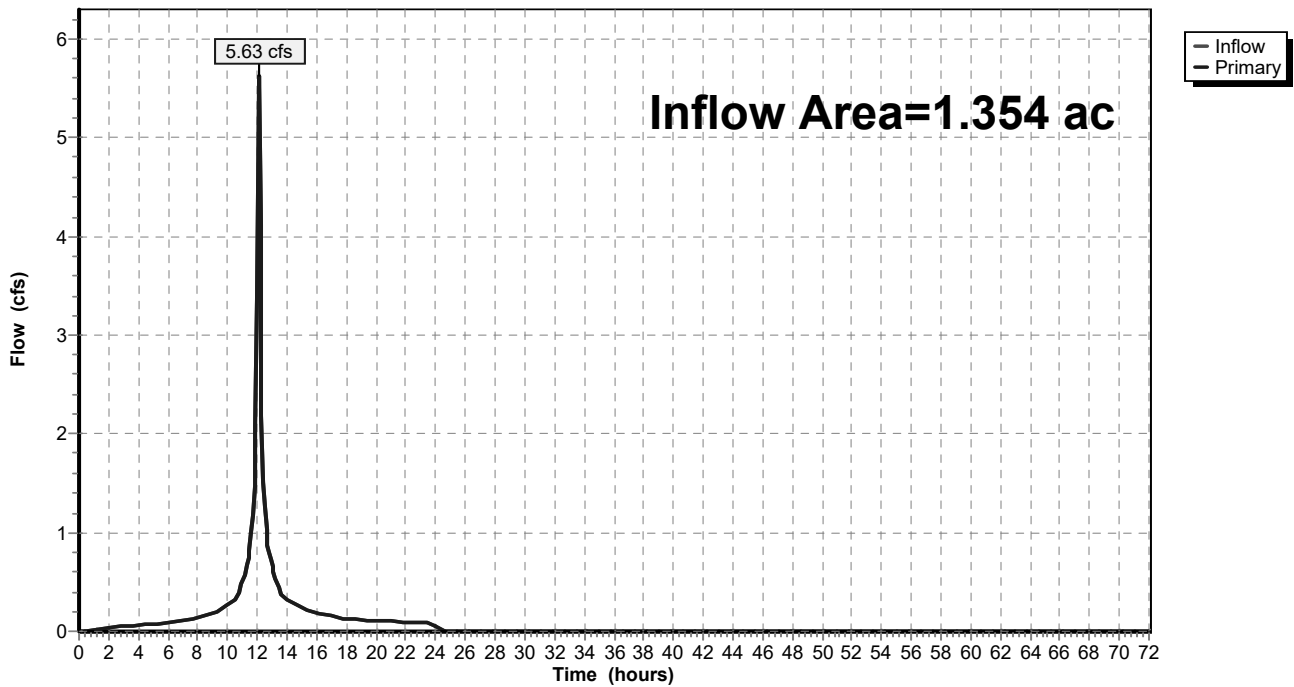
Summary for Link ES: EXISTING SITE

Inflow Area = 1.354 ac, 77.33% Impervious, Inflow Depth = 4.52" for 10-Year event
Inflow = 5.63 cfs @ 12.11 hrs, Volume= 0.511 af
Primary = 5.63 cfs @ 12.11 hrs, Volume= 0.511 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link ES: EXISTING SITE

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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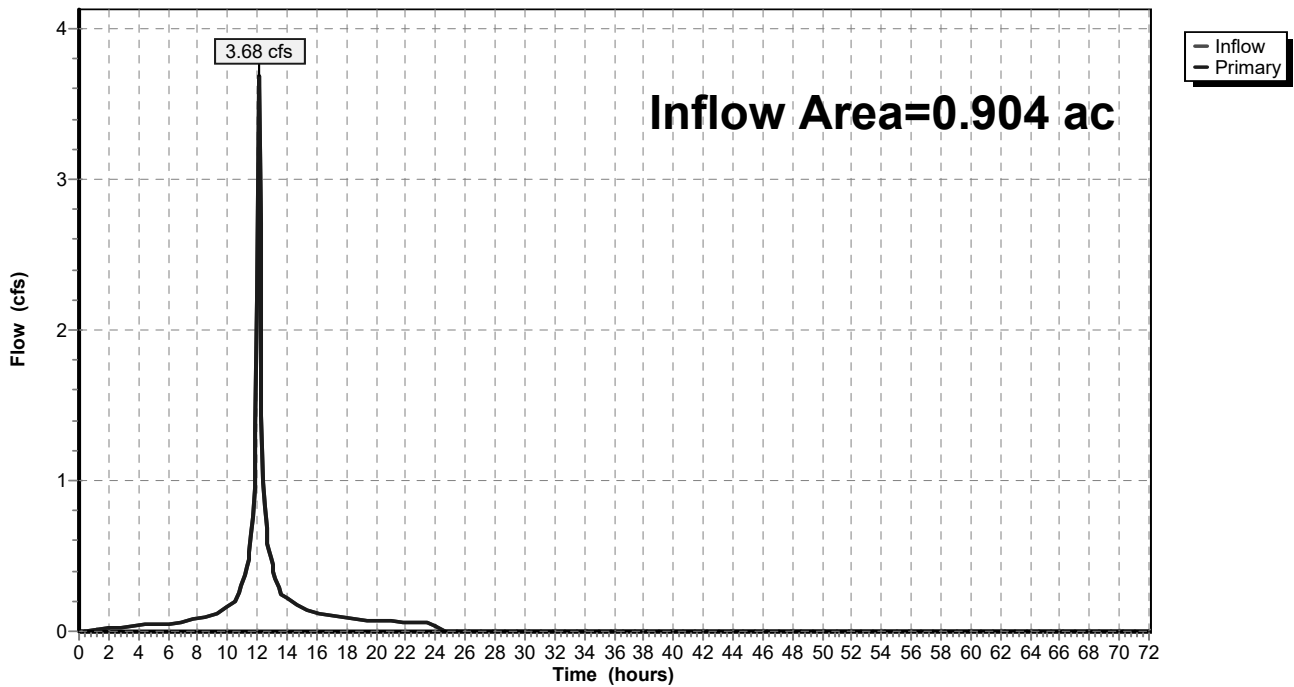
Summary for Link P1: PDA 1

Inflow Area = 0.904 ac, 67.92% Impervious, Inflow Depth = 4.38" for 10-Year event
Inflow = 3.68 cfs @ 12.11 hrs, Volume= 0.330 af
Primary = 3.68 cfs @ 12.11 hrs, Volume= 0.330 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1: PDA 1

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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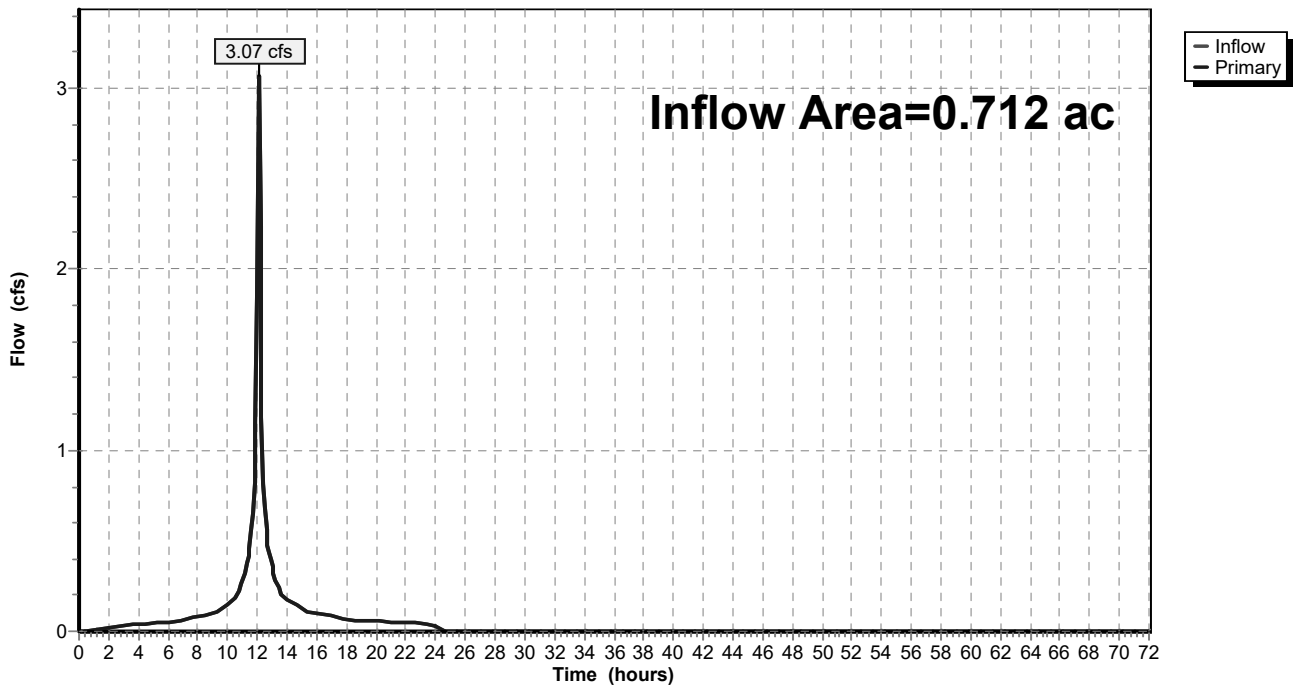
Summary for Link P1A: PDA 1A

Inflow Area = 0.712 ac, 86.24% Impervious, Inflow Depth = 4.73" for 10-Year event
Inflow = 3.07 cfs @ 12.11 hrs, Volume= 0.281 af
Primary = 3.07 cfs @ 12.11 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1A: PDA 1A

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment P1AI: PDA 1A - IMPERV.

Runoff = 2.76 cfs @ 12.11 hrs, Volume= 0.255 af, Depth= 4.99"

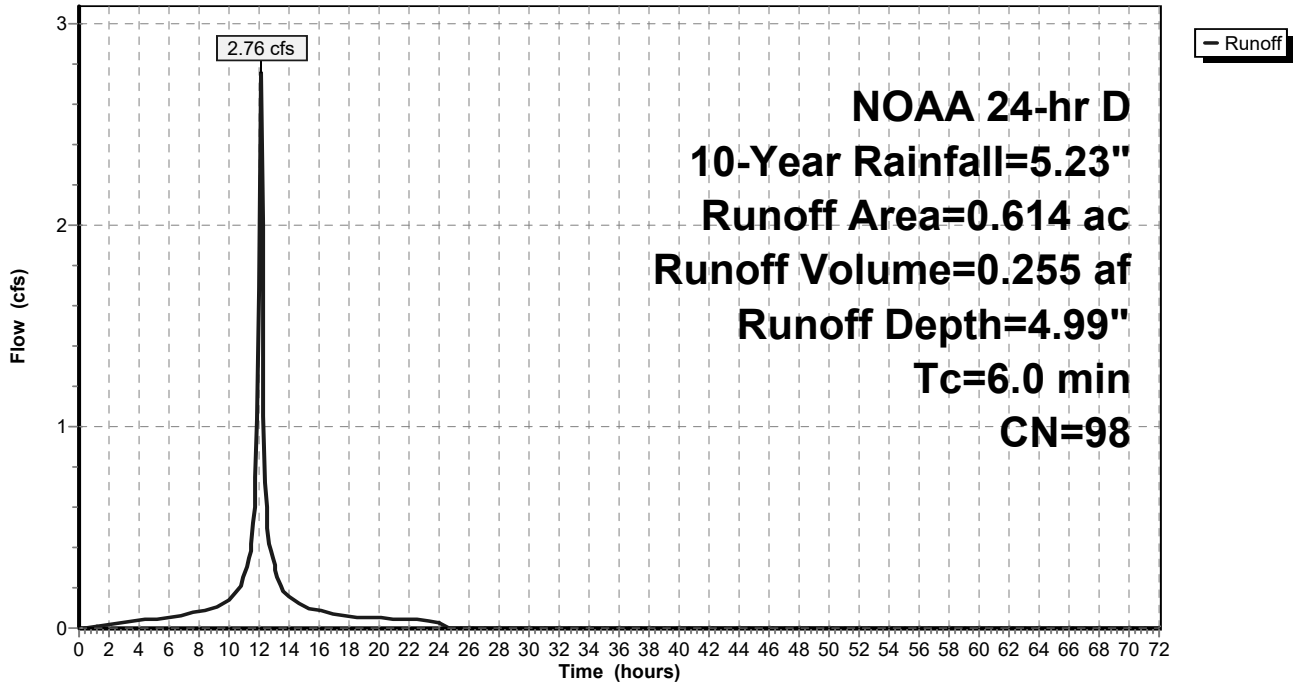
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.597	98	Unconnected pavement, HSG D
0.017	98	Unconnected pavement, HSG A
0.614	98	Weighted Average
0.614		100.00% Impervious Area
0.614		100.00% Unconnected

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

Subcatchment P1AI: PDA 1A - IMPERV.

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment P1AP: PDA 1A - PERV.

Runoff = 0.31 cfs @ 12.11 hrs, Volume= 0.025 af, Depth= 3.09"

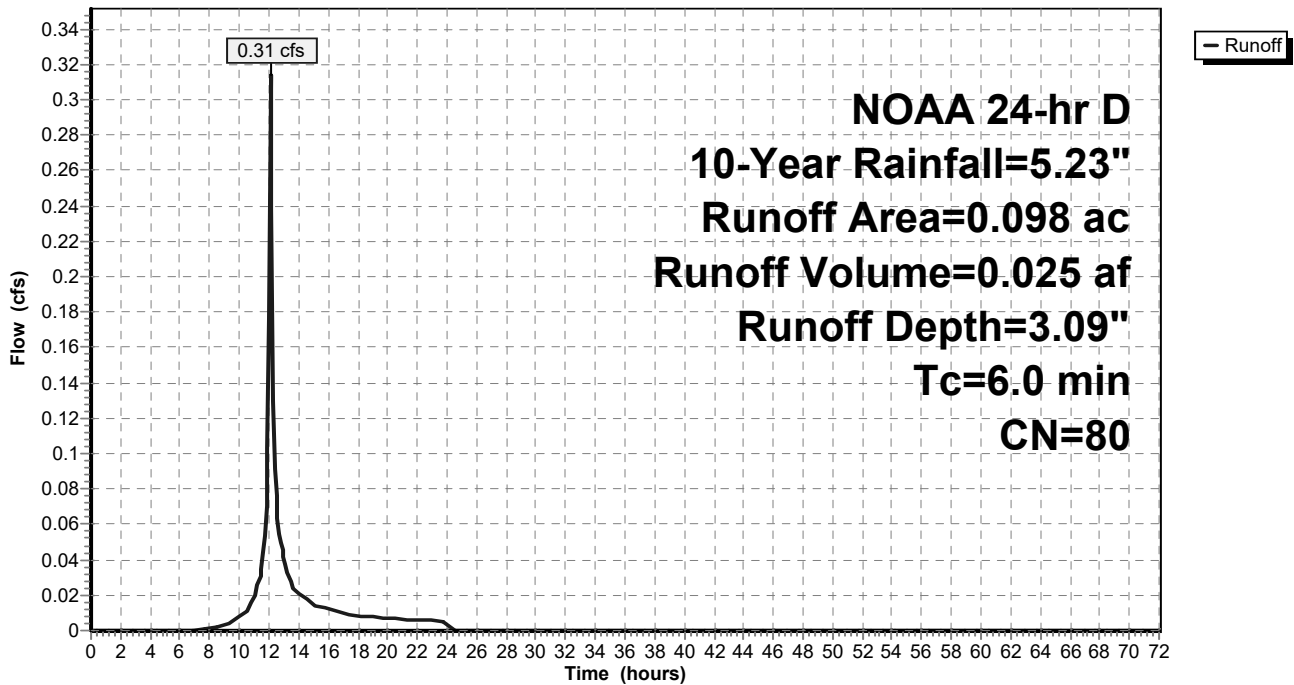
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.097	80	>75% Grass cover, Good, HSG D
0.001	39	>75% Grass cover, Good, HSG A
0.098	80	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P1AP: PDA 1A - PERV.

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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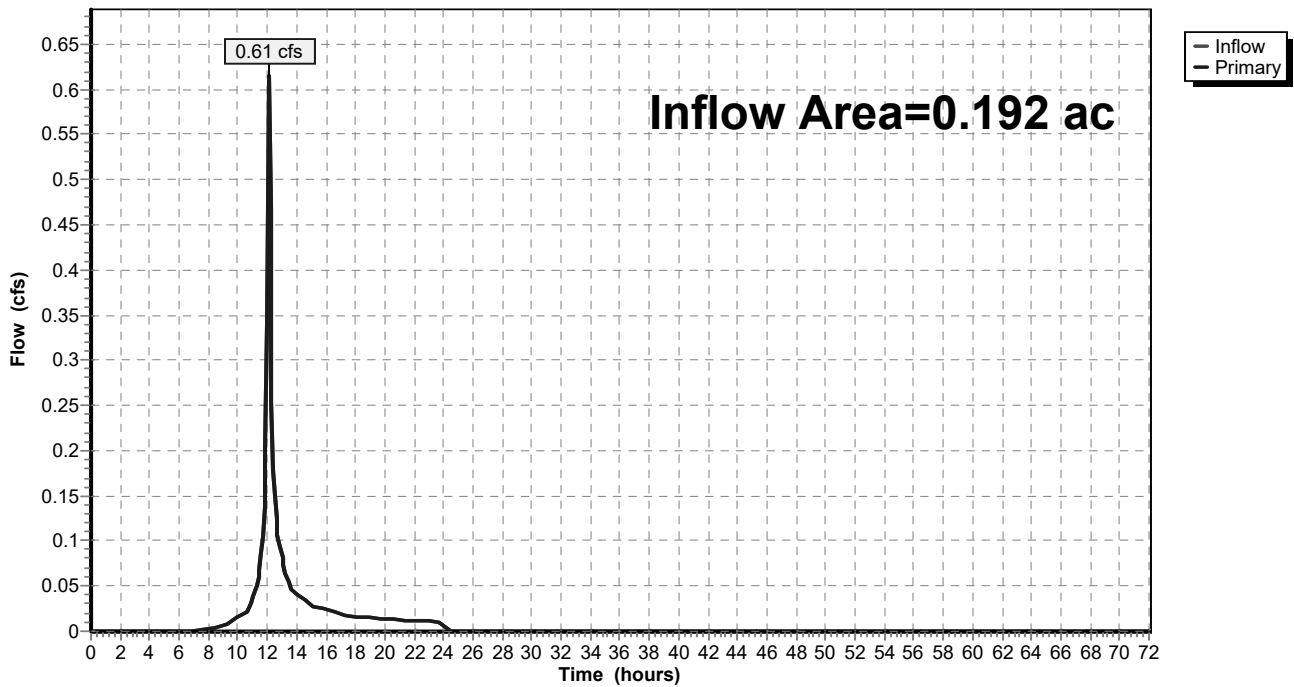
Summary for Link P1B: PDA 1B

Inflow Area = 0.192 ac, 0.00% Impervious, Inflow Depth = 3.09" for 10-Year event
Inflow = 0.61 cfs @ 12.11 hrs, Volume= 0.050 af
Primary = 0.61 cfs @ 12.11 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1B: PDA 1B

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment P1BI: PDA 1B - IMPERV.

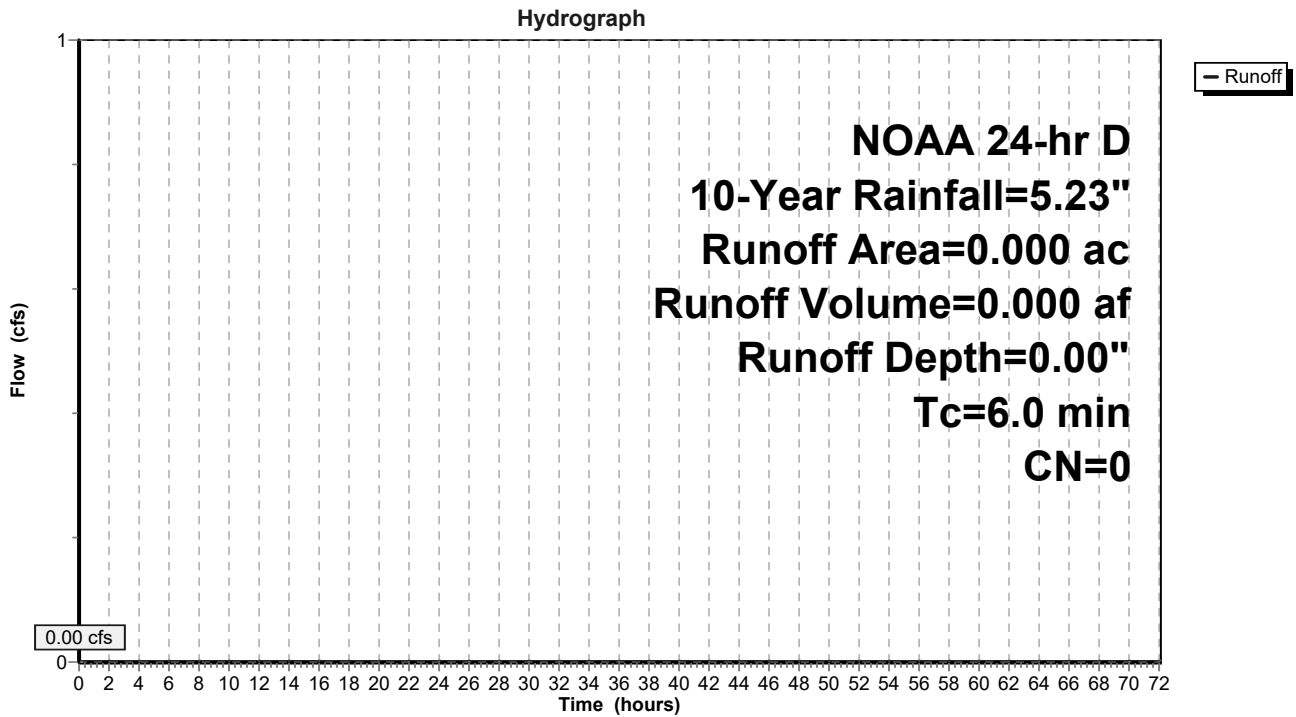
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment P1BI: PDA 1B - IMPERV.



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment P1BP: PDA 1B - PERV.

Runoff = 0.61 cfs @ 12.11 hrs, Volume= 0.050 af, Depth= 3.09"

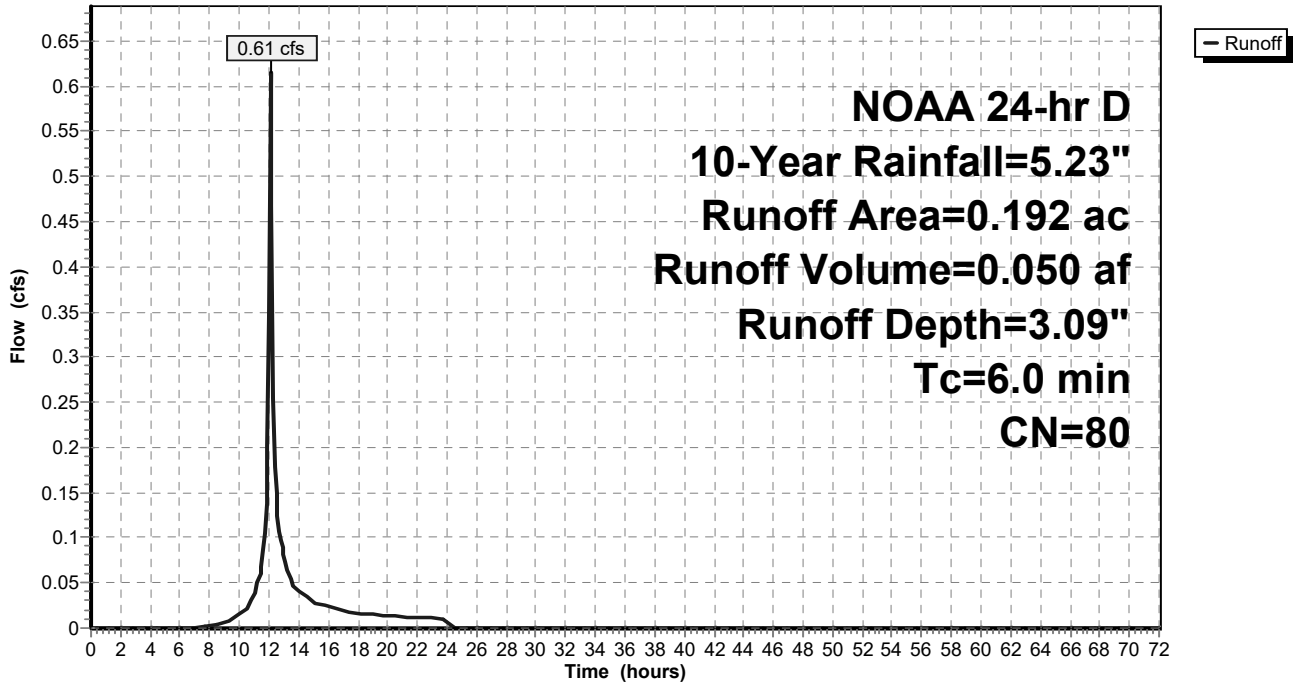
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.176	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.016	80	>75% Grass cover, Good, HSG D
0.192	80	Weighted Average
0.192		100.00% Pervious Area

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

Subcatchment P1BP: PDA 1B - PERV.

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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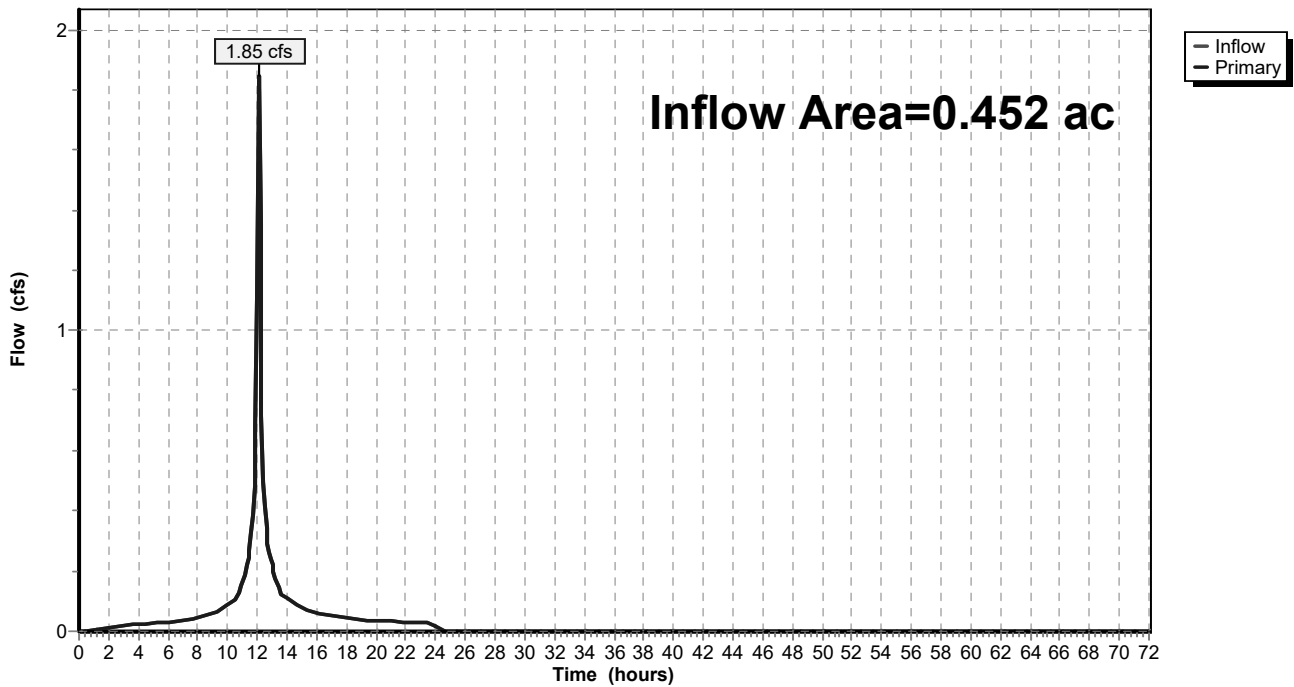
Summary for Link P2: PDA 2

Inflow Area = 0.452 ac, 78.32% Impervious, Inflow Depth = 4.46" for 10-Year event
Inflow = 1.85 cfs @ 12.11 hrs, Volume= 0.168 af
Primary = 1.85 cfs @ 12.11 hrs, Volume= 0.168 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P2: PDA 2

Hydrograph



EX-PR(balance)

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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment P2I: PDA 2 - IMPERV.

Runoff = 1.59 cfs @ 12.11 hrs, Volume= 0.147 af, Depth= 4.99"

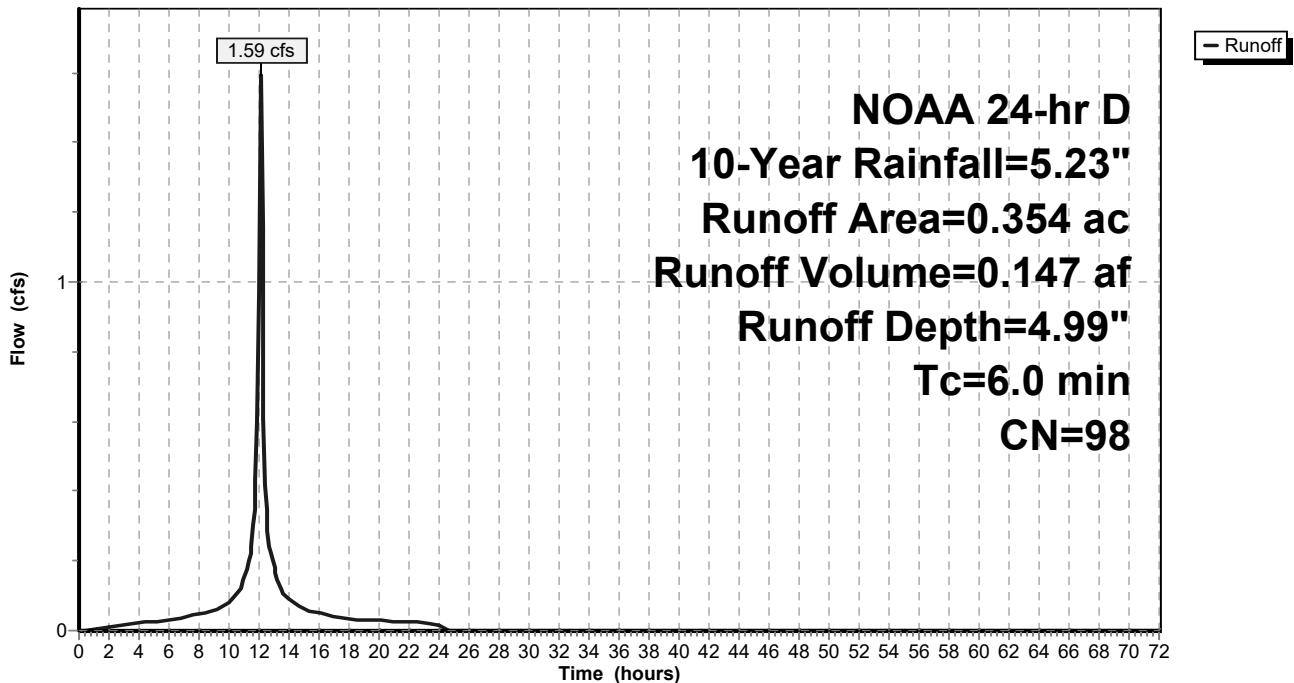
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.291	98	Unconnected pavement, HSG D
0.045	98	Unconnected pavement, HSG A
0.018	98	Unconnected pavement, HSG D
0.354	98	Weighted Average
0.354		100.00% Impervious Area
0.354		100.00% Unconnected

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

Subcatchment P2I: PDA 2 - IMPERV.

Hydrograph



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NOAA 24-hr D 10-Year Rainfall=5.23"

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Summary for Subcatchment P2P: PDA 2 - PERV.

Runoff = 0.26 cfs @ 12.12 hrs, Volume= 0.021 af, Depth= 2.55"

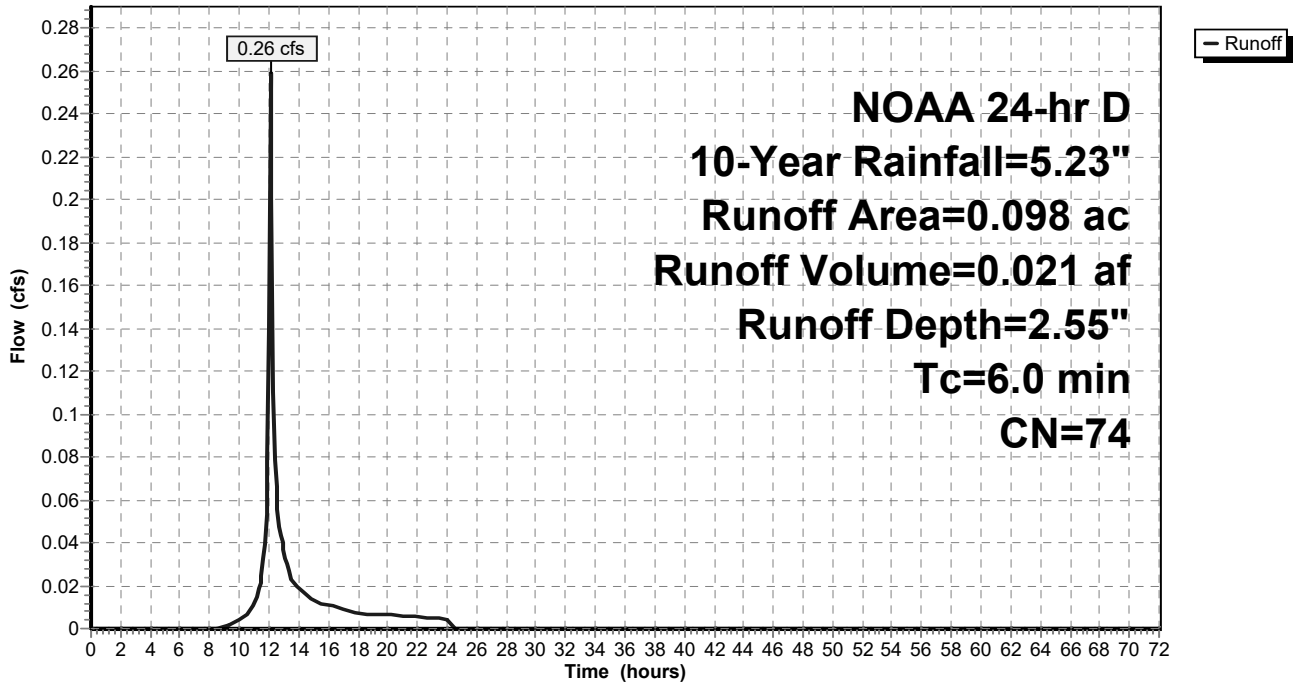
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-Year Rainfall=5.23"

Area (ac)	CN	Description
0.084	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.098	74	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P2P: PDA 2 - PERV.

Hydrograph



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10-Year Storm Drainage Runoff
NOAA 24-hr D 10-Year Rainfall=5.23"

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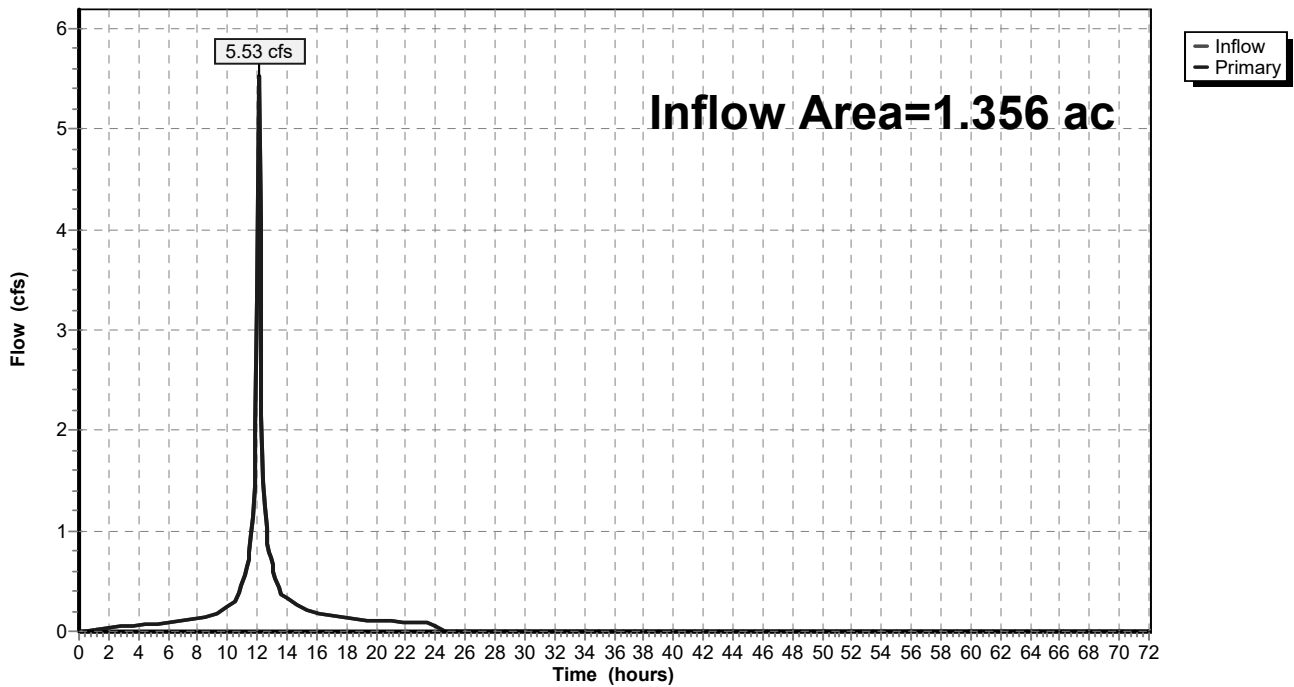
Summary for Link PS: PROPOSED SITE

Inflow Area = 1.356 ac, 71.39% Impervious, Inflow Depth = 4.41" for 10-Year event
Inflow = 5.53 cfs @ 12.11 hrs, Volume= 0.498 af
Primary = 5.53 cfs @ 12.11 hrs, Volume= 0.498 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link PS: PROPOSED SITE

Hydrograph



EX-PR(balance)

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100 Year Storm Drainage Runoff
NOAA 24-hr D 100-Year Rainfall=8.94"

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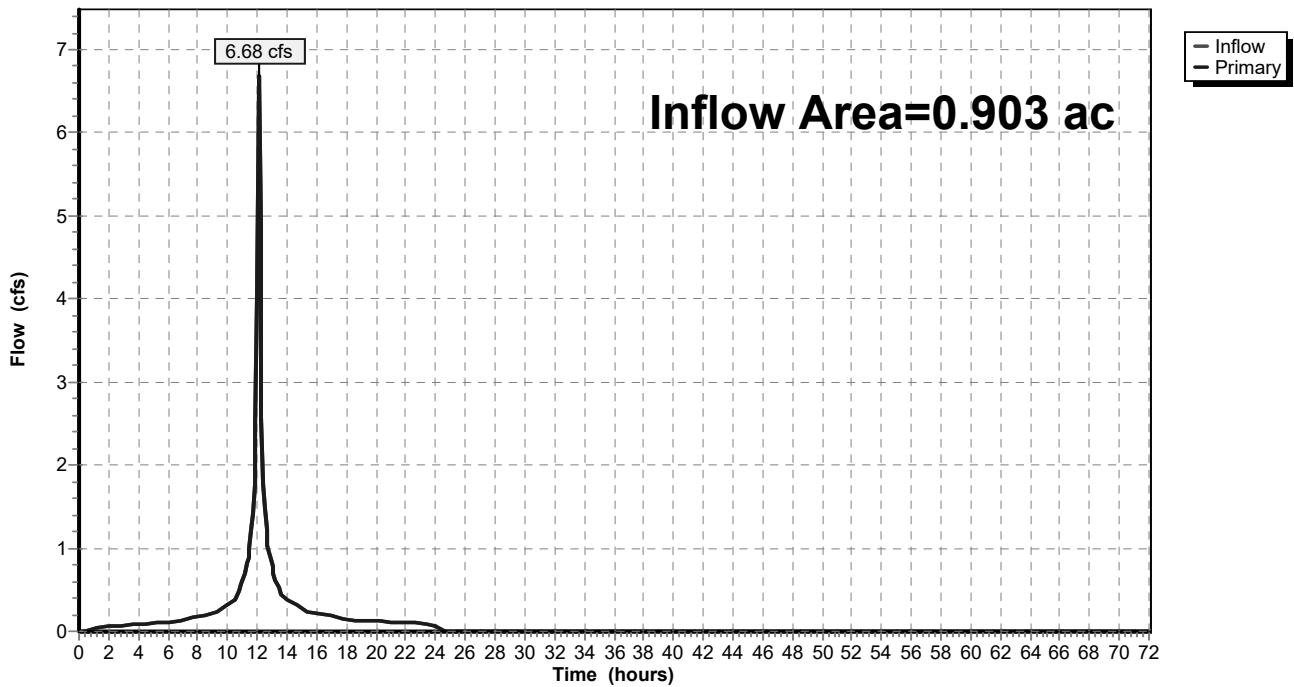
Summary for Link E1: EDA 1

Inflow Area = 0.903 ac, 73.09% Impervious, Inflow Depth = 8.11" for 100-Year event
Inflow = 6.68 cfs @ 12.11 hrs, Volume= 0.610 af
Primary = 6.68 cfs @ 12.11 hrs, Volume= 0.610 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1: EDA 1

Hydrograph



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100 Year Storm Drainage Runoff
NOAA 24-hr D 100-Year Rainfall=8.94"

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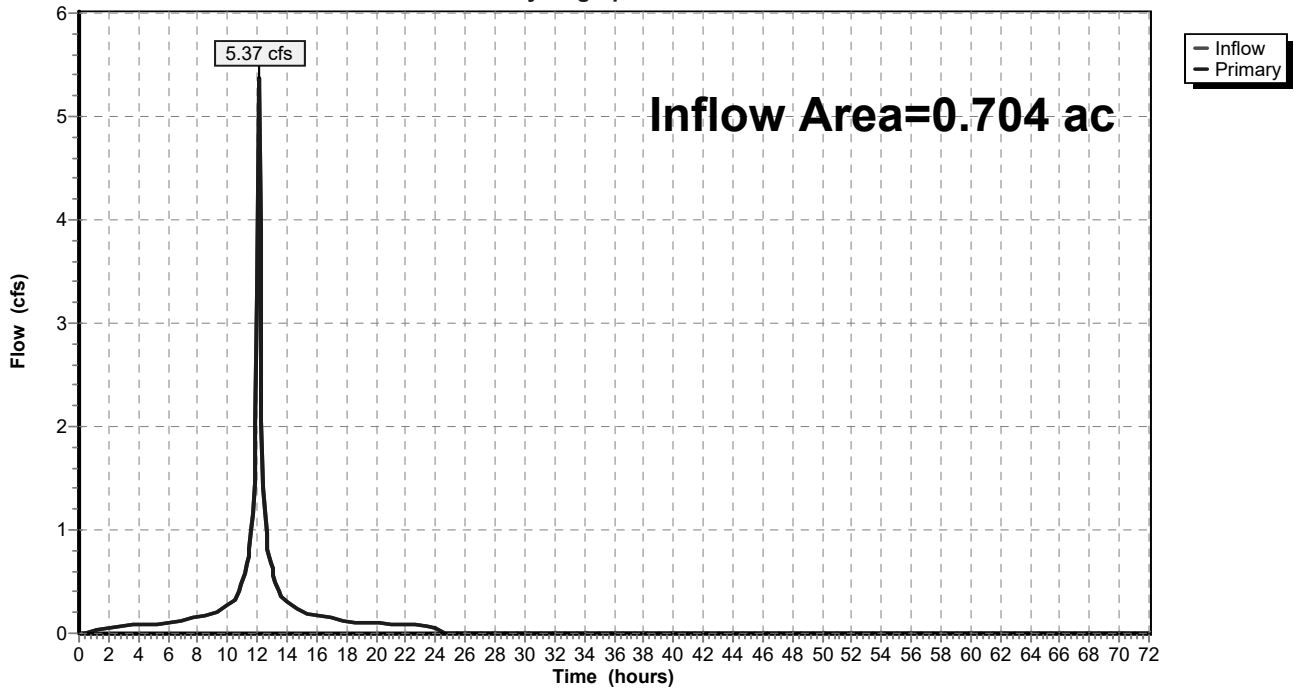
Summary for Link E1A: EDA 1A

Inflow Area = 0.704 ac, 93.75% Impervious, Inflow Depth = 8.56" for 100-Year event
Inflow = 5.37 cfs @ 12.11 hrs, Volume= 0.502 af
Primary = 5.37 cfs @ 12.11 hrs, Volume= 0.502 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1A: EDA 1A

Hydrograph



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NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment E1A1: EDA 1A - IMPERV.

Runoff = 5.08 cfs @ 12.11 hrs, Volume= 0.478 af, Depth= 8.70"

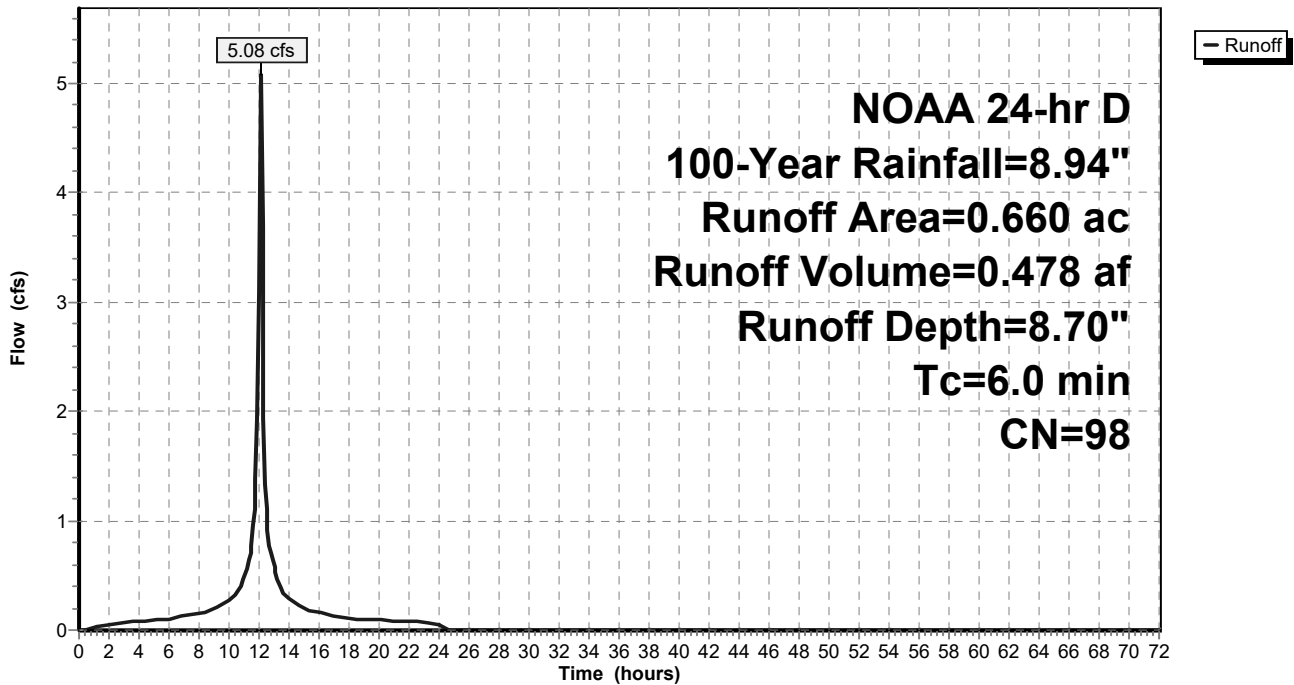
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.660	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.660	98	Weighted Average
0.660		100.00% Impervious Area
0.660		100.00% Unconnected

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

Subcatchment E1A1: EDA 1A - IMPERV.

Hydrograph



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Summary for Subcatchment E1AP: EDA 1A - PERV

Runoff = 0.29 cfs @ 12.11 hrs, Volume= 0.024 af, Depth= 6.51"

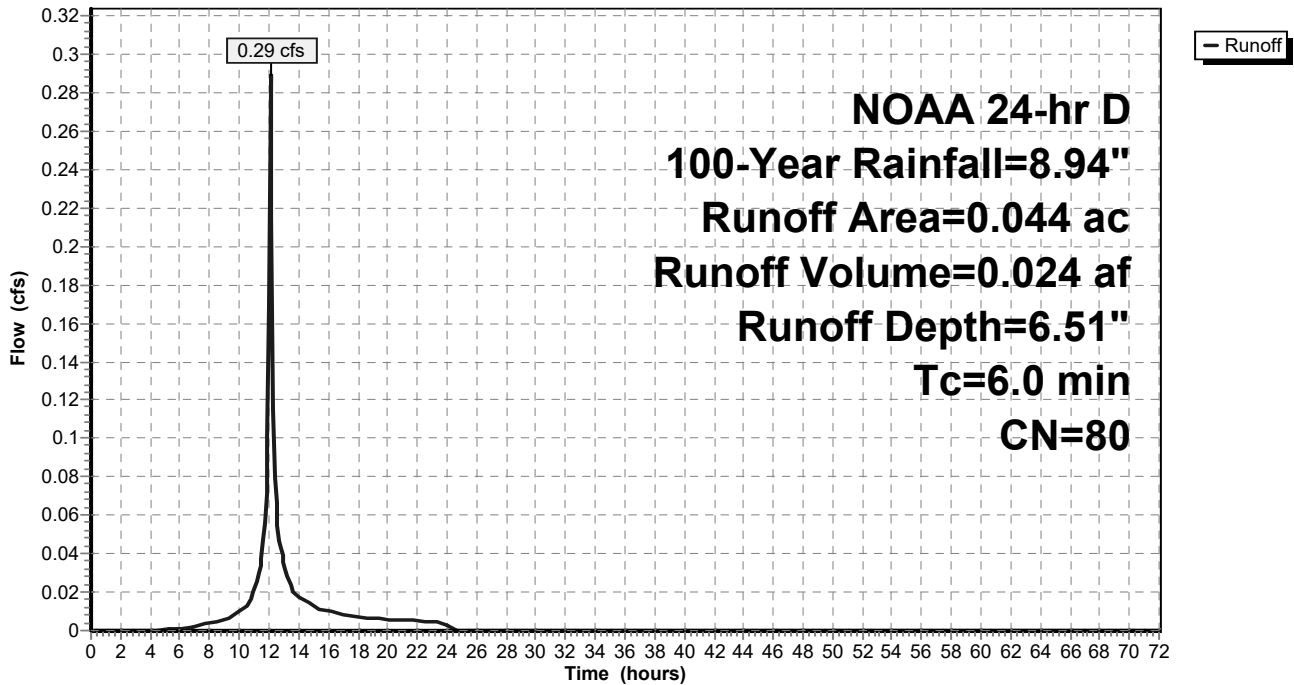
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.044	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.044	80	Weighted Average
0.044		100.00% Pervious Area

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

Subcatchment E1AP: EDA 1A - PERV

Hydrograph



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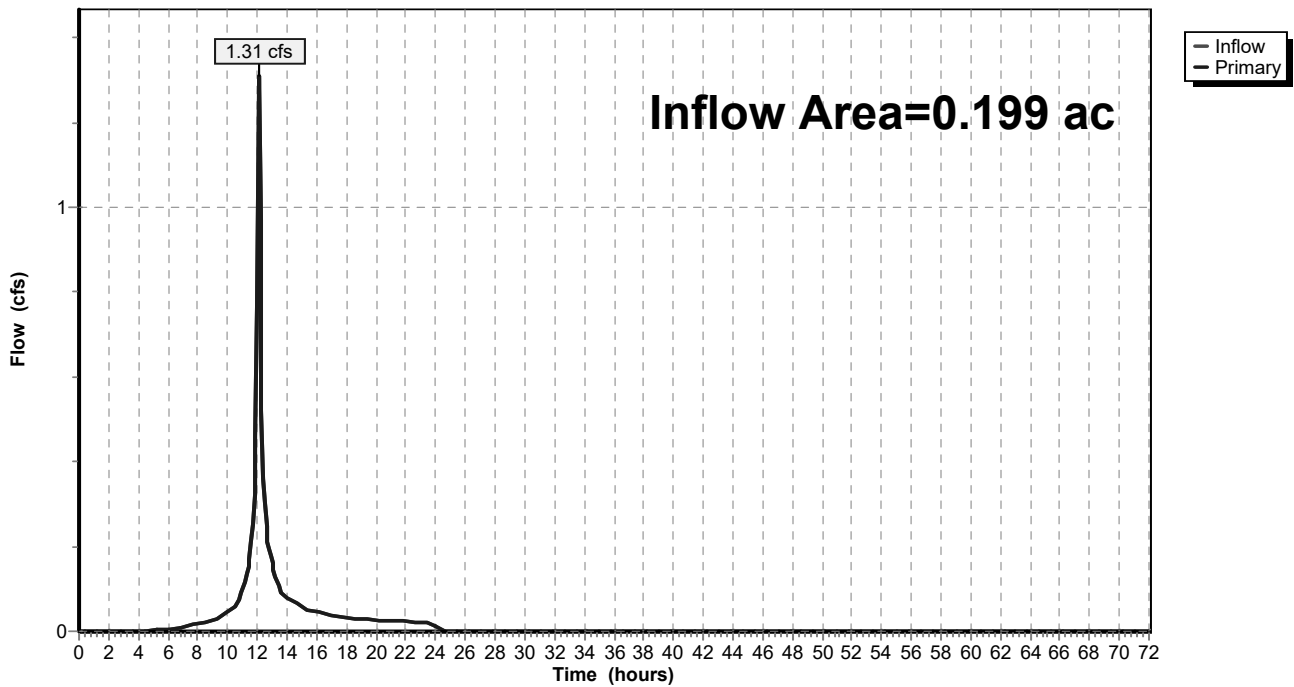
Summary for Link E1B: EDA 1B

Inflow Area = 0.199 ac, 0.00% Impervious, Inflow Depth = 6.51" for 100-Year event
Inflow = 1.31 cfs @ 12.11 hrs, Volume= 0.108 af
Primary = 1.31 cfs @ 12.11 hrs, Volume= 0.108 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1B: EDA 1B

Hydrograph



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Summary for Subcatchment E1BI: EDA 1B - IMPERV.

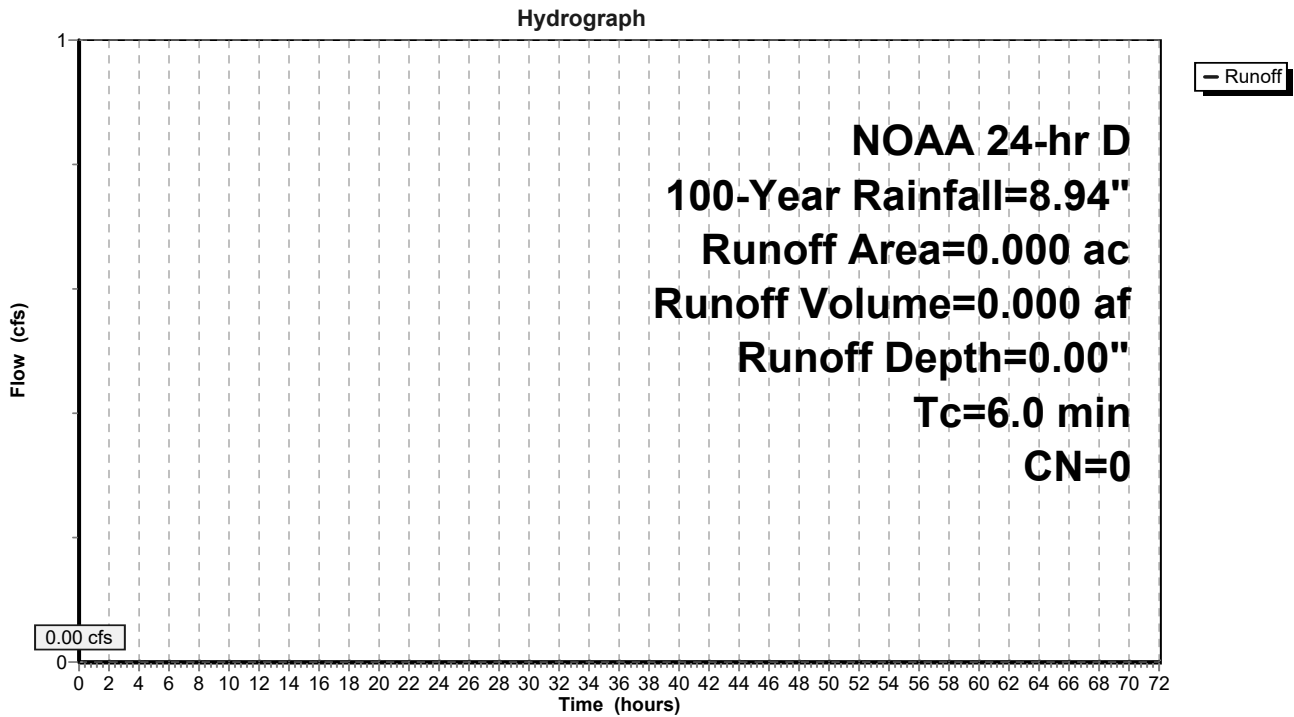
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment E1BI: EDA 1B - IMPERV.



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NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment E1BP: EDA 1B - PERV

Runoff = 1.31 cfs @ 12.11 hrs, Volume= 0.108 af, Depth= 6.51"

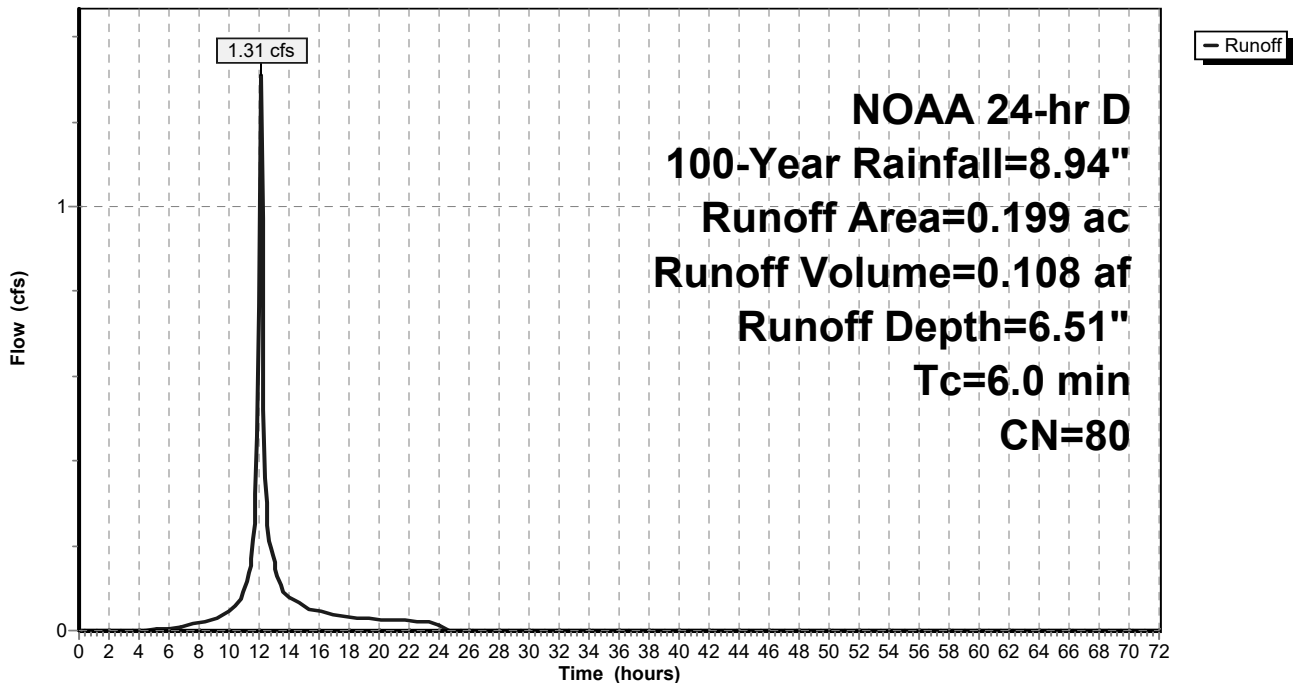
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.199	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.199	80	Weighted Average
0.199		100.00% Pervious Area

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

Subcatchment E1BP: EDA 1B - PERV

Hydrograph



EX-PR(balance)

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NOAA 24-hr D 100-Year Rainfall=8.94"

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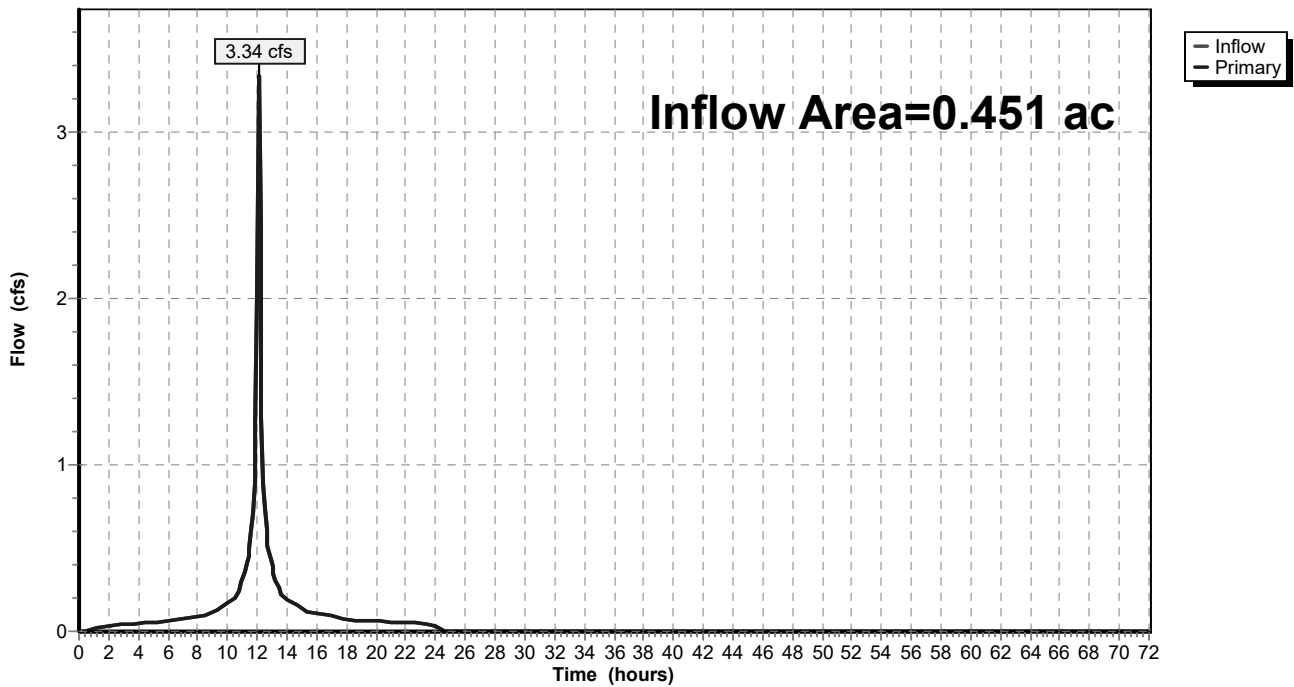
Summary for Link E2: EDA 2

Inflow Area = 0.451 ac, 85.81% Impervious, Inflow Depth = 8.23" for 100-Year event
Inflow = 3.34 cfs @ 12.11 hrs, Volume= 0.309 af
Primary = 3.34 cfs @ 12.11 hrs, Volume= 0.309 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E2: EDA 2

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment E2I: EDA 2- IMPERV.

Runoff = 2.98 cfs @ 12.11 hrs, Volume= 0.281 af, Depth= 8.70"

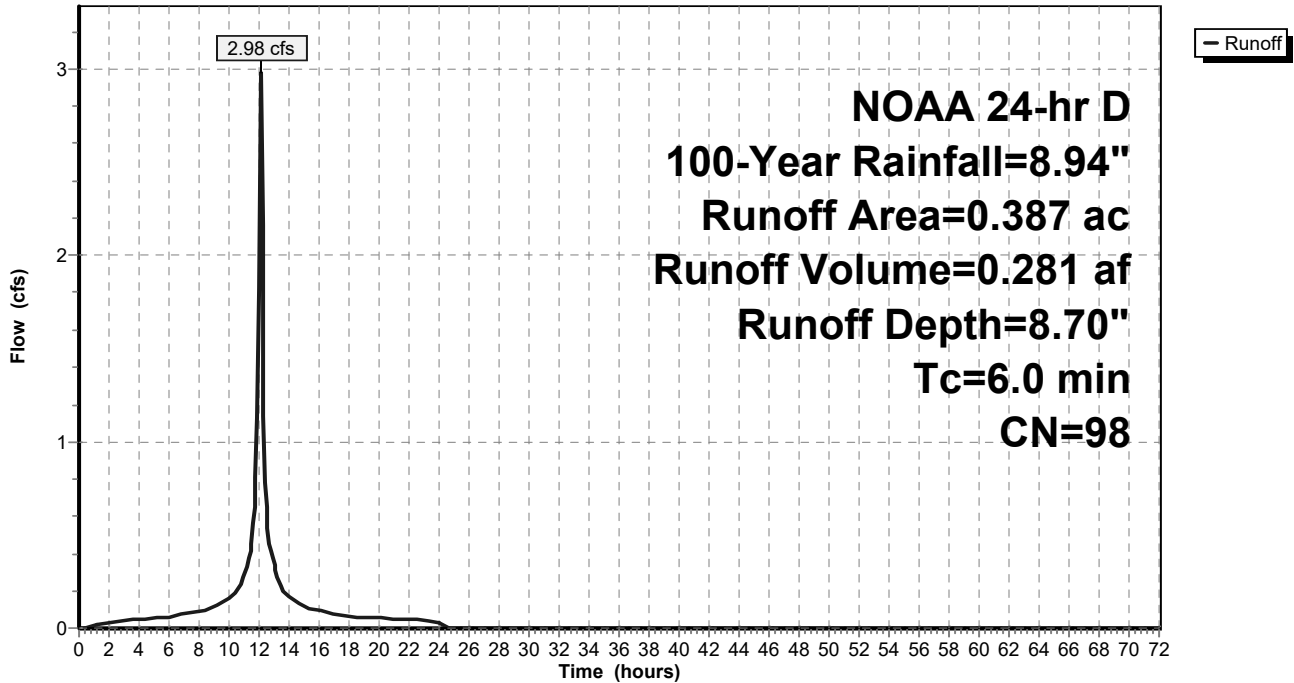
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.323	98	Unconnected pavement, HSG D
0.064	98	Unconnected pavement, HSG A
0.387	98	Weighted Average
0.387		100.00% Impervious Area
0.387		100.00% Unconnected

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

Subcatchment E2I: EDA 2- IMPERV.

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment E2P: EDA 2 - PERV

Runoff = 0.36 cfs @ 12.11 hrs, Volume= 0.029 af, Depth= 5.41"

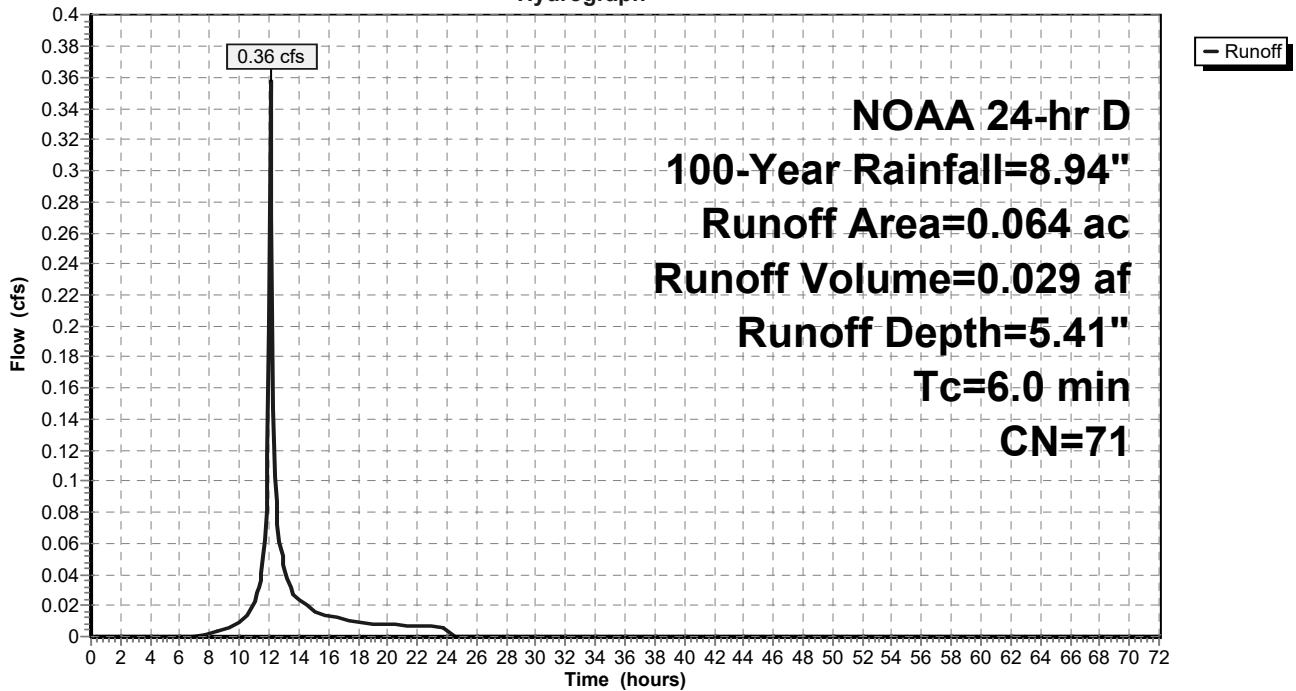
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.064	71	Weighted Average
0.064		100.00% Pervious Area

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

Subcatchment E2P: EDA 2 - PERV

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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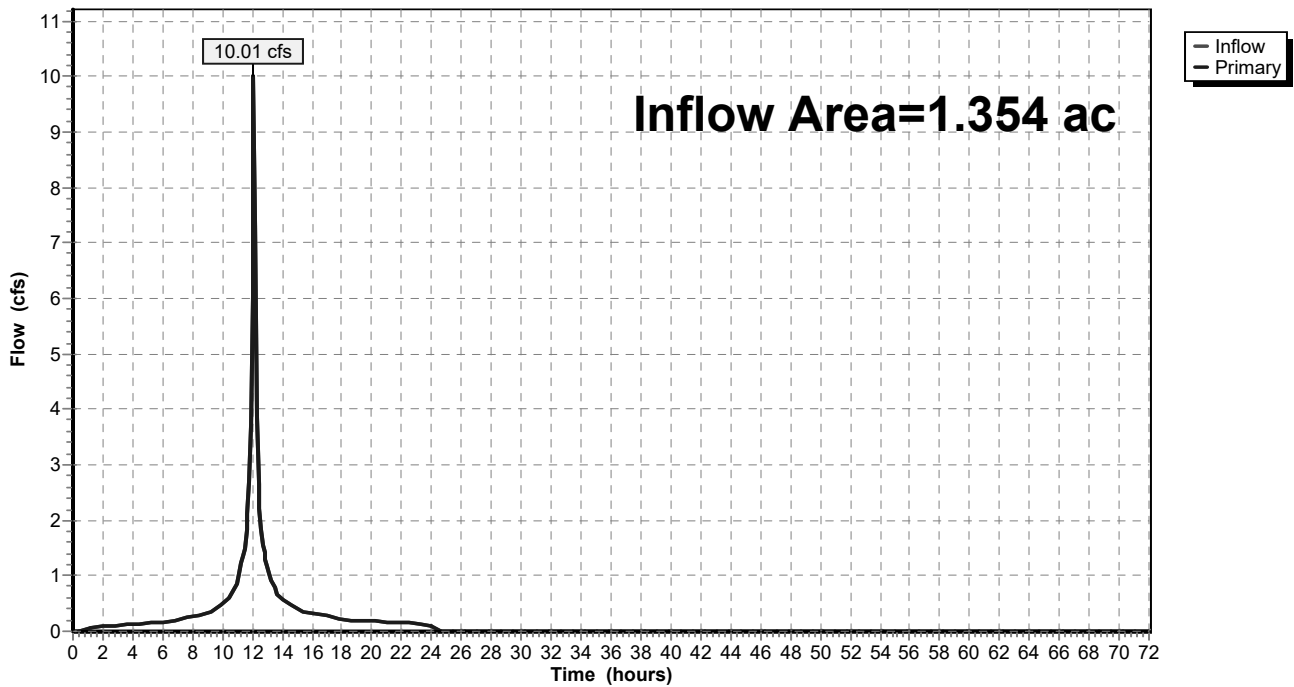
Summary for Link ES: EXISTING SITE

Inflow Area = 1.354 ac, 77.33% Impervious, Inflow Depth = 8.15" for 100-Year event
Inflow = 10.01 cfs @ 12.11 hrs, Volume= 0.920 af
Primary = 10.01 cfs @ 12.11 hrs, Volume= 0.920 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link ES: EXISTING SITE

Hydrograph



EX-PR(balance)

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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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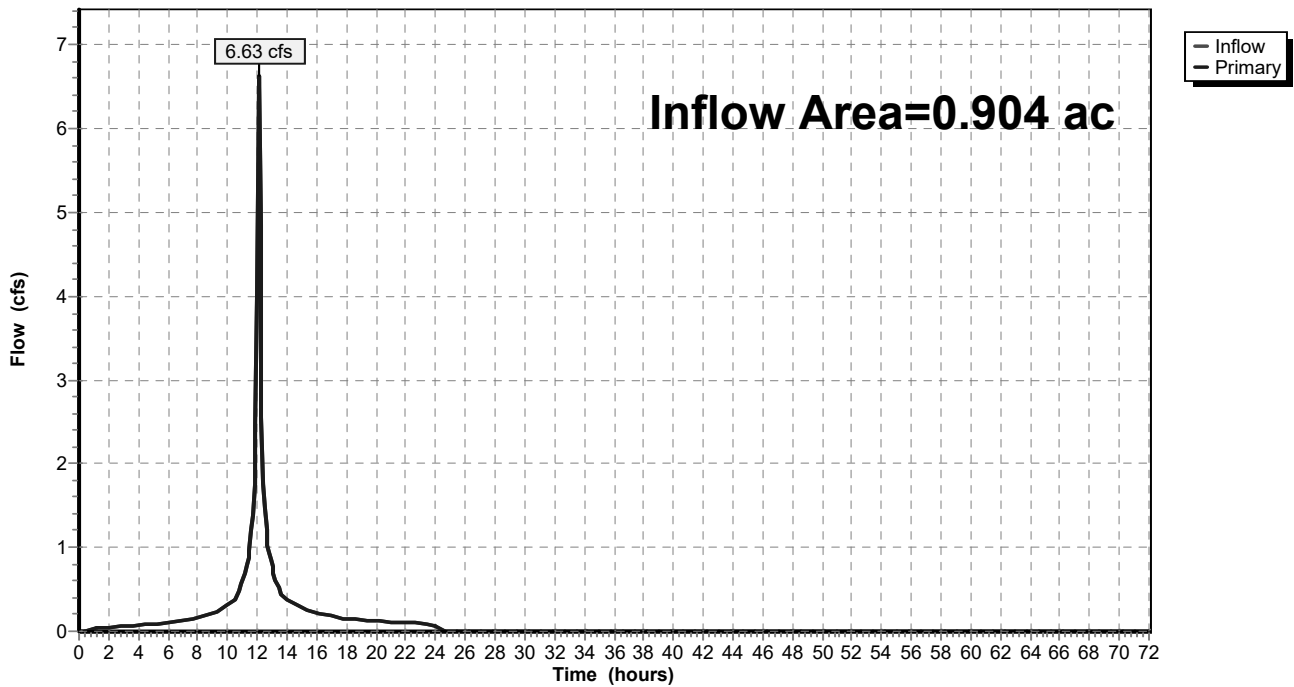
Summary for Link P1: PDA 1

Inflow Area = 0.904 ac, 67.92% Impervious, Inflow Depth = 8.00" for 100-Year event
Inflow = 6.63 cfs @ 12.11 hrs, Volume= 0.602 af
Primary = 6.63 cfs @ 12.11 hrs, Volume= 0.602 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1: PDA 1

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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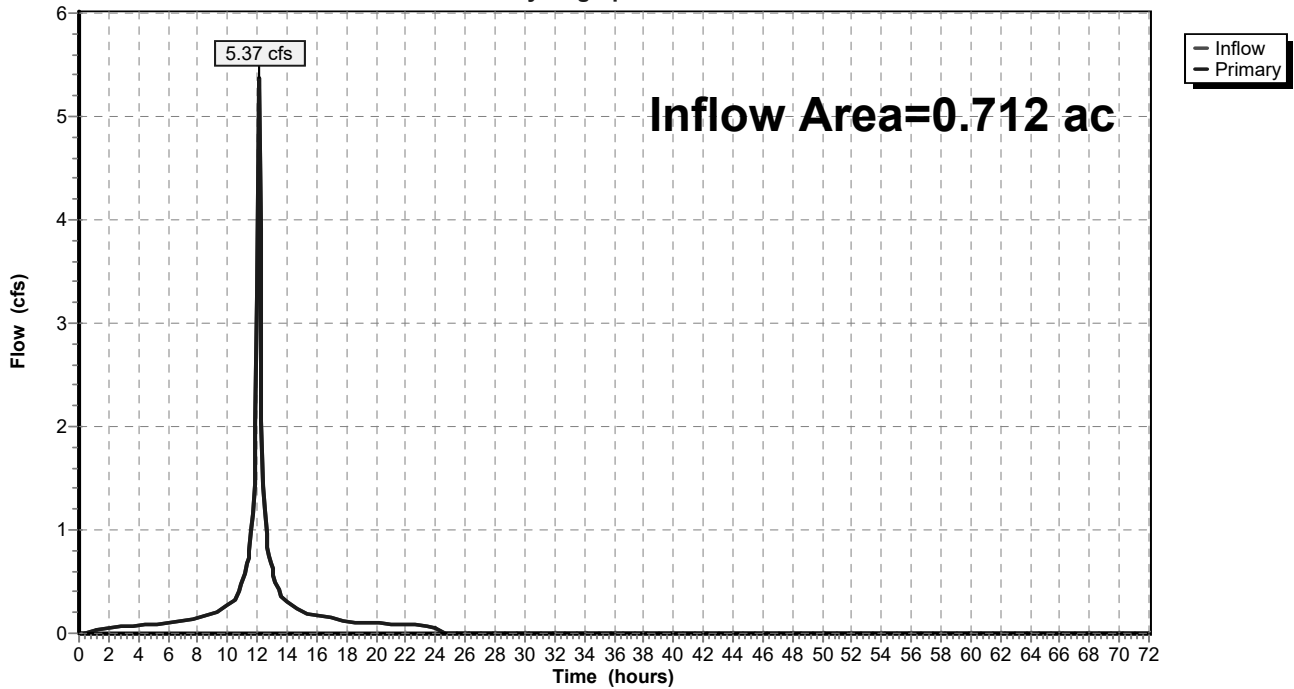
Summary for Link P1A: PDA 1A

Inflow Area = 0.712 ac, 86.24% Impervious, Inflow Depth = 8.40" for 100-Year event
Inflow = 5.37 cfs @ 12.11 hrs, Volume= 0.498 af
Primary = 5.37 cfs @ 12.11 hrs, Volume= 0.498 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1A: PDA 1A

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment P1AI: PDA 1A - IMPERV.

Runoff = 4.73 cfs @ 12.11 hrs, Volume= 0.445 af, Depth= 8.70"

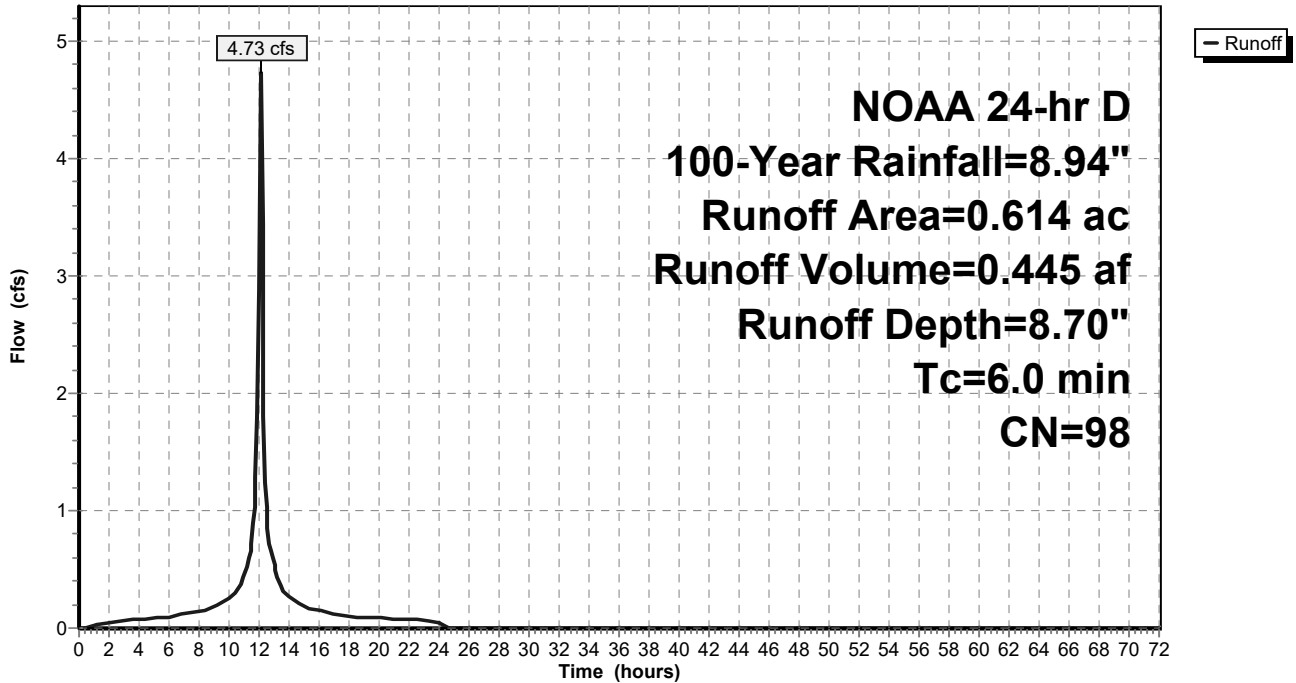
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.597	98	Unconnected pavement, HSG D
0.017	98	Unconnected pavement, HSG A
0.614	98	Weighted Average
0.614		100.00% Impervious Area
0.614		100.00% Unconnected

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

Subcatchment P1AI: PDA 1A - IMPERV.

Hydrograph



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Summary for Subcatchment P1AP: PDA 1A - PERV.

Runoff = 0.64 cfs @ 12.11 hrs, Volume= 0.053 af, Depth= 6.51"

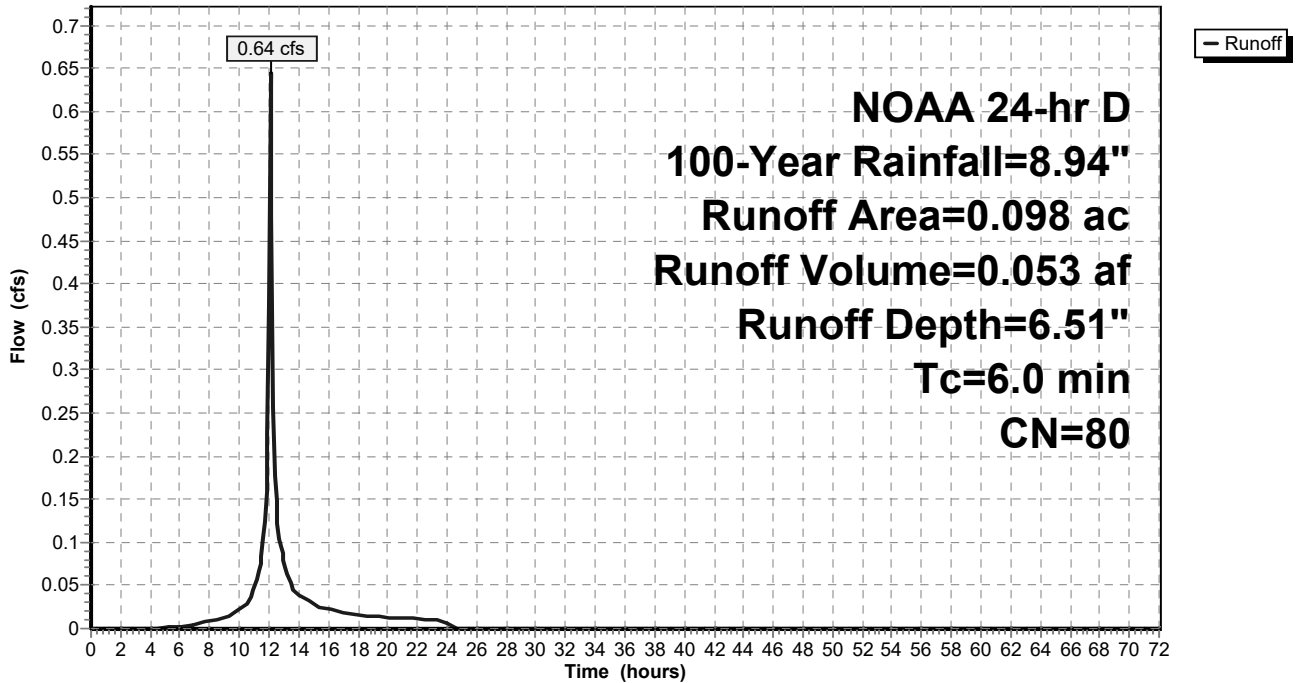
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.097	80	>75% Grass cover, Good, HSG D
0.001	39	>75% Grass cover, Good, HSG A
0.098	80	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P1AP: PDA 1A - PERV.

Hydrograph



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100 Year Storm Drainage Runoff
NOAA 24-hr D 100-Year Rainfall=8.94"

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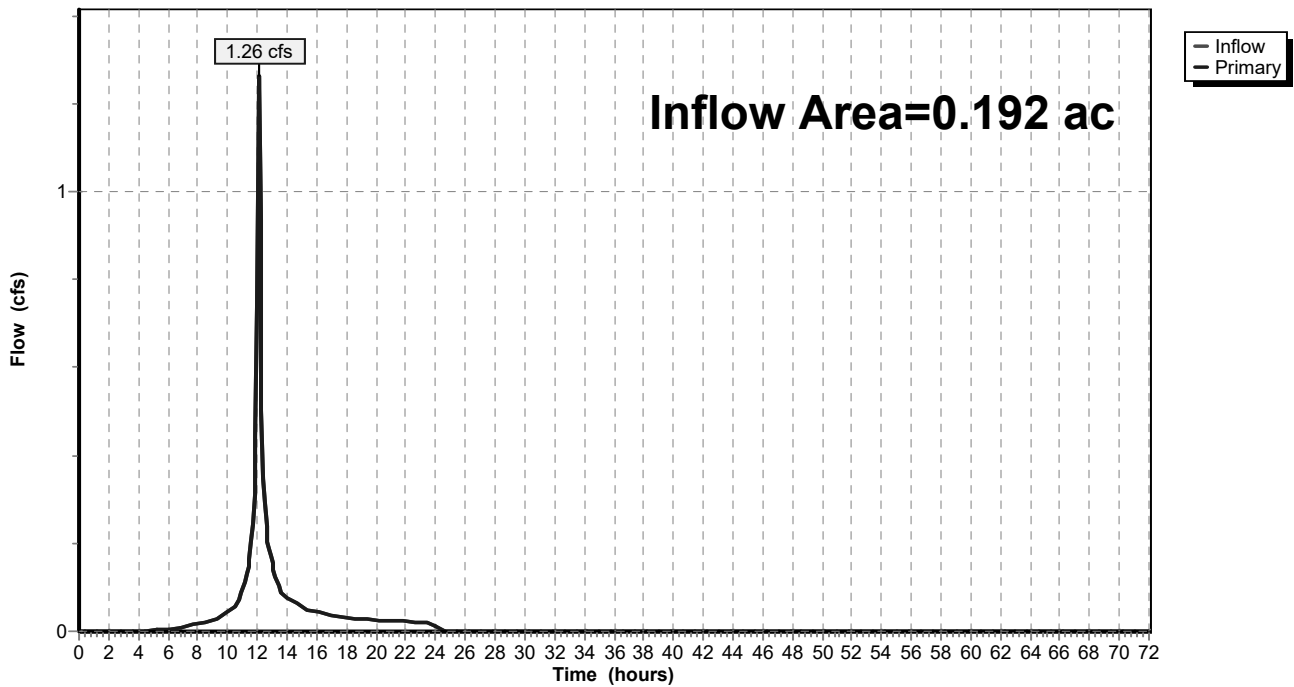
Summary for Link P1B: PDA 1B

Inflow Area = 0.192 ac, 0.00% Impervious, Inflow Depth = 6.51" for 100-Year event
Inflow = 1.26 cfs @ 12.11 hrs, Volume= 0.104 af
Primary = 1.26 cfs @ 12.11 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1B: PDA 1B

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment P1BI: PDA 1B - IMPERV.

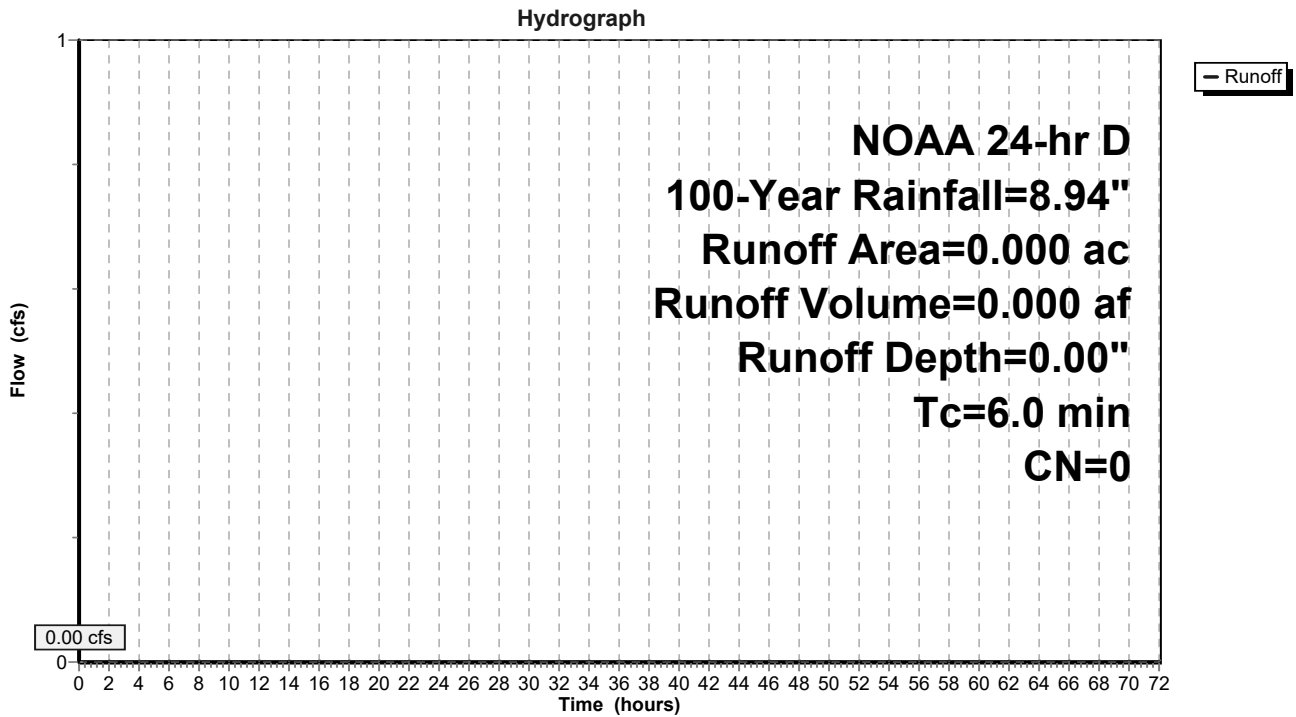
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment P1BI: PDA 1B - IMPERV.



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Summary for Subcatchment P1BP: PDA 1B - PERV.

Runoff = 1.26 cfs @ 12.11 hrs, Volume= 0.104 af, Depth= 6.51"

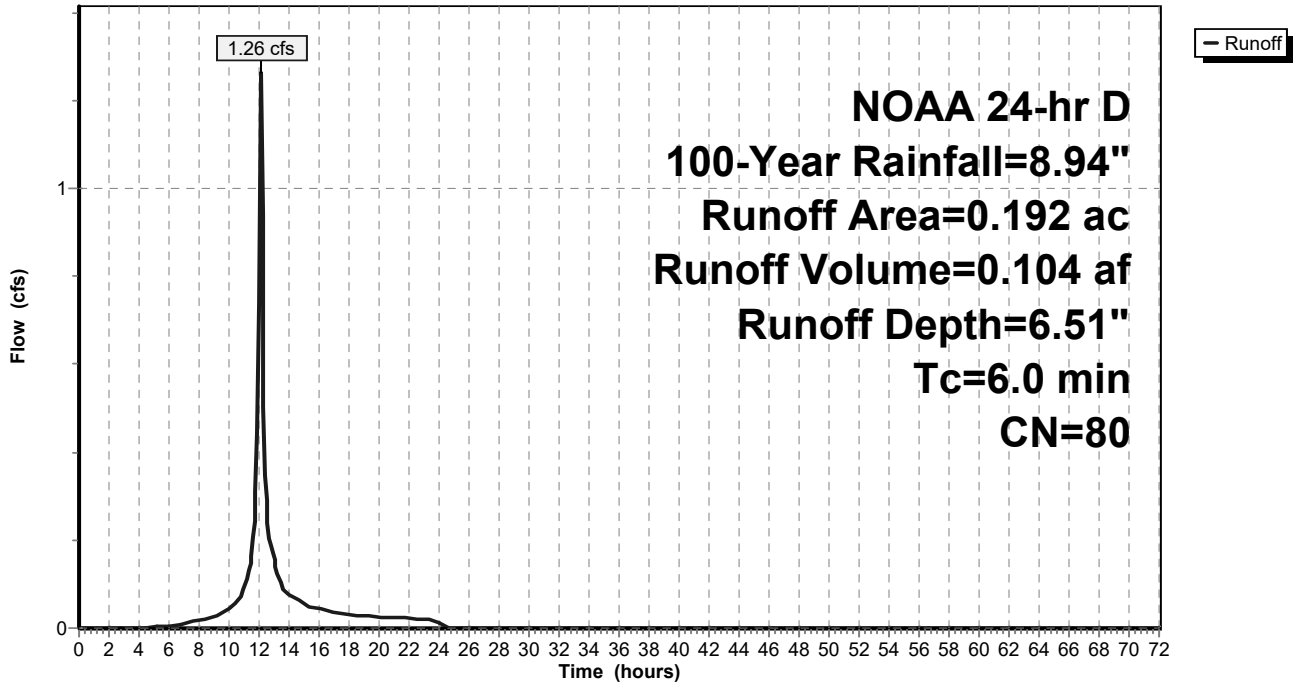
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.176	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.016	80	>75% Grass cover, Good, HSG D
0.192	80	Weighted Average
0.192		100.00% Pervious Area

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

Subcatchment P1BP: PDA 1B - PERV.

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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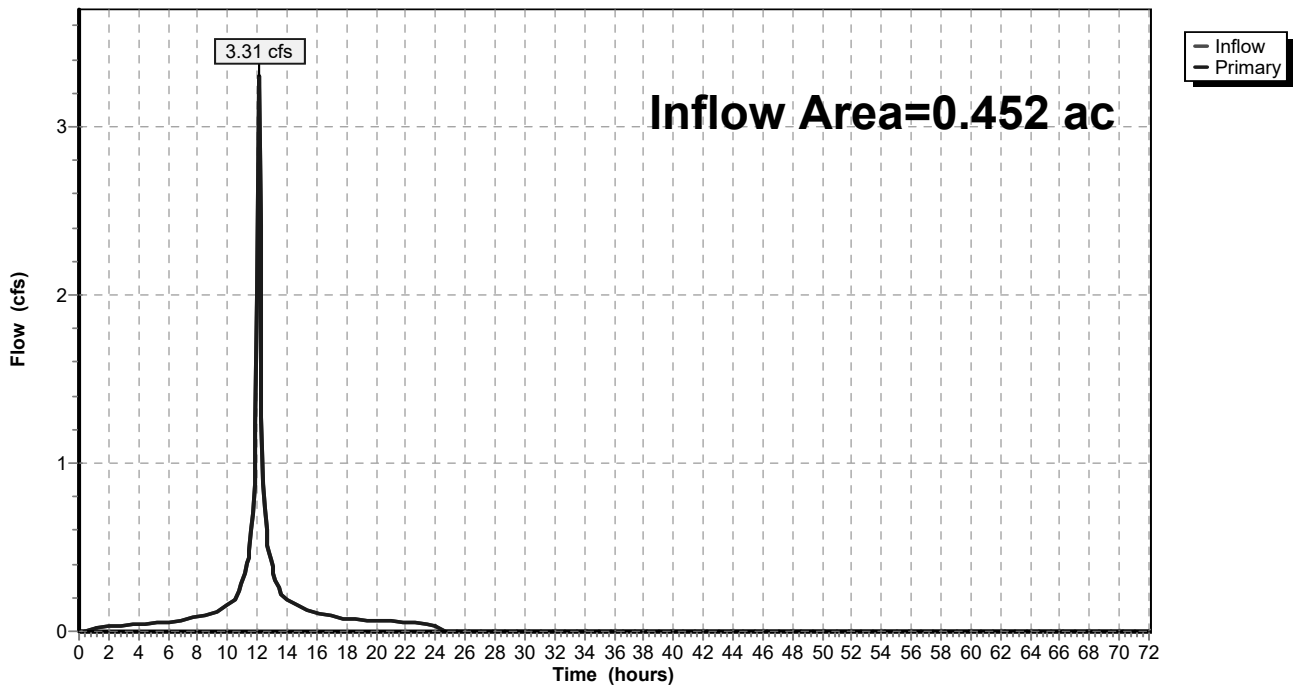
Summary for Link P2: PDA 2

Inflow Area = 0.452 ac, 78.32% Impervious, Inflow Depth = 8.07" for 100-Year event
Inflow = 3.31 cfs @ 12.11 hrs, Volume= 0.304 af
Primary = 3.31 cfs @ 12.11 hrs, Volume= 0.304 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P2: PDA 2

Hydrograph



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100 Year Storm Drainage Runoff

NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment P2I: PDA 2 - IMPERV.

Runoff = 2.73 cfs @ 12.11 hrs, Volume= 0.257 af, Depth= 8.70"

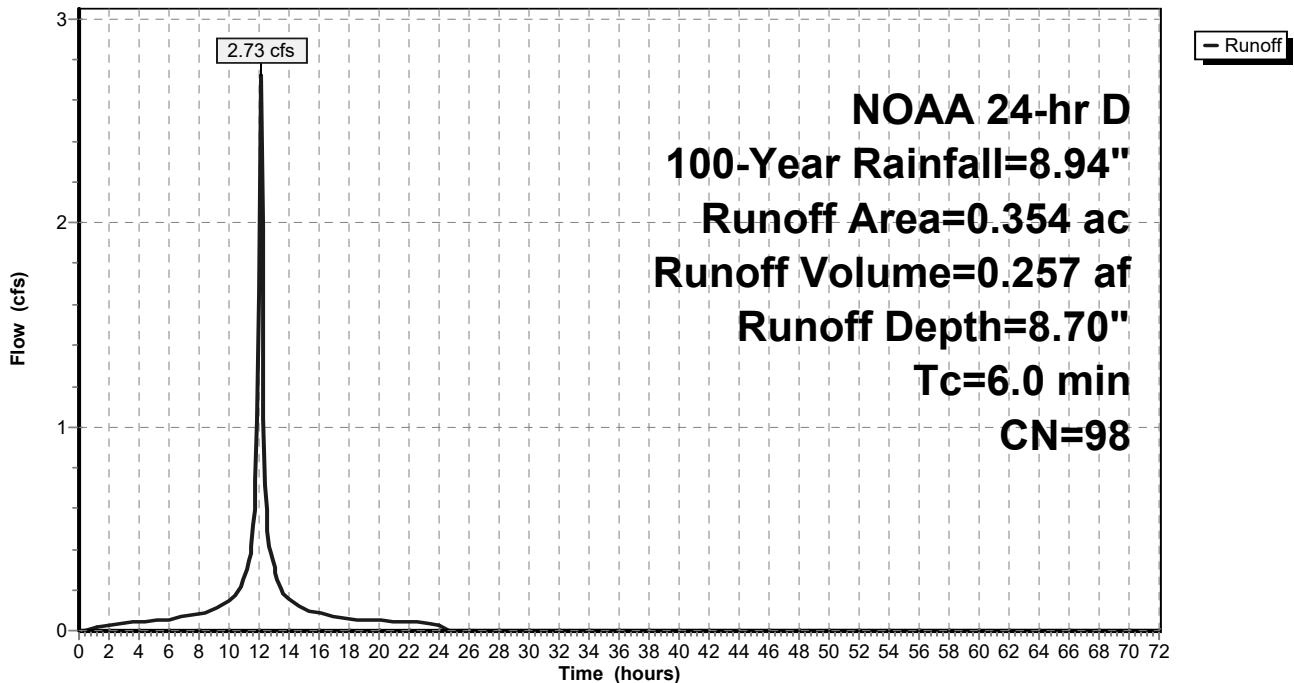
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.291	98	Unconnected pavement, HSG D
0.045	98	Unconnected pavement, HSG A
0.018	98	Unconnected pavement, HSG D
0.354	98	Weighted Average
0.354		100.00% Impervious Area
0.354		100.00% Unconnected

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

Subcatchment P2I: PDA 2 - IMPERV.

Hydrograph



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NOAA 24-hr D 100-Year Rainfall=8.94"

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Summary for Subcatchment P2P: PDA 2 - PERV.

Runoff = 0.58 cfs @ 12.11 hrs, Volume= 0.047 af, Depth= 5.77"

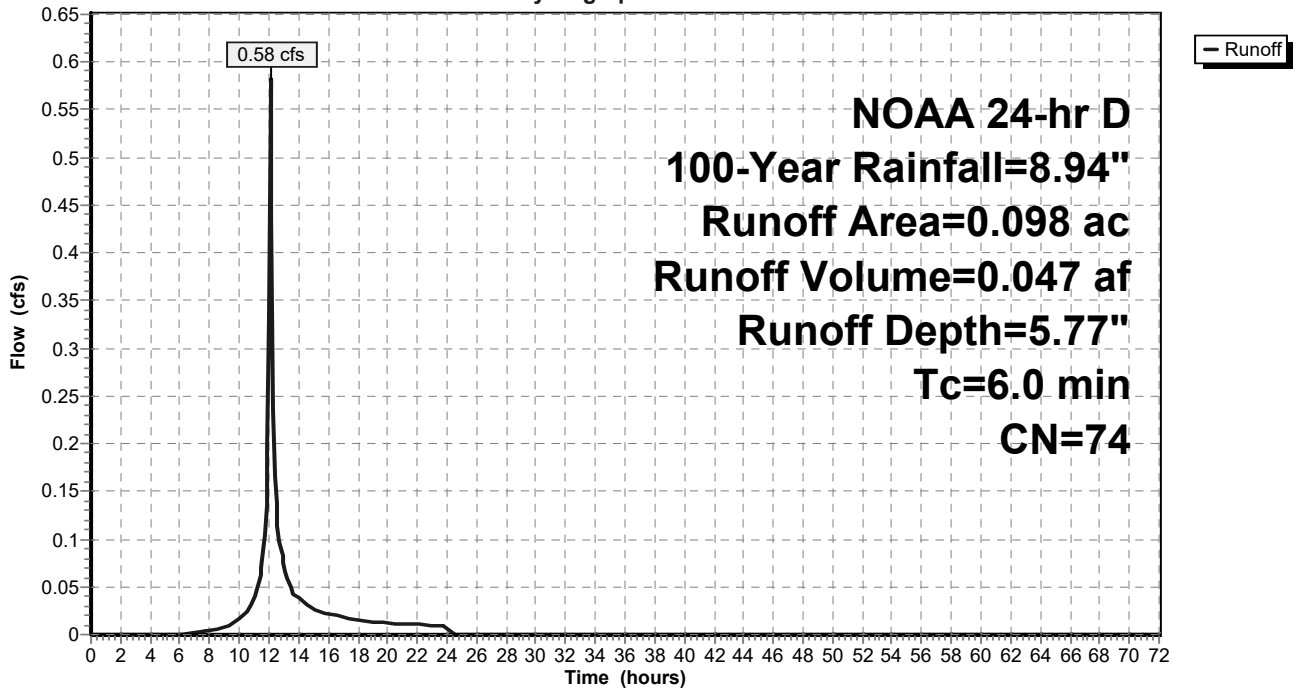
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-Year Rainfall=8.94"

Area (ac)	CN	Description
0.084	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.098	74	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P2P: PDA 2 - PERV.

Hydrograph



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NOAA 24-hr D 100-Year Rainfall=8.94"

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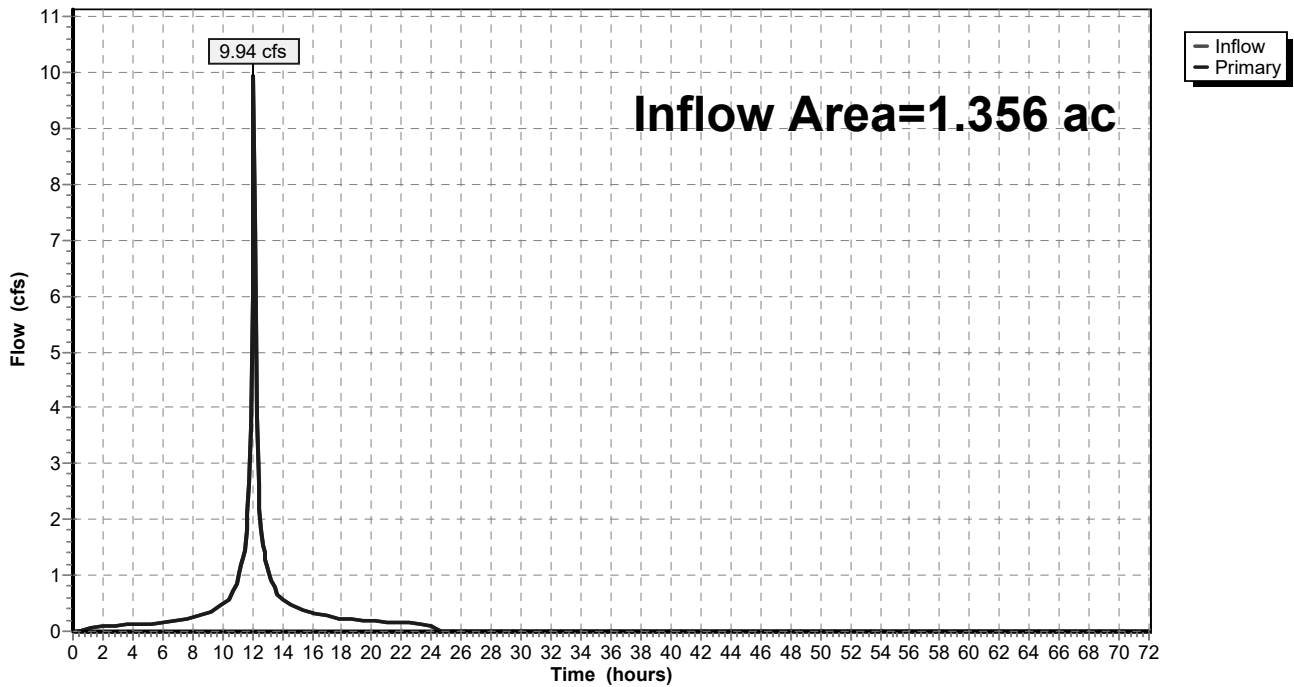
Summary for Link PS: PROPOSED SITE

Inflow Area = 1.356 ac, 71.39% Impervious, Inflow Depth = 8.02" for 100-Year event
Inflow = 9.94 cfs @ 12.11 hrs, Volume= 0.906 af
Primary = 9.94 cfs @ 12.11 hrs, Volume= 0.906 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link PS: PROPOSED SITE

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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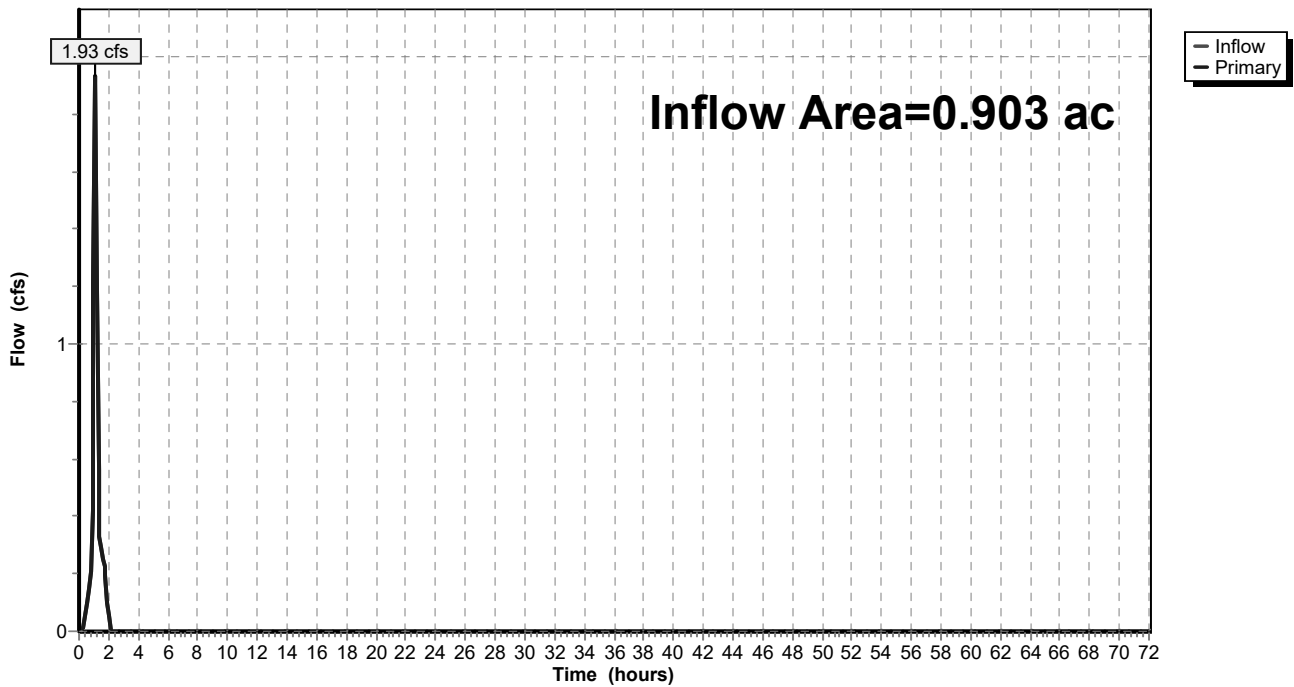
Summary for Link E1: EDA 1

Inflow Area = 0.903 ac, 73.09% Impervious, Inflow Depth = 0.80" for WQ - Storm event
Inflow = 1.93 cfs @ 1.10 hrs, Volume= 0.060 af
Primary = 1.93 cfs @ 1.10 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1: EDA 1

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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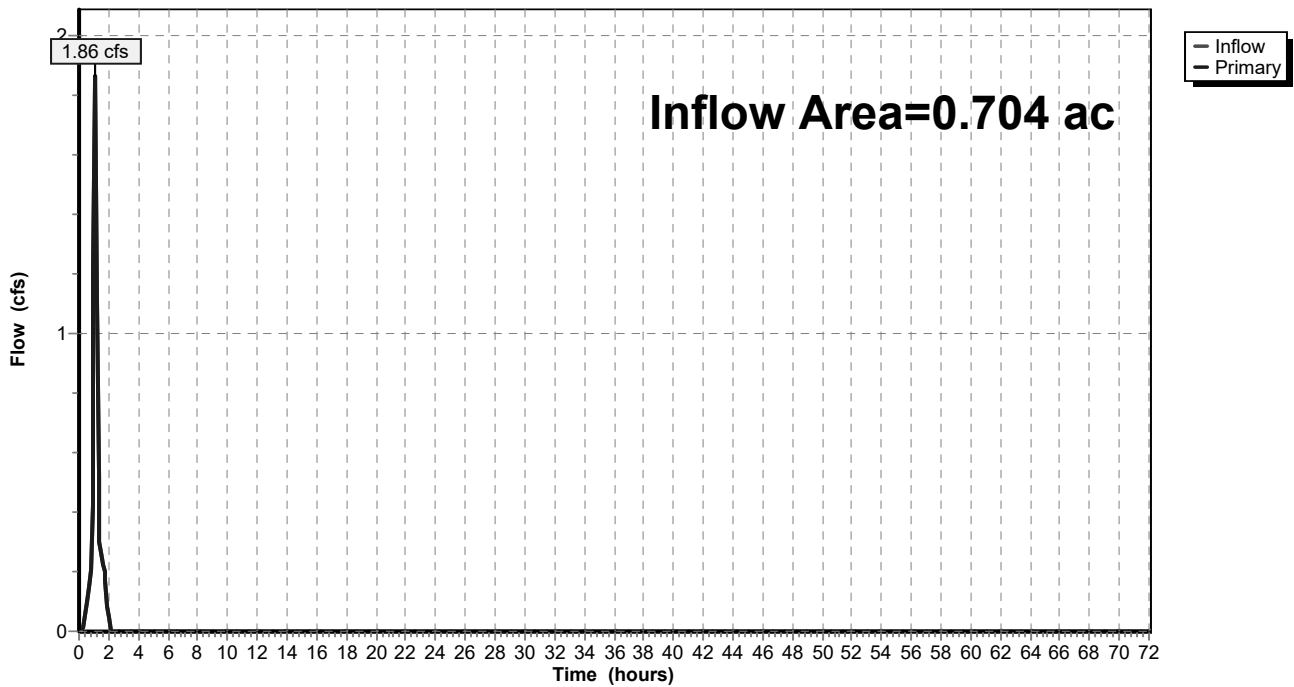
Summary for Link E1A: EDA 1A

Inflow Area = 0.704 ac, 93.75% Impervious, Inflow Depth = 0.98" for WQ - Storm event
Inflow = 1.86 cfs @ 1.10 hrs, Volume= 0.058 af
Primary = 1.86 cfs @ 1.10 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1A: EDA 1A

Hydrograph



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NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment E1A1: EDA 1A - IMPERV.

Runoff = 1.85 cfs @ 1.10 hrs, Volume= 0.057 af, Depth= 1.03"

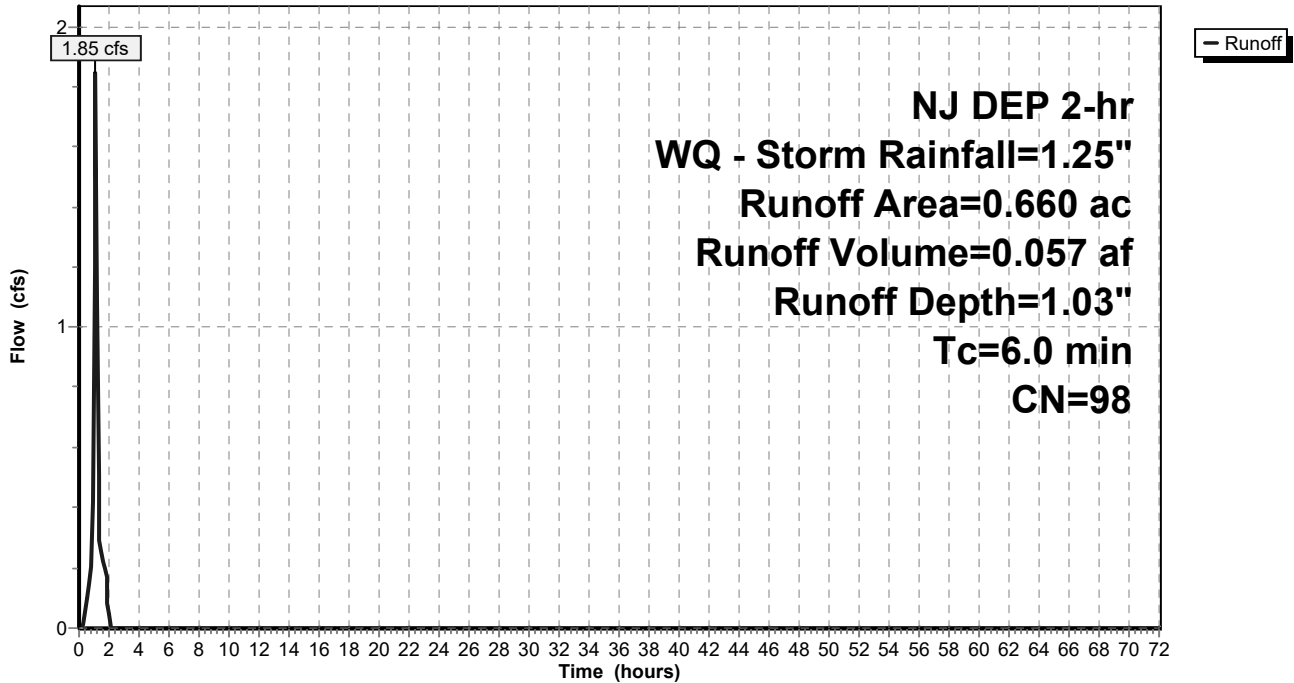
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.660	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.660	98	Weighted Average
0.660		100.00% Impervious Area
0.660		100.00% Unconnected

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

Subcatchment E1A1: EDA 1A - IMPERV.

Hydrograph



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NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment E1AP: EDA 1A - PERV

Runoff = 0.02 cfs @ 1.17 hrs, Volume= 0.001 af, Depth= 0.17"

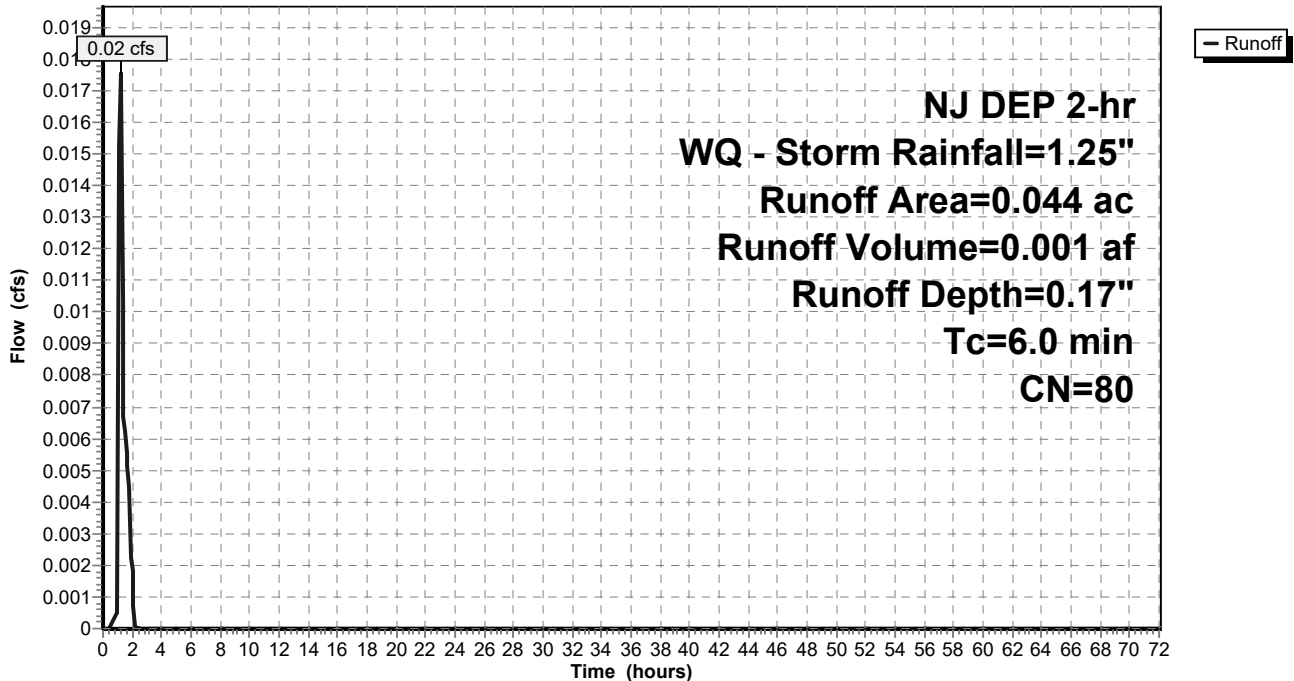
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.044	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.044	80	Weighted Average
0.044		100.00% Pervious Area

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

Subcatchment E1AP: EDA 1A - PERV

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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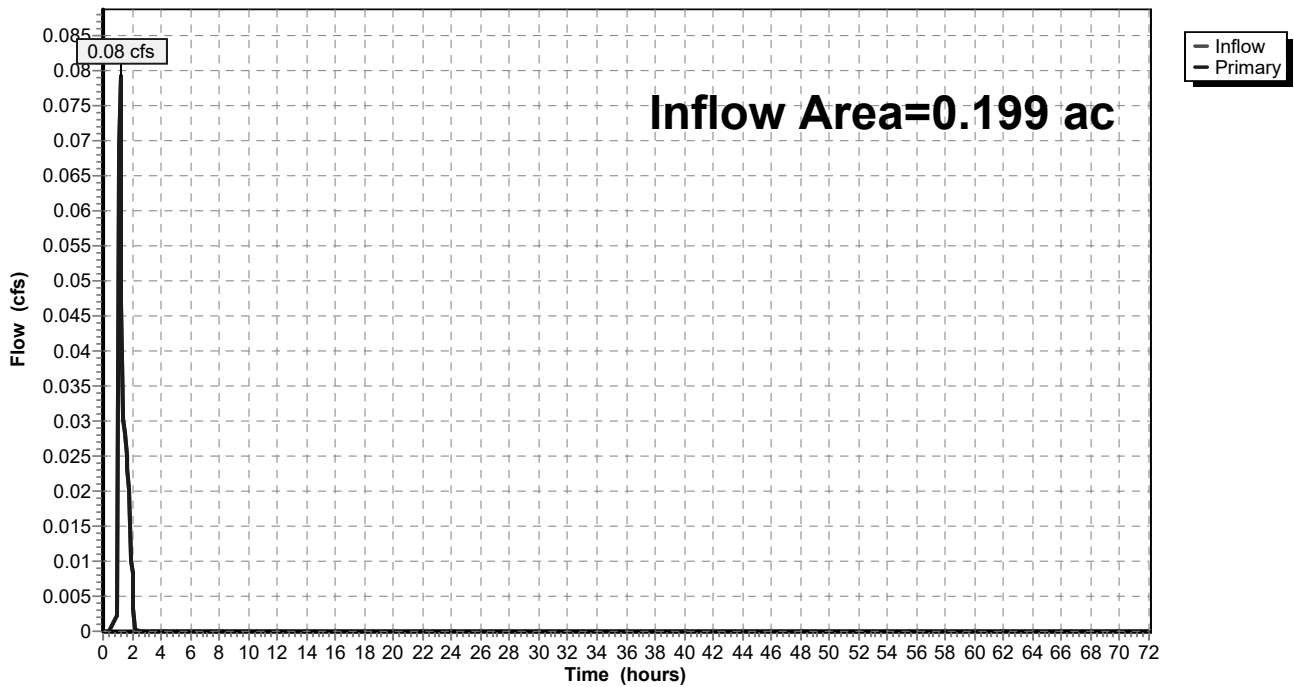
Summary for Link E1B: EDA 1B

Inflow Area = 0.199 ac, 0.00% Impervious, Inflow Depth = 0.17" for WQ - Storm event
Inflow = 0.08 cfs @ 1.17 hrs, Volume= 0.003 af
Primary = 0.08 cfs @ 1.17 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E1B: EDA 1B

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment E1BI: EDA 1B - IMPERV.

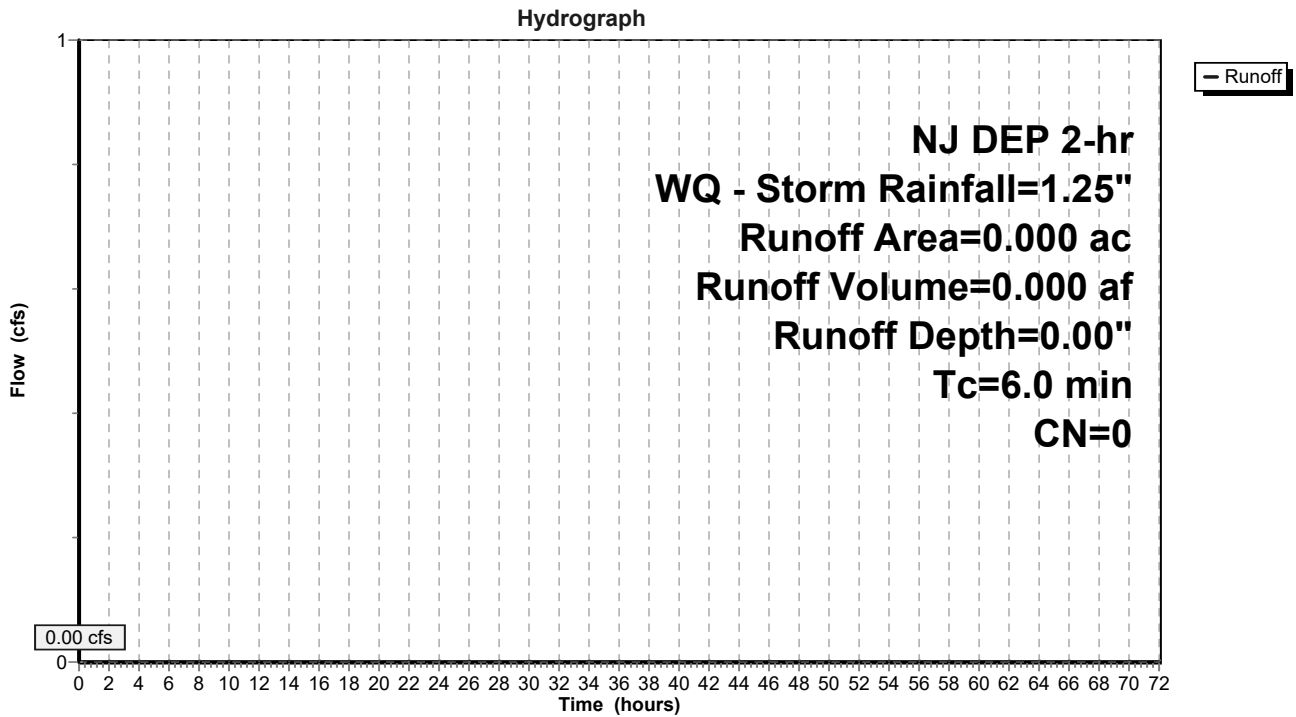
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment E1BI: EDA 1B - IMPERV.



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NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment E1BP: EDA 1B - PERV

Runoff = 0.08 cfs @ 1.17 hrs, Volume= 0.003 af, Depth= 0.17"

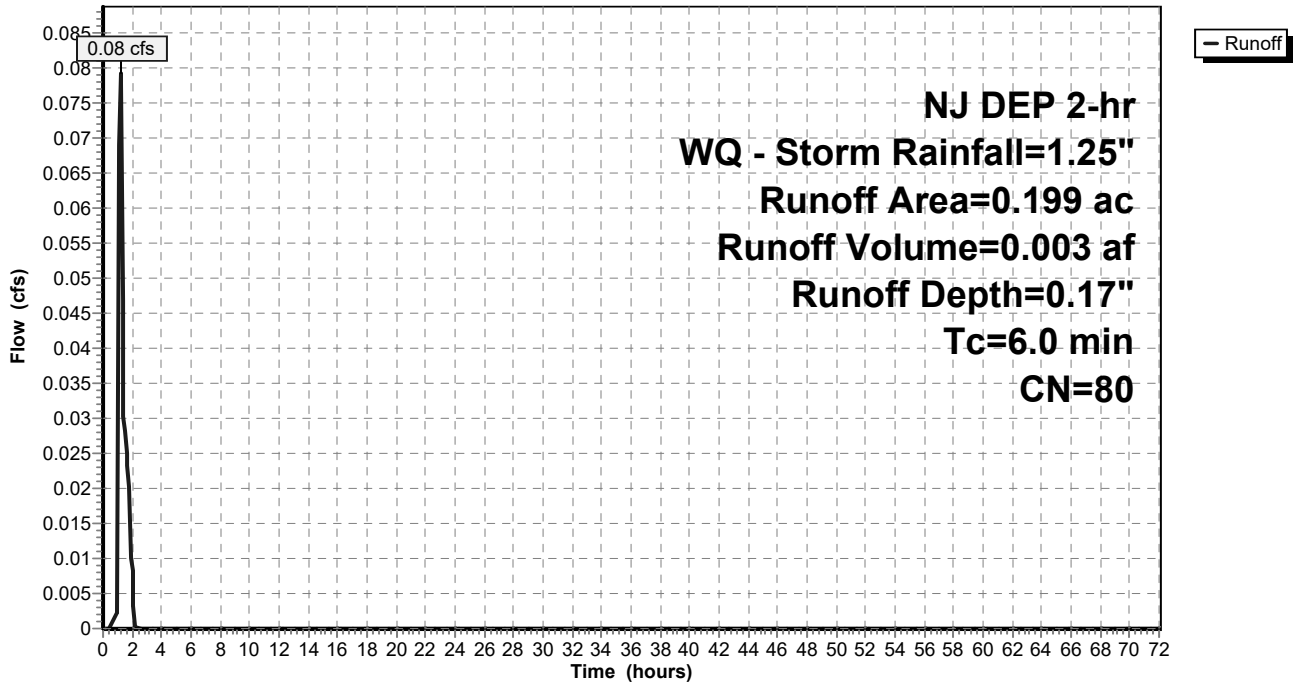
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.199	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.199	80	Weighted Average
0.199		100.00% Pervious Area

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

Subcatchment E1BP: EDA 1B - PERV

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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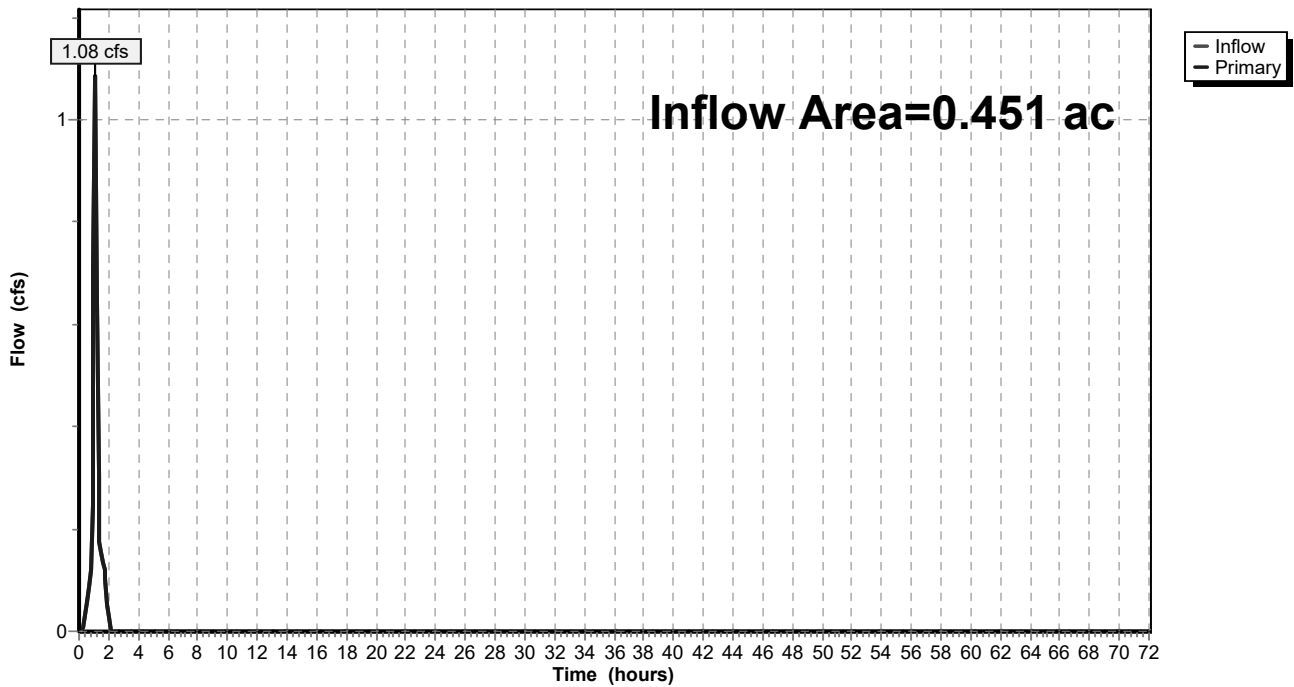
Summary for Link E2: EDA 2

Inflow Area = 0.451 ac, 85.81% Impervious, Inflow Depth = 0.89" for WQ - Storm event
Inflow = 1.08 cfs @ 1.10 hrs, Volume= 0.034 af
Primary = 1.08 cfs @ 1.10 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link E2: EDA 2

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment E2I: EDA 2- IMPERV.

Runoff = 1.08 cfs @ 1.10 hrs, Volume= 0.033 af, Depth= 1.03"

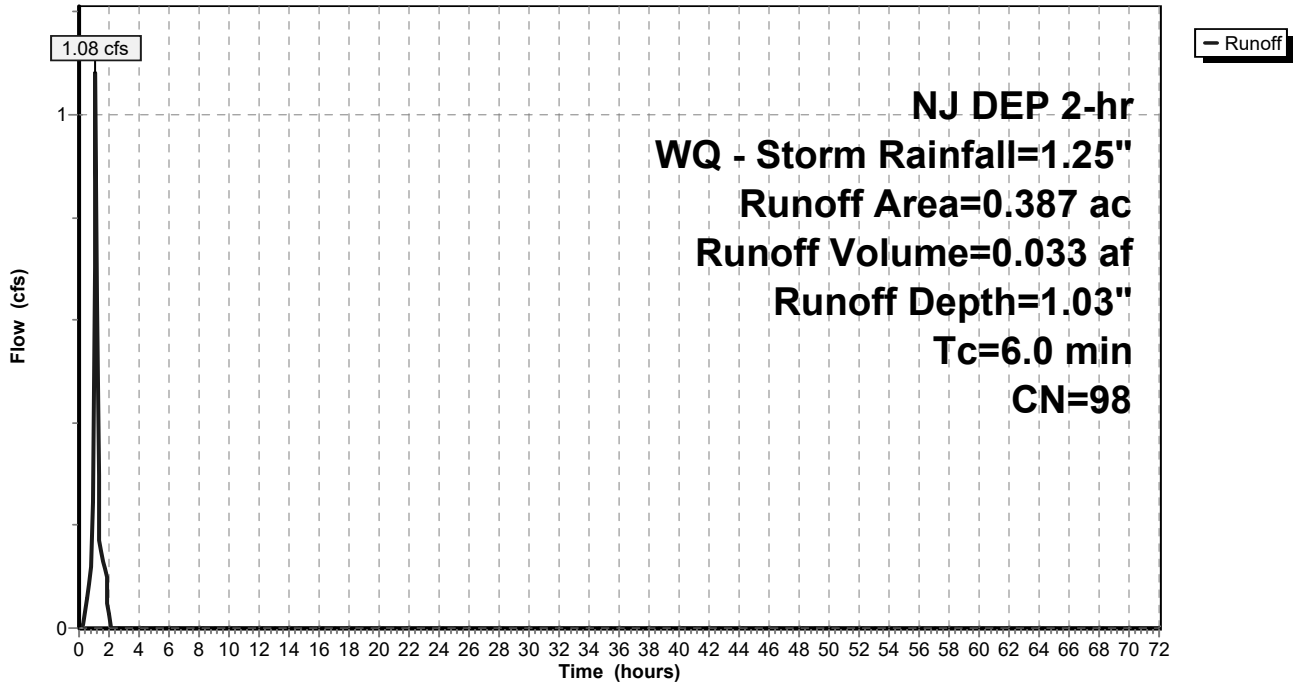
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.323	98	Unconnected pavement, HSG D
0.064	98	Unconnected pavement, HSG A
0.387	98	Weighted Average
0.387		100.00% Impervious Area
0.387		100.00% Unconnected

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

Subcatchment E2I: EDA 2- IMPERV.

Hydrograph



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NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment E2P: EDA 2 - PERV

Runoff = 0.00 cfs @ 1.29 hrs, Volume= 0.000 af, Depth= 0.04"

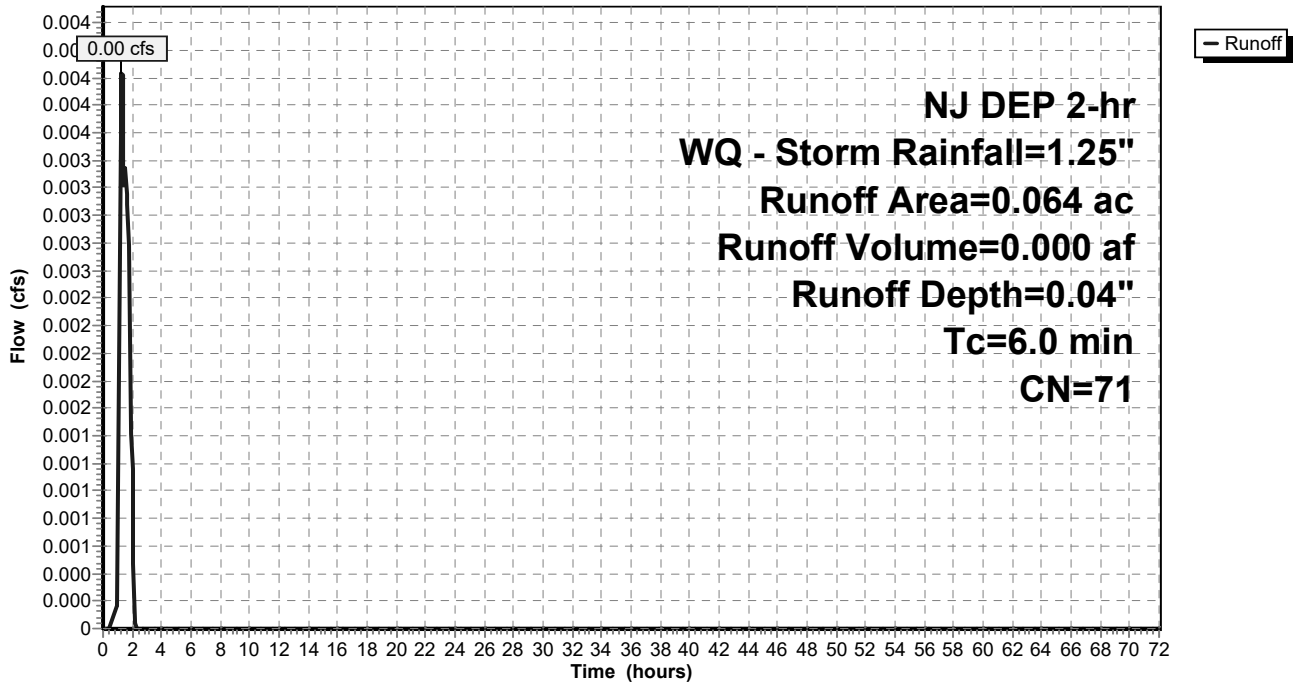
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.050	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.064	71	Weighted Average
0.064		100.00% Pervious Area

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

Subcatchment E2P: EDA 2 - PERV

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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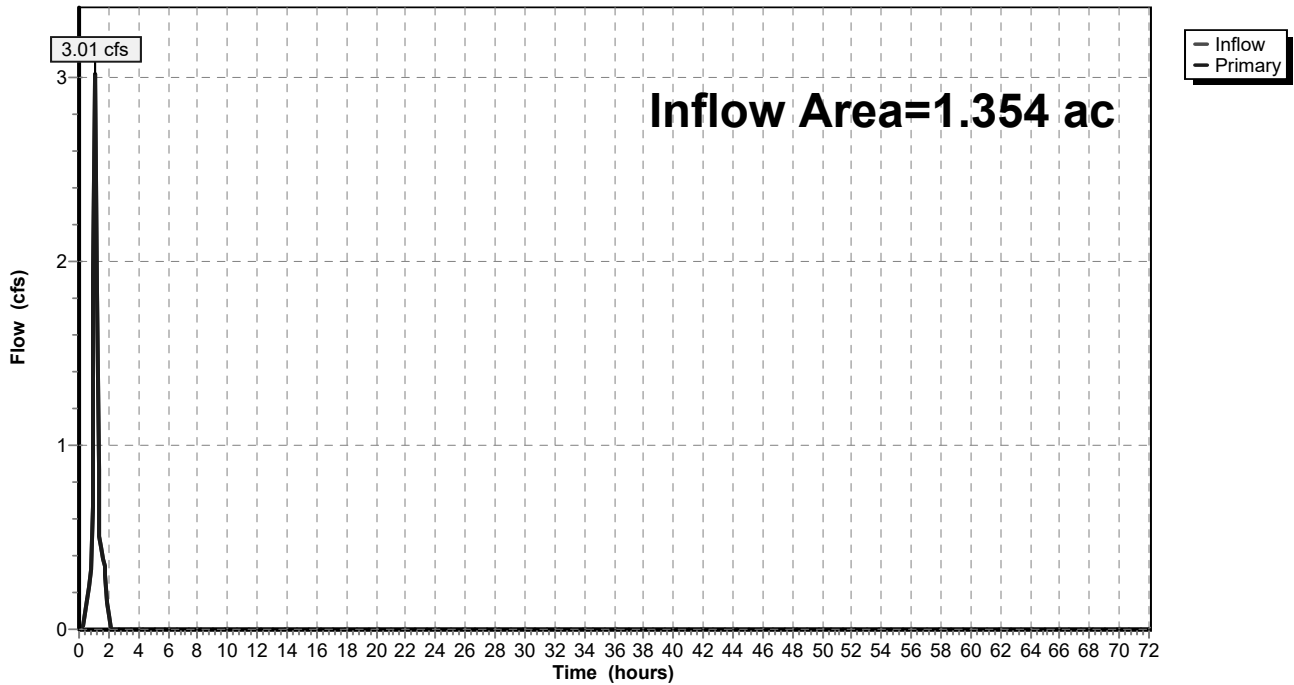
Summary for Link ES: EXISTING SITE

Inflow Area = 1.354 ac, 77.33% Impervious, Inflow Depth = 0.83" for WQ - Storm event
Inflow = 3.01 cfs @ 1.10 hrs, Volume= 0.094 af
Primary = 3.01 cfs @ 1.10 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link ES: EXISTING SITE

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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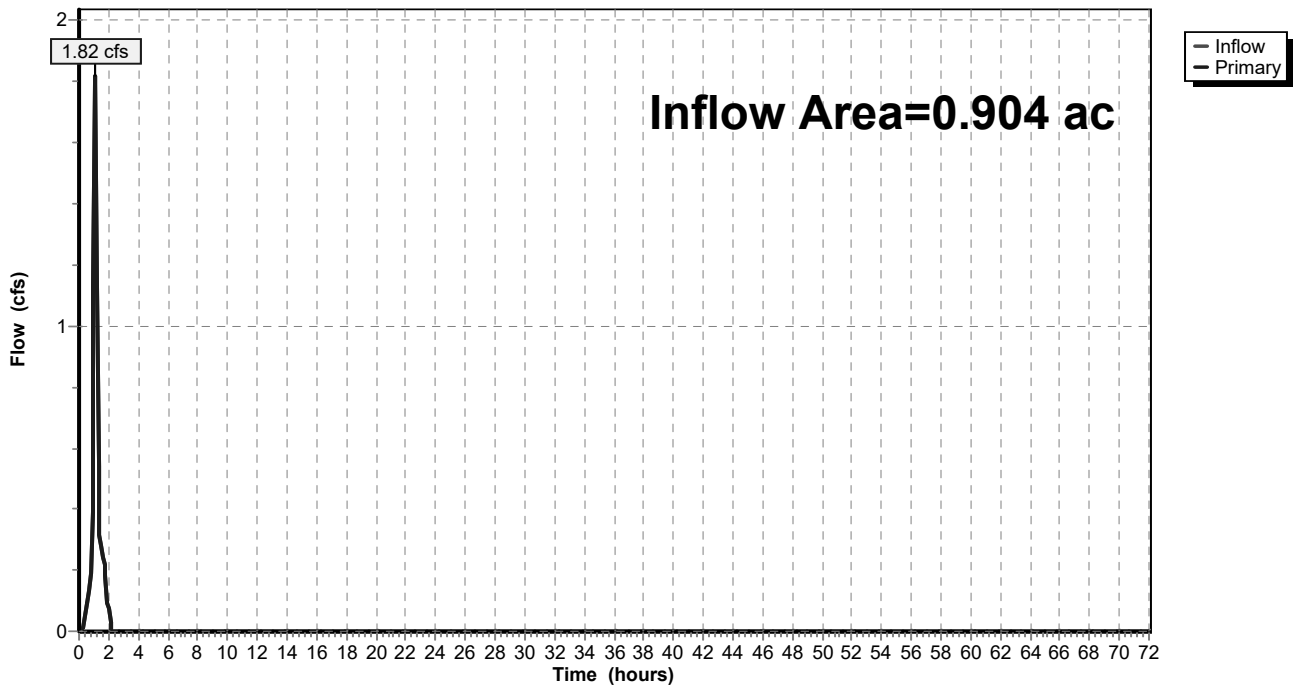
Summary for Link P1: PDA 1

Inflow Area = 0.904 ac, 67.92% Impervious, Inflow Depth = 0.76" for WQ - Storm event
Inflow = 1.82 cfs @ 1.10 hrs, Volume= 0.057 af
Primary = 1.82 cfs @ 1.10 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1: PDA 1

Hydrograph



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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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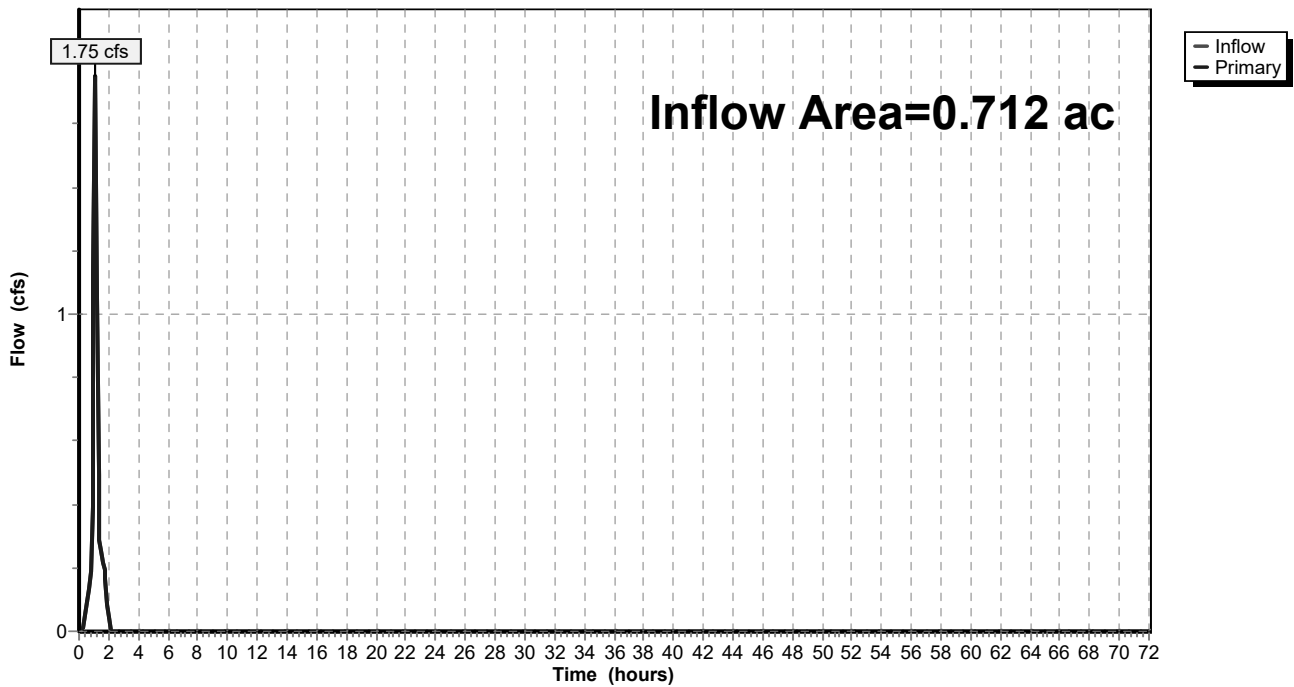
Summary for Link P1A: PDA 1A

Inflow Area = 0.712 ac, 86.24% Impervious, Inflow Depth = 0.92" for WQ - Storm event
Inflow = 1.75 cfs @ 1.10 hrs, Volume= 0.054 af
Primary = 1.75 cfs @ 1.10 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1A: PDA 1A

Hydrograph



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment P1AI: PDA 1A - IMPERV.

Runoff = 1.72 cfs @ 1.10 hrs, Volume= 0.053 af, Depth= 1.03"

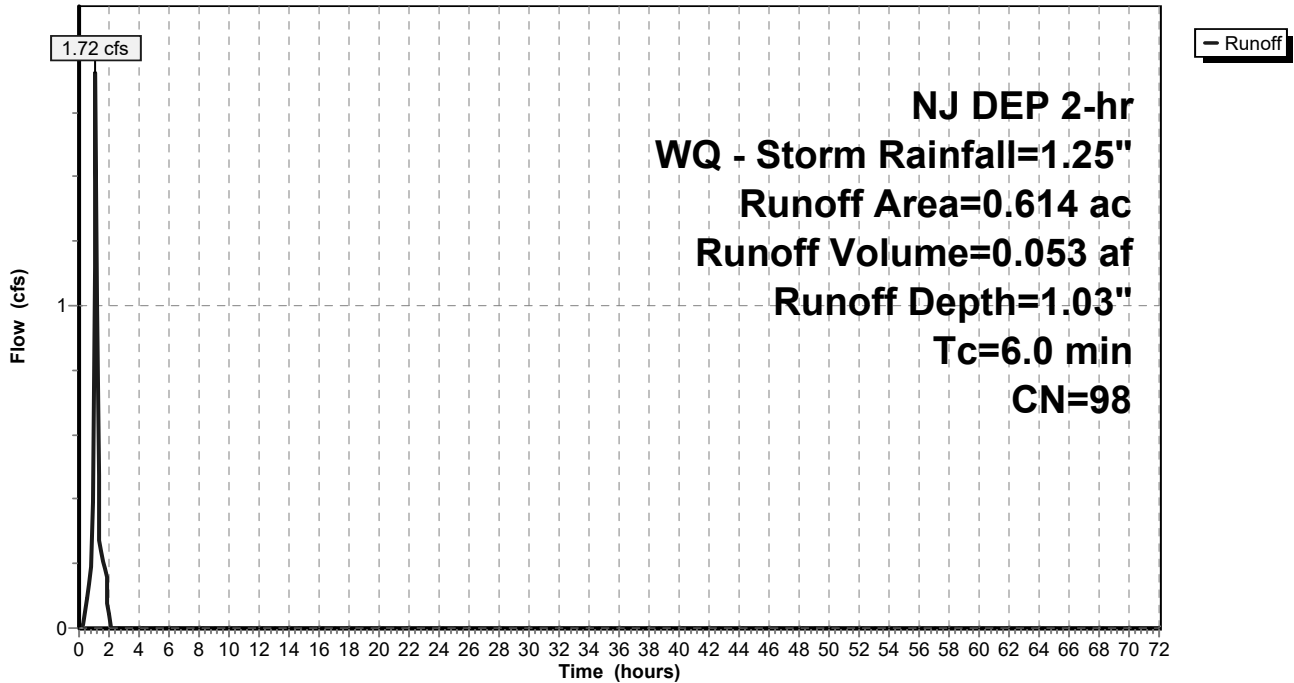
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.597	98	Unconnected pavement, HSG D
0.017	98	Unconnected pavement, HSG A
0.614	98	Weighted Average
0.614		100.00% Impervious Area
0.614		100.00% Unconnected

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

Subcatchment P1AI: PDA 1A - IMPERV.

Hydrograph



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment P1AP: PDA 1A - PERV.

Runoff = 0.04 cfs @ 1.17 hrs, Volume= 0.001 af, Depth= 0.17"

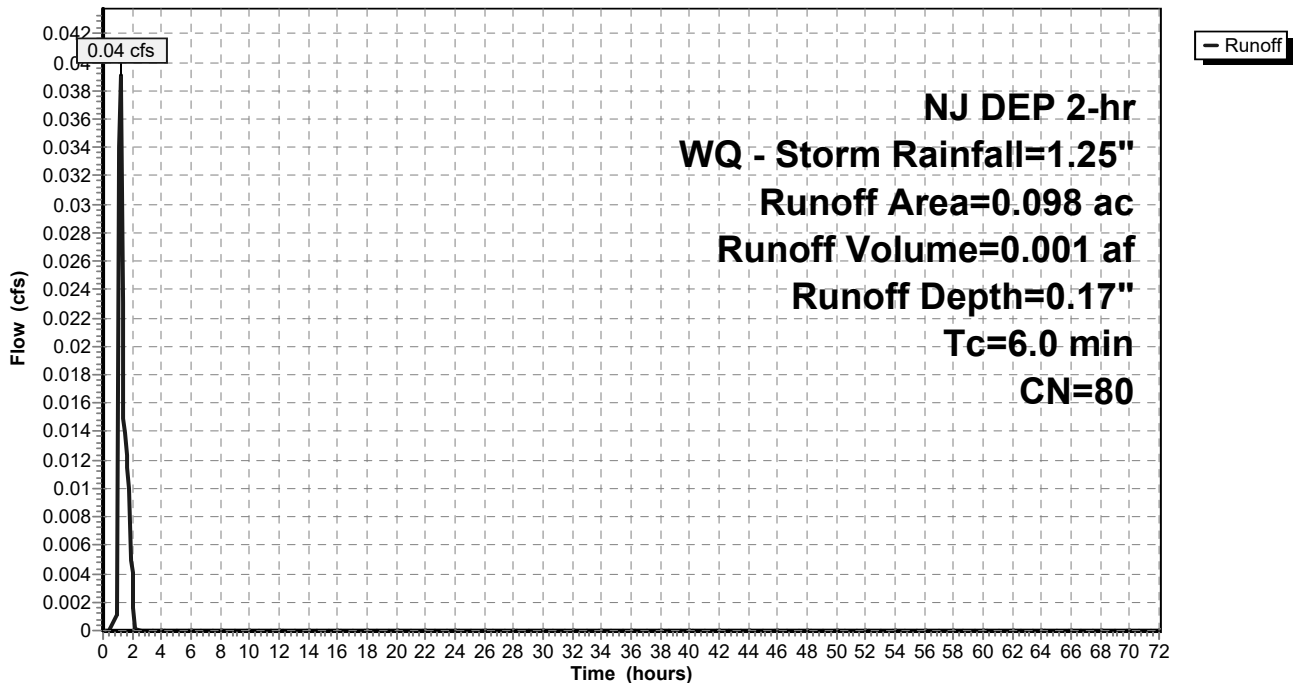
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.097	80	>75% Grass cover, Good, HSG D
0.001	39	>75% Grass cover, Good, HSG A
0.098	80	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P1AP: PDA 1A - PERV.

Hydrograph



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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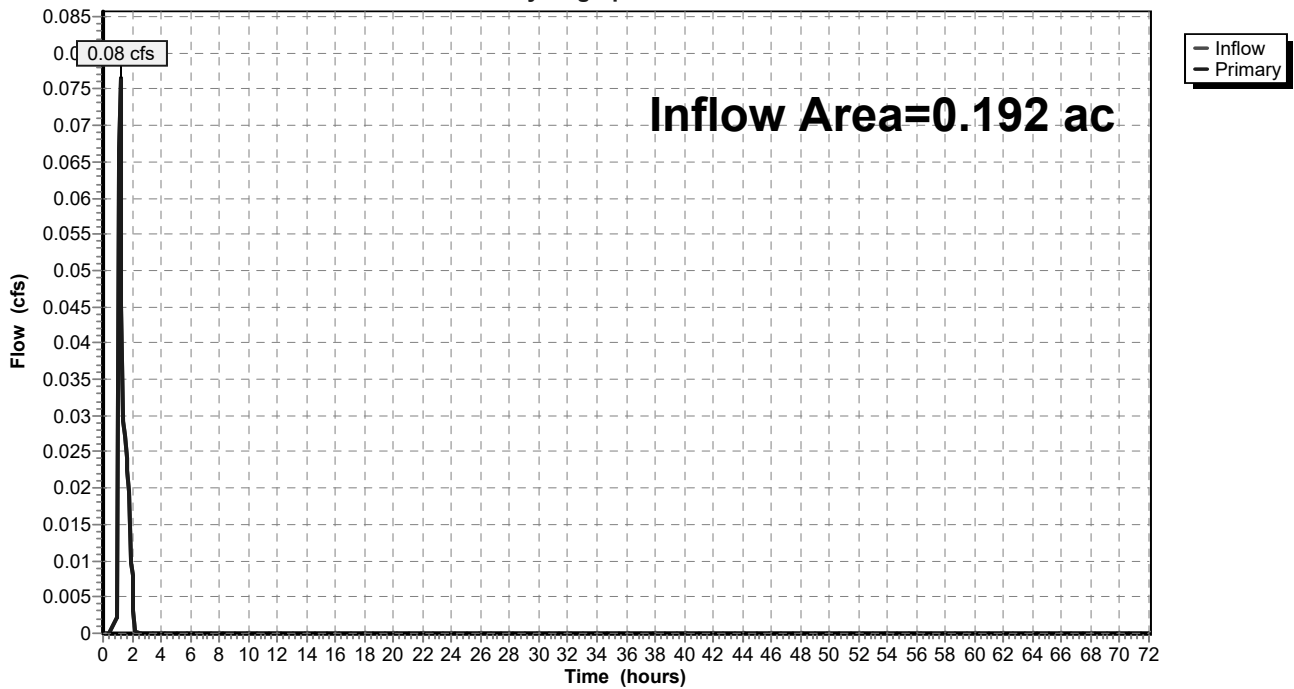
Summary for Link P1B: PDA 1B

Inflow Area = 0.192 ac, 0.00% Impervious, Inflow Depth = 0.17" for WQ - Storm event
Inflow = 0.08 cfs @ 1.17 hrs, Volume= 0.003 af
Primary = 0.08 cfs @ 1.17 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P1B: PDA 1B

Hydrograph



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment P1BI: PDA 1B - IMPERV.

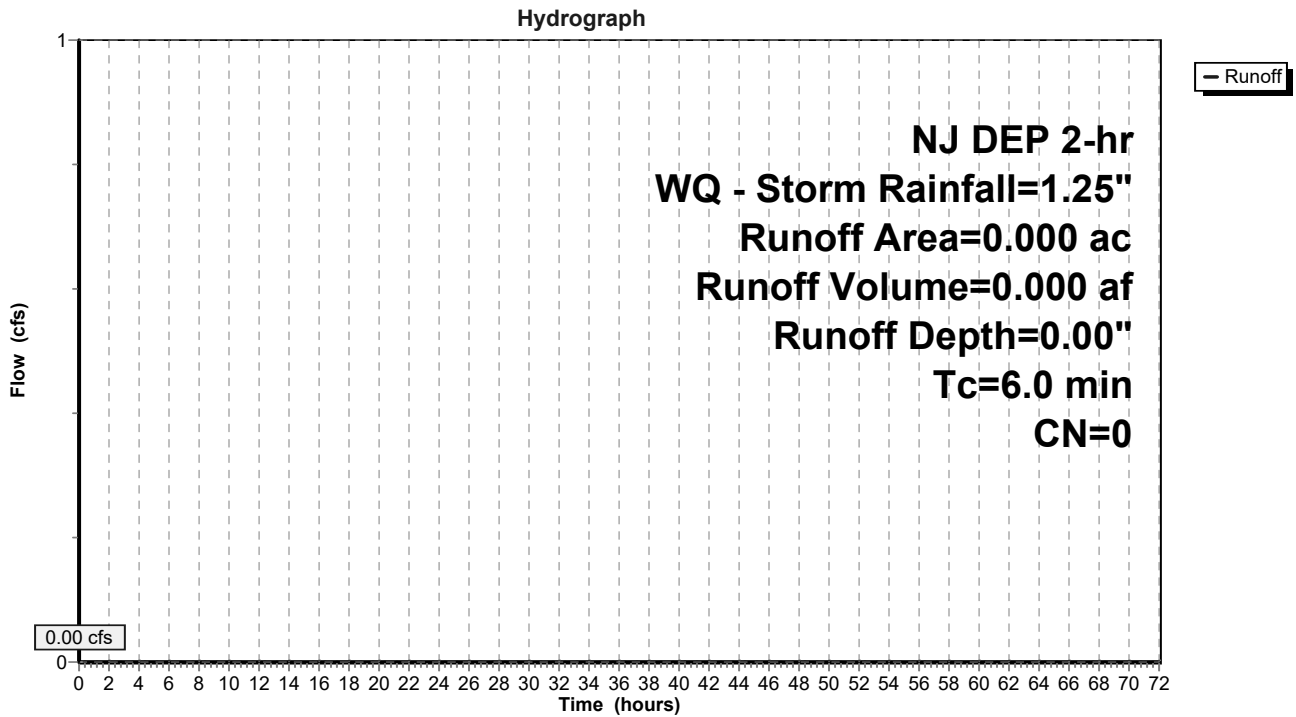
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.000	98	Unconnected pavement, HSG D
0.000	98	Unconnected pavement, HSG A
0.000	0	Weighted Average

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

Subcatchment P1BI: PDA 1B - IMPERV.



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment P1BP: PDA 1B - PERV.

Runoff = 0.08 cfs @ 1.17 hrs, Volume= 0.003 af, Depth= 0.17"

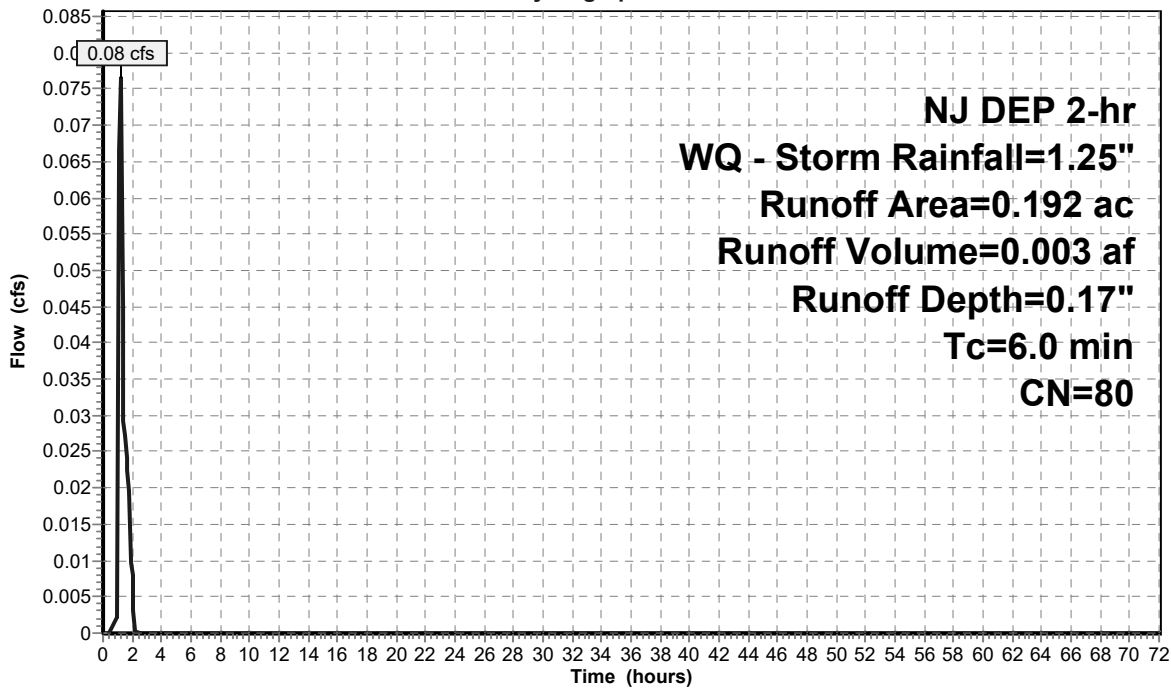
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.176	80	>75% Grass cover, Good, HSG D
0.000	39	>75% Grass cover, Good, HSG A
0.016	80	>75% Grass cover, Good, HSG D
0.192	80	Weighted Average
0.192		100.00% Pervious Area

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

Subcatchment P1BP: PDA 1B - PERV.

Hydrograph



Runoff

EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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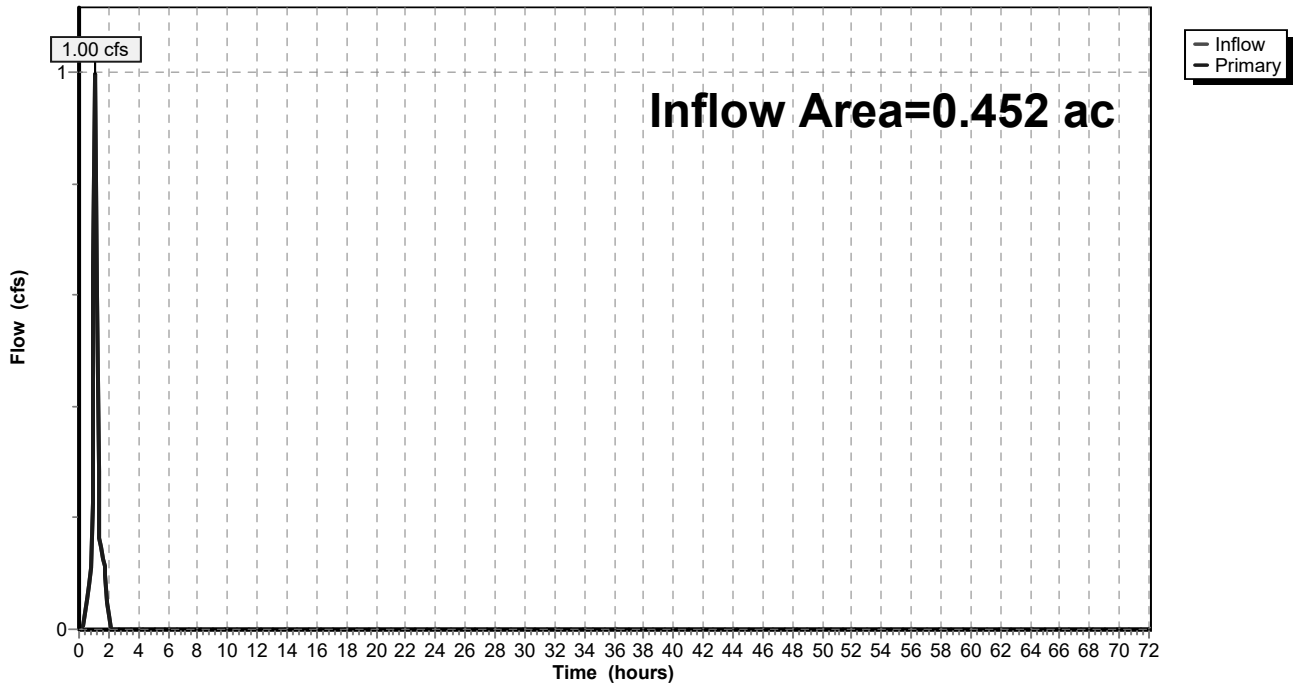
Summary for Link P2: PDA 2

Inflow Area = 0.452 ac, 78.32% Impervious, Inflow Depth = 0.83" for WQ - Storm event
Inflow = 1.00 cfs @ 1.10 hrs, Volume= 0.031 af
Primary = 1.00 cfs @ 1.10 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link P2: PDA 2

Hydrograph



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment P2I: PDA 2 - IMPERV.

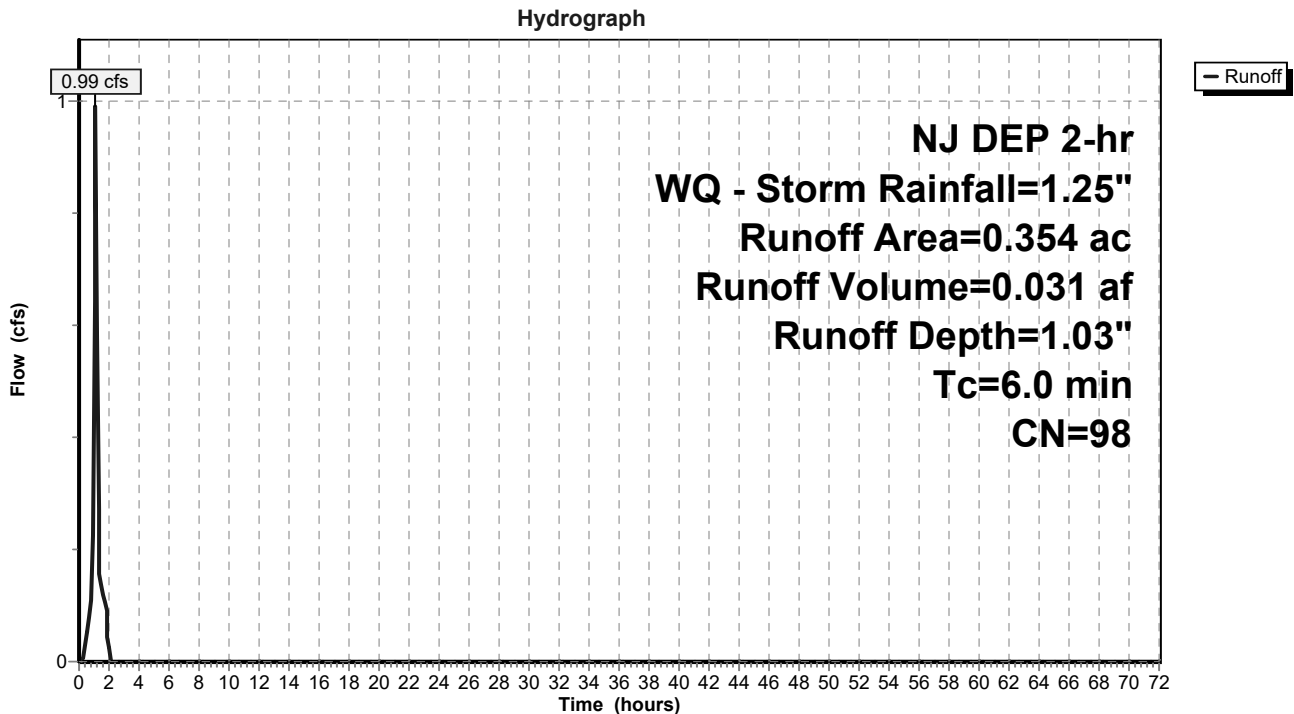
Runoff = 0.99 cfs @ 1.10 hrs, Volume= 0.031 af, Depth= 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.291	98	Unconnected pavement, HSG D
0.045	98	Unconnected pavement, HSG A
0.018	98	Unconnected pavement, HSG D
0.354	98	Weighted Average
0.354		100.00% Impervious Area
0.354		100.00% Unconnected

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

Subcatchment P2I: PDA 2 - IMPERV.



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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Summary for Subcatchment P2P: PDA 2 - PERV.

Runoff = 0.01 cfs @ 1.22 hrs, Volume= 0.001 af, Depth= 0.07"

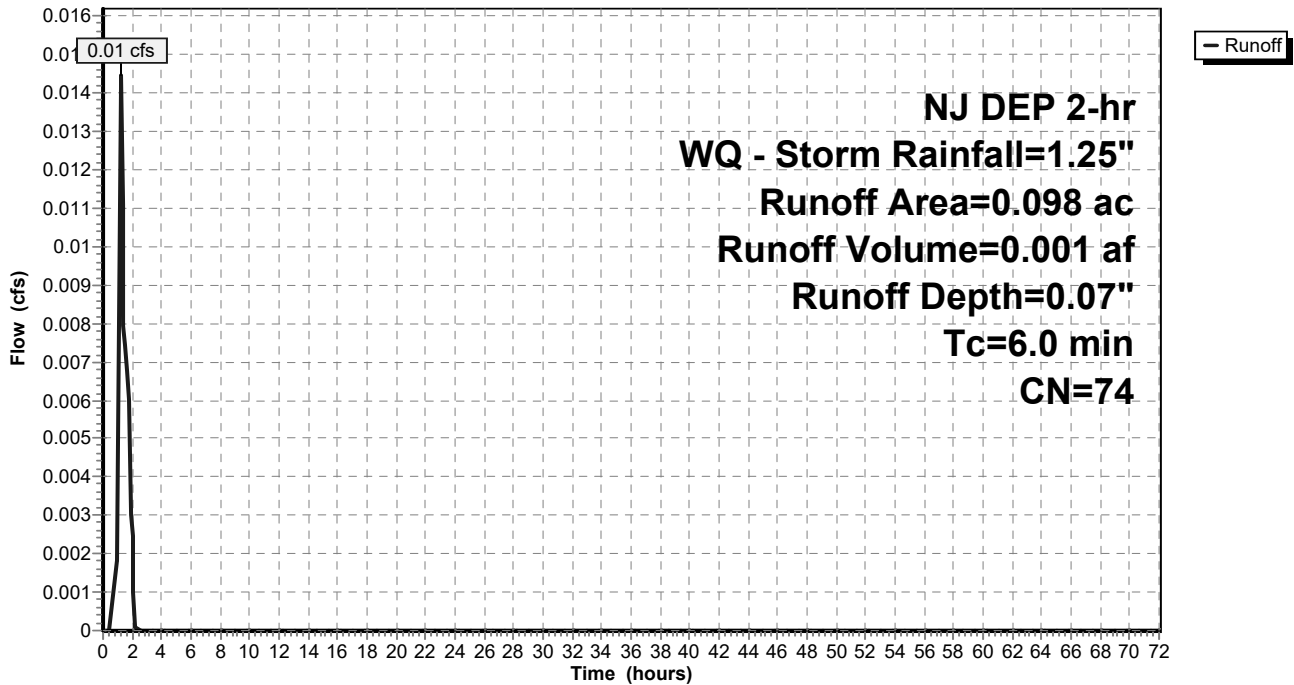
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

Area (ac)	CN	Description
0.084	80	>75% Grass cover, Good, HSG D
0.014	39	>75% Grass cover, Good, HSG A
0.098	74	Weighted Average
0.098		100.00% Pervious Area

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

Subcatchment P2P: PDA 2 - PERV.

Hydrograph



EX-PR(balance)

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WQ Storm Drainage Runoff
NJ DEP 2-hr WQ - Storm Rainfall=1.25"

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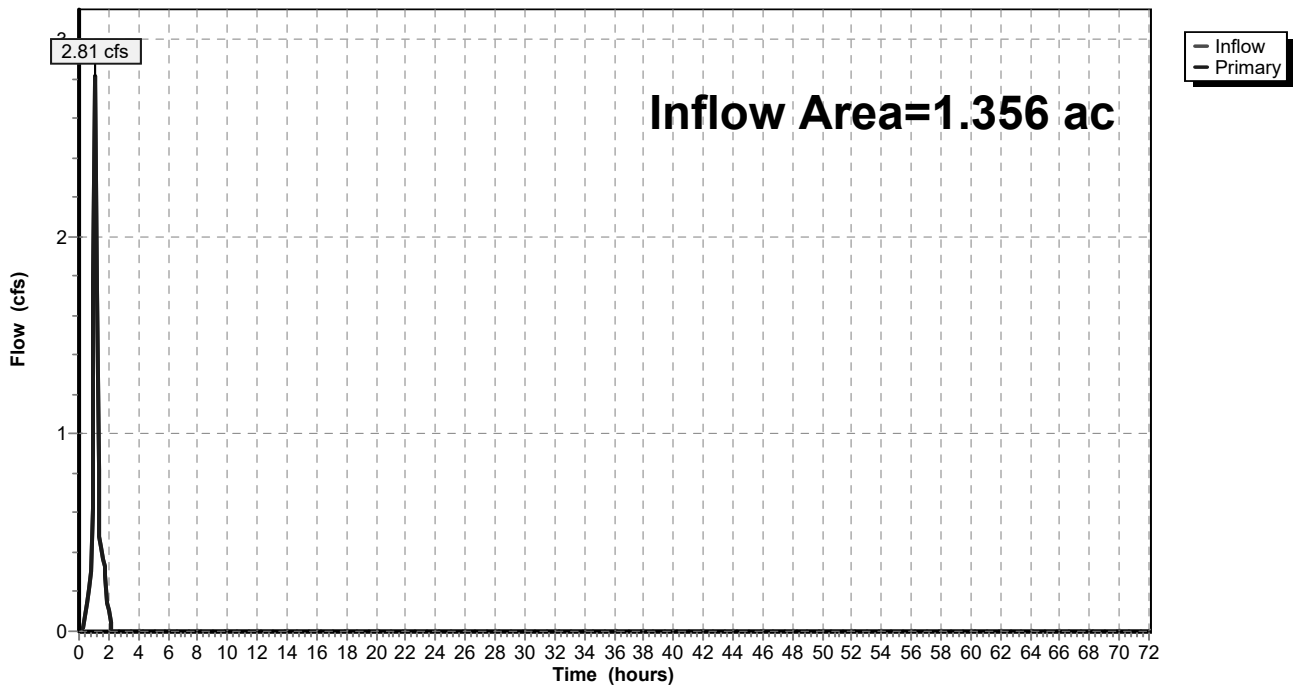
Summary for Link PS: PROPOSED SITE

Inflow Area = 1.356 ac, 71.39% Impervious, Inflow Depth = 0.78" for WQ - Storm event
Inflow = 2.81 cfs @ 1.10 hrs, Volume= 0.088 af
Primary = 2.81 cfs @ 1.10 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs

Link PS: PROPOSED SITE

Hydrograph



NJDEP GROUNDWATER RECHARGE SPREADSHEET

New Jersey
Groundwater
Recharge
Spreadsheet
Version 2.0
November 2003

Annual Groundwater Recharge Analysis (based on GSR-32)

Project Name: McDonald's Marlboro

Description:

Analysis Date: 07/20/20

Select Township ↓	Average Annual P (in)	Climatic Factor
MONMOUTH CO., MARLBORO TWP	44.9	1.44

Pre-Developed Conditions

Post-Developed Conditions

Land Segment	Area (acres)	TR-55 Land Cover	Soil	Annual Recharge (in)	Annual Recharge (cu.ft)
1	0.294	Open space	Elkton	0.0	-
2	0.983	Impervious areas	Elkton	0.0	-
3	0.014	Open space	Lakewood	15.5	789
4	0.064	Impervious areas	Lakewood	0.0	-
5	0				
6	0				
7	0				
8	0				
9	0				
10	0				
11	0				
12	0				
13	0				
14	0				
15	0				
Total =	1.4			Total Annual Recharge (in)	Total Annual Recharge (cu-ft)
				0.2	789

Land Segment	Area (acres)	TR-55 Land Cover	Soil	Annual Recharge (in)	Annual Recharge (cu.ft)
1	0.373	Open space	Elkton	0.0	-
2	0.906	Impervious areas	Elkton	0.0	-
3	0.015	Open space	Lakewood	15.5	845
4	0.062	Impervious areas	Lakewood	0.0	-
5	0				
6	0				
7	0				
8	0				
9	0				
10	0				
11	0				
12	0				
13	0				
14	0				
15	0				
Total =	1.4	Warning: make total area equal to Pre-Developed Conditions		Total Annual Recharge (in)	Total Annual Recharge (cu.ft)
				0.2	845

Procedure to fill the Pre-Development and Post-Development Conditions Tables

For each land segment, first enter the area, then select TR-55 Land Cover, then select Soil. Start from the top of the table and proceed downward. Don't leave blank rows (with A=0) in between your segment entries. Rows with A=0 will not be displayed or used in calculations. For impervious areas outside of standard lots select "Impervious Areas" as the Land Cover. Soil type for impervious areas are only required if an infiltration facility will be built within these areas.

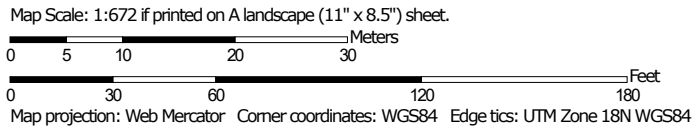
Annual Recharge Requirements Calculation ↓			
% of Pre-Developed Annual Recharge to Preserve =	100%	Total Impervious Area (sq.ft)	42,166
Post-Development Annual Recharge Deficit=	-56	(cubic feet)	
Recharge Efficiency Parameters Calculations (area averages)			
RWC= 0.08	(in)	DRWC= 0.08	(in)
ERWC = 0.02	(in)	EDRWC= 0.02	(in)

SOIL CLASSIFICATION

































Hydrologic Soil Group—Monmouth County, New Jersey



Soil Map may not be valid at this scale.



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 - Soil Rating Polygons**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Lines**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Points**
 -  A
 -  A/D
 -  B
 -  B/D
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads
- Background**
 -  Aerial Photography
- Other**
 -  C
 -  C/D
 -  D
 -  Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monmouth County, New Jersey
 Survey Area Data: Version 14, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 29, 2019—Jul 16, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
EkaAr	Elkton loam, 0 to 2 percent slopes, rarely flooded	C/D	1.3	93.8%
LasC	Lakewood sand, 5 to 10 percent slopes	A	0.1	6.2%
Totals for Area of Interest			1.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

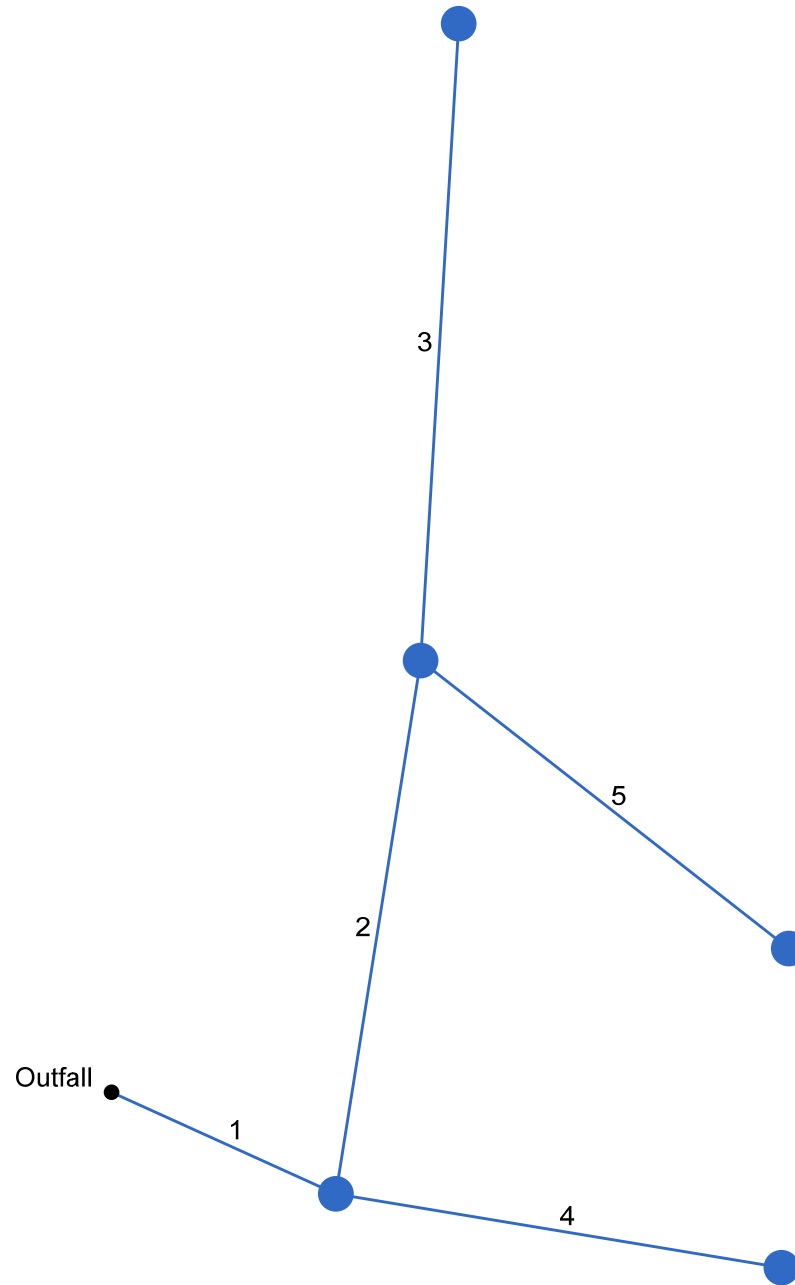
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

PIPE SIZING

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	30.000	0.01	0.40	0.99	0.01	0.33	10.0	16.4	5.3	1.75	5.40	1.43	15	0.50	104.80	104.95	106.55	106.57	108.23	109.90	EXI-MH1
2	1	66.000	0.17	0.32	0.76	0.13	0.25	10.0	15.5	5.4	1.36	5.40	1.11	15	0.50	104.95	105.28	106.60	106.62	109.90	109.35	MH1-I6
3	2	78.000	0.10	0.10	0.89	0.09	0.09	10.0	10.0	6.5	0.58	5.40	0.51	15	0.50	105.28	105.67	106.65	106.65	109.35	111.30	I6-I7
4	1	55.000	0.07	0.07	0.99	0.07	0.07	10.0	10.0	6.5	0.45	5.45	0.37	15	0.51	104.95	105.23	106.60	106.60	109.90	110.30	MH1-I5
5	2	57.000	0.05	0.05	0.65	0.03	0.03	10.0	10.0	6.5	0.21	5.44	0.18	15	0.51	105.28	105.57	106.65	106.65	109.35	110.40	I6-I8

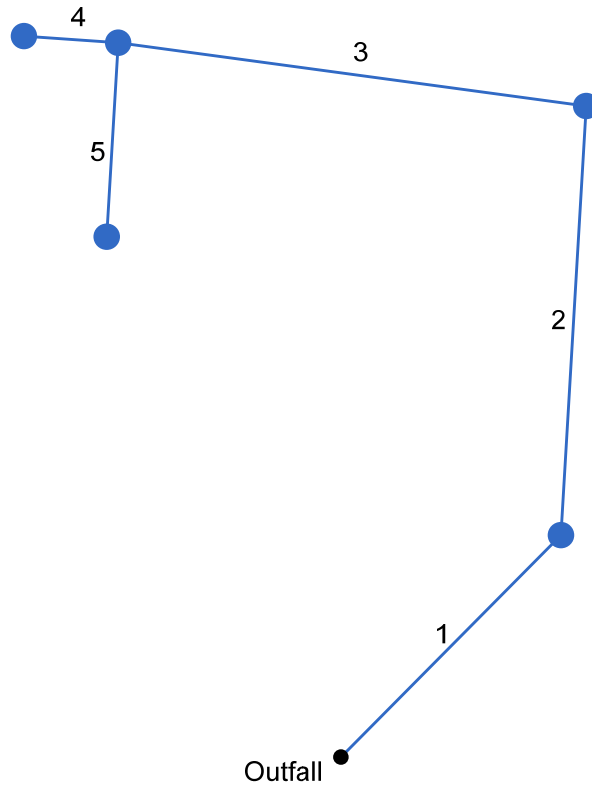
Project File: Pipe Sizing Run 1.stm

Number of lines: 5

Run Date: 1/27/2021

NOTES: Intensity = $182.59 / (\text{Inlet time} + 19.10)^{0.99}$; Return period = Yrs. 25 ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	53.000	0.06	0.62	0.82	0.05	0.52	10.0	26.2	4.2	2.17	17.49	0.69	24	0.51	102.79	103.06	105.62	105.62	0.00	109.50	MH-I2
2	1	73.000	0.16	0.56	0.76	0.12	0.47	10.0	25.0	4.3	2.02	17.21	0.64	24	0.49	103.06	103.42	105.63	105.64	109.50	109.50	I2-I3
3	2	80.000	0.29	0.40	0.83	0.24	0.35	10.0	23.1	4.5	1.56	17.33	0.51	24	0.50	103.42	103.82	105.65	105.65	109.50	109.90	I3-I4
4	3	16.000	0.01	0.01	0.99	0.01	0.01	10.0	10.0	6.5	0.06	17.33	0.02	24	0.50	103.82	103.90	105.65	105.66	109.90	111.00	I4-EXM
5	3	33.000	0.10	0.10	0.99	0.10	0.10	10.0	10.0	6.5	0.64	1.31	1.83	8	1.00	103.82	104.15	105.65	105.73	109.90	111.00	I4-R1

Project File: Pipe Sizing Run 2.stm

Number of lines: 5

Run Date: 1/27/2021

NOTES: Intensity = $182.59 / (\text{Inlet time} + 19.10)^{0.99}$; Return period = Yrs. 25 ; c = cir e = ellip b = box

Yard Inlet #9 Pipe Sizing
 Drainage area: 530 SF = 0.012 Acres
 C-Value = 0.65
 Rainfall Intensity: 6.5 in/hr
 Required Capacity: $Q=CIA = (0.65)(0.012)(6.5) = 0.051$ CFS



35 Technology Drive, Warren, NJ 07059
 (908) 668-8300

Date: 1/25/2021
 Project: Marlboro, NJ
 Project No: J180406

Calculated By: RND
 Checked By: AJL

Manning's Equation

Design Parameters:

Pipe Diameter, D	6 in
Pipe Material	PVC
Slope, s	0.50 %
Flow Depth, y	FULL

Calculations:

Cross-Sectional Area, $A = D^2 / 8 [\theta - \sin(\theta)] =$	0.20 ft ²
Manning's Coefficient, n	0.010
Hydraulic Radius, R	0.13 ft
Angle, $\theta =$	6.28 radians
Wetted Perimeter, $P = \theta D / 2$	1.57 ft
Flow Depth, y	0.50 ft
Flow Top Width, $T = 2[y(D - y)]^{1/2}$	0.00 ft
Gravity Constant, g	32.174 ft/s ²
Froude Number, F	0.00

Subcritical Flow

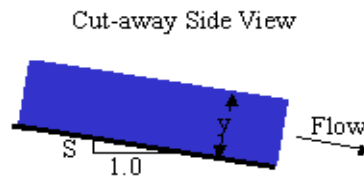
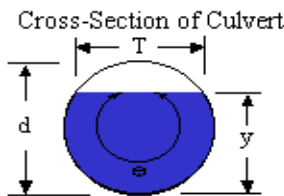
• Flow & Velocity:

Flow, $Q_o = \frac{1.486 \cdot R^{2/3} s^{1/2} A}{n}$

0.52 cfs
0.33 MGD

Velocity, $V = Q/A$

2.63 fps



$$Q = VA \quad V = \frac{k}{n} R^{2/3} S^{1/2} \quad R = \frac{A}{P} \quad A = \frac{d^2}{8} (\theta - \sin(\theta))$$

$$P = \frac{\theta d}{2} \quad y = \frac{d}{2} \left[1 - \cos\left(\frac{\theta}{2}\right) \right] \quad T = 2 \sqrt{y(d - y)} \quad F = V \sqrt{\frac{T}{gA \cos(\tan^{-1} S)}}$$

0.52 cfs Available Capacity > 0.051 Required Capacity, therefore OK

DRAINAGE MAPS



SOIL LINE (TYP.)

EDA 2

DRAINAGE AREA 'EDA 2'
 TOTAL AREA = 19,640 SF (0.451 AC)
 IMPERVIOUS AREA (D) = 14,088 SF (0.323 AC)
 PERVIOUS AREA (D) = 2,165 SF (0.060 AC)
 IMPERVIOUS AREA (A) = 2,767 SF (0.064 AC)
 PERVIOUS AREA (A) = 620 SF (0.014 AC)

EDA 1A

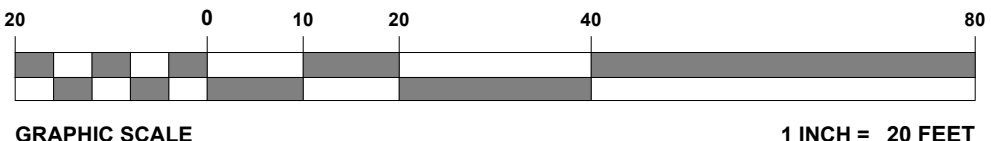
DRAINAGE AREA 'EDA 1A'
 TOTAL AREA = 30,853 SF (0.704 AC)
 IMPERVIOUS AREA (D) = 28,730 SF (0.660 AC)
 PERVIOUS AREA (D) = 1,923 SF (0.044 AC)

EDA 1B

DRAINAGE AREA 'EDA 1B'
 TOTAL AREA = 8,694 SF (0.200 AC)
 IMPERVIOUS AREA (D) = 0 SF (0 AC)
 PERVIOUS AREA (D) = 8,694 SF (0.200 AC)

NEW JERSEY STATE HIGHWAY ROUTE U.S. NO. 9
 (VARIABLE WIDTH PUBLIC RIGHT OF WAY)
 (ASPHALT ROADWAY)
 (TWO WAY TRAFFIC)

SOIL TYPE
 (Lak) - LAKEWOOD SAND
 (ElkAr) - ELKTON LOAM



NEW JERSEY
 YOU MUST CALL 811 BEFORE ANY EXCAVATION
 WHETHER IT'S ON PRIVATE OR PUBLIC LAND.
 1-800-327-1600
 www.nj-811.org



SITE CIVIL AND CONSULTING ENGINEERING
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 LANDSCAPE ARCHITECTURE SUSTAINABLE DESIGN
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BOHLER ENGINEERING NJ, LLC
 30 INDEPENDENCE BOULEVARD
 WARREN, NJ 07059
 Phone: (908) 658-3300
 Fax: (908) 754-4401
 www.BohlerEngineering.com
 NJ CERT. OF AUTHORIZATION NO. 246A28181700

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 FLORIDA LICENSE NO. 73277
 NEW YORK LICENSE NO. 088514-1
 CONNECTICUT LICENSE NO. 26039
 PENNSYLVANIA LICENSE NO. 077366

PROPOSED SITE IMPROVEMENTS		
BLOCK 268; LOTS 62 & 80		
STREET ADDRESS		
78 U.S. ROUTE 9		
CITY	STATE	
TOWNSHIP OF MARLBORO	NJ	
COUNTY		
MONMOUTH COUNTY		
REGIONAL DWG. NO	PLAN DESCRIPTION	
L/C: 029-0328	EXISTING DRAINAGE AREA MAP	

REGIONAL MGR.	STATUS	DATE	BY
CONST. MGR.	PRELIMINARY	01/22/21	RND
OPERATIONS DEPT.	PLAN CHECKED	01/22/21	AJL
REAL ESTATE DEPT.	AS-BUILT	N/A	N/A

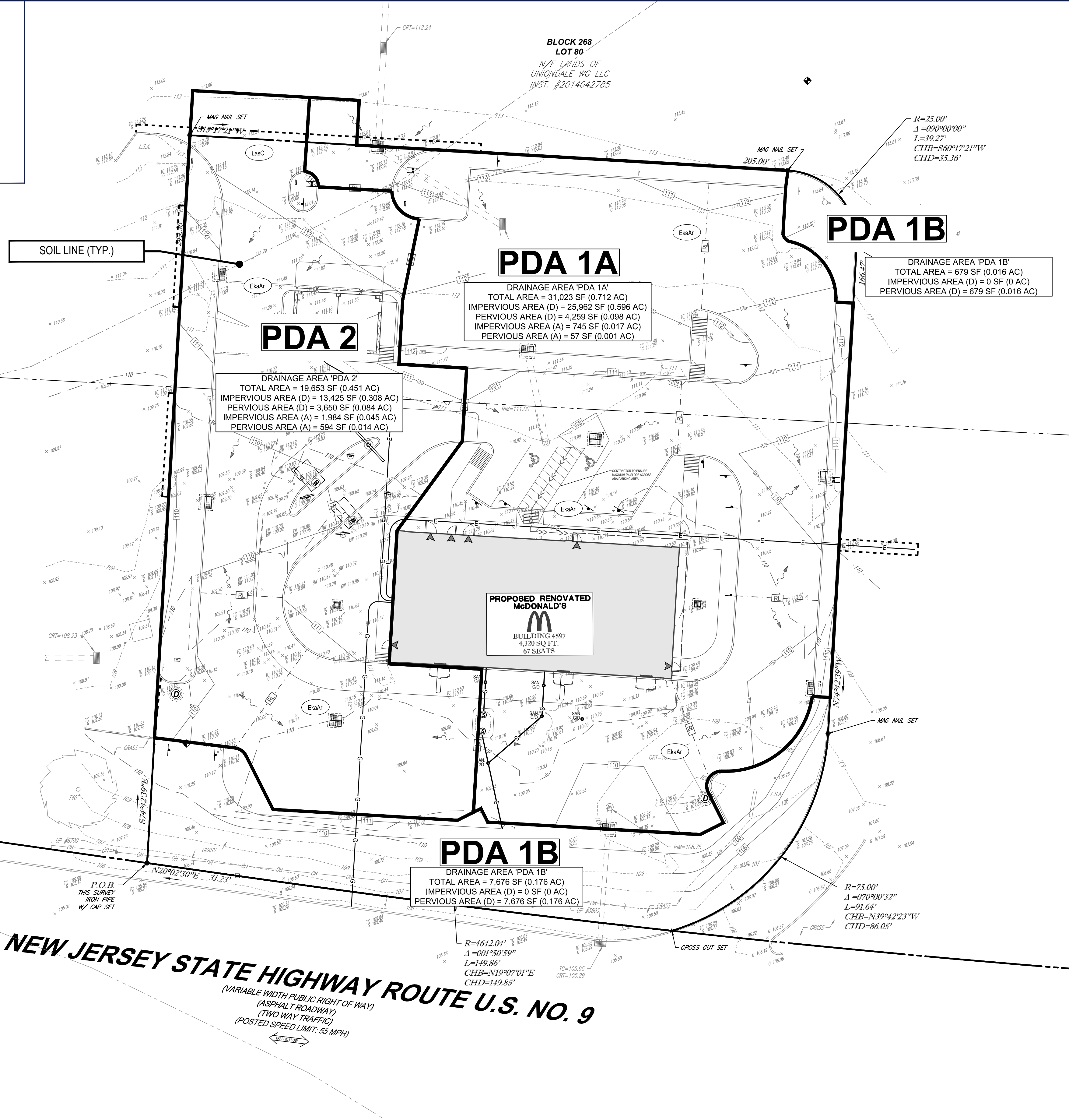
ISSUE REF	BY	DESCRIPTION	DATE	REV	FINAL PLAN SIGNATURES

P.M.
 G.C.
 O/O

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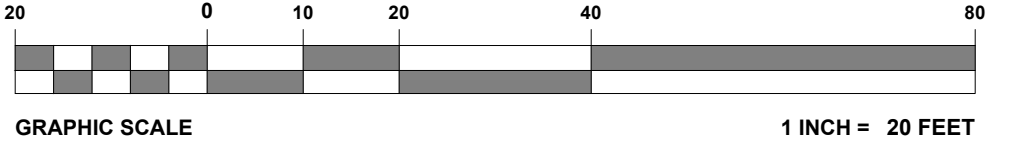
REGIONAL MGR.	DATE	PLAN APPROVALS
CONST. MGR.		SIGNATURE (2 REQUIRED)
OPERATIONS DEPT.		
REAL ESTATE DEPT.		
CONTRACTOR OWNER		CO-SIGN SIGNATURES

G:\01\1160\DRAWINGS\CURRENT DRAWINGS\SUPPLEMENT DRAWINGS\DRAINAGE MAPS\116048-EDA-1B-LAYOUT-C41.EDM



NEW JERSEY STATE HIGHWAY ROUTE U.S. NO. 9
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
(ASPHALT ROADWAY)
(TWO WAY TRAFFIC)
(POSTED SPEED LIMIT: 55 MPH)

SOIL TYPE
LabC - LAKEWOOD SAND
EkaAr - ELKTON LOAM



FOR EXHIBIT PURPOSES ONLY

PROPOSED SITE IMPROVEMENTS	
BLOCK 268; LOTS 62 & 80	
STREET ADDRESS	
78 U.S. ROUTE 9	
CITY	STATE
TOWNSHIP OF MARLBORO	NJ
COUNTY	
MONMOUTH COUNTY	
REGIONAL DWG. NO	PLAN DESCRIPTION
L/C: 029-0328	PROPOSED DRAINAGE AREA MAP

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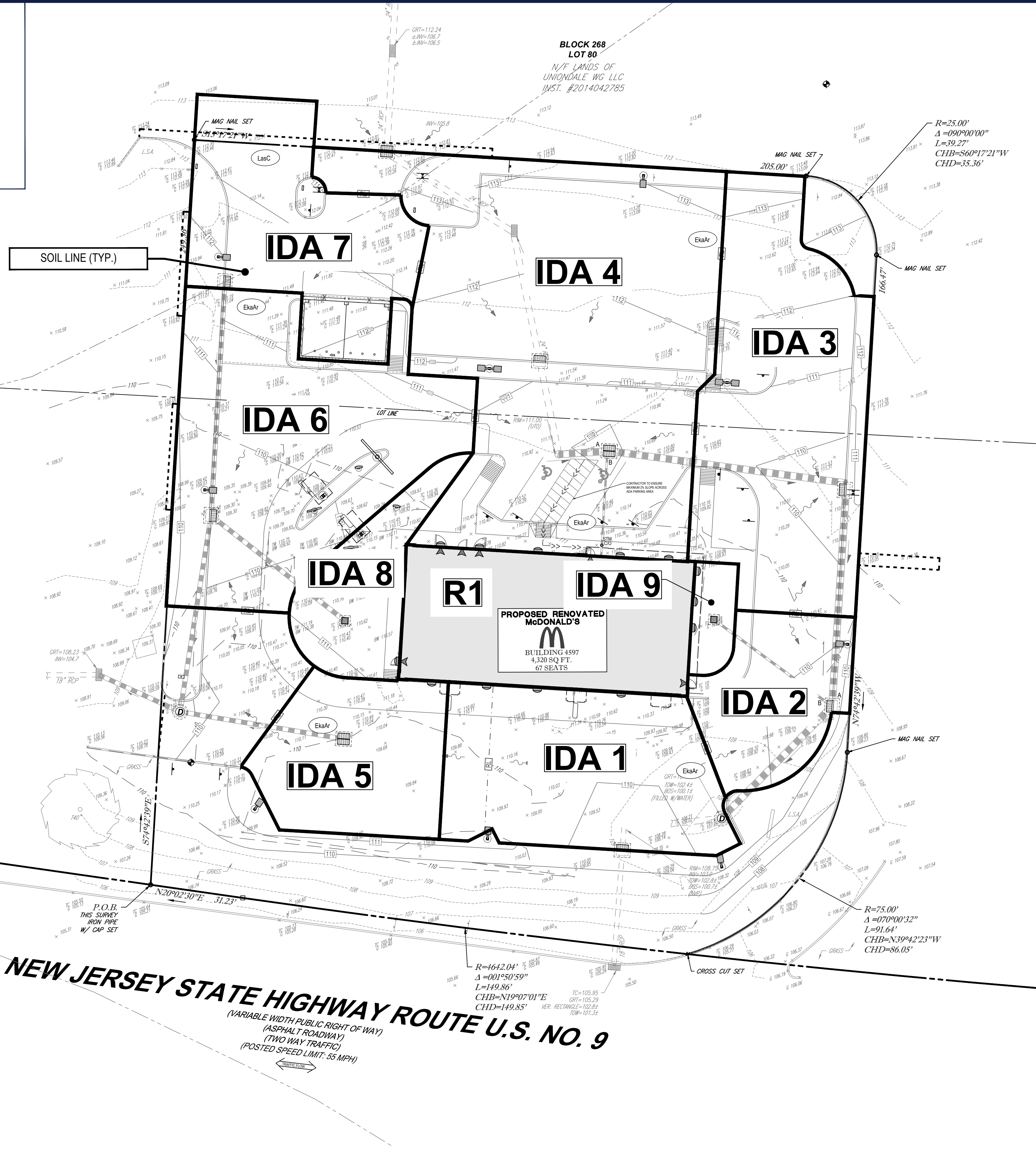
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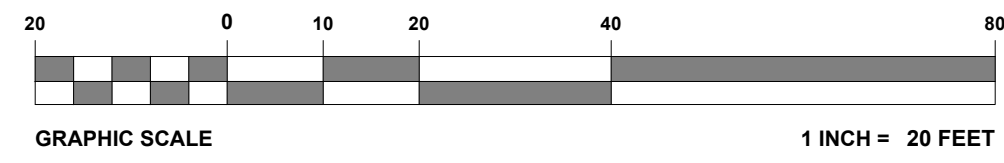
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STAMFORD, CT 06901 (203) 359-9238					
McDonald's					
OFFICE ADDRESS					
NORTHEAST FIELD EXECUTION TEAM					
695 E. MAIN STREET					
STAMFORD, CT 06901 (203) 359-9238					
REGIONAL MGR.	STATUS	DATE	BY		
CONST. MGR.	PRELIMINARY	01/22/21	RND		
OPERATIONS DEPT.	PLAN CHECKED	01/22/21	AJL		
REAL ESTATE DEPT.	AS-BUILT	N/A	N/A		
CONTRACTOR OWNER					
CO-SIGN SIGNATURES					
SIGNATURE (2 REQUIRED)					
DATE					
PLAN APPROVALS					
FINAL PLAN SIGNATURES					
P.M.	REV	DATE	DESCRIPTION	BY	ISSUE REF
G.C.					
O/O					



NEW JERSEY STATE HIGHWAY ROUTE U.S. NO. 9
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 (ASPHALT ROADWAY)
 (TWO WAY TRAFFIC)
 (POSTED SPEED LIMIT: 55 MPH)

SOIL TYPE

- LakC - LAKEWOOD SAND
- ElkAr - ELKTON LOAM



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PROPOSED SITE IMPROVEMENTS		
BLOCK 268; LOTS 62 & 80		
STREET ADDRESS 78 U.S. ROUTE 9		
CITY	STATE	
TOWNSHIP OF MARLBORO	NJ	
COUNTY MONMOUTH COUNTY		
REGIONAL DWG. NO	PLAN DESCRIPTION	
L/C: 029-0328	INLET AREA MAP	

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PLAN APPROVALS	DATE	ISSUE REF
SIGNATURE (2 REQUIRED)		
REGIONAL MGR.		
CONST. MGR.		
OPERATIONS DEPT.		
REAL ESTATE DEPT.		
CO-SIGN SIGNATURES		
CONTRACTOR		
OWNER		

FINAL PLAN SIGNATURES	REV	DATE	DESCRIPTION	BY	ISSUE REF
P.M.					
G.C.					
O/O					

1