STORMWATER MANAGEMENT REPORT

FOR

420 Bloomfield Avenue
Lot 3, Block 701
Township of Verona
Essex County, New Jersey

Applicant
GOMES CONSULTING LLC
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Prepared by
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Jarmel Kizel Project No. GOMESGR24-190
Dated: May 22, 2026

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APPENDICES

Introduction

The purpose of this report is to present the stormwater runoff calculations performed for this development and to demonstrate compliance with the Townships Code 150-25 on Stormwater Control and NJDEP Best Management Practices (BMP) specifically regarding the four (4) components of a major development: stormwater quantity, stormwater quality, groundwater recharge, and erosion control.

The project site is located at 420 Bloomfield Avenue, and is the site of the Richfield Regency Catering Hall. The property has been designated as Tax Lot 3, Block 701 on the current Township Tax Maps. The site has a total land area of 43,484sf or 0.99acres. The site is located along Bloomfield Avenue in the Redevelopment Plan for the 420 Bloomfield Avenue Redevelopment Area, and it backs up to Claremont Avenue. Across the street along Bloomfield Avenue and Claremont are multiple apartment unit buildings. To the east is a single family Dwelling and to our west is a professional office building.

Existing Site Conditions

The property is developed with one principal structure, a one-story flat roofed, commercial building with an asphalt parking lot to the rear of the property, along Claremont Avenue. The southwesterly side of the building, fronting Bloomfield Avenue along the westbound side, maintains a zero foot setback. Immediately to the east/southeast of the building is a landscaped patio leading to a brick paver drive aisle. The drive-aisle provides ingress and egress to the site from Bloomfield Avenue. The main entrance to the building is also along the southeasterly side of the building, facing the brick-paver drive aisle. The main entrance is sheltered by an attached, one-story canopy with a gable roof. Traversing in the northerly direction, just past the canopy, the brick-paver drive aisle transitions into an asphalt parking lot that spans the entire Claremont Avenue frontage. This parking lot is divided into two sections by the main building, which juts into the parking lot. Both sections of the parking lot are connected by an approximately 12- to 15-foot drive aisle.

The drainage study considers a total area of 1.003 acres. The site slopes considerably from the northeast corner toward the intersection of Bloomfield Avenue and Cumberland Avenue. The parking lot currently has an average slope of 8.5%. The site is currently composed of 97.2% of the impervious area and 2.8% of pervious areas. The pervious areas are, for the most part, located in the main entrance drive from Bloomfield Avenue. The vegetation in this area is mostly landscaping and fountains. Access to the site is available from Bloomfield Avenue and Claremont Avenue.

Proposed Site Conditions

The proposed development requires removing all existing building area, pavement, and site infrastructure for submission for preliminary and final site plans seeking approval to construct a multi-family 65-unit apartment building with two levels of underground parking garage. The 38,583 square foot building will have (52) one-bedroom units, (10) two-bedroom units and

(3) three-bedroom units. The building will also have 1,400sf of retail space, with a total of (119) parking spaces.

The existing property has a total land area of 43,484 square feet. The proposed conditions will have a reduction in impervious coverage by 3,144sf. In proposed conditions we are maintaining drainage patterns as close to existing conditions as possible. Do to the fact that the proposal will disturbance more than 0.5 acres of land, causes the project to meet the definition of a "Major Development" under the State and local regulations Code 150-25.

Soils

From the Natural Resources Conservation Service, one soil type was found at the project site: BouB—Boonton substratum, 0 to 8 percent slopes. The soil is ranked with a hydraulic soil group C. For design purposes Hydrologic Soil Group C will be used for design comparison.

Nonstructural Best Management Practices (Bmps)

Stormwater management is an important aspect of the project, not only for the safety and convenience of potential residents, but for the environment as well. Thus, it has been endeavored to include various stormwater management techniques that include both natural and structural means to accomplish that task.

The following low impact, nonstructural, development approaches to site design have been incorporated into this project as per Township Code 150-25.4 and the NJDEP storm water management regulations 7:8-5.3; notably:

150-25.4 (b) A Maintenance plan has been prepared to address ongoing maintenance of the project.

NJDEP 7:8-5.3 (b) 7. Extensive, supplemental landscaping would be added throughout the project site in the form of trees, shrubs, and ground cover.

NJDEP 7:8-5.3 (b) 6. Much of the proposed building area has been previously disturbed and/or filled. It is these areas where most of the contemplated soil compaction would take place in order to construct the new buildings, parking areas, and drives. In other locations that have not seen extensive disturbance, rubber tired vehicles would be used to minimize compaction.

Groundwater Recharge

This section of the report describes the groundwater recharge provisions of the stormwater management system's design. The site falls within the State's Planning Area 1 (Metropolitan) and therefore the site can be considered as part of the urban redevelopment area and is part of a redevelopment ordinance prepared by the Township. This groundwater recharge

requirement does not apply to areas of the project that have been previously developed. Consequently, pursuant to 150-25.4(Q)3 and NJAC 7:8-5.4(b)2 the groundwater recharge requirements do not apply to this development. The reduction in impervious coverage by would likely allow groundwater infiltration and comply.

Water Quality Management

As stated previously, since the project does not increase impervious cover by more than 5,000sf (impervious cover is reduced in the proposed condition) and the site does not drain to a water that has a total maximum daily load (TMDL) for TSS reduction, the regulatory requirements of the Code 150-25.4(R) and NJAC 7:8-5.5 are not applicable. Nevertheless, we believe implementation of the project will result in an improvement of runoff quality, when compared to existing site conditions and former use of the property. The anticipated improvement in water quality is based upon the net reduction in impervious cover, as well as a higher percentage of the post-project cover being comprised of mainly roof areas consisting of 38,583 square feet. The NJDEP considers roof runoff "clean," not requiring TSS removal pursuant to State regulation.

Hydrology And Stormwater Management

Quantity Control (Peak Flow Attenuation)

Estimating runoff rates and volumes for quantity control purposes is done by utilizing what is referred to as the "NRCS Method", which is also known as the "TR-55" methodology. This is described at length in Chapter 5 of the BMP Manual

According to the National Engineering Handbook, as published by the NRCS, the combination of a hydrologic soil group and a land use and treatment class is a hydrologic soil-cover complex, to which a runoff curve number (CN) can be assigned. The CN is an indication of the complex's runoff potential. The Hydrologic Soil Group(s) for the project site were determined by referencing the NRCS's Web Soil Survey for the appropriate county.

The Time of Concentration, "Tc", for the existing and the proposed conditions have been calculated through modeling software and the paths are shown on the coverage maps. For the various ground covers, runoff coefficients, "CN", used in the analysis were 98 for impervious areas such as buildings, parking lot, and walkways, and 71-74 for wooded/landscape areas.

The rainfall depths utilized for the project's design were derived from NOAA Atlas 14, Volume 2, Version 3 point precipitation frequency estimates. An adjustment factor increasing the runoff factor by 1%-6% was applied in per 54 NJR 2187(a) for current storms and another 23% to 46% was added to arrive at a "future" storm intensity. Below is a summary of the storm rainfall depths used for both the existing and proposed conditions.

Storm	**2-year**	**10-year**	**100-year**
Current-Year-2020	3.47 in	5.38 in	9.18 in
Future-Year-2050	**4.09 in**	**6.37 in**	**11.52 in**.

The project's approach for compliance with the regulatory requirements for "quantity control" are set forth at Township Code 150-25.4(S) and Subpart 5.6(b)(2) of the Stormwater Management Regulations (NJAC 7:8), specifically "Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the current and projected two(2), ten(10), and 100-year storm events, as defined and determined pursuant to § 150-25.5c and d, respectively, of this section, and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area;" As the project is divided into two primary drainage areas with two design points, quantity control considerations are evaluated for each design point.

The TR-55 calculations provided in Appendix No. A and Appendix No. B indicate the total peak runoff and total runoff volumes from the subject drainage areas under pre-project and post-project conditions respectively. Tables below provide a summary of the peak runoff rates and total runoff volumes for the regulated storms under existing and proposed conditions for both design points and the overall site, respectively. The following data verifies the project's compliance with the standards pertaining to "quantity control" as the peak runoff rates for post-project conditions never exceed the pre-project conditions. There is no increase in volume for post-conditions because we were able to maintain drainage areas with the use of roof drains, therefore, we will not increase flood damage at or downstream of the site. Our will connect to an existing storm sewer system on Bloomfield Avenue and Claremont Avenue which will safely convey the runoff and minimize erosion.

Table No. 1				
Design Point #1				
Storm Freq.	Runoff Rates (cfs)		Total Volume Runoff (cf)	
	PRE	POST	PRE	POST
2-Year(2020)	2.73	2.68	8,198	7,941
10-Year(2020)	4.27	4.22	12,923	12,626
100-Year(2020)	7.31	7.29	22,275	21,956
2-Year(2050)	3.24	3.19	9,735	9,461
10-Year(2050)	5.07	5.04	15,364	15,056
100-Year(2050)	9.20	9.20	28,020	27,703

Table No. 2				
Design Point #2				
Storm Freq.	Runoff Rates (cfs)		Total Volume Runoff (cf)	
	PRE	POST	PRE	POST
2-Year(2020)	0.81	0.71	2,393	2,170
10-Year(2020)	1.28	1.14	3,829	3,565
100-Year(2020)	2.23	2.02	6,706	6,413
2-Year(2050)	0.97	0.85	2,858	2,618
10-Year(2050)	1.53	1.38	4,576	4,301
100-Year(2050)	2.82	2.59	8,483	8,187

Table No. 3				
Overall Site (Total)				
Storm Freq.	Runoff Rates (cfs)		Total Volume Runoff (cf)	
	PRE	POST	PRE	POST
2-Year(2020)	3.52	3.39	10,591	10,110
10-Year(2020)	5.51	5.37	16,752	16,191
100-Year(2020)	9.47	9.31	28,981	28,369
2-Year(2050)	4.18	4.05	12,592	12,079
10-Year(2050)	6.56	6.42	19,940	19,357
100-Year(2050)	11.94	11.79	36,503	35,890

5. Soil Erosion and Sediment Control Compliance

The project has also been designed to minimize erosion and sedimentation in accordance with The Standards for Soil Erosion and Sediment Control in New Jersey". "Soil Erosion and Sediment Control Plan" is included in the set of project plans, specifying numerous practices to achieve this goal. The project's "Soil Erosion and Sediment Control Plan" is subject to review and approval by the Hudson Essex Passaic Soil Conservation District (HEPSCD). The District's certification of the plan is required before any construction may commence, which provides further assurance that the project's implementation will minimize erosion and sedimentation.

6. Collection and Conveyance System Design

The project's storm water management system also includes a network of storm sewer pipes to convey the stormwater runoff to and from the various management facilities. Similarly, stormwater inlets are strategically located to collect runoff from the surface of the ground. The collection and conveyance systems (storm sewers) were designed for the peak rate of runoff during a 100-year storm calculated per the Rational Method. Appendix No. C of this report contains the storm sewer design calculations.

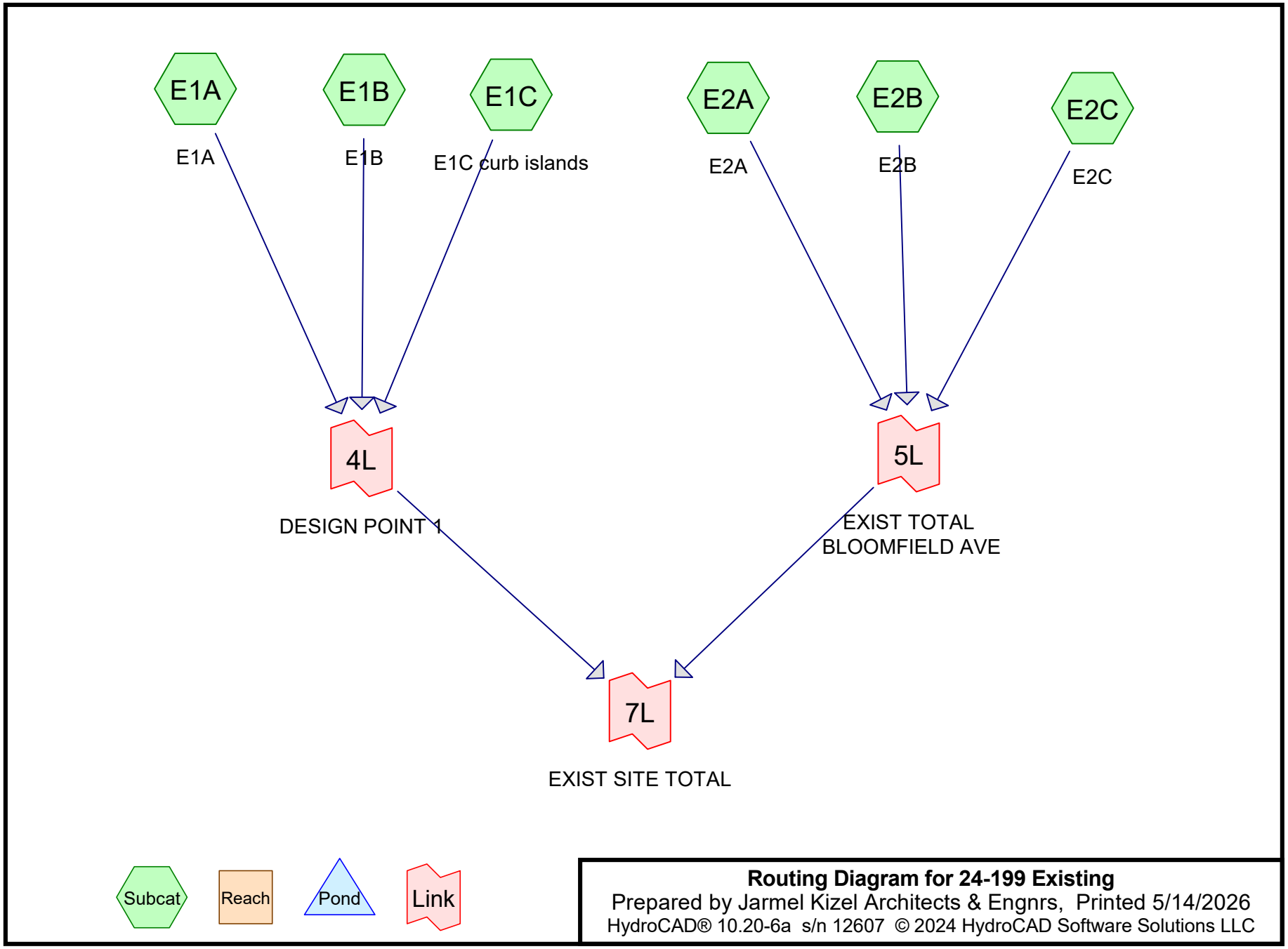
The Proposed Inlet Area Map presents the inlet drainage areas for each proposed inlet collecting roof runoff via downspout leaders. There are multiple storm sewers systems proposed: system B-F encompasses Proposed Drainage Area to mimic existing condition drainage patterns.

Conclusion

The proposed improvements are designed in accordance with local, county and state standards as specified herein. The measures and design provided herein are intended to prevent or limit the impact of the proposed development on the site and the surrounding areas with respect to stormwater quantity, quality, groundwater recharge, and erosion from stormwater runoff. The proposed project will not increase impervious surfaces within the property in question and will provide peak flow attenuation by reducing the peak flow and volume as compared to existing conditions.
As per the requirements for a major site development, there is a reduction in the existing peak runoff rates and volumes for stormwater leaving the site for the 2, 10, and 100-year storm events at each design point respectively. It is our opinion that the calculations provided and summarized above demonstrate compliance with the Township ordinance 150-25 Stormwater Management Controls.

APPENDIX A

EXISTING DRAINAGE CALCULATIONS



Routing Diagram for 24-199 Existing

Prepared by Jarmel Kizel Architects & Engnrs, Printed 5/14/2026

HydroCAD® 10.20-6a s/n 12607 © 2024 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,005	74	>75% Grass cover, Good, HSG C (E2B)
199	74	CURBED ISLANDS (E1C)
8,781	98	PARKING LOT (E2A)
13,407	98	PAVED PARKING LOT (E1B)
19,744	98	ROOF (E1A)
546	98	SIDEWALK (E2C)

Summary for Subcatchment E1A: E1A

Runoff = 1.67 cfs @ 12.08 hrs, Volume= 4,872 cf, Depth> 2.96"
Routed to Link 4L : DESIGN POINT 1

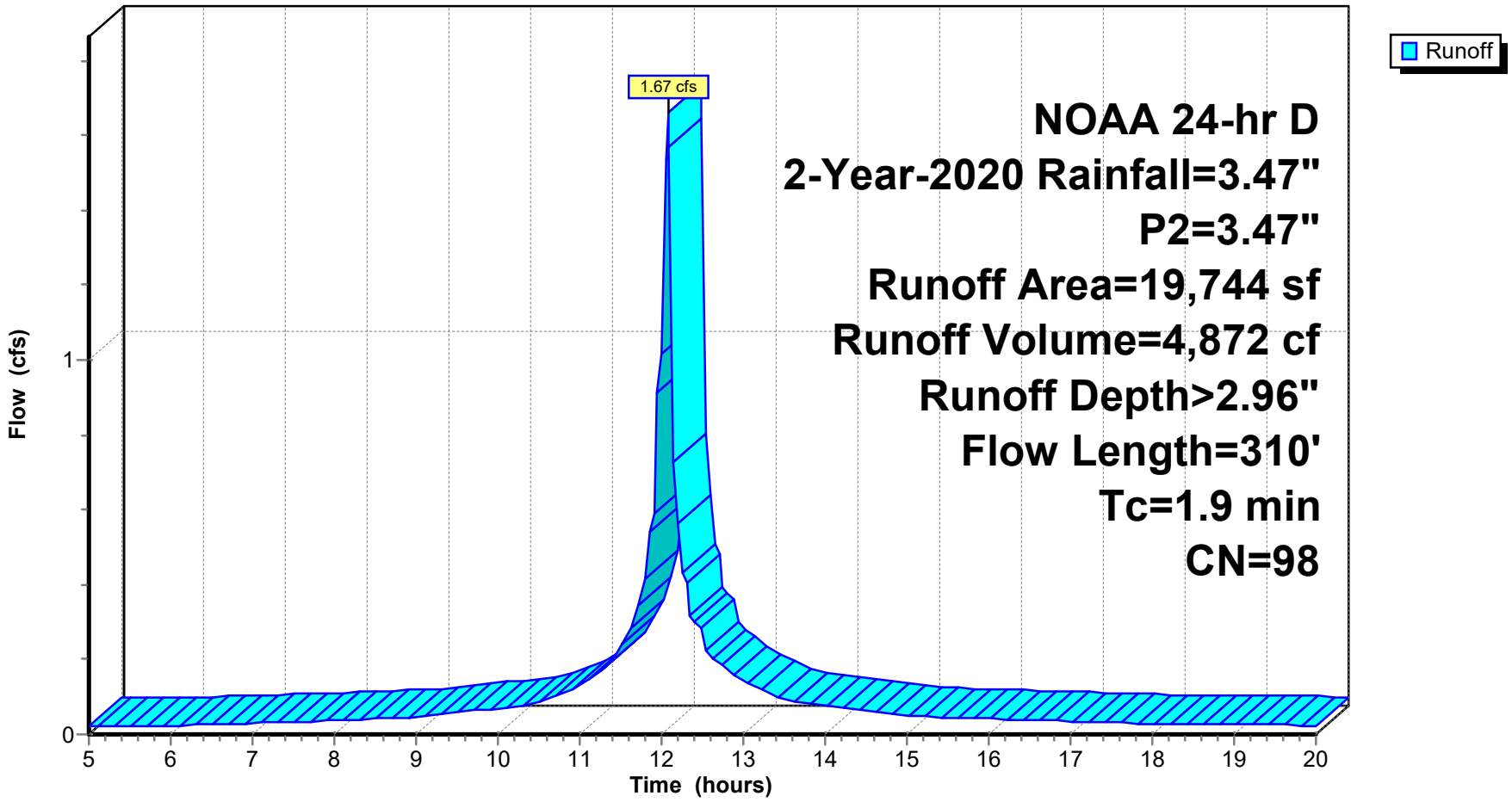
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	19,744	98	ROOF
	19,744		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.43		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.2	33	0.0200	2.87		**Shallow Concentrated Flow, ROOF** Paved Kv= 20.3 fps
0.5	177	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.9	310	Total			

Subcatchment E1A: E1A

Hydrograph



Summary for Subcatchment E1B: E1B

Runoff = 1.12 cfs @ 12.06 hrs, Volume= 3,308 cf, Depth> 2.96"
Routed to Link 4L : DESIGN POINT 1

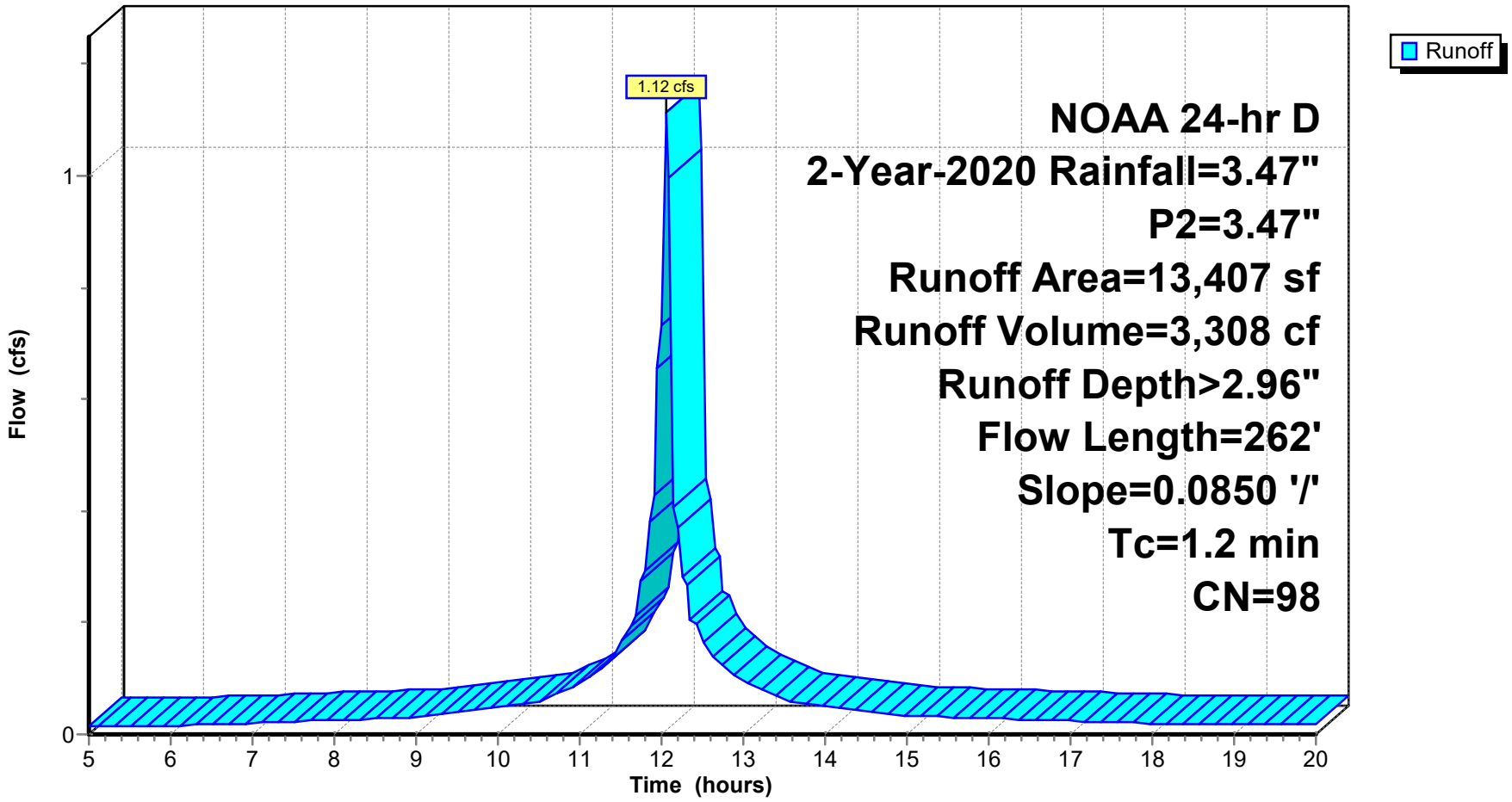
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	13,407	98	PAVED PARKING LOT
	13,407		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	100	0.0850	2.56		**Sheet Flow, PARKING LOT** Smooth surfaces n= 0.011 P2= 3.47"
0.5	162	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.2	262	Total			

Subcatchment E1B: E1B

Hydrograph



Summary for Subcatchment E1C: E1C curb islands

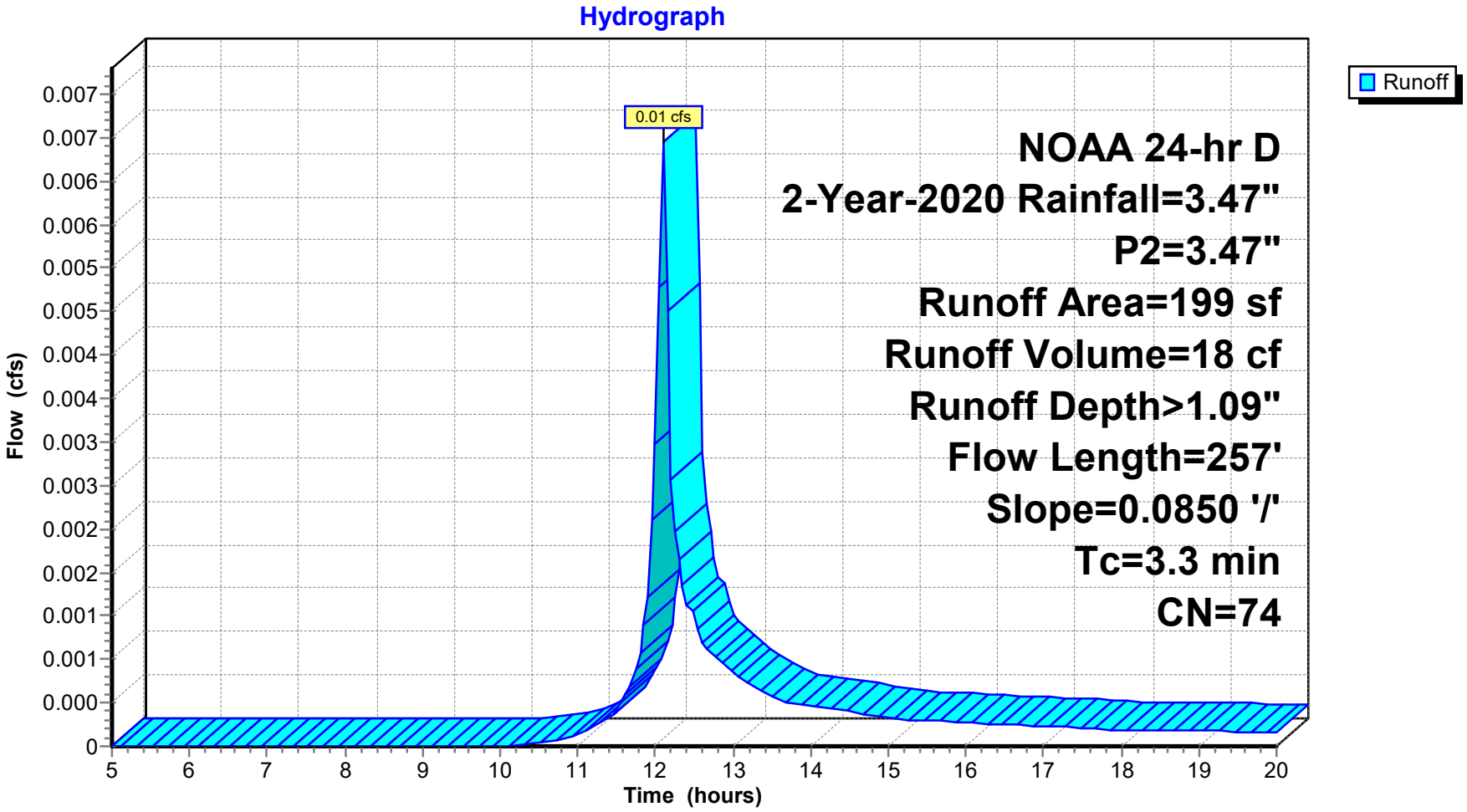
Runoff = 0.01 cfs @ 12.10 hrs, Volume= 18 cf, Depth> 1.09"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	199	74	CURBED ISLANDS
	199		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	43	0.0850	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.47"
0.6	214	0.0850	5.92		**Shallow Concentrated Flow, PAVED** Paved Kv= 20.3 fps
3.3	257	Total			

Subcatchment E1C: E1C curb islands



Summary for Subcatchment E2A: E2A

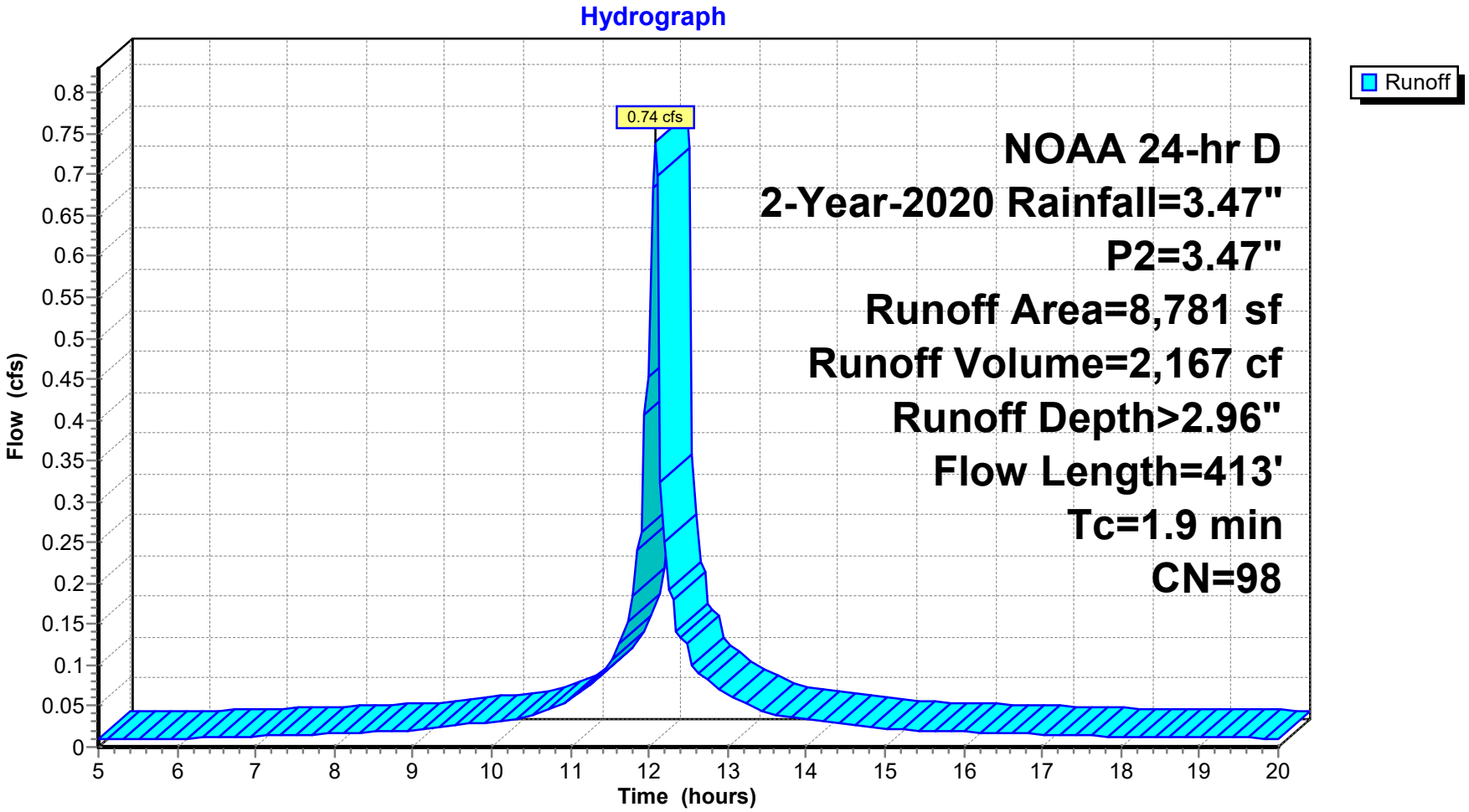
Runoff = 0.74 cfs @ 12.08 hrs, Volume= 2,167 cf, Depth> 2.96"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	8,781	98	PARKING LOT
	8,781		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	100	0.0700	2.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"
1.2	313	0.0473	4.41		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.9	413	Total			

Subcatchment E2A: E2A



Summary for Subcatchment E2B: E2B

Runoff = 0.03 cfs @ 12.13 hrs, Volume= 92 cf, Depth> 1.09"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

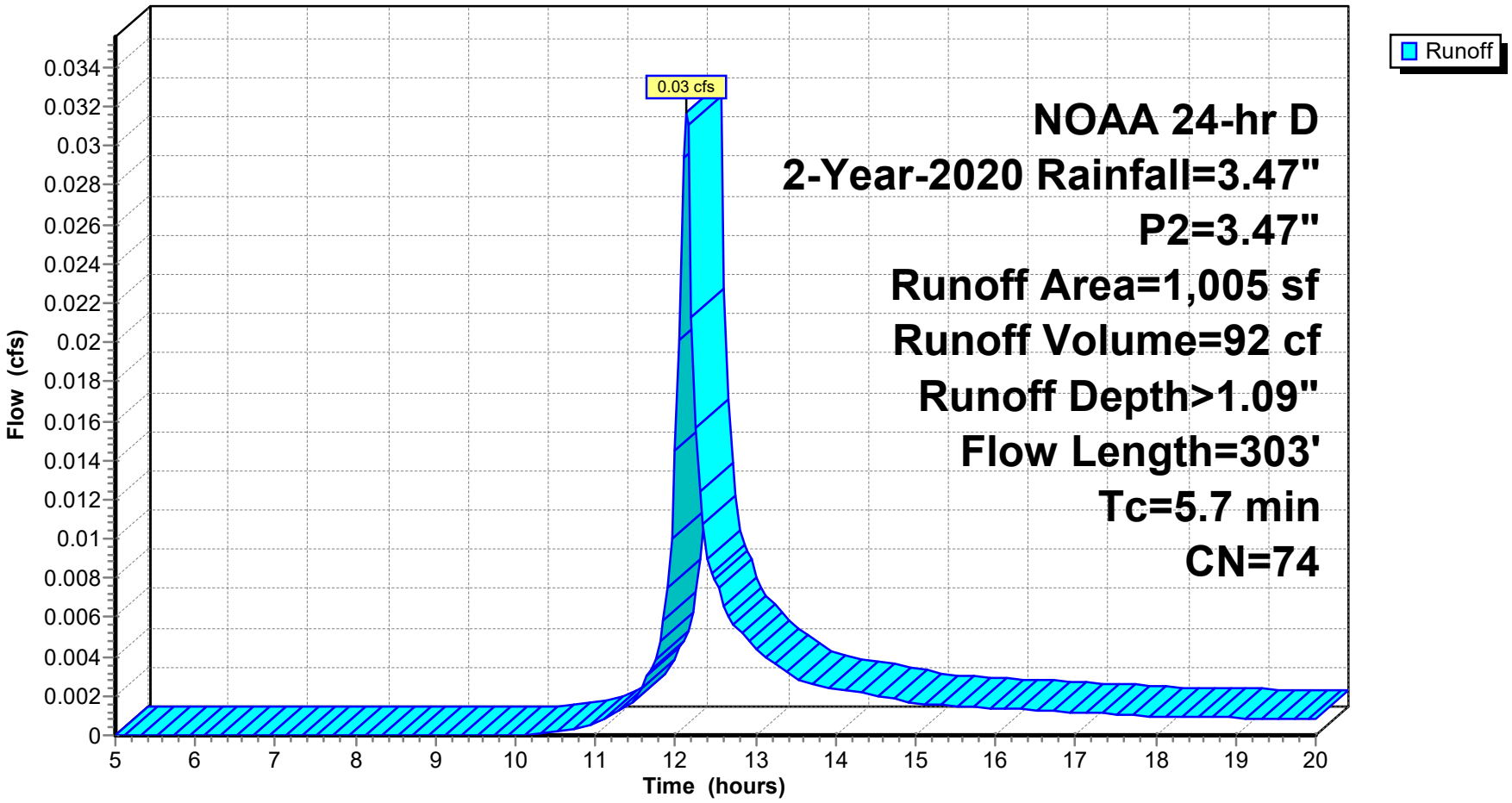
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
1,005	74	>75% Grass cover, Good, HSG C
1,005		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	30	0.0300	0.11		**Sheet Flow, LANDSCAPE** Grass: Dense n= 0.240 P2= 3.47"
0.6	70	0.0500	1.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"
0.7	203	0.0550	4.76		**Shallow Concentrated Flow, PARKING AND ROAD** Paved Kv= 20.3 fps
5.7	303	Total			

Subcatchment E2B: E2B

Hydrograph



Summary for Subcatchment E2C: E2C

Runoff = 0.05 cfs @ 12.06 hrs, Volume= 135 cf, Depth> 2.96"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

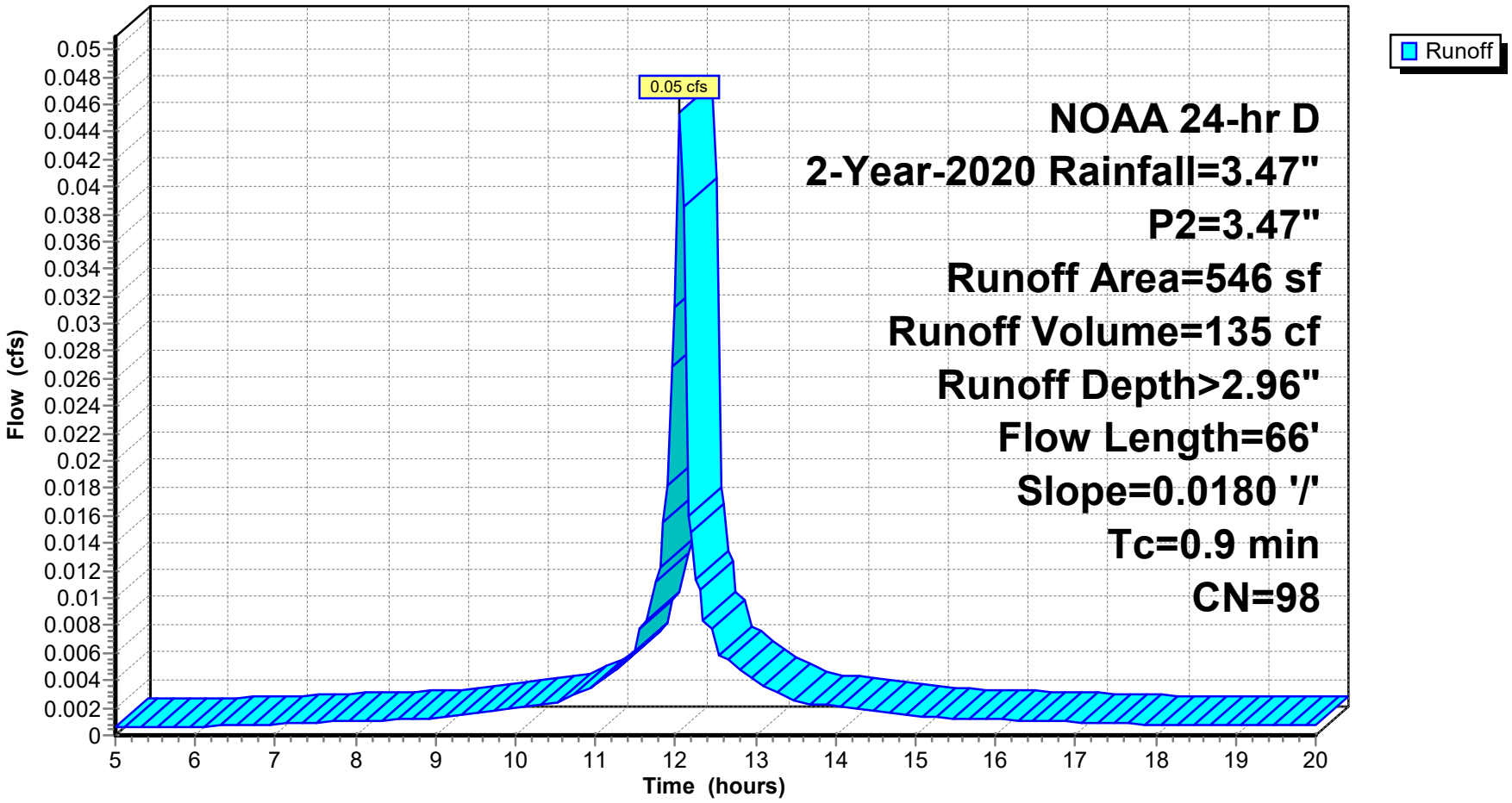
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	546	98	SIDEWALK
	546		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	66	0.0180	1.26		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"

Subcatchment E2C: E2C

Hydrograph

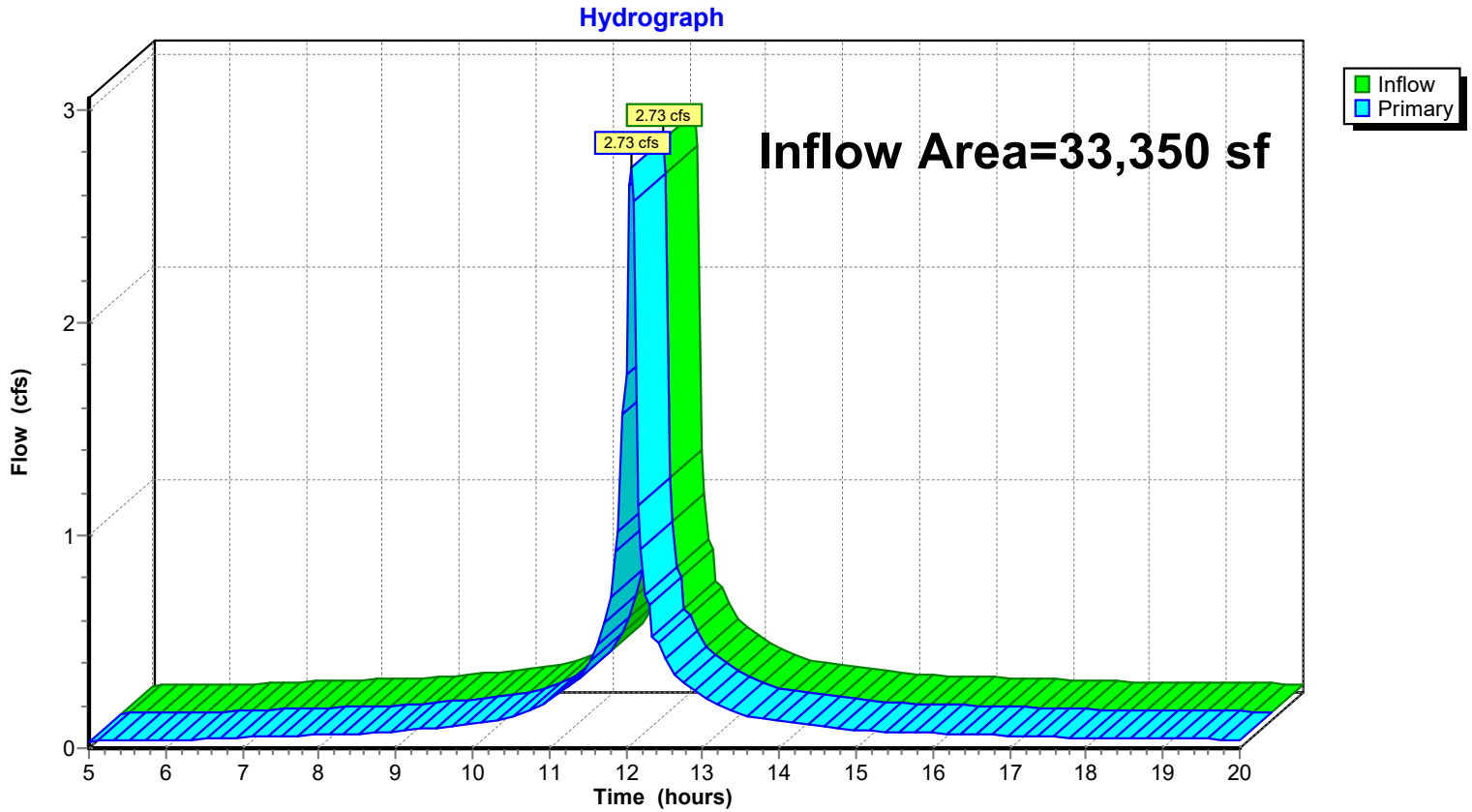


Summary for Link 4L: DESIGN POINT 1

Inflow Area = 33,350 sf, 99.40% Impervious, Inflow Depth > 2.95" for 2-Year-2020 event
Inflow = 2.73 cfs @ 12.07 hrs, Volume= 8,198 cf
Primary = 2.73 cfs @ 12.07 hrs, Volume= 8,198 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: DESIGN POINT 1

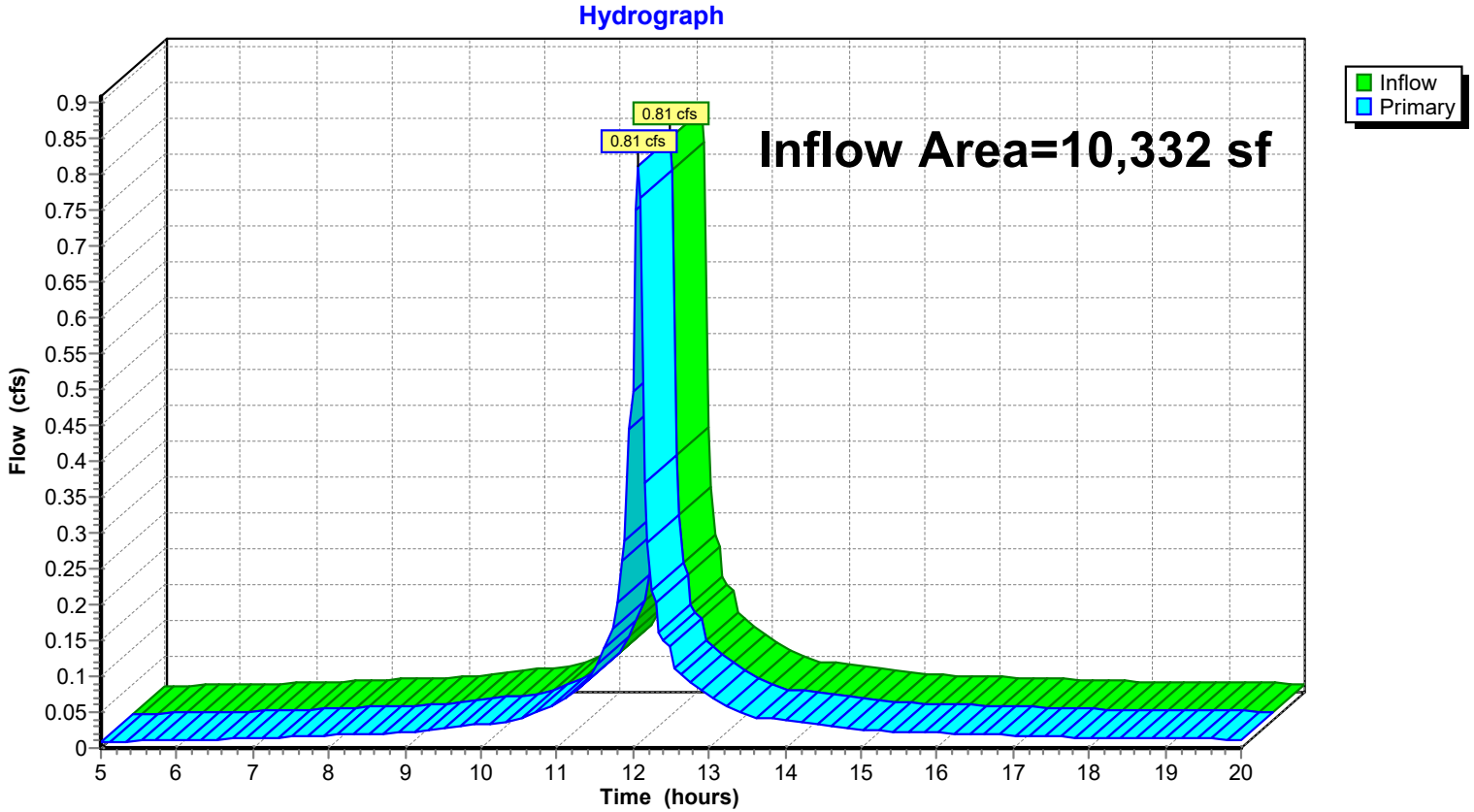


Summary for Link 5L: EXIST TOTAL BLOOMFIELD AVE

Inflow Area = 10,332 sf, 90.27% Impervious, Inflow Depth > 2.78" for 2-Year-2020 event
Inflow = 0.81 cfs @ 12.08 hrs, Volume= 2,393 cf
Primary = 0.81 cfs @ 12.08 hrs, Volume= 2,393 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: EXIST TOTAL BLOOMFIELD AVE

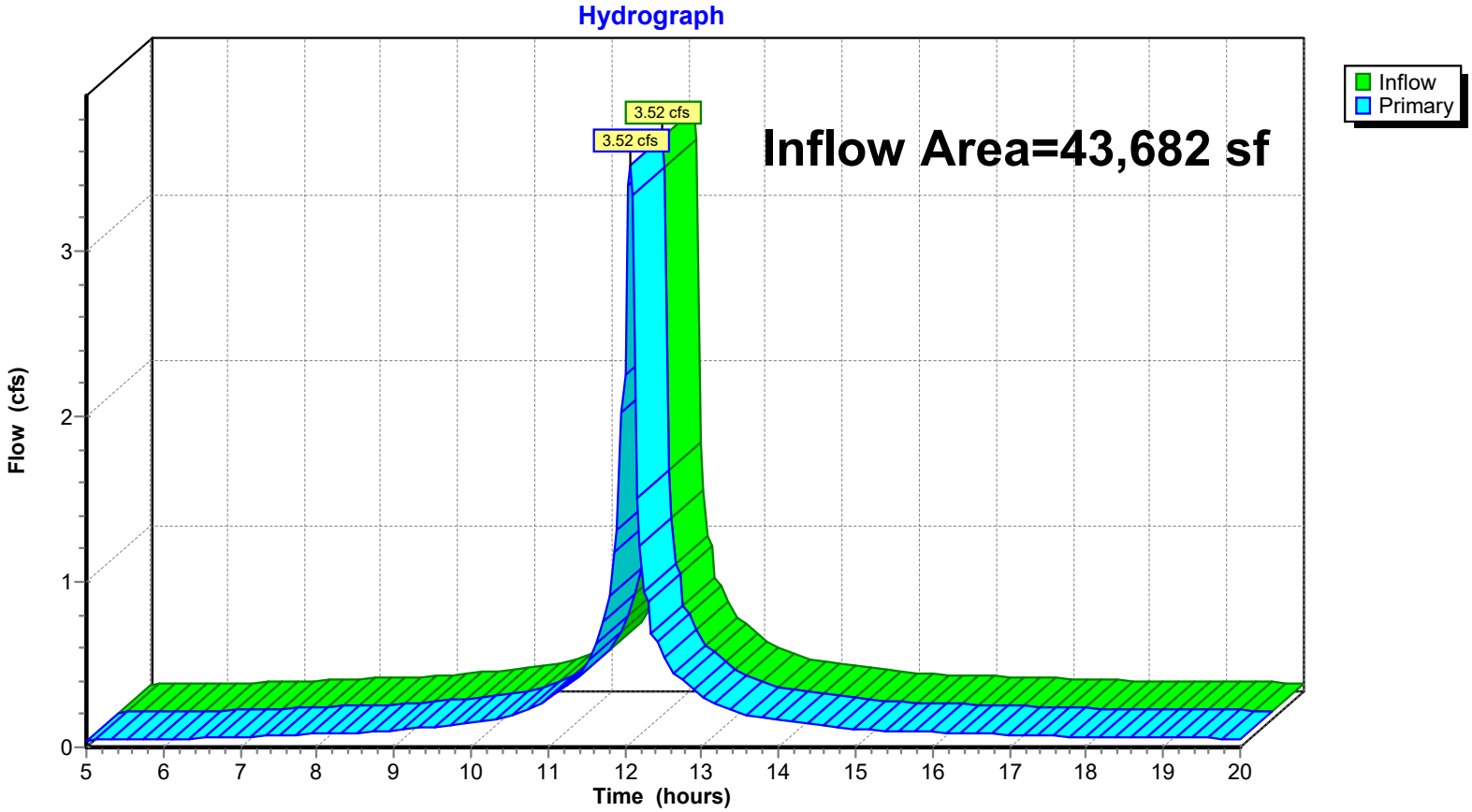


Summary for Link 7L: EXIST SITE TOTAL

Inflow Area = 43,682 sf, 97.24% Impervious, Inflow Depth > 2.91" for 2-Year-2020 event
Inflow = 3.52 cfs @ 12.07 hrs, Volume= 10,591 cf
Primary = 3.52 cfs @ 12.07 hrs, Volume= 10,591 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: EXIST SITE TOTAL



Summary for Subcatchment E1A: E1A

Runoff = 1.97 cfs @ 12.08 hrs, Volume= 5,783 cf, Depth> 3.51"
Routed to Link 4L : DESIGN POINT 1

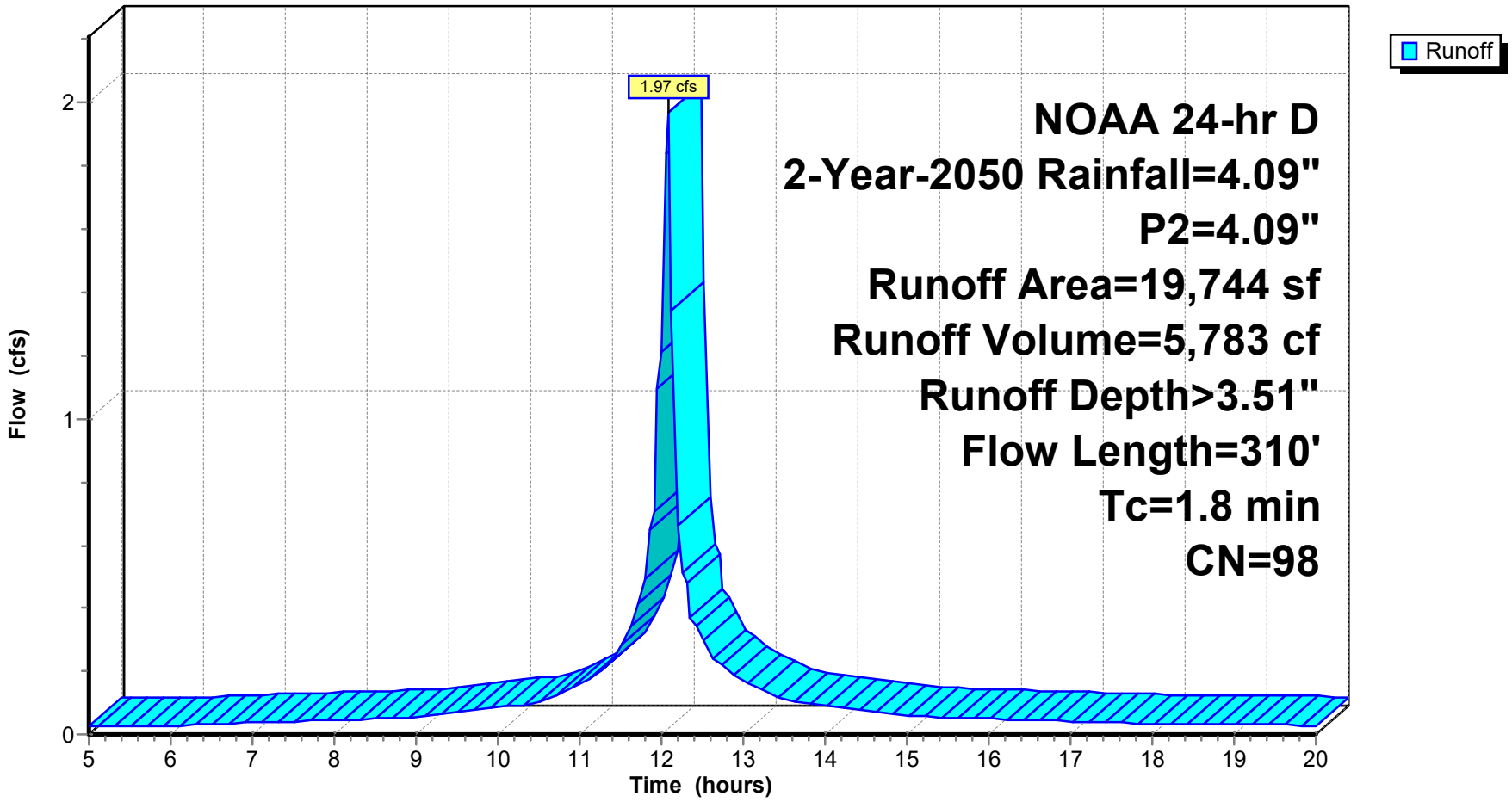
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	19,744	98	ROOF
	19,744		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0200	1.56		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.2	33	0.0200	2.87		**Shallow Concentrated Flow, ROOF** Paved Kv= 20.3 fps
0.5	177	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.8	310	Total			

Subcatchment E1A: E1A

Hydrograph



Summary for Subcatchment E1B: E1B

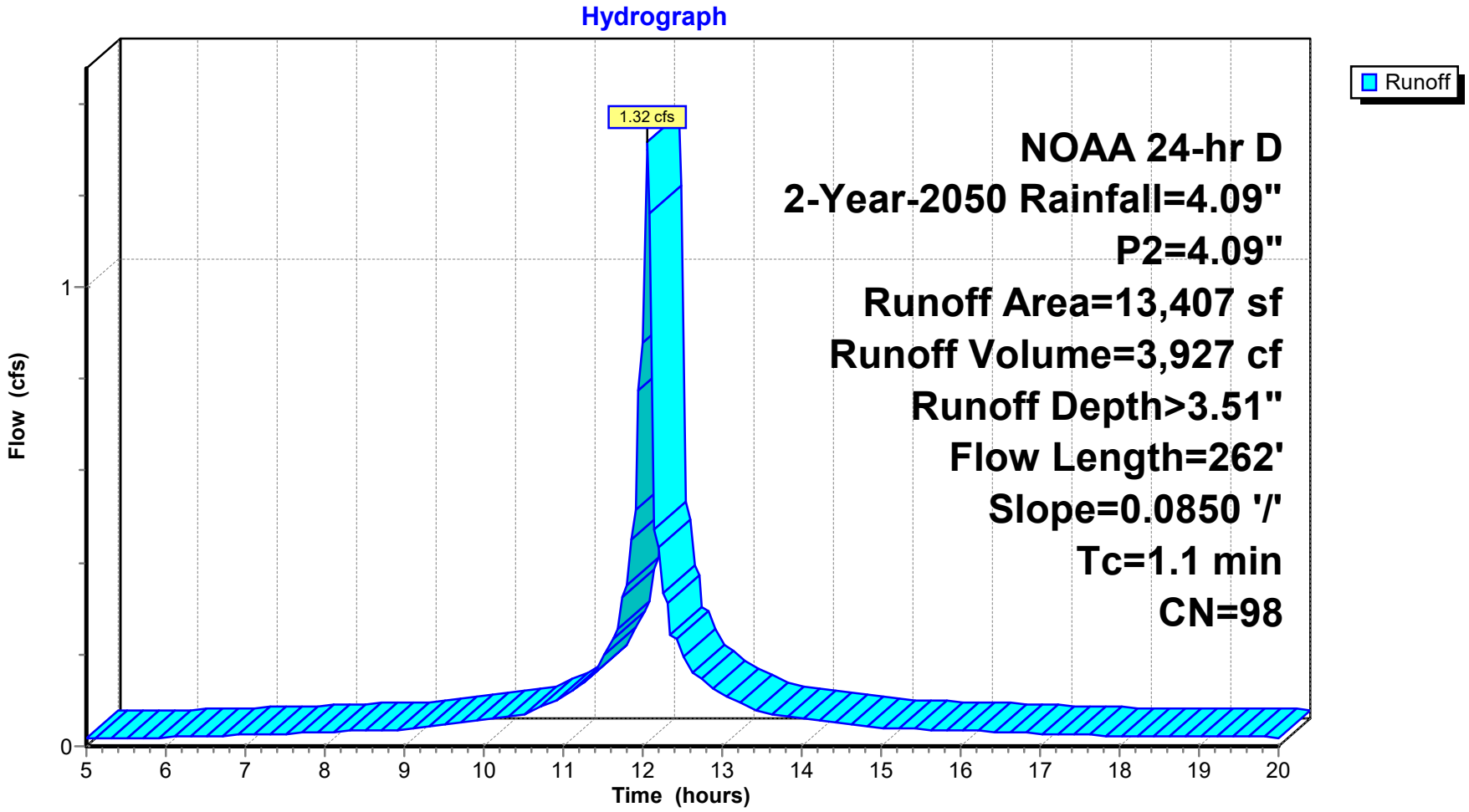
Runoff = 1.32 cfs @ 12.06 hrs, Volume= 3,927 cf, Depth> 3.51"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	13,407	98	PAVED PARKING LOT
	13,407		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	100	0.0850	2.77		**Sheet Flow, PARKING LOT** Smooth surfaces n= 0.011 P2= 4.09"
0.5	162	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.1	262	Total			

Subcatchment E1B: E1B



Summary for Subcatchment E1C: E1C curb islands

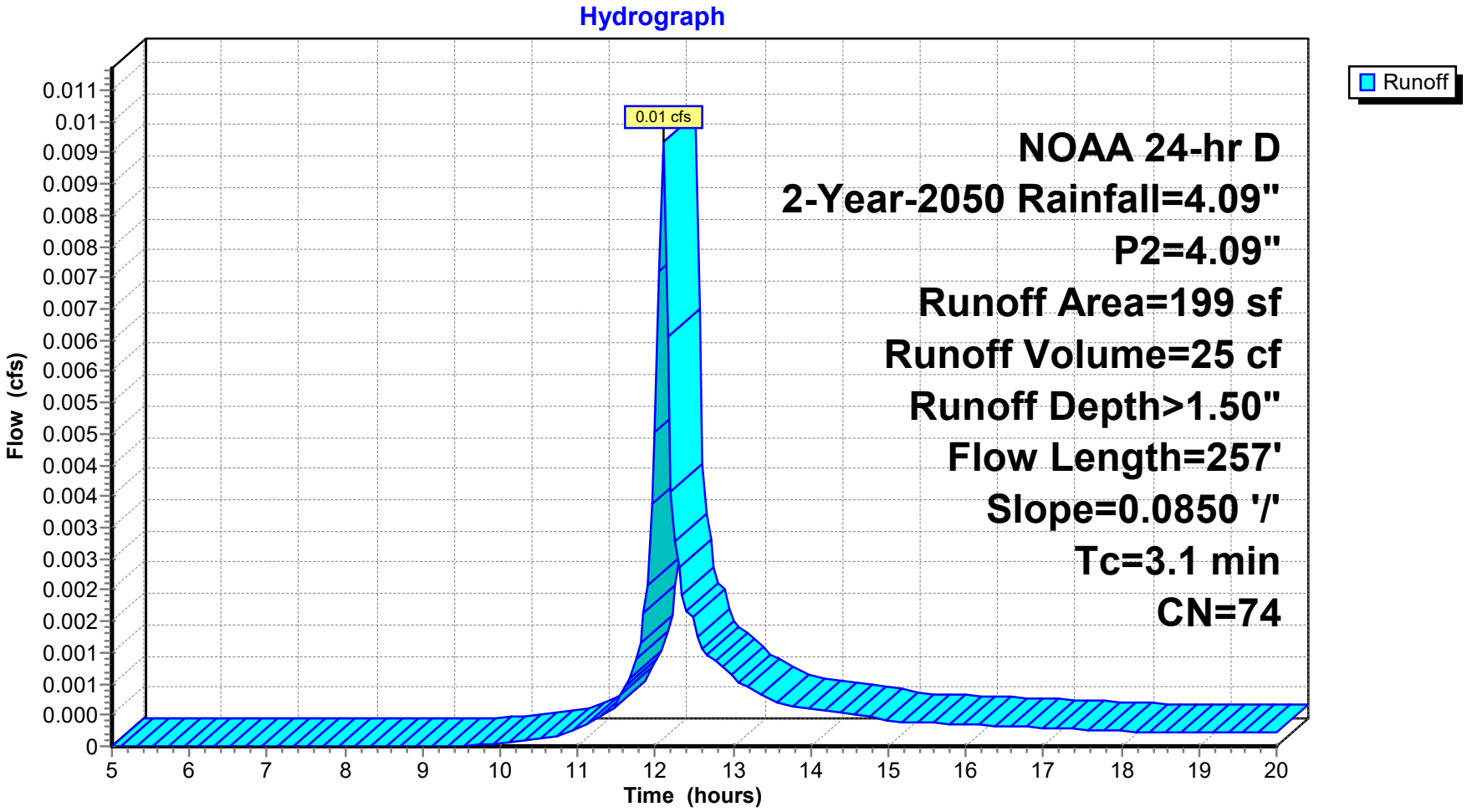
Runoff = 0.01 cfs @ 12.09 hrs, Volume= 25 cf, Depth> 1.50"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	199	74	CURBED ISLANDS
	199		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	43	0.0850	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 4.09"
0.6	214	0.0850	5.92		**Shallow Concentrated Flow, PAVED** Paved Kv= 20.3 fps
3.1	257	Total			

Subcatchment E1C: E1C curb islands



Summary for Subcatchment E2A: E2A

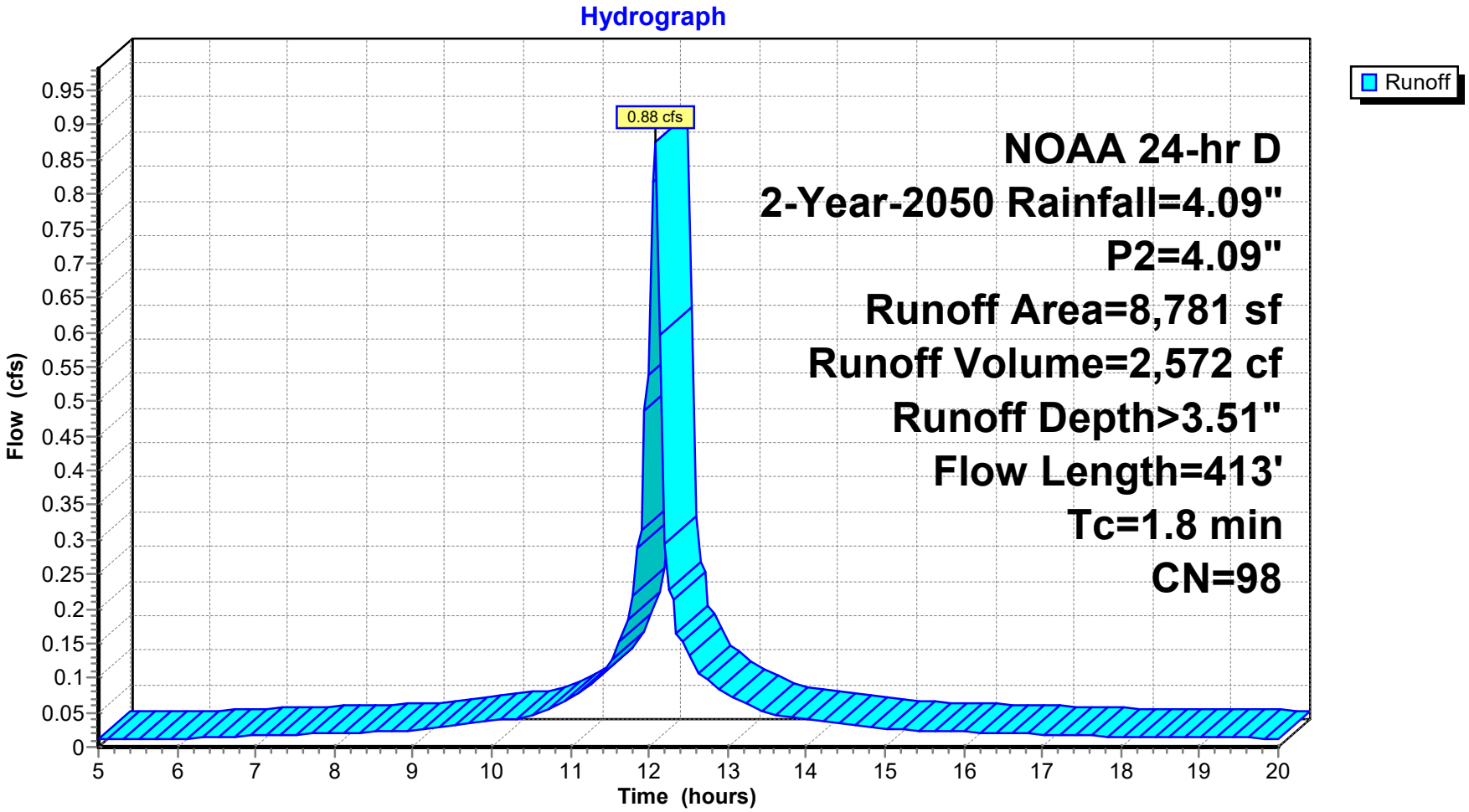
Runoff = 0.88 cfs @ 12.08 hrs, Volume= 2,572 cf, Depth> 3.51"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	8,781	98	PARKING LOT
	8,781		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	100	0.0700	2.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"
1.2	313	0.0473	4.41		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	413	Total			

Subcatchment E2A: E2A



Summary for Subcatchment E2B: E2B

Runoff = 0.04 cfs @ 12.13 hrs, Volume= 126 cf, Depth> 1.50"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

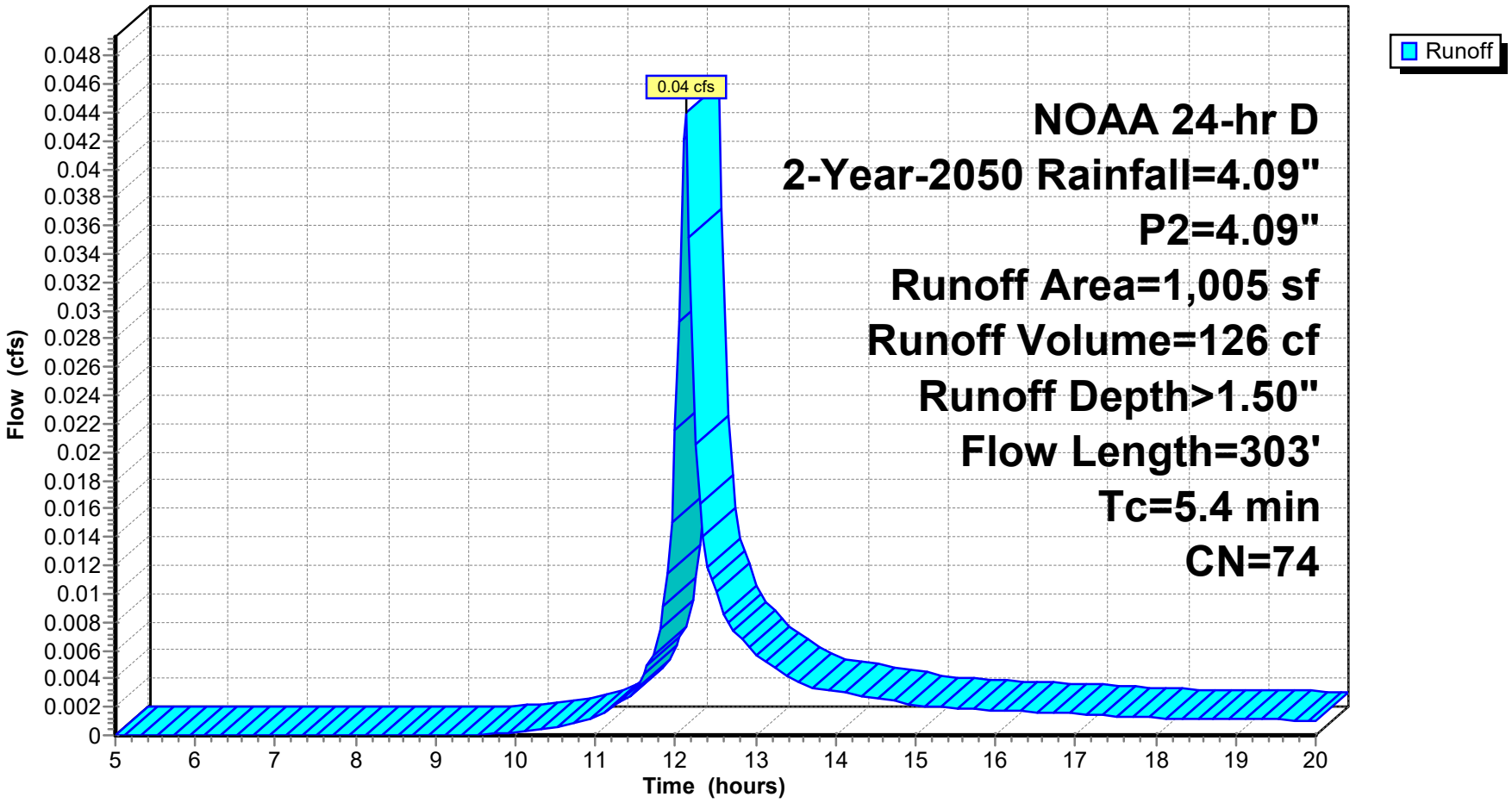
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
1,005	74	>75% Grass cover, Good, HSG C
1,005		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	30	0.0300	0.12		**Sheet Flow, LANDSCAPE** Grass: Dense n= 0.240 P2= 4.09"
0.6	70	0.0500	2.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"
0.7	203	0.0550	4.76		**Shallow Concentrated Flow, PARKING AND ROAD** Paved Kv= 20.3 fps
5.4	303	Total			

Subcatchment E2B: E2B

Hydrograph



Summary for Subcatchment E2C: E2C

Runoff = 0.05 cfs @ 12.06 hrs, Volume= 160 cf, Depth> 3.51"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

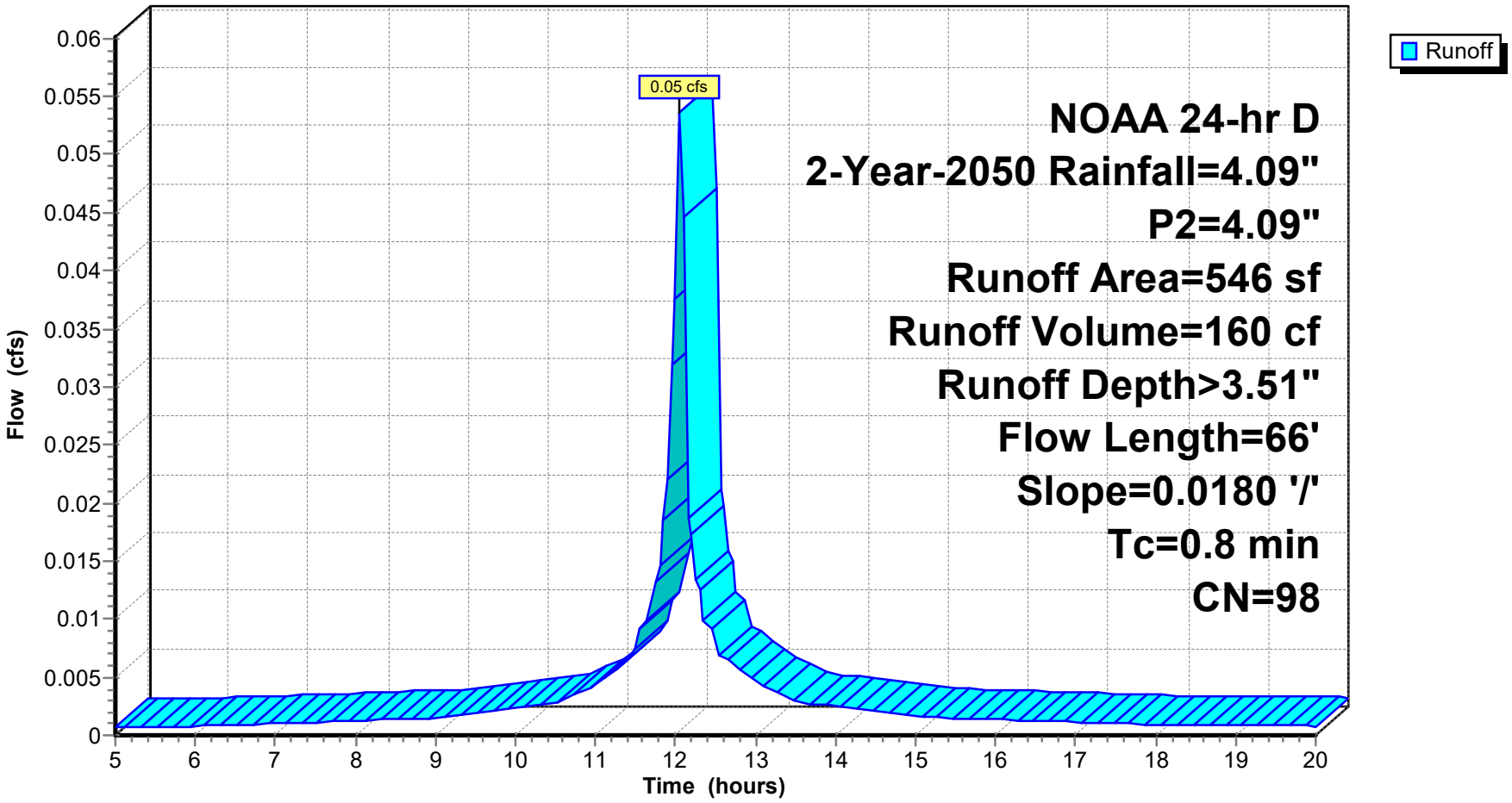
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	546	98	SIDEWALK
	546		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	66	0.0180	1.37		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"

Subcatchment E2C: E2C

Hydrograph

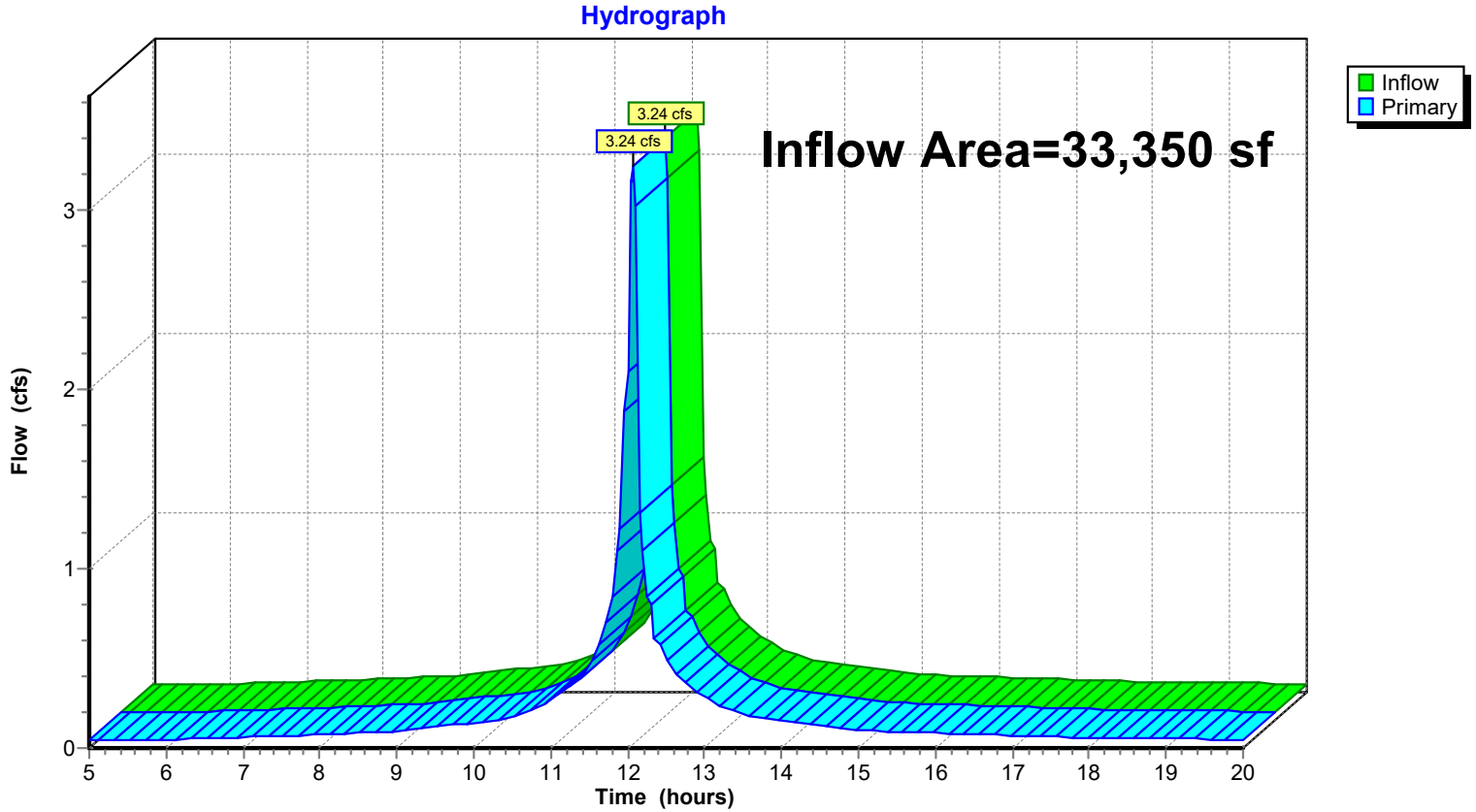


Summary for Link 4L: DESIGN POINT 1

Inflow Area = 33,350 sf, 99.40% Impervious, Inflow Depth > 3.50" for 2-Year-2050 event
Inflow = 3.24 cfs @ 12.07 hrs, Volume= 9,735 cf
Primary = 3.24 cfs @ 12.07 hrs, Volume= 9,735 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: DESIGN POINT 1

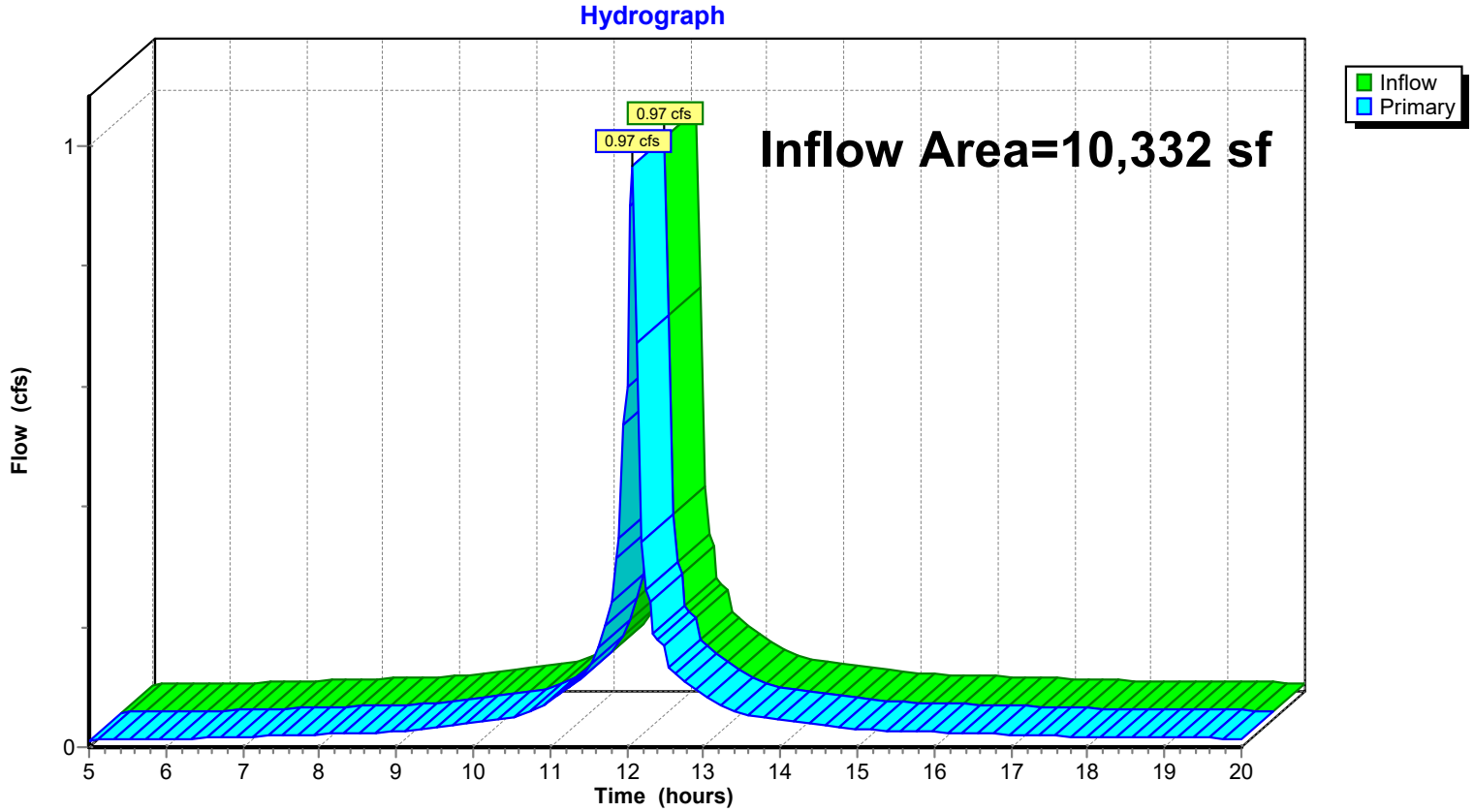


Summary for Link 5L: EXIST TOTAL BLOOMFIELD AVE

Inflow Area = 10,332 sf, 90.27% Impervious, Inflow Depth > 3.32" for 2-Year-2050 event
Inflow = 0.97 cfs @ 12.08 hrs, Volume= 2,858 cf
Primary = 0.97 cfs @ 12.08 hrs, Volume= 2,858 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: EXIST TOTAL BLOOMFIELD AVE

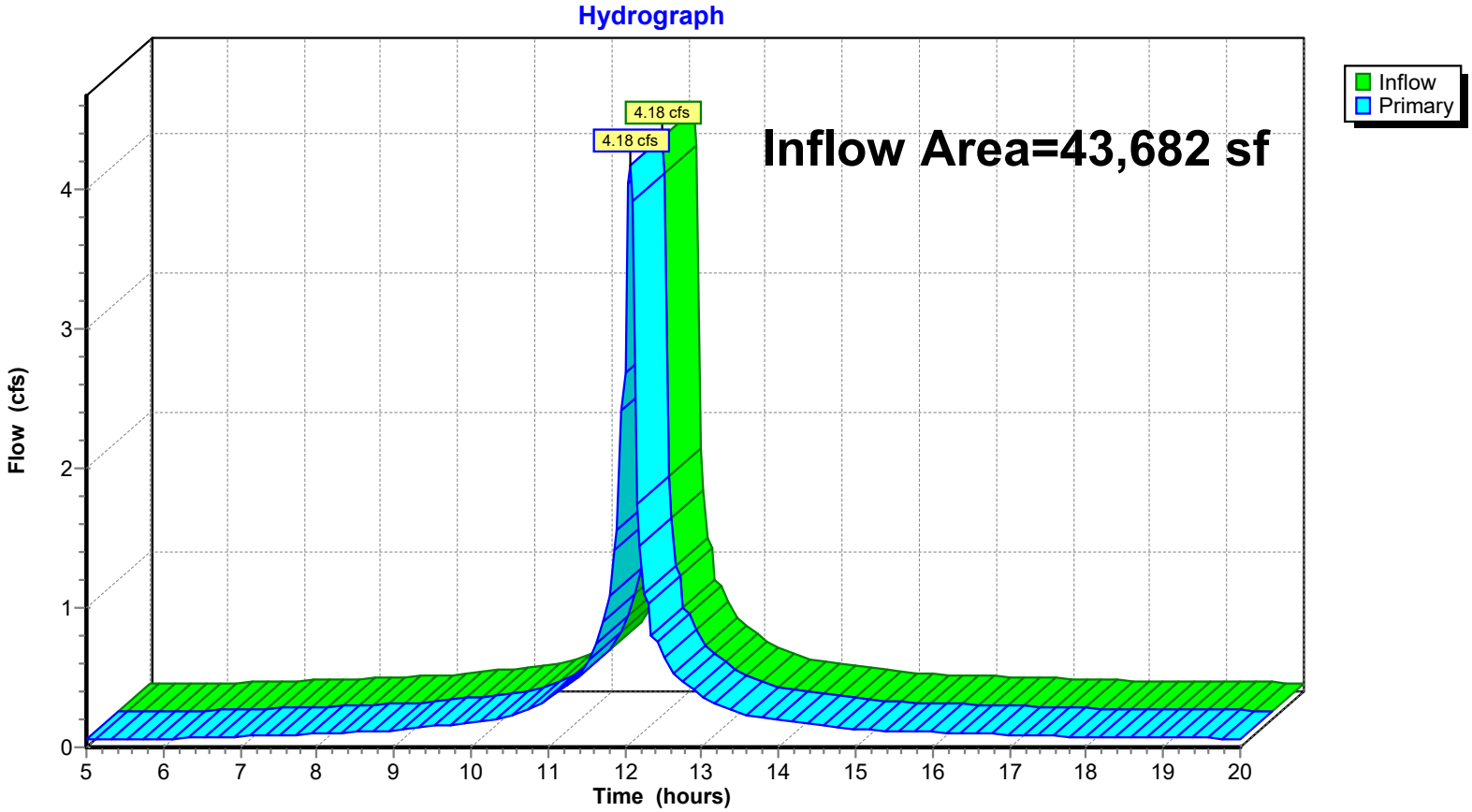


Summary for Link 7L: EXIST SITE TOTAL

Inflow Area = 43,682 sf, 97.24% Impervious, Inflow Depth > 3.46" for 2-Year-2050 event
Inflow = 4.18 cfs @ 12.07 hrs, Volume= 12,592 cf
Primary = 4.18 cfs @ 12.07 hrs, Volume= 12,592 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: EXIST SITE TOTAL



Summary for Subcatchment E1A: E1A

Runoff = 2.60 cfs @ 12.08 hrs, Volume= 7,673 cf, Depth> 4.66"
Routed to Link 4L : DESIGN POINT 1

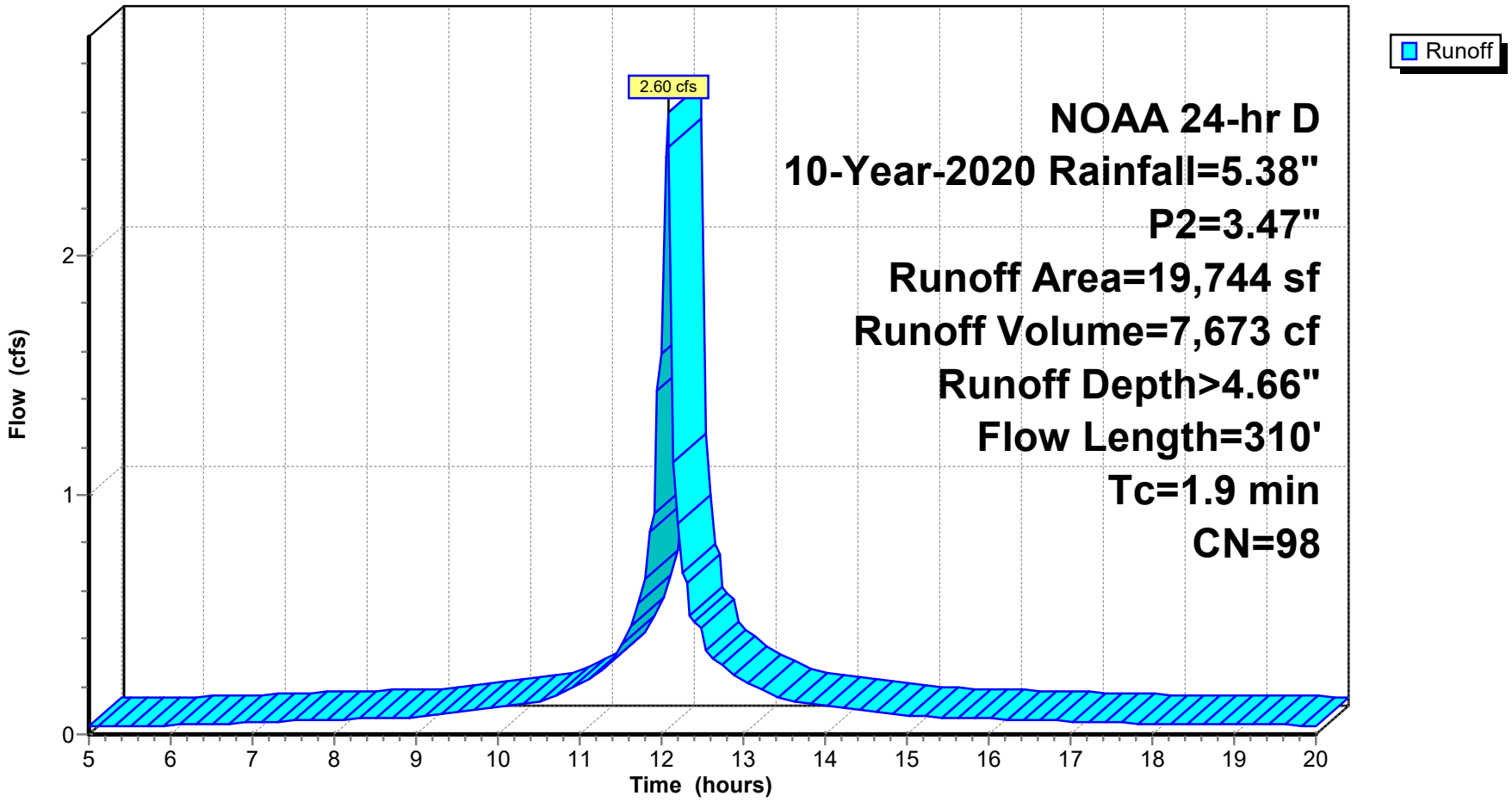
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	19,744	98	ROOF
	19,744		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.43		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.2	33	0.0200	2.87		**Shallow Concentrated Flow, ROOF** Paved Kv= 20.3 fps
0.5	177	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.9	310	Total			

Subcatchment E1A: E1A

Hydrograph



Summary for Subcatchment E1B: E1B

Runoff = 1.74 cfs @ 12.06 hrs, Volume= 5,210 cf, Depth> 4.66"
Routed to Link 4L : DESIGN POINT 1

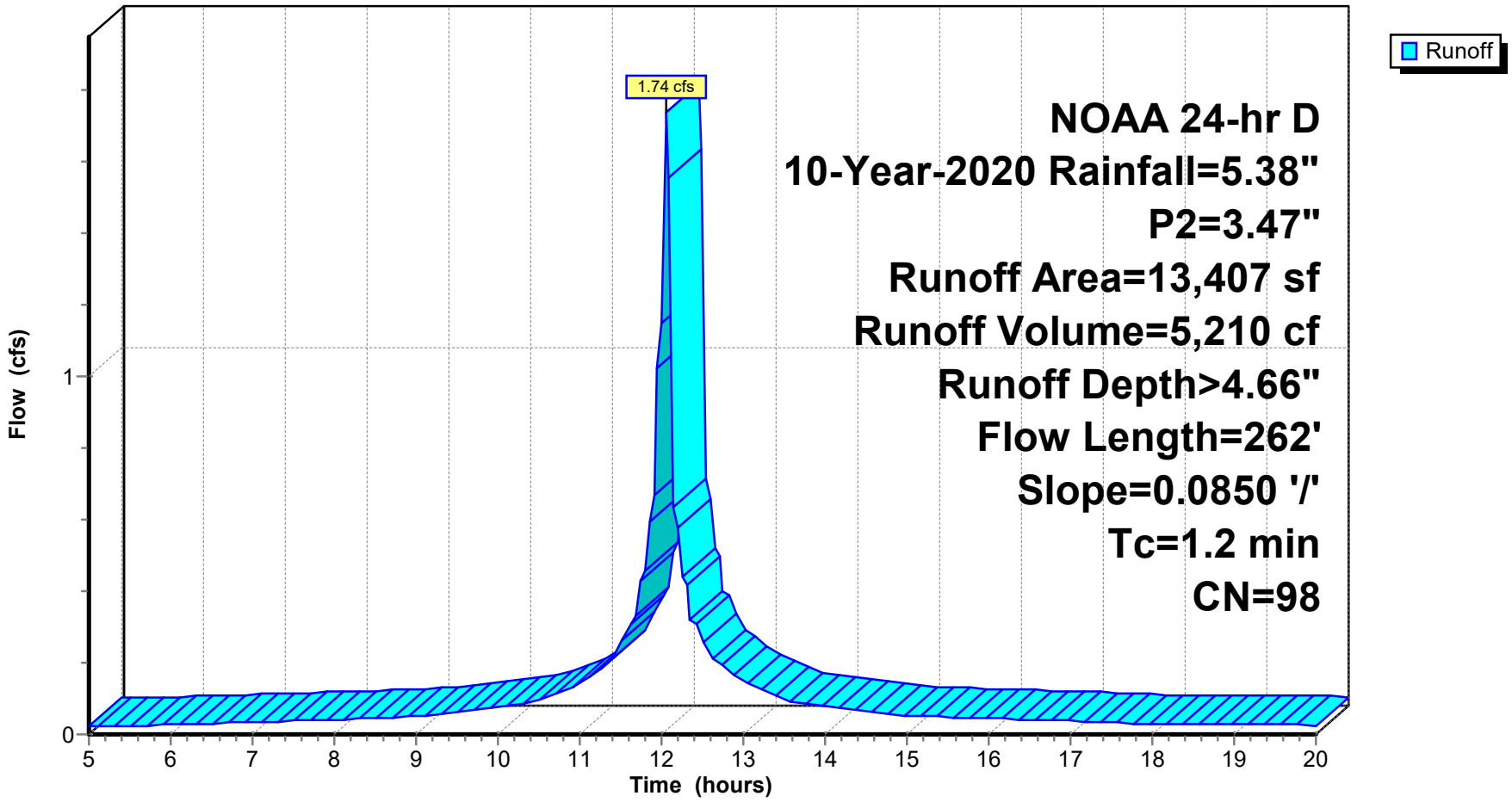
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	13,407	98	PAVED PARKING LOT
	13,407		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	100	0.0850	2.56		**Sheet Flow, PARKING LOT** Smooth surfaces n= 0.011 P2= 3.47"
0.5	162	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.2	262	Total			

Subcatchment E1B: E1B

Hydrograph



Summary for Subcatchment E1C: E1C curb islands

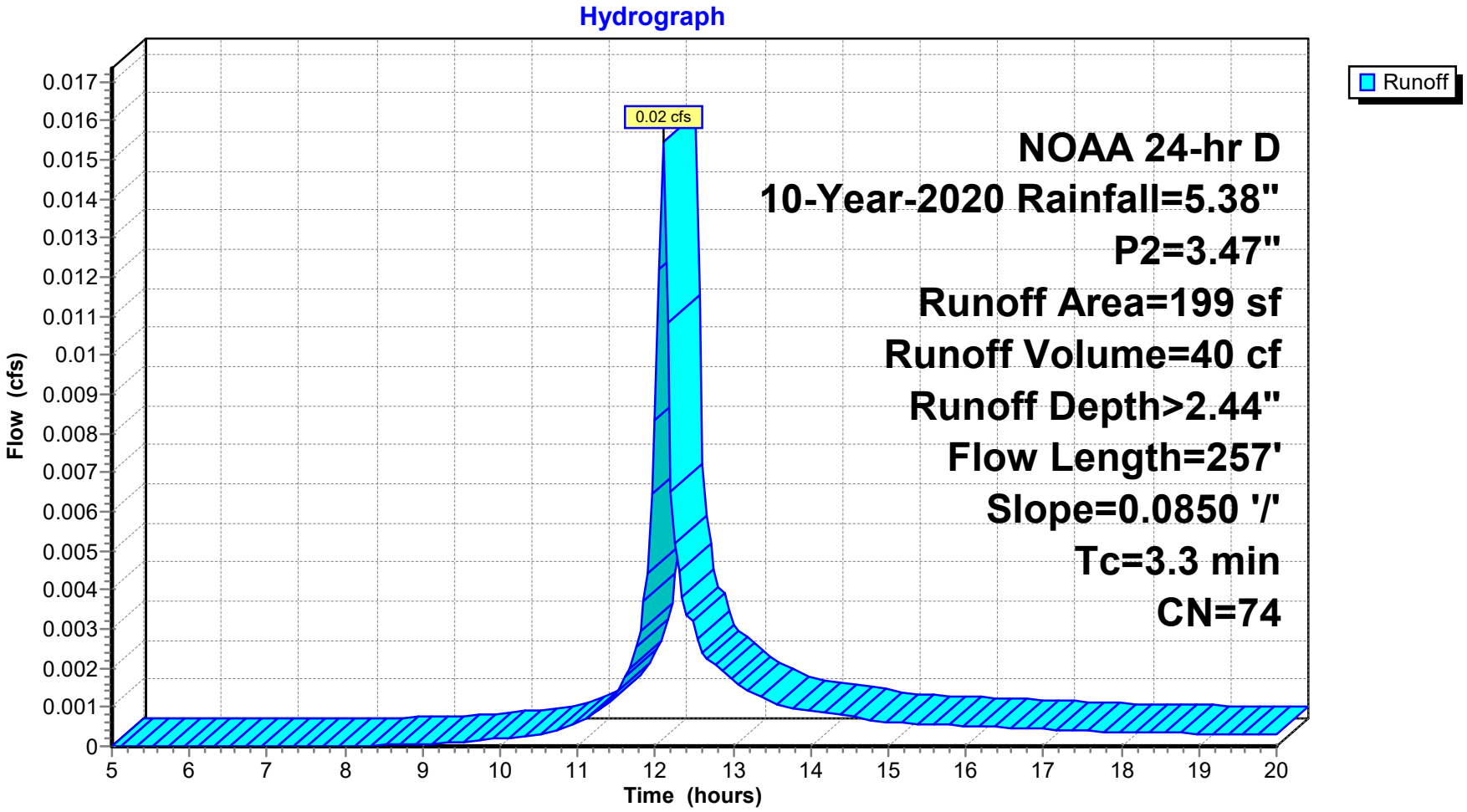
Runoff = 0.02 cfs @ 12.10 hrs, Volume= 40 cf, Depth> 2.44"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	199	74	CURBED ISLANDS
	199		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	43	0.0850	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.47"
0.6	214	0.0850	5.92		**Shallow Concentrated Flow, PAVED** Paved Kv= 20.3 fps
3.3	257	Total			

Subcatchment E1C: E1C curb islands



Summary for Subcatchment E2A: E2A

Runoff = 1.16 cfs @ 12.08 hrs, Volume= 3,412 cf, Depth> 4.66"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

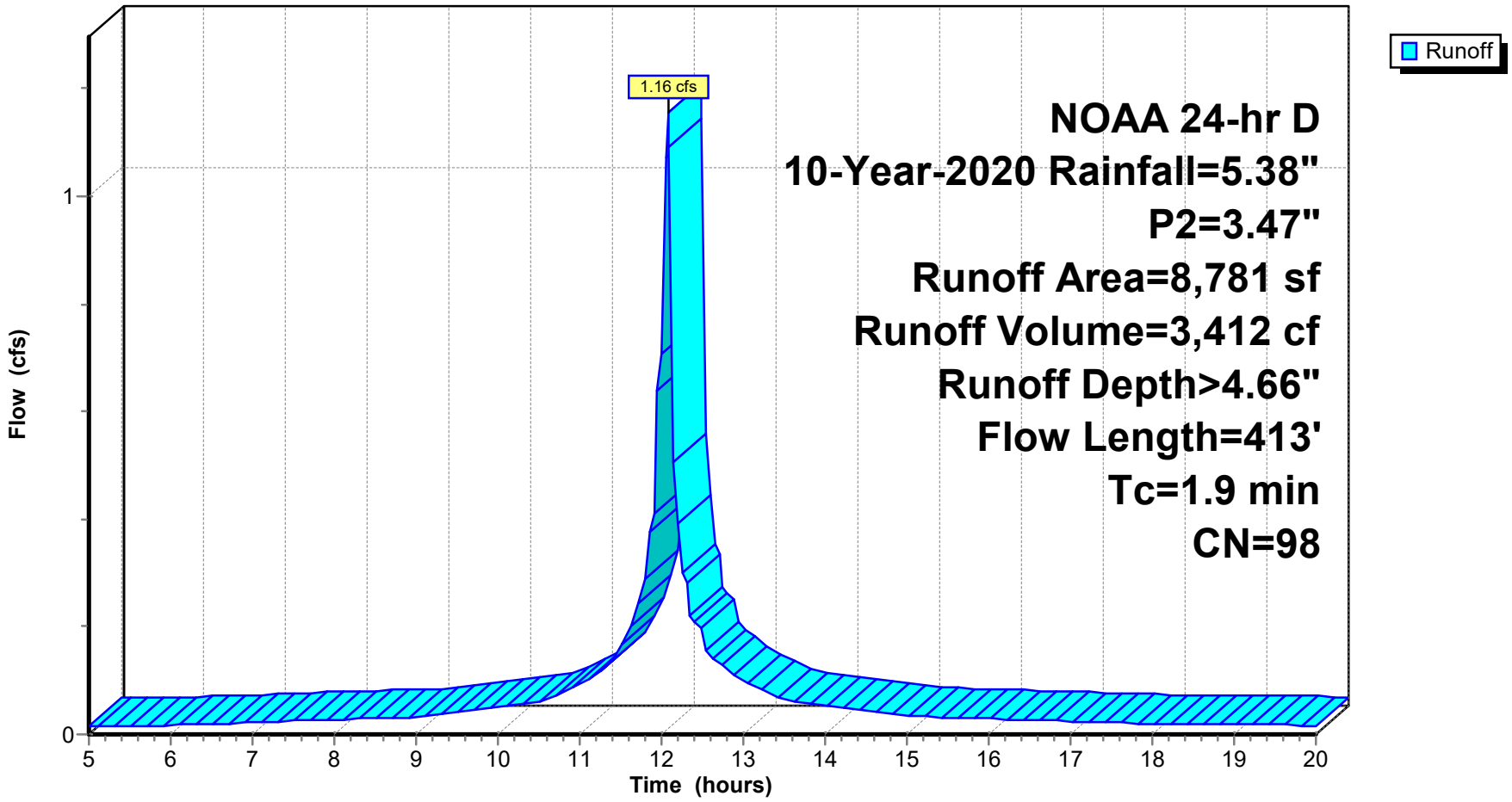
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	8,781	98	PARKING LOT
	8,781		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	100	0.0700	2.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"
1.2	313	0.0473	4.41		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.9	413	Total			

Subcatchment E2A: E2A

Hydrograph



Summary for Subcatchment E2B: E2B

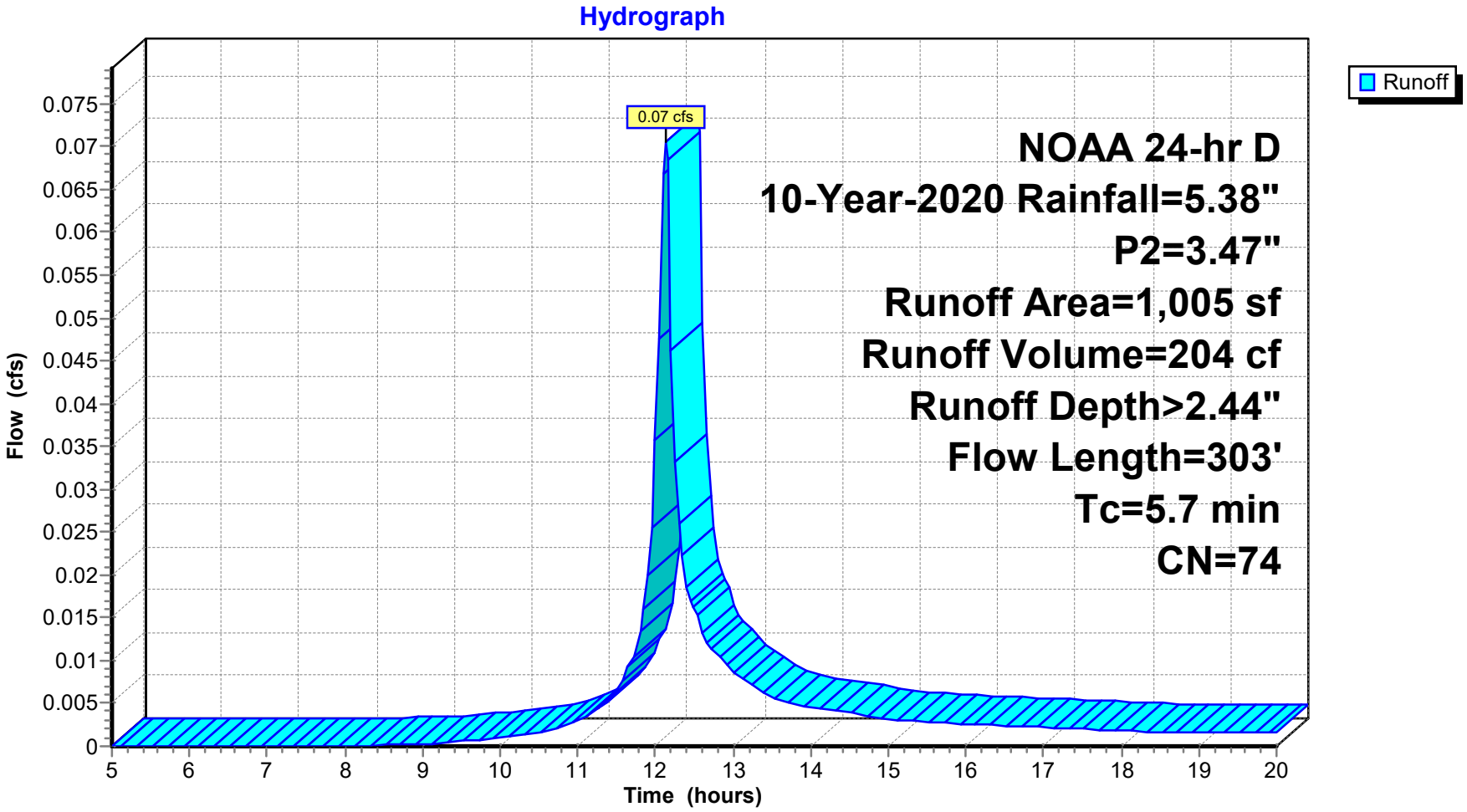
Runoff = 0.07 cfs @ 12.13 hrs, Volume= 204 cf, Depth> 2.44"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
1,005	74	>75% Grass cover, Good, HSG C
1,005		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	30	0.0300	0.11		**Sheet Flow, LANDSCAPE** Grass: Dense n= 0.240 P2= 3.47"
0.6	70	0.0500	1.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"
0.7	203	0.0550	4.76		**Shallow Concentrated Flow, PARKING AND ROAD** Paved Kv= 20.3 fps
5.7	303	Total			

Subcatchment E2B: E2B



Summary for Subcatchment E2C: E2C

Runoff = 0.07 cfs @ 12.06 hrs, Volume= 212 cf, Depth> 4.66"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

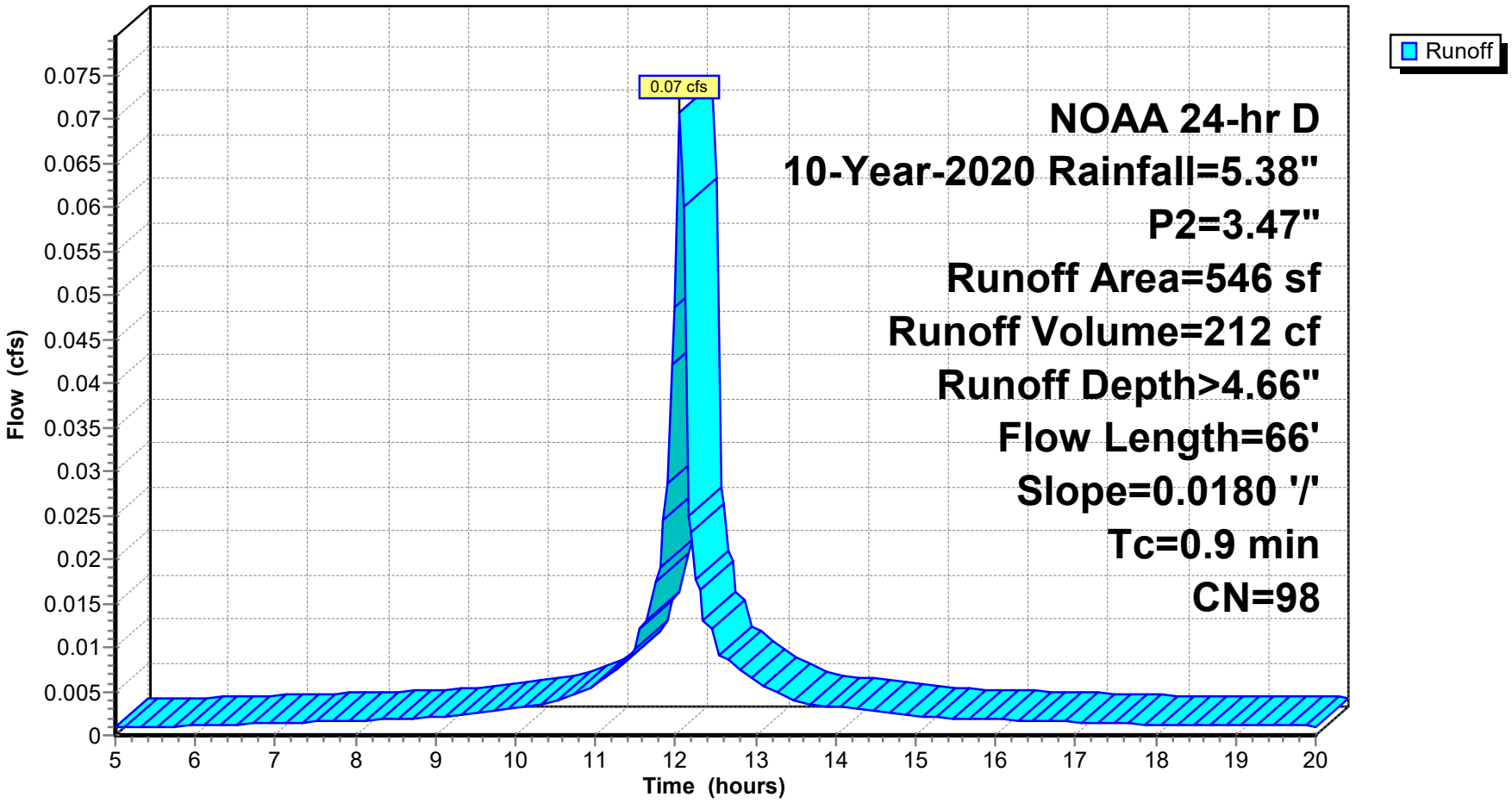
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	546	98	SIDEWALK
	546		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	66	0.0180	1.26		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"

Subcatchment E2C: E2C

Hydrograph

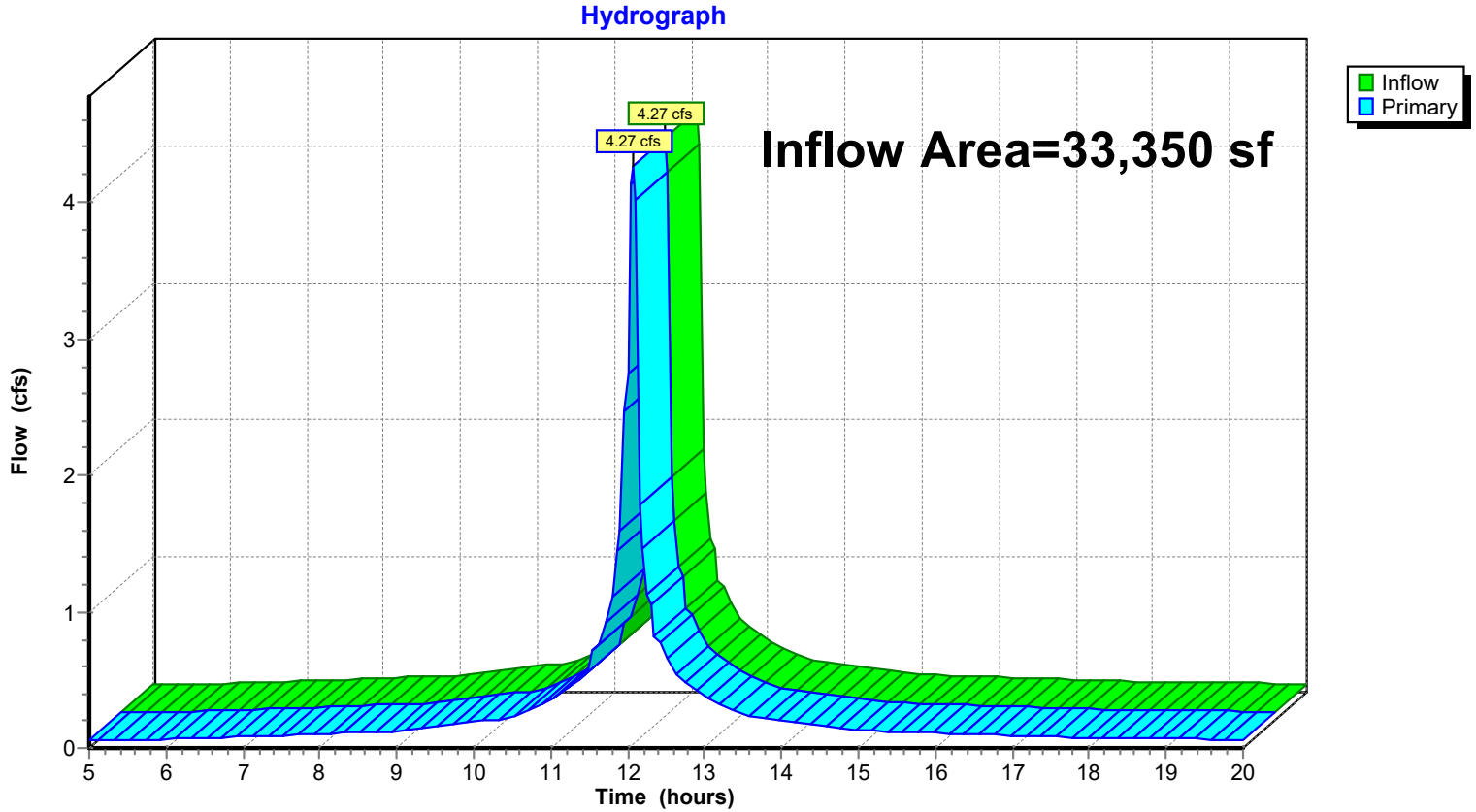


Summary for Link 4L: DESIGN POINT 1

Inflow Area = 33,350 sf, 99.40% Impervious, Inflow Depth > 4.65" for 10-Year-2020 event
Inflow = 4.27 cfs @ 12.07 hrs, Volume= 12,923 cf
Primary = 4.27 cfs @ 12.07 hrs, Volume= 12,923 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: DESIGN POINT 1

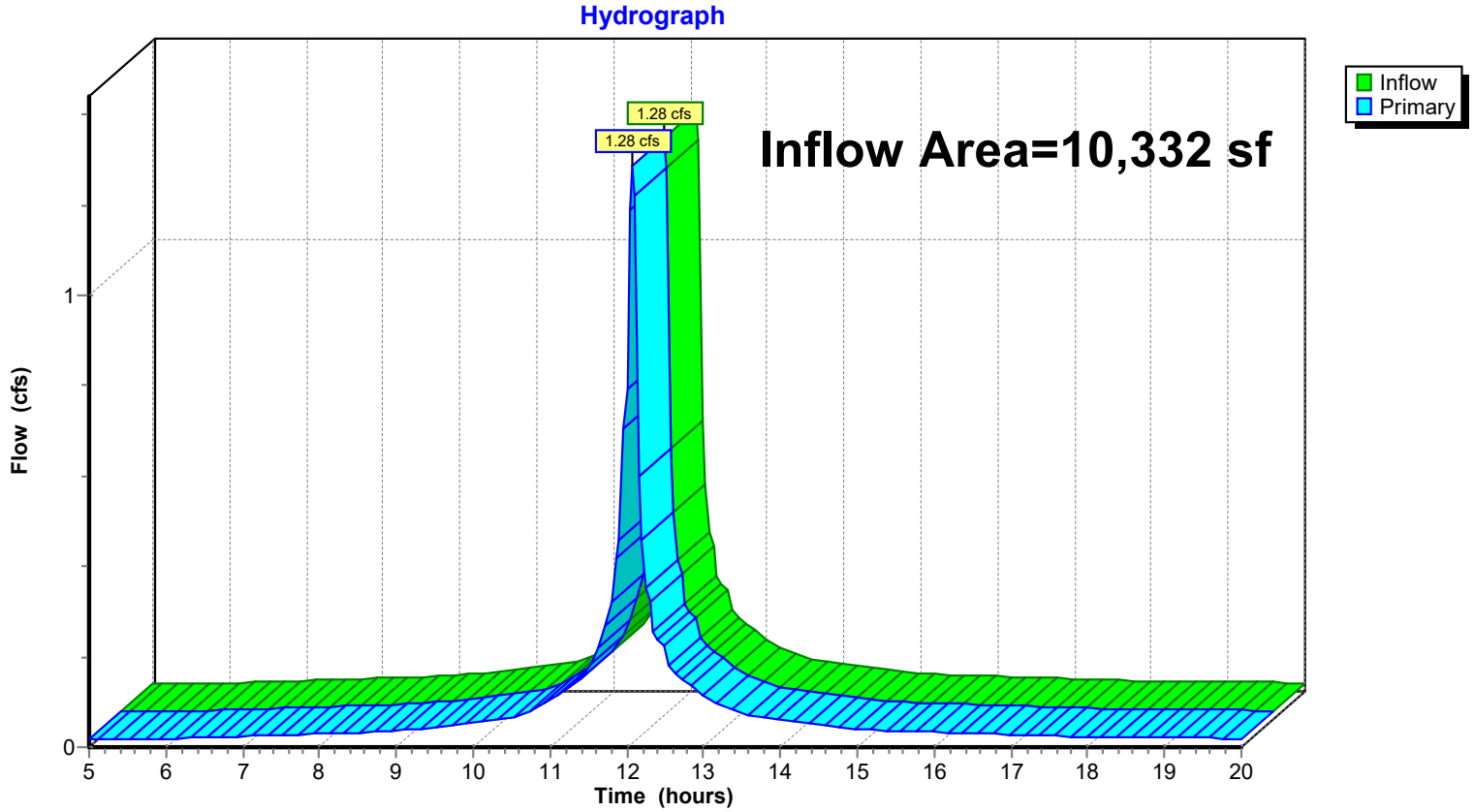


Summary for Link 5L: EXIST TOTAL BLOOMFIELD AVE

Inflow Area = 10,332 sf, 90.27% Impervious, Inflow Depth > 4.45" for 10-Year-2020 event
Inflow = 1.28 cfs @ 12.08 hrs, Volume= 3,829 cf
Primary = 1.28 cfs @ 12.08 hrs, Volume= 3,829 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: EXIST TOTAL BLOOMFIELD AVE

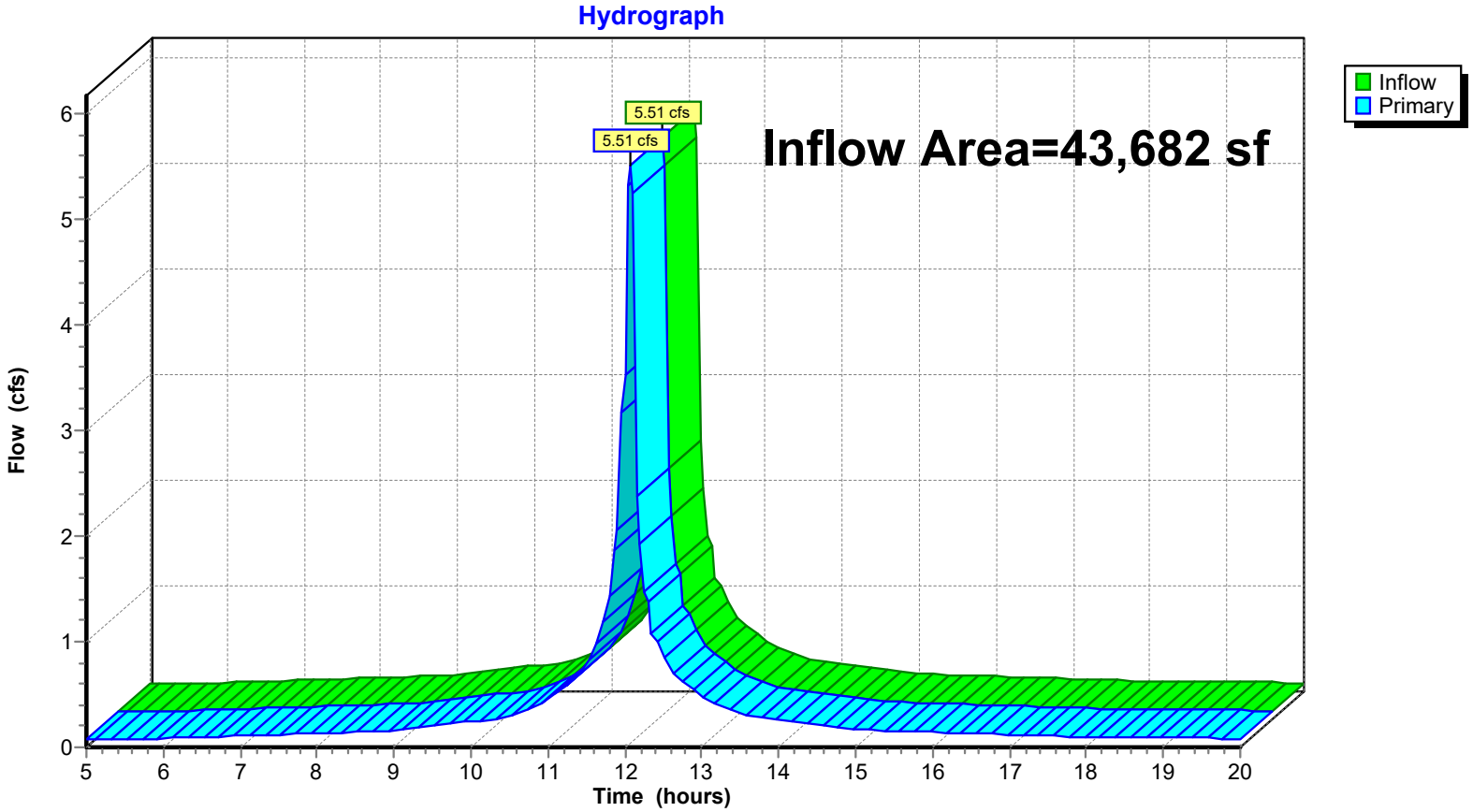


Summary for Link 7L: EXIST SITE TOTAL

Inflow Area = 43,682 sf, 97.24% Impervious, Inflow Depth > 4.60" for 10-Year-2020 event
Inflow = 5.51 cfs @ 12.07 hrs, Volume= 16,752 cf
Primary = 5.51 cfs @ 12.07 hrs, Volume= 16,752 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: EXIST SITE TOTAL



Summary for Subcatchment E1A: E1A

Runoff = 3.08 cfs @ 12.08 hrs, Volume= 9,119 cf, Depth> 5.54"
Routed to Link 4L : DESIGN POINT 1

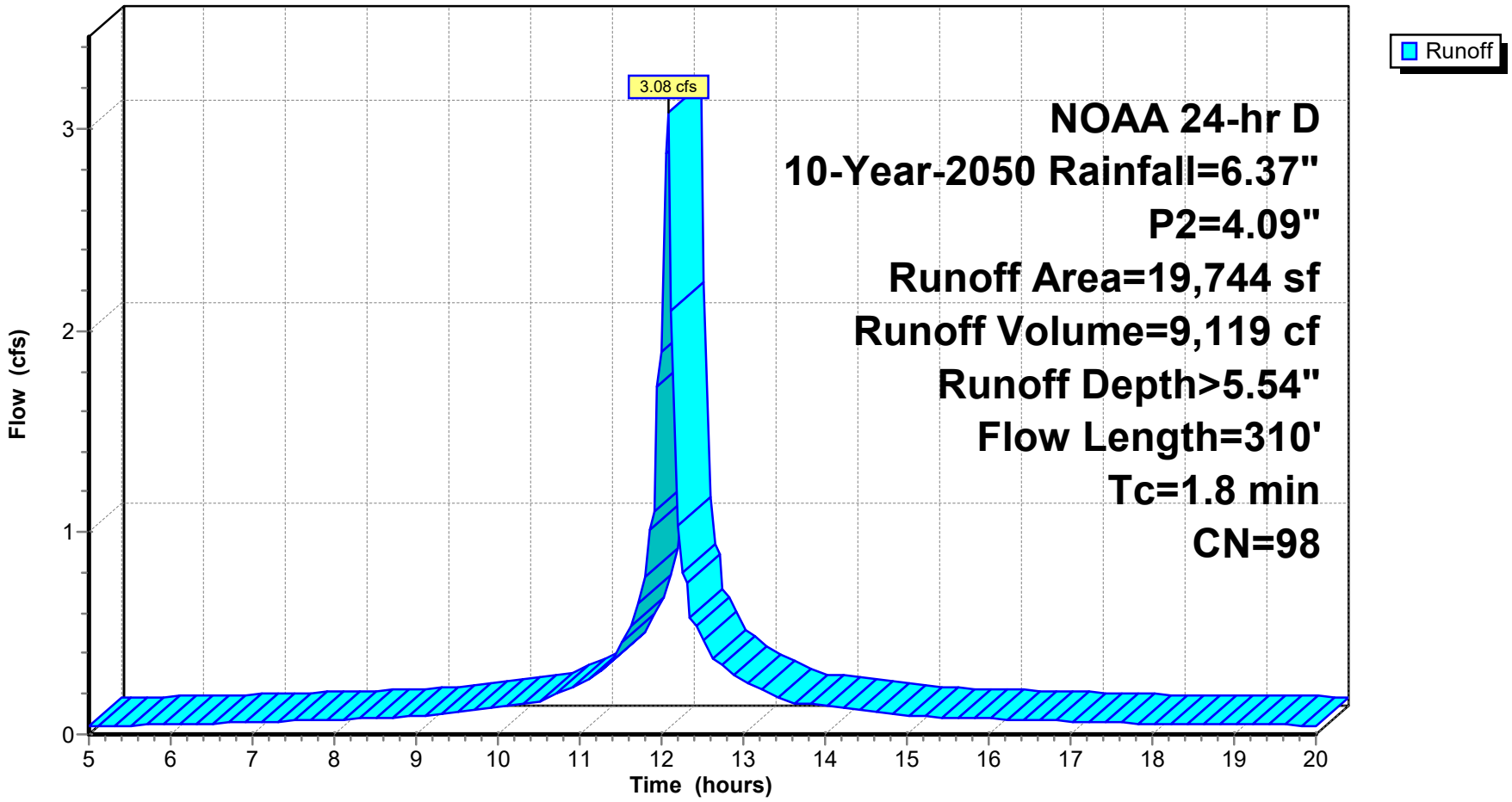
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	19,744	98	ROOF
	19,744		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0200	1.56		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.2	33	0.0200	2.87		**Shallow Concentrated Flow, ROOF** Paved Kv= 20.3 fps
0.5	177	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.8	310	Total			

Subcatchment E1A: E1A

Hydrograph



Summary for Subcatchment E1B: E1B

Runoff = 2.07 cfs @ 12.06 hrs, Volume= 6,192 cf, Depth> 5.54"
Routed to Link 4L : DESIGN POINT 1

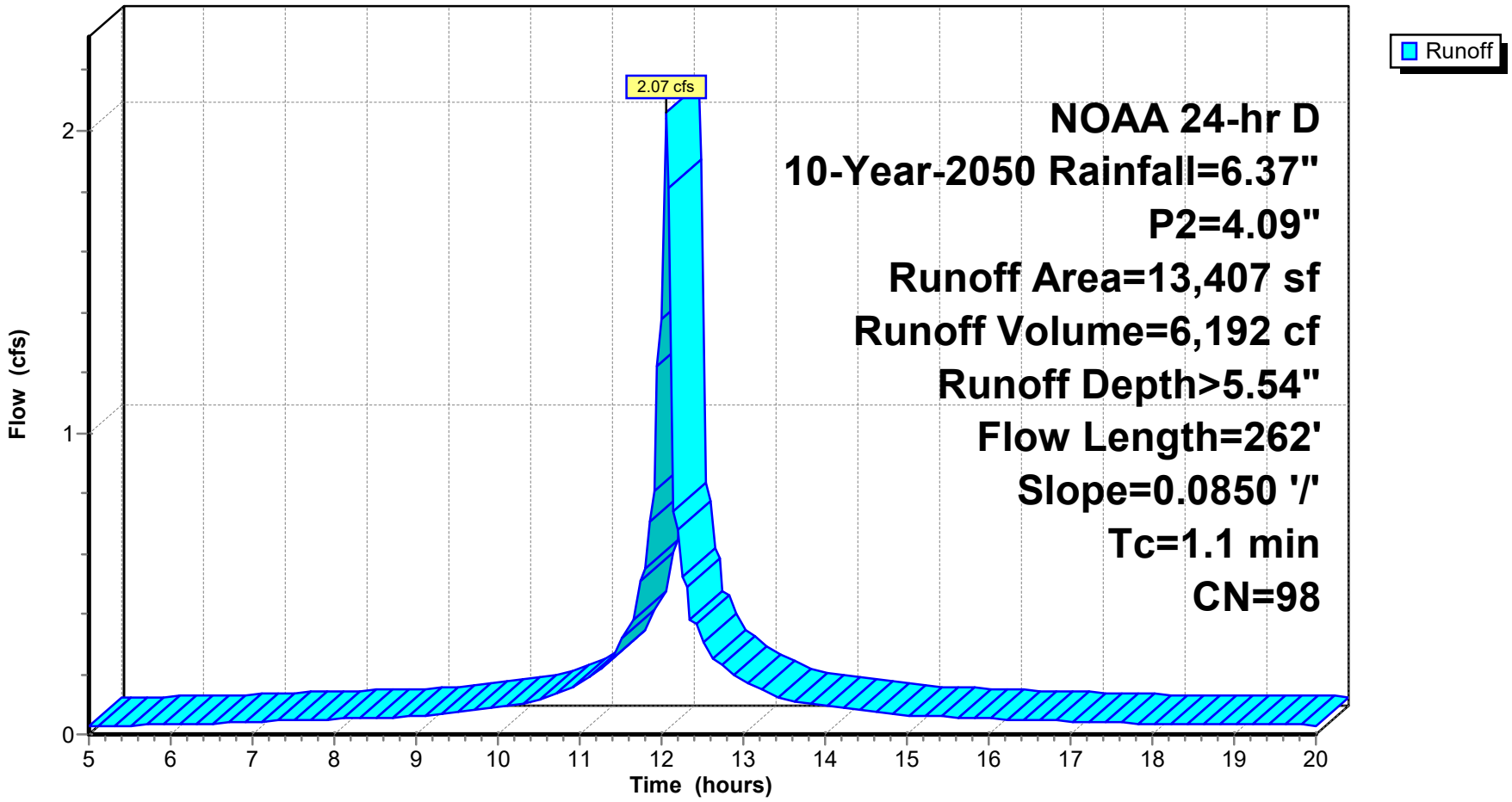
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	13,407	98	PAVED PARKING LOT
	13,407		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	100	0.0850	2.77		**Sheet Flow, PARKING LOT** Smooth surfaces n= 0.011 P2= 4.09"
0.5	162	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.1	262	Total			

Subcatchment E1B: E1B

Hydrograph



Summary for Subcatchment E1C: E1C curb islands

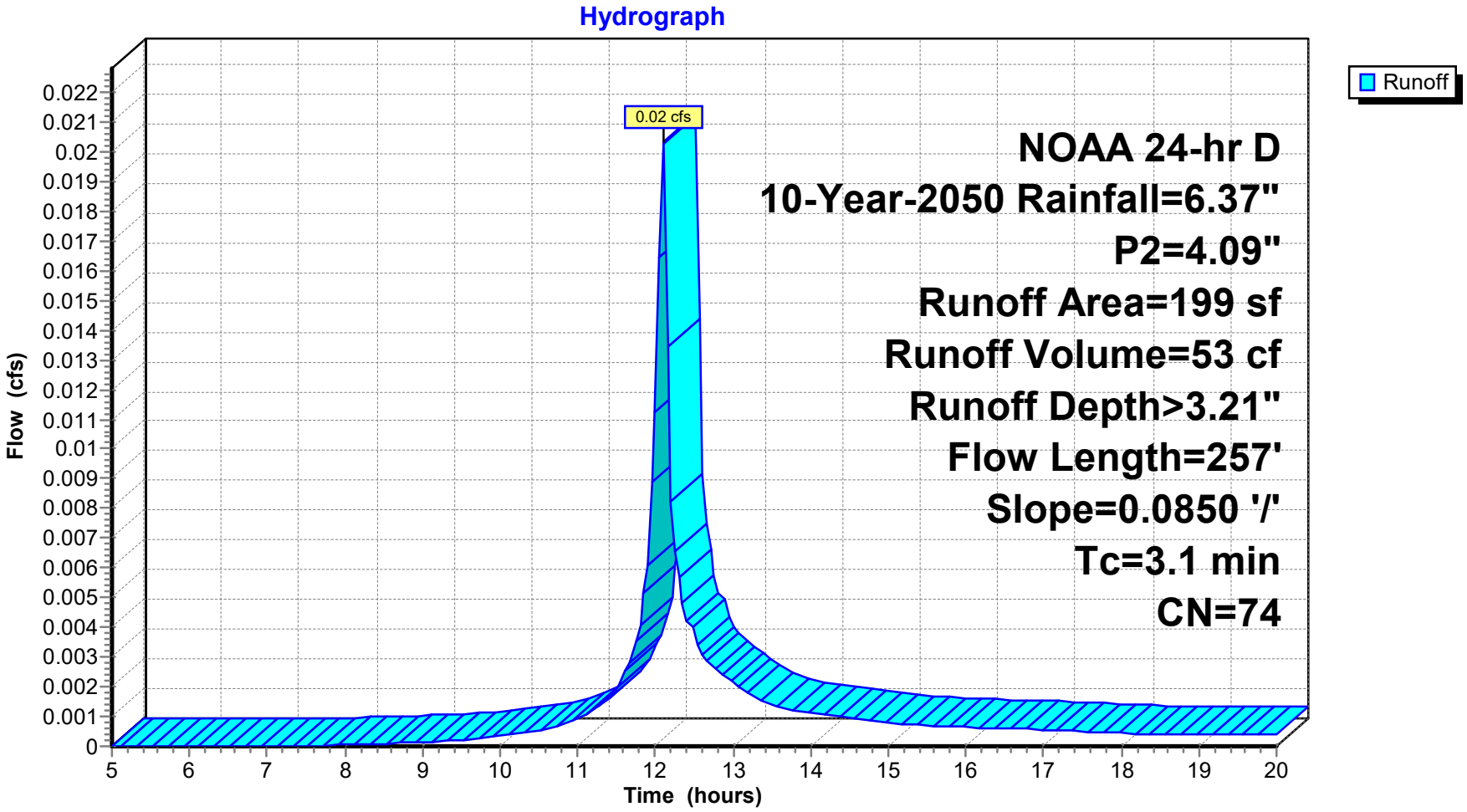
Runoff = 0.02 cfs @ 12.09 hrs, Volume= 53 cf, Depth> 3.21"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	199	74	CURBED ISLANDS
	199		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	43	0.0850	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 4.09"
0.6	214	0.0850	5.92		**Shallow Concentrated Flow, PAVED** Paved Kv= 20.3 fps
3.1	257	Total			

Subcatchment E1C: E1C curb islands



Summary for Subcatchment E2A: E2A

Runoff = 1.37 cfs @ 12.08 hrs, Volume= 4,055 cf, Depth> 5.54"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

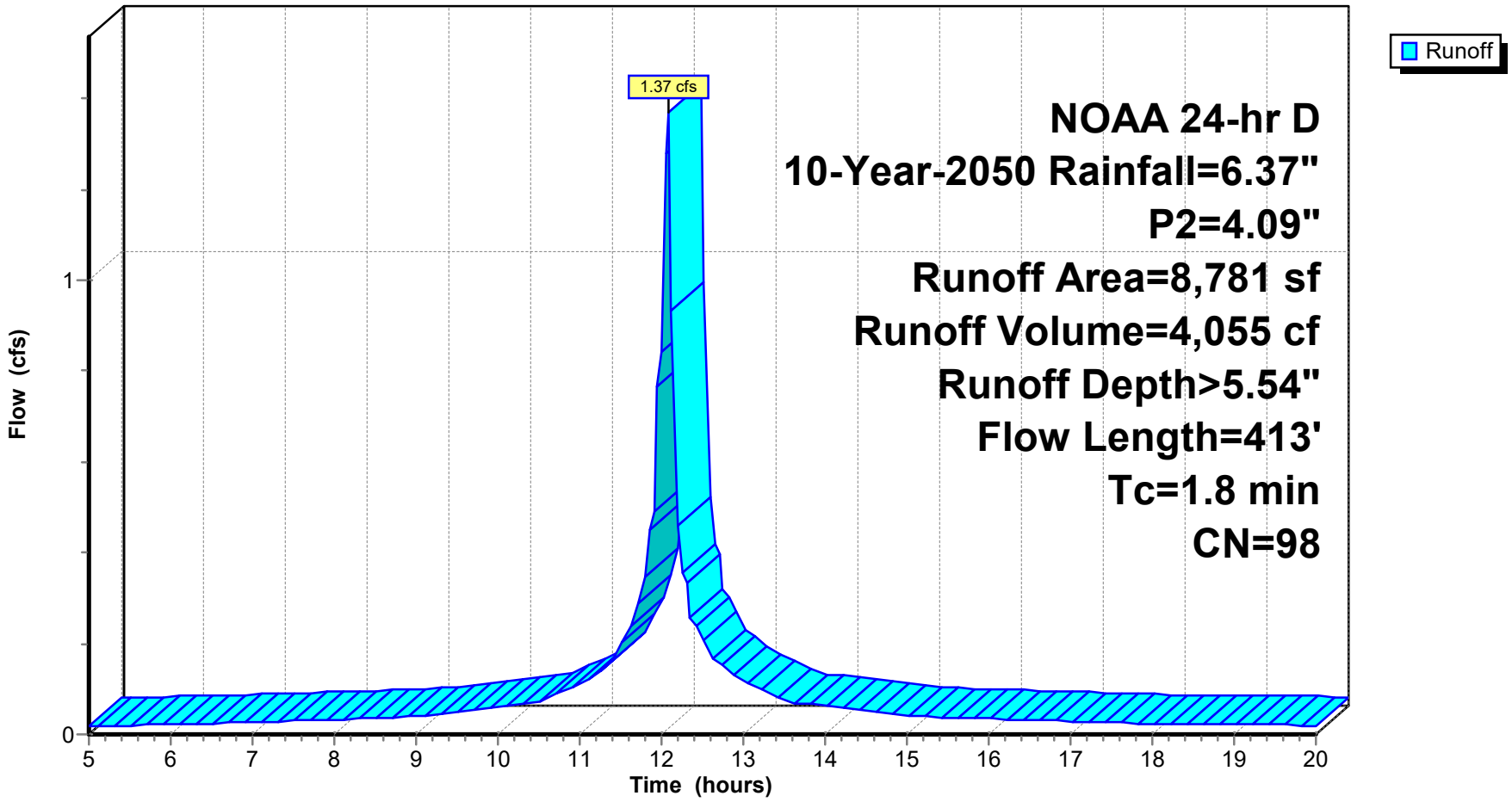
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	8,781	98	PARKING LOT
	8,781		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	100	0.0700	2.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"
1.2	313	0.0473	4.41		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	413	Total			

Subcatchment E2A: E2A

Hydrograph



Summary for Subcatchment E2B: E2B

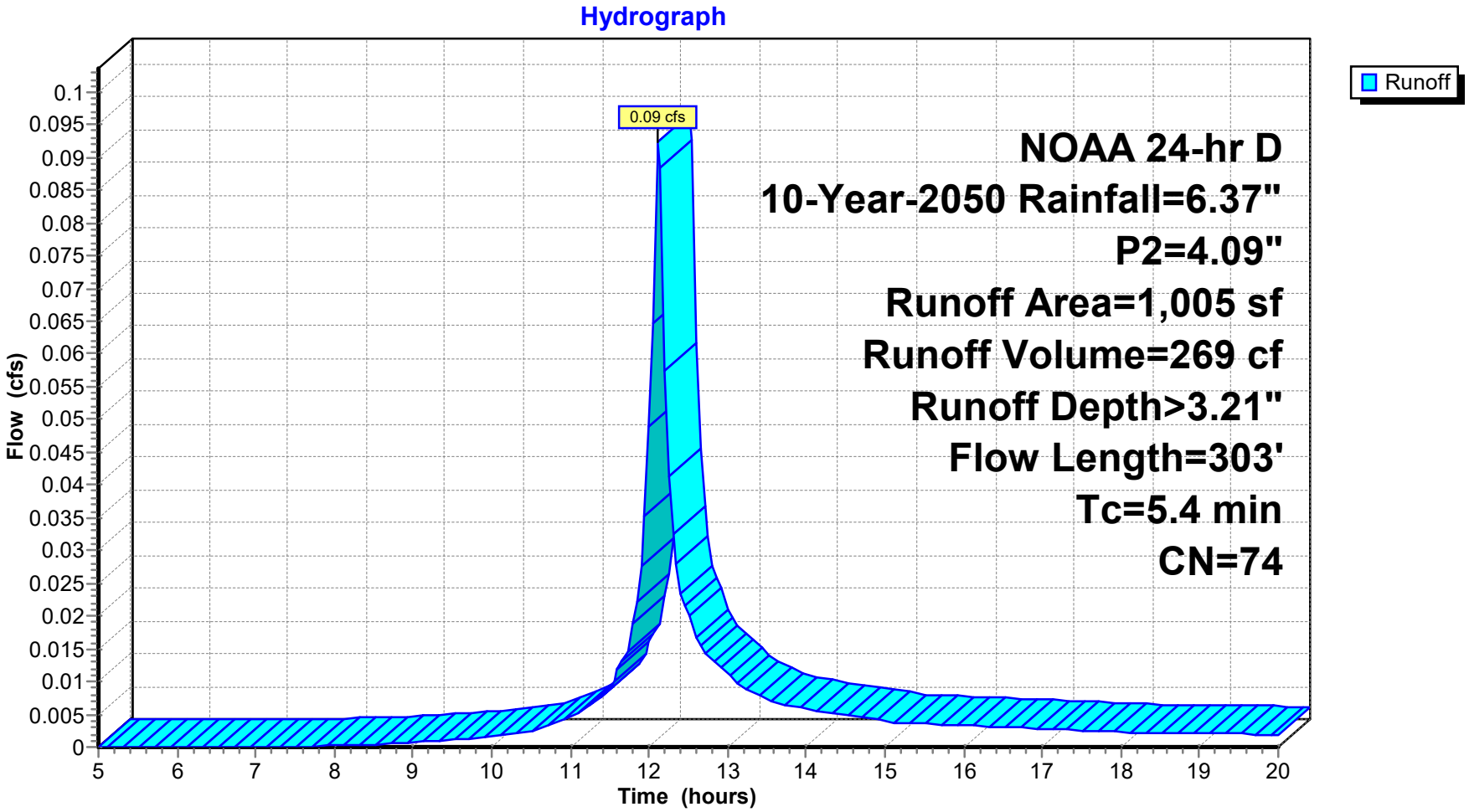
Runoff = 0.09 cfs @ 12.12 hrs, Volume= 269 cf, Depth> 3.21"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
1,005	74	>75% Grass cover, Good, HSG C
1,005		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	30	0.0300	0.12		**Sheet Flow, LANDSCAPE** Grass: Dense n= 0.240 P2= 4.09"
0.6	70	0.0500	2.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"
0.7	203	0.0550	4.76		**Shallow Concentrated Flow, PARKING AND ROAD** Paved Kv= 20.3 fps
5.4	303	Total			

Subcatchment E2B: E2B



Summary for Subcatchment E2C: E2C

Runoff = 0.08 cfs @ 12.06 hrs, Volume= 252 cf, Depth> 5.54"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

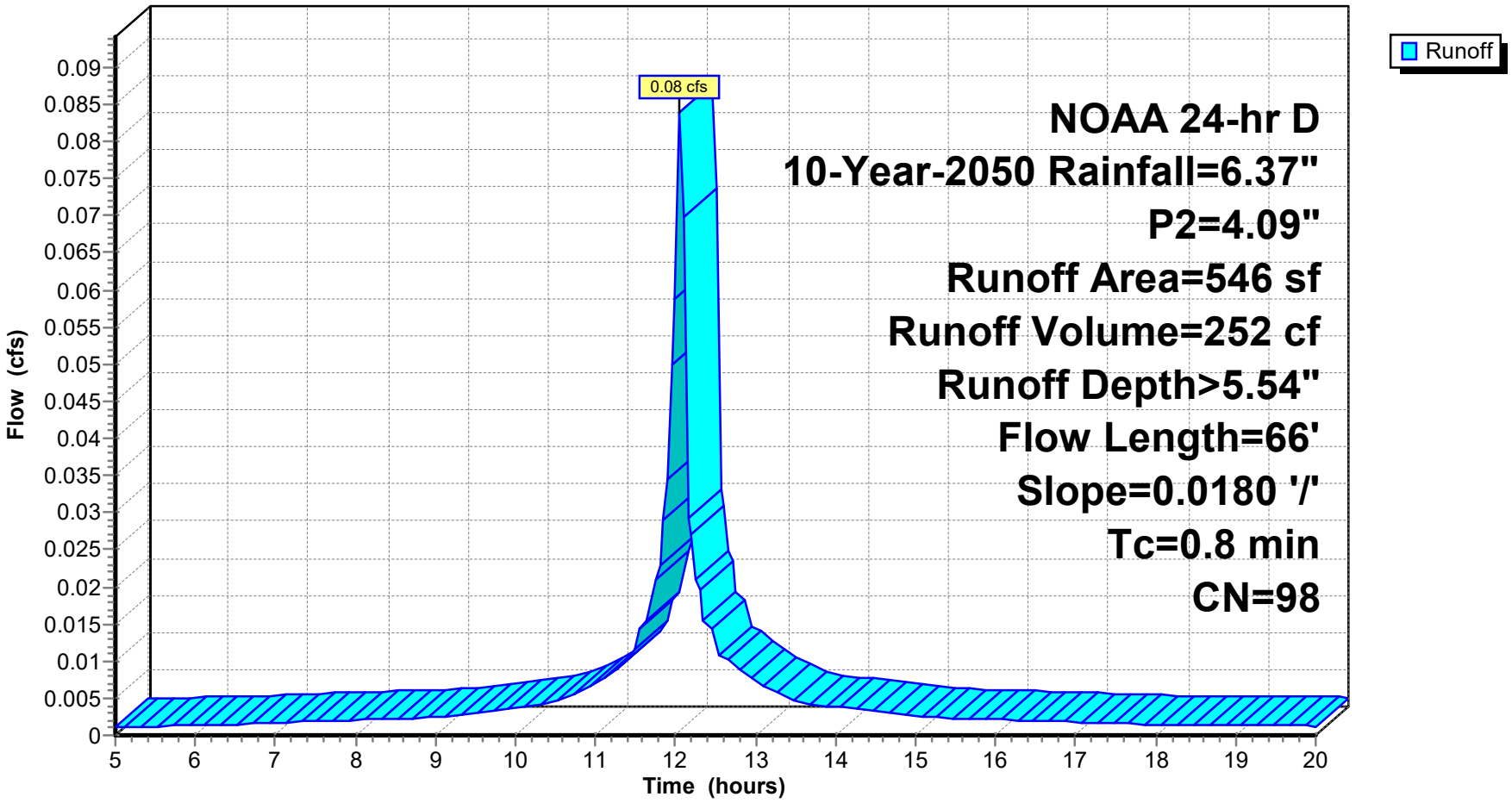
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	546	98	SIDEWALK
	546		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	66	0.0180	1.37		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"

Subcatchment E2C: E2C

Hydrograph

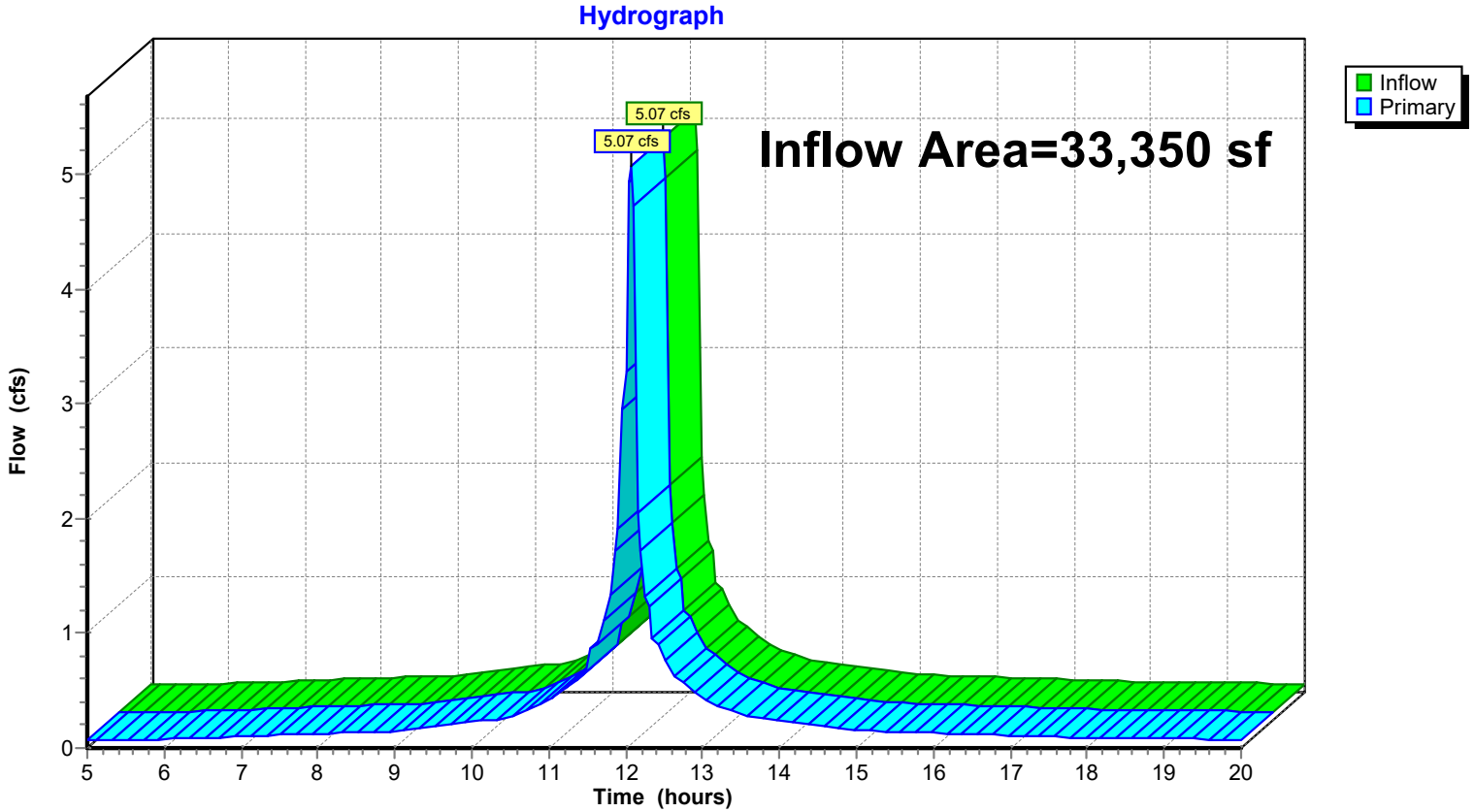


Summary for Link 4L: DESIGN POINT 1

Inflow Area = 33,350 sf, 99.40% Impervious, Inflow Depth > 5.53" for 10-Year-2050 event
Inflow = 5.07 cfs @ 12.07 hrs, Volume= 15,364 cf
Primary = 5.07 cfs @ 12.07 hrs, Volume= 15,364 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: DESIGN POINT 1

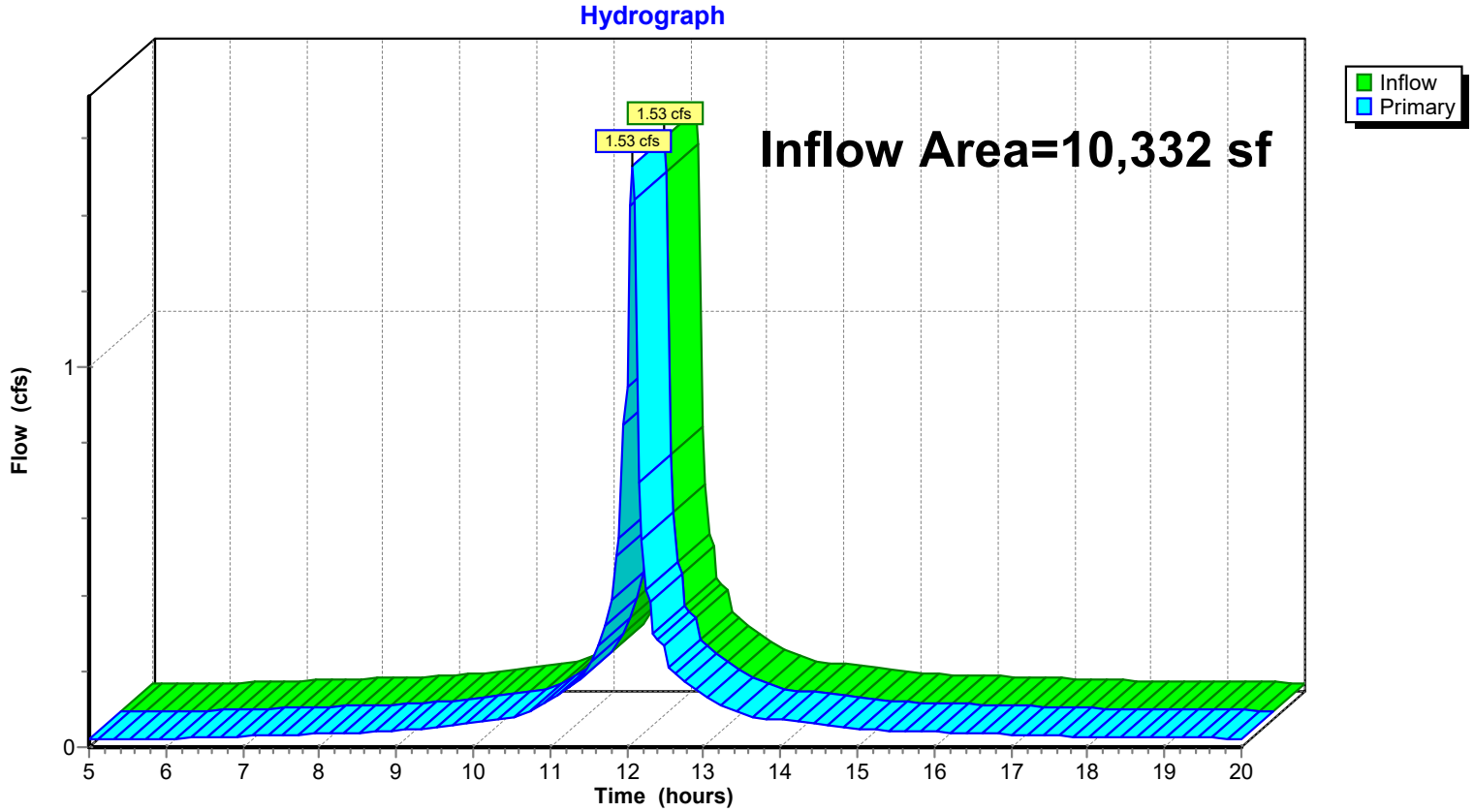


Summary for Link 5L: EXIST TOTAL BLOOMFIELD AVE

Inflow Area = 10,332 sf, 90.27% Impervious, Inflow Depth > 5.32" for 10-Year-2050 event
Inflow = 1.53 cfs @ 12.08 hrs, Volume= 4,576 cf
Primary = 1.53 cfs @ 12.08 hrs, Volume= 4,576 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: EXIST TOTAL BLOOMFIELD AVE

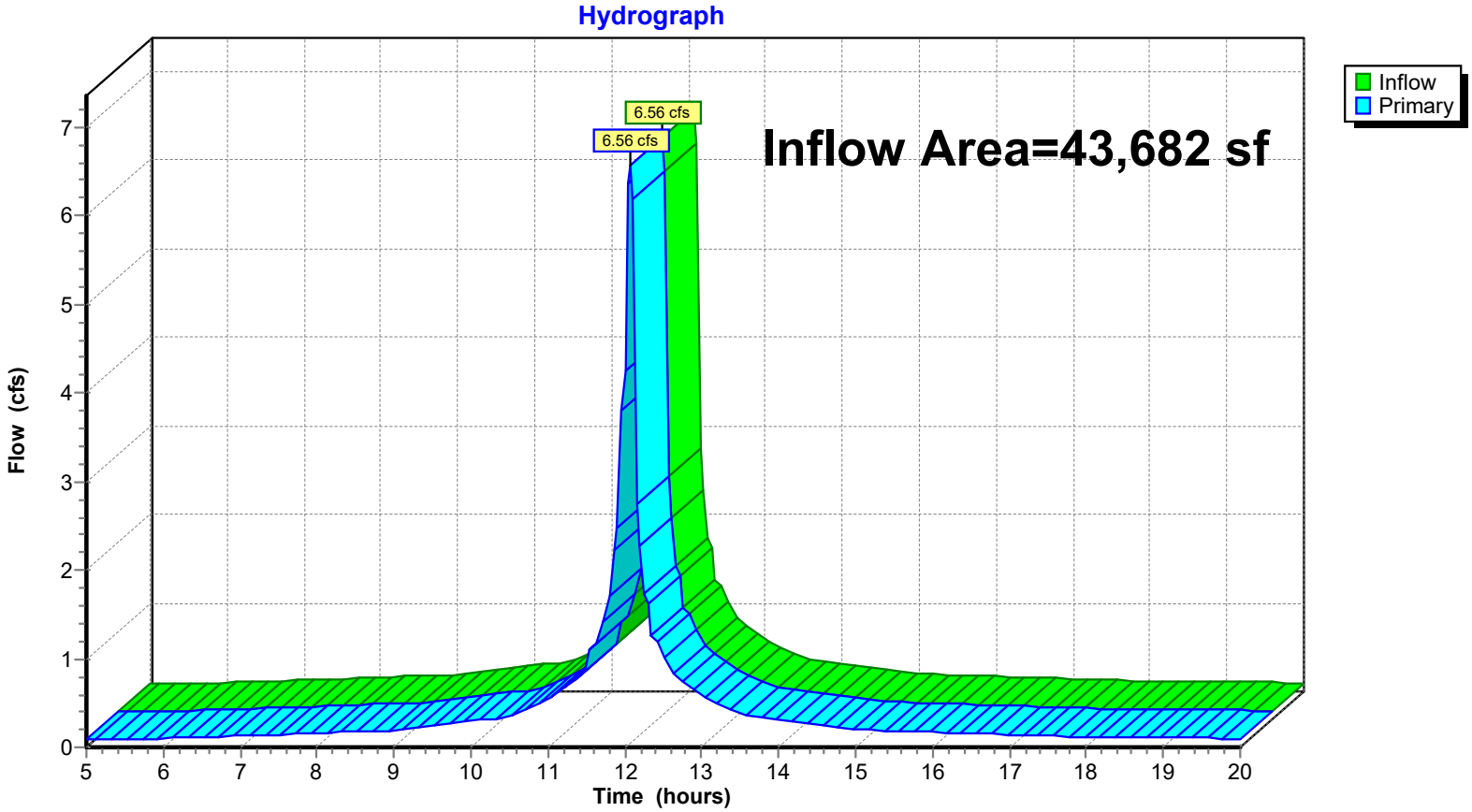


Summary for Link 7L: EXIST SITE TOTAL

Inflow Area = 43,682 sf, 97.24% Impervious, Inflow Depth > 5.48" for 10-Year-2050 event
Inflow = 6.56 cfs @ 12.07 hrs, Volume= 19,940 cf
Primary = 6.56 cfs @ 12.07 hrs, Volume= 19,940 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: EXIST SITE TOTAL



Summary for Subcatchment E1A: E1A

Runoff = 4.45 cfs @ 12.08 hrs, Volume= 13,212 cf, Depth> 8.03"
Routed to Link 4L : DESIGN POINT 1

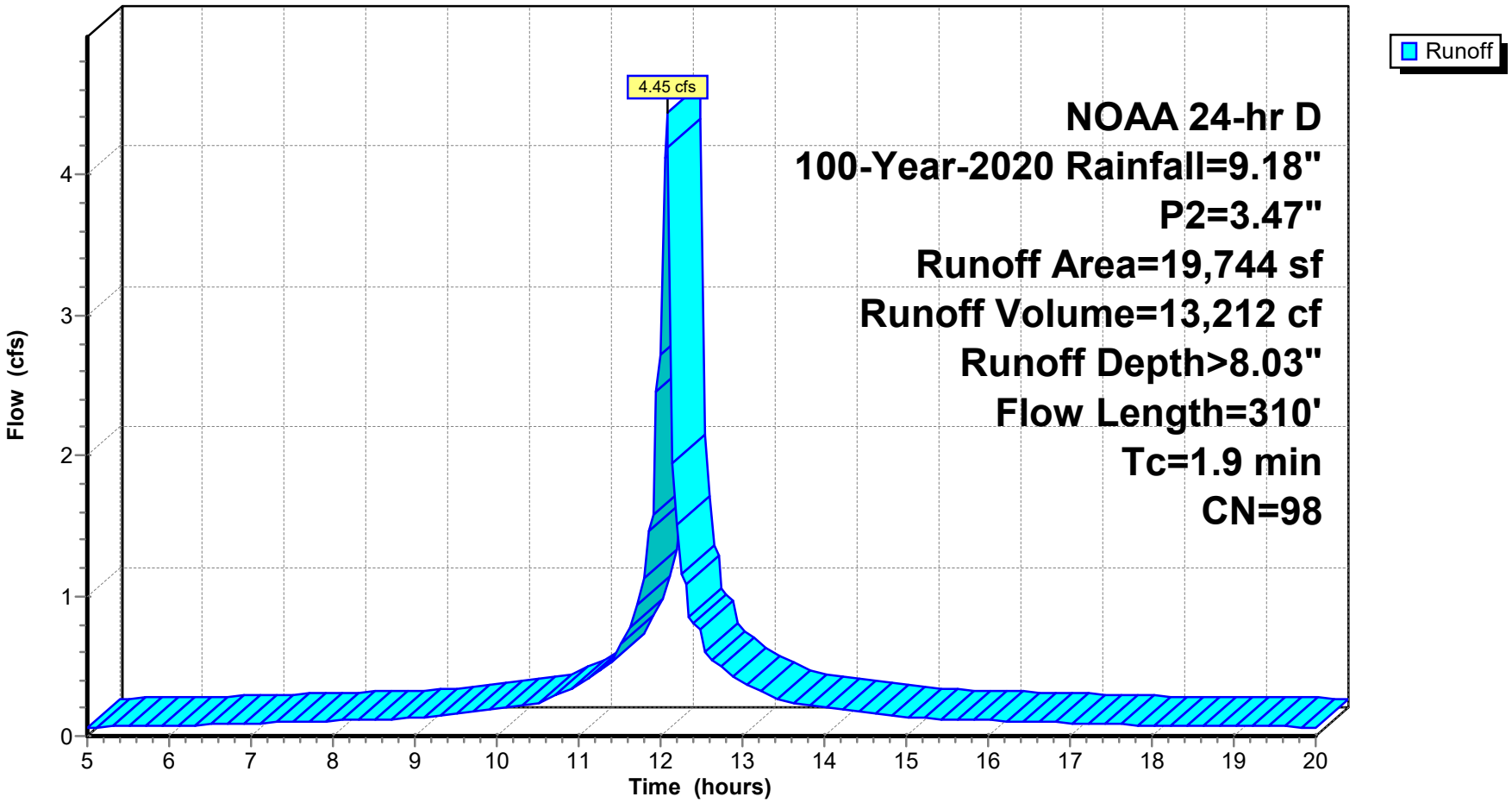
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	19,744	98	ROOF
	19,744		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.43		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.2	33	0.0200	2.87		**Shallow Concentrated Flow, ROOF** Paved Kv= 20.3 fps
0.5	177	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.9	310	Total			

Subcatchment E1A: E1A

Hydrograph



Summary for Subcatchment E1B: E1B

Runoff = 2.98 cfs @ 12.06 hrs, Volume= 8,971 cf, Depth> 8.03"
Routed to Link 4L : DESIGN POINT 1

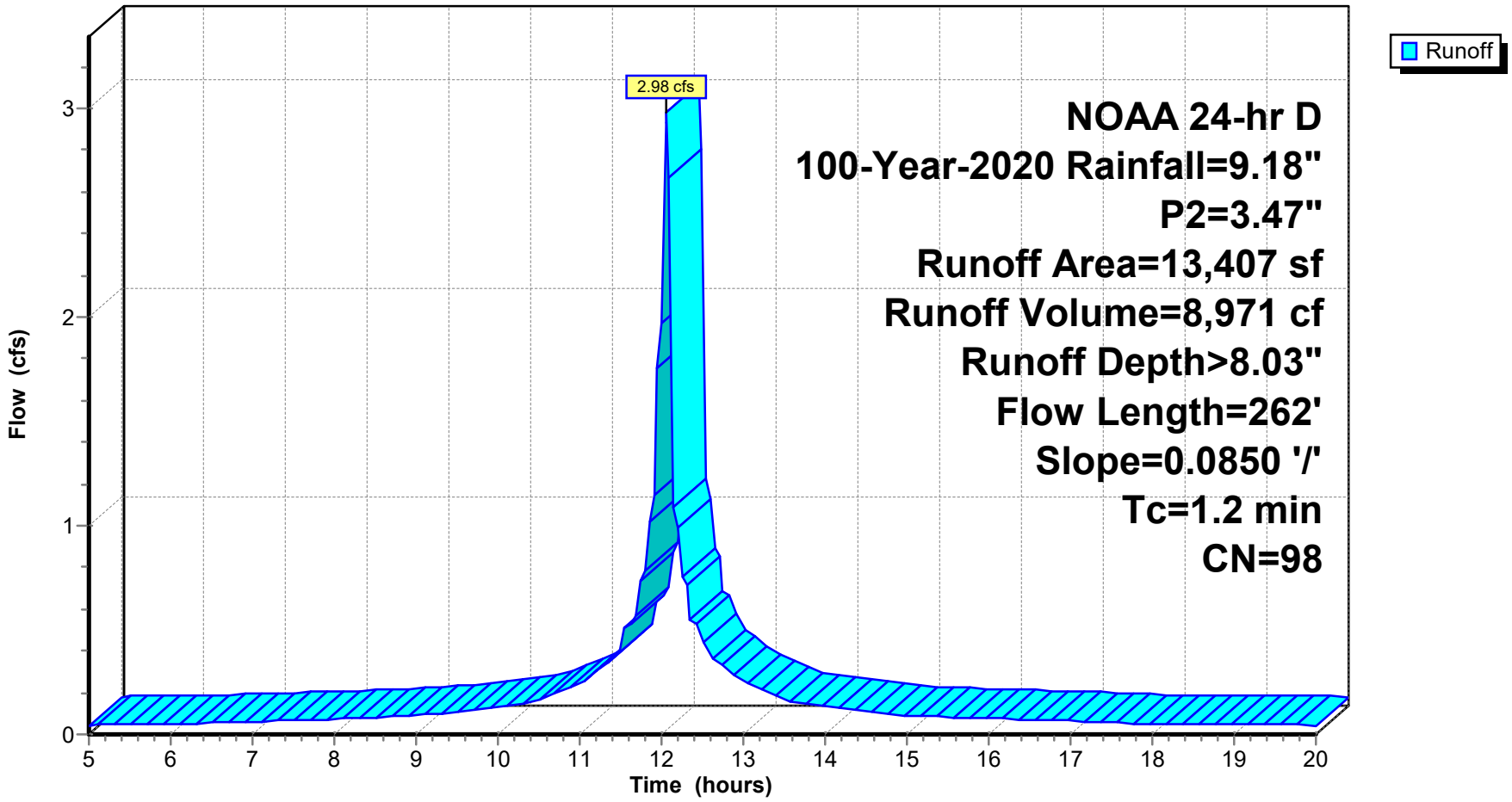
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	13,407	98	PAVED PARKING LOT
	13,407		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	100	0.0850	2.56		**Sheet Flow, PARKING LOT** Smooth surfaces n= 0.011 P2= 3.47"
0.5	162	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.2	262	Total			

Subcatchment E1B: E1B

Hydrograph



Summary for Subcatchment E1C: E1C curb islands

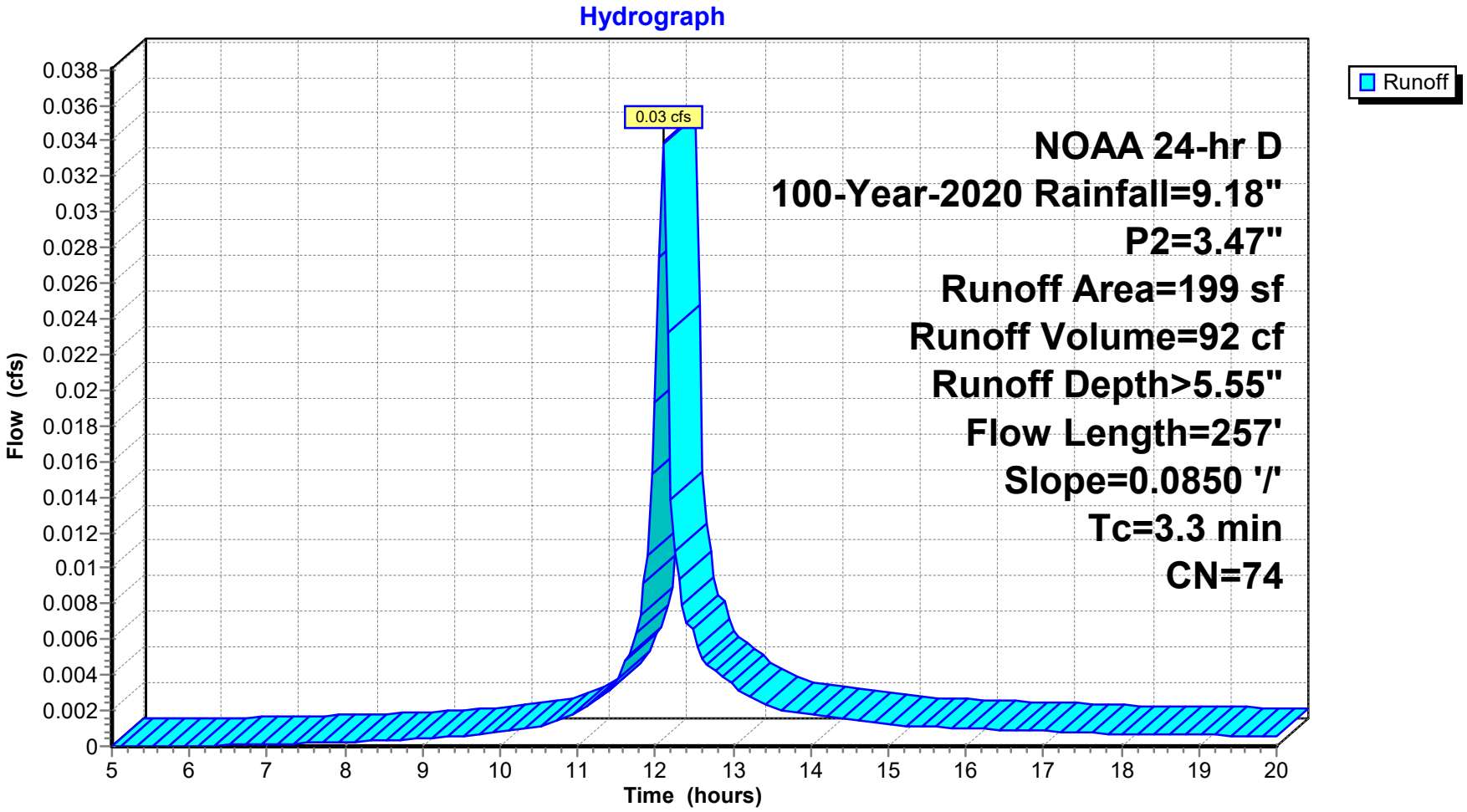
Runoff = 0.03 cfs @ 12.09 hrs, Volume= 92 cf, Depth> 5.55"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	199	74	CURBED ISLANDS
	199		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	43	0.0850	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.47"
0.6	214	0.0850	5.92		**Shallow Concentrated Flow, PAVED** Paved Kv= 20.3 fps
3.3	257	Total			

Subcatchment E1C: E1C curb islands



Summary for Subcatchment E2A: E2A

Runoff = 1.98 cfs @ 12.08 hrs, Volume= 5,876 cf, Depth> 8.03"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

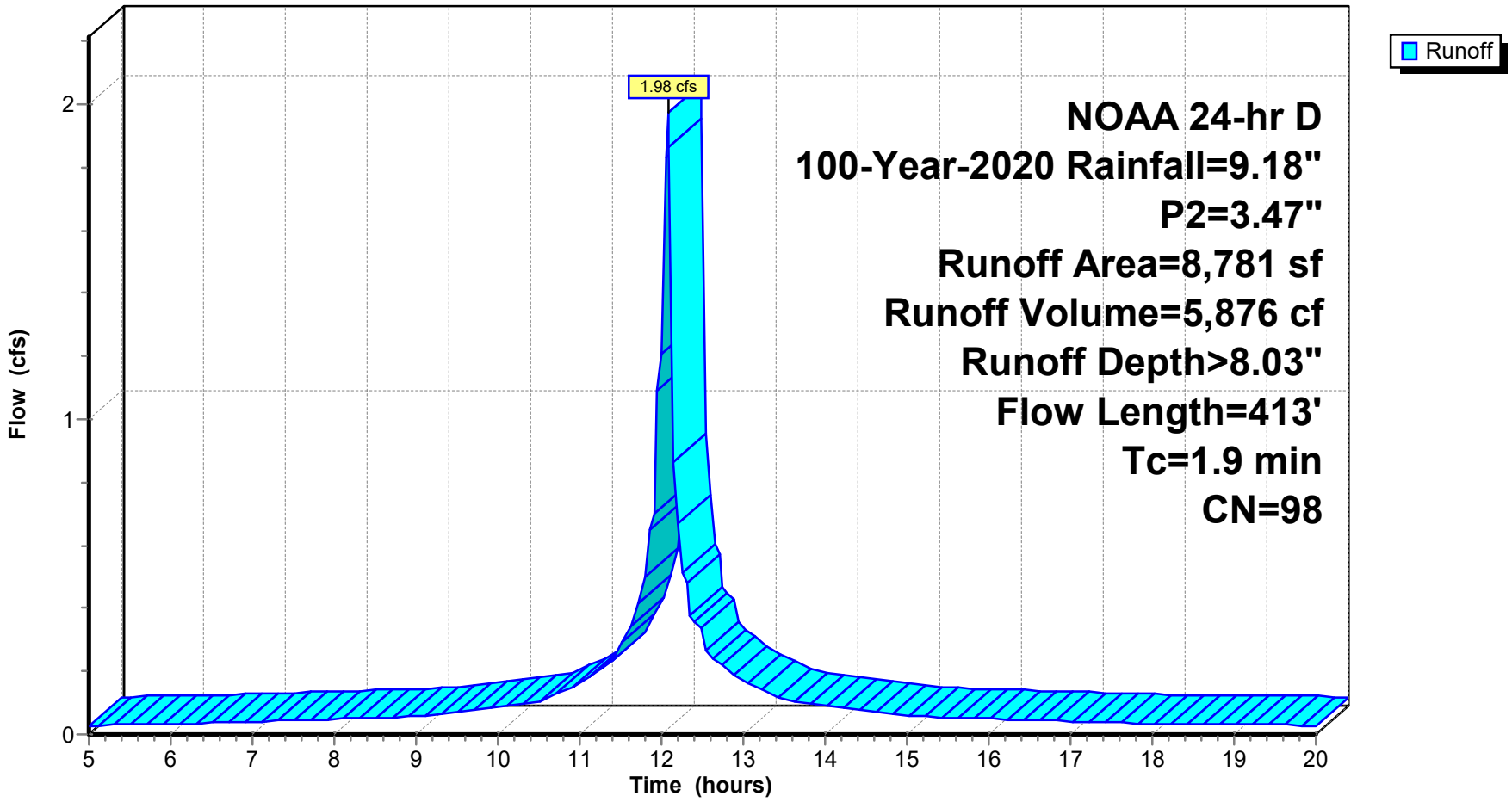
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	8,781	98	PARKING LOT
	8,781		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	100	0.0700	2.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"
1.2	313	0.0473	4.41		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.9	413	Total			

Subcatchment E2A: E2A

Hydrograph



Summary for Subcatchment E2B: E2B

Runoff = 0.16 cfs @ 12.13 hrs, Volume= 465 cf, Depth> 5.55"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

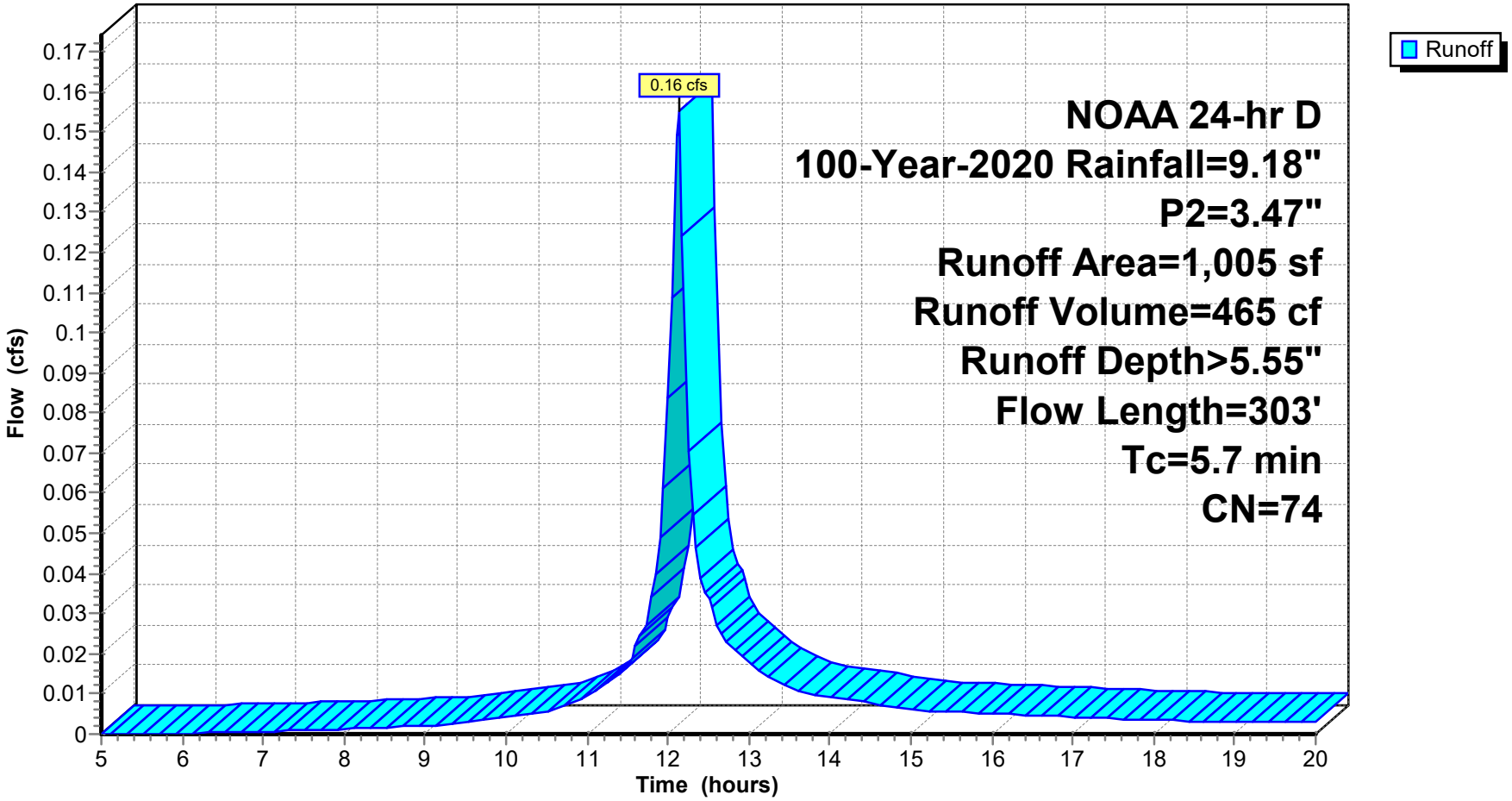
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
1,005	74	>75% Grass cover, Good, HSG C
1,005		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	30	0.0300	0.11		**Sheet Flow, LANDSCAPE** Grass: Dense n= 0.240 P2= 3.47"
0.6	70	0.0500	1.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"
0.7	203	0.0550	4.76		**Shallow Concentrated Flow, PARKING AND ROAD** Paved Kv= 20.3 fps
5.7	303	Total			

Subcatchment E2B: E2B

Hydrograph



Summary for Subcatchment E2C: E2C

Runoff = 0.12 cfs @ 12.06 hrs, Volume= 365 cf, Depth> 8.03"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

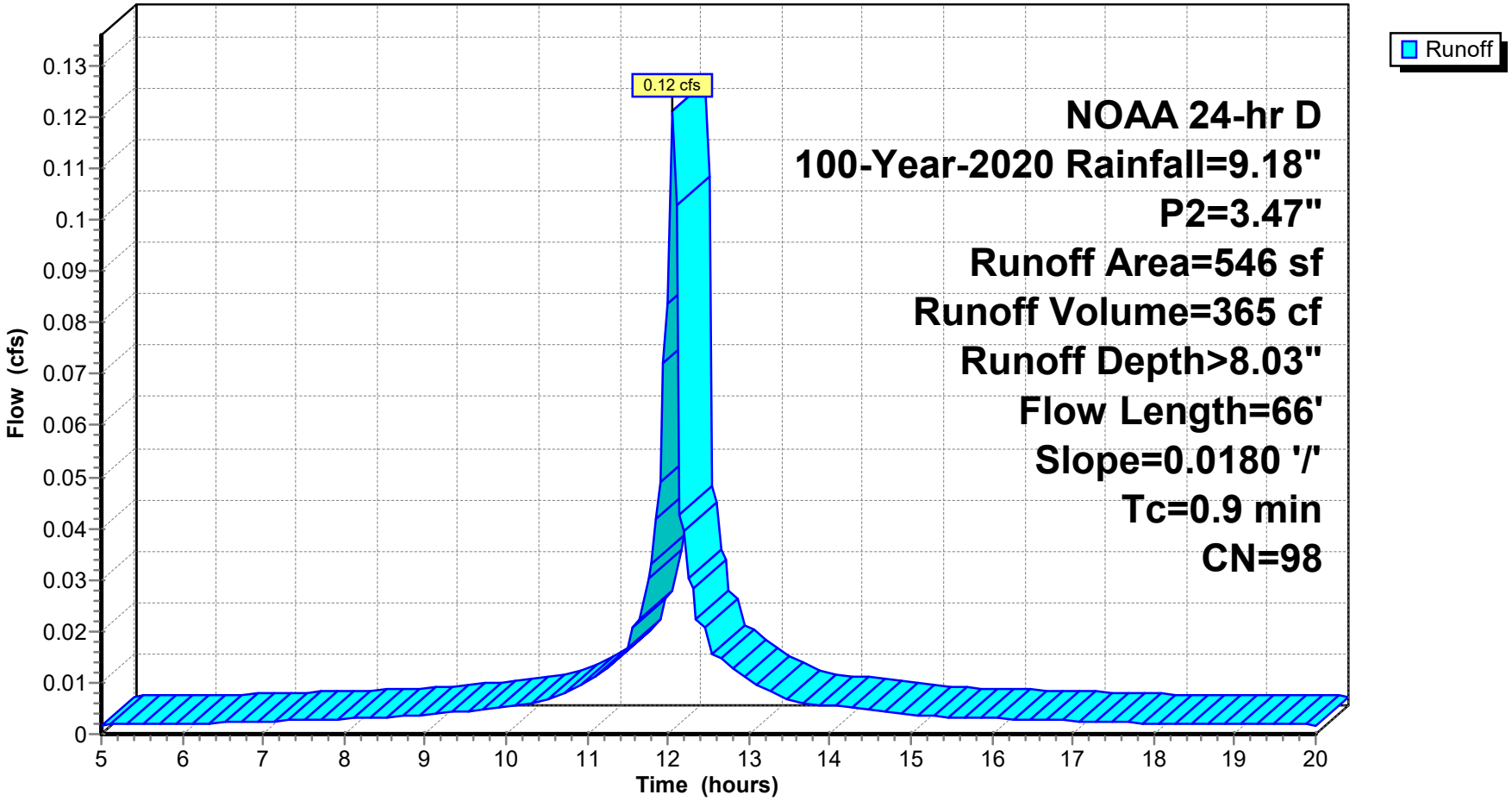
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	546	98	SIDEWALK
	546		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	66	0.0180	1.26		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.47"

Subcatchment E2C: E2C

Hydrograph

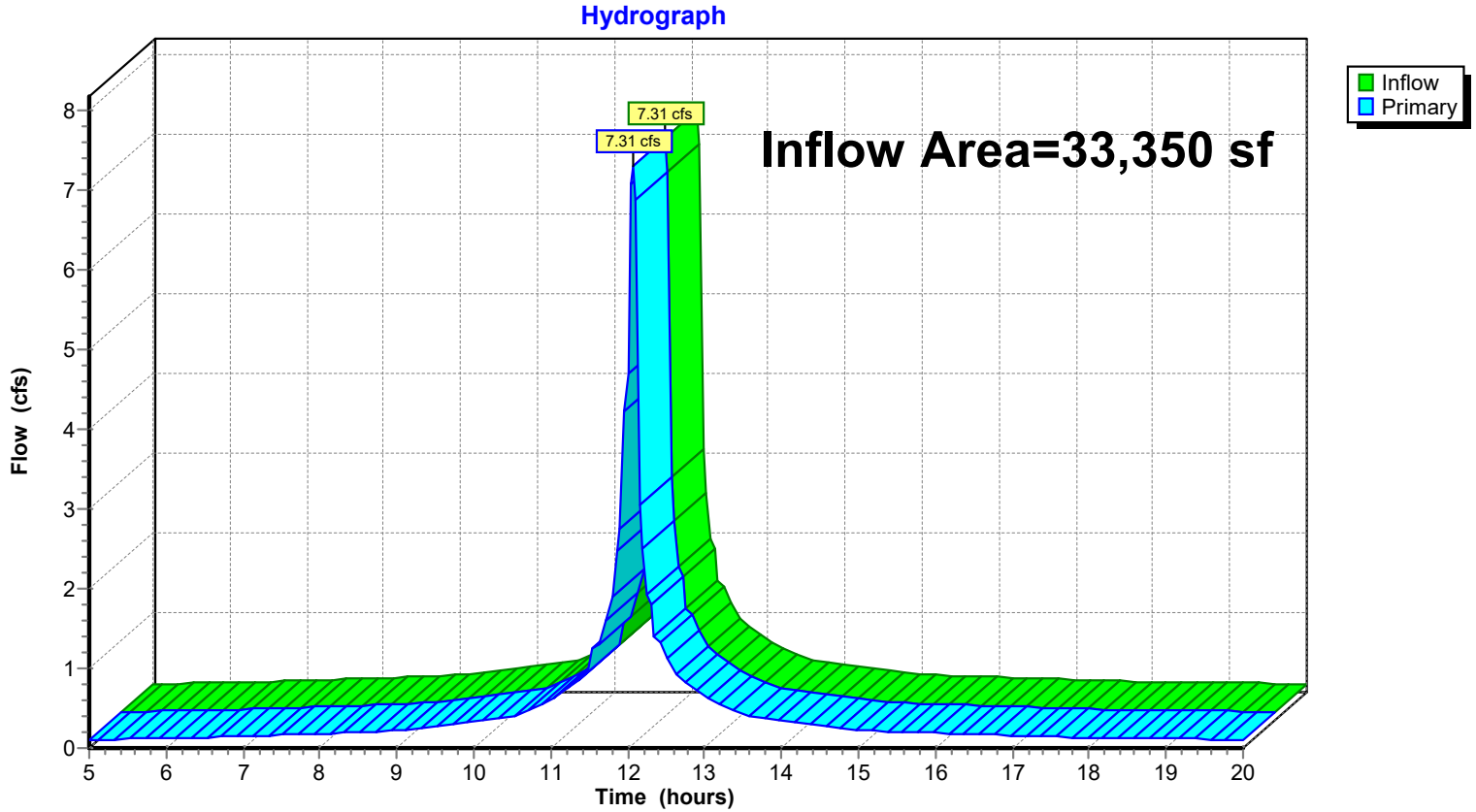


Summary for Link 4L: DESIGN POINT 1

Inflow Area = 33,350 sf, 99.40% Impervious, Inflow Depth > 8.02" for 100-Year-2020 event
Inflow = 7.31 cfs @ 12.07 hrs, Volume= 22,275 cf
Primary = 7.31 cfs @ 12.07 hrs, Volume= 22,275 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: DESIGN POINT 1

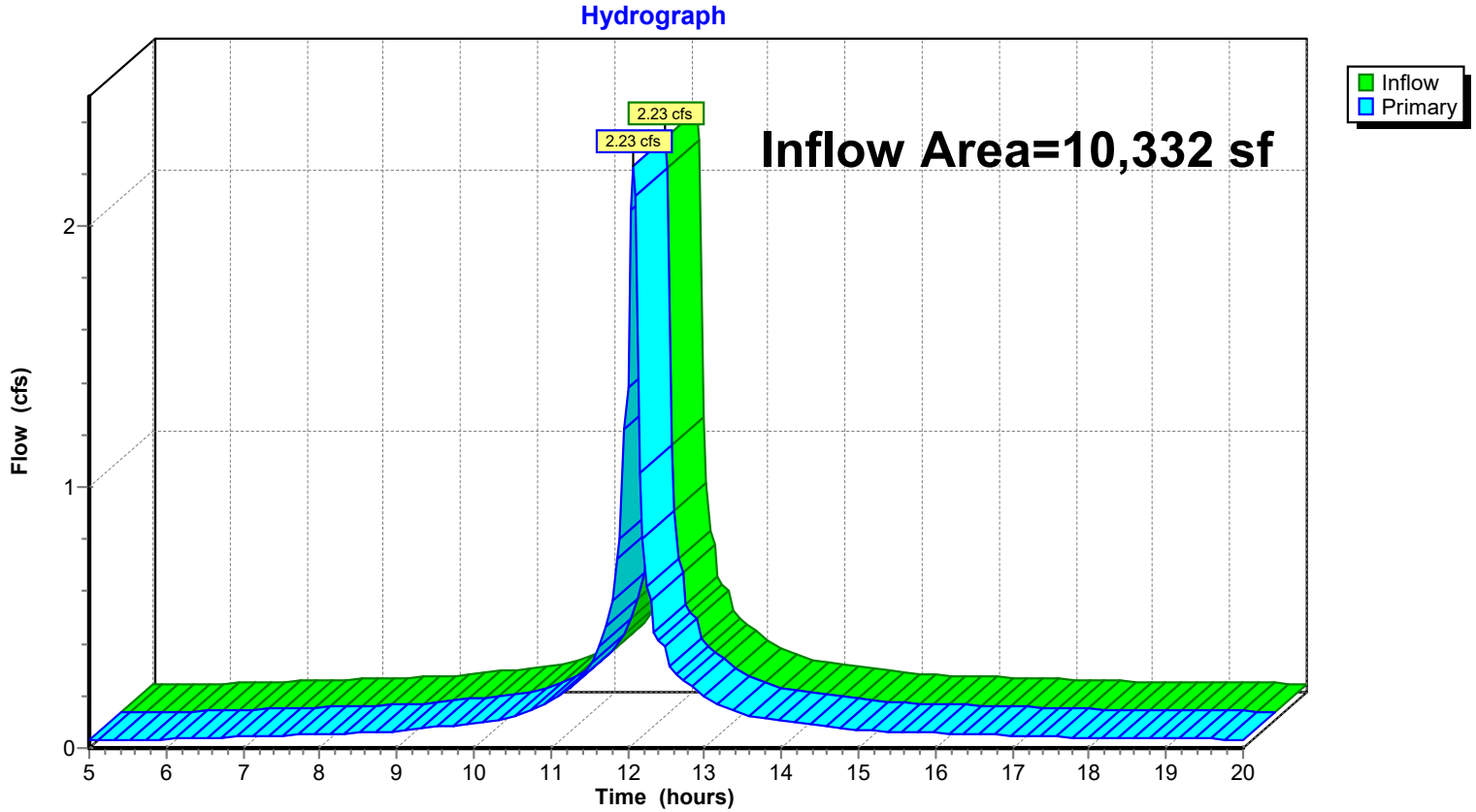


Summary for Link 5L: EXIST TOTAL BLOOMFIELD AVE

Inflow Area = 10,332 sf, 90.27% Impervious, Inflow Depth > 7.79" for 100-Year-2020 event
Inflow = 2.23 cfs @ 12.08 hrs, Volume= 6,706 cf
Primary = 2.23 cfs @ 12.08 hrs, Volume= 6,706 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: EXIST TOTAL BLOOMFIELD AVE

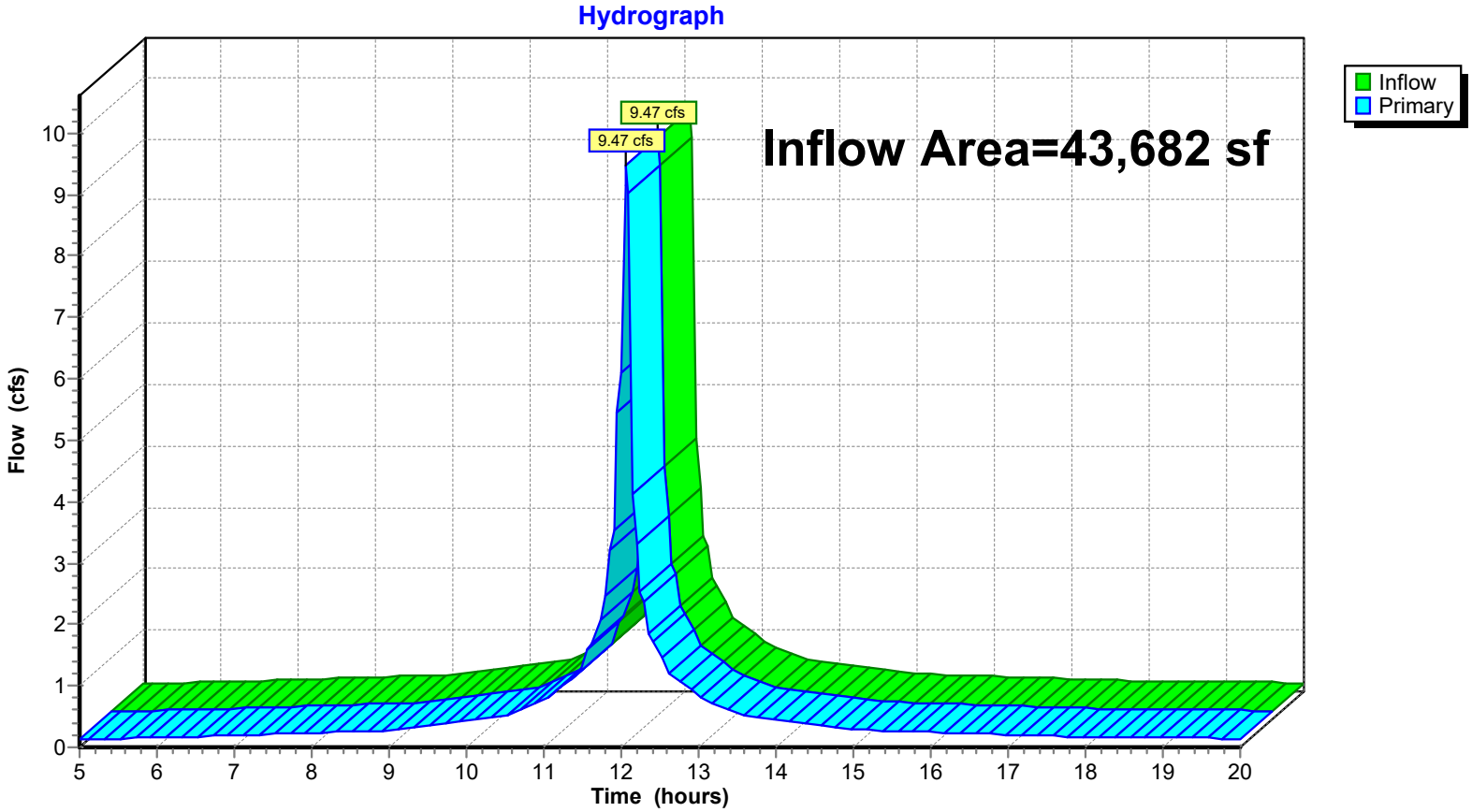


Summary for Link 7L: EXIST SITE TOTAL

Inflow Area = 43,682 sf, 97.24% Impervious, Inflow Depth > 7.96" for 100-Year-2020 event
Inflow = 9.47 cfs @ 12.07 hrs, Volume= 28,981 cf
Primary = 9.47 cfs @ 12.07 hrs, Volume= 28,981 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: EXIST SITE TOTAL



Summary for Subcatchment E1A: E1A

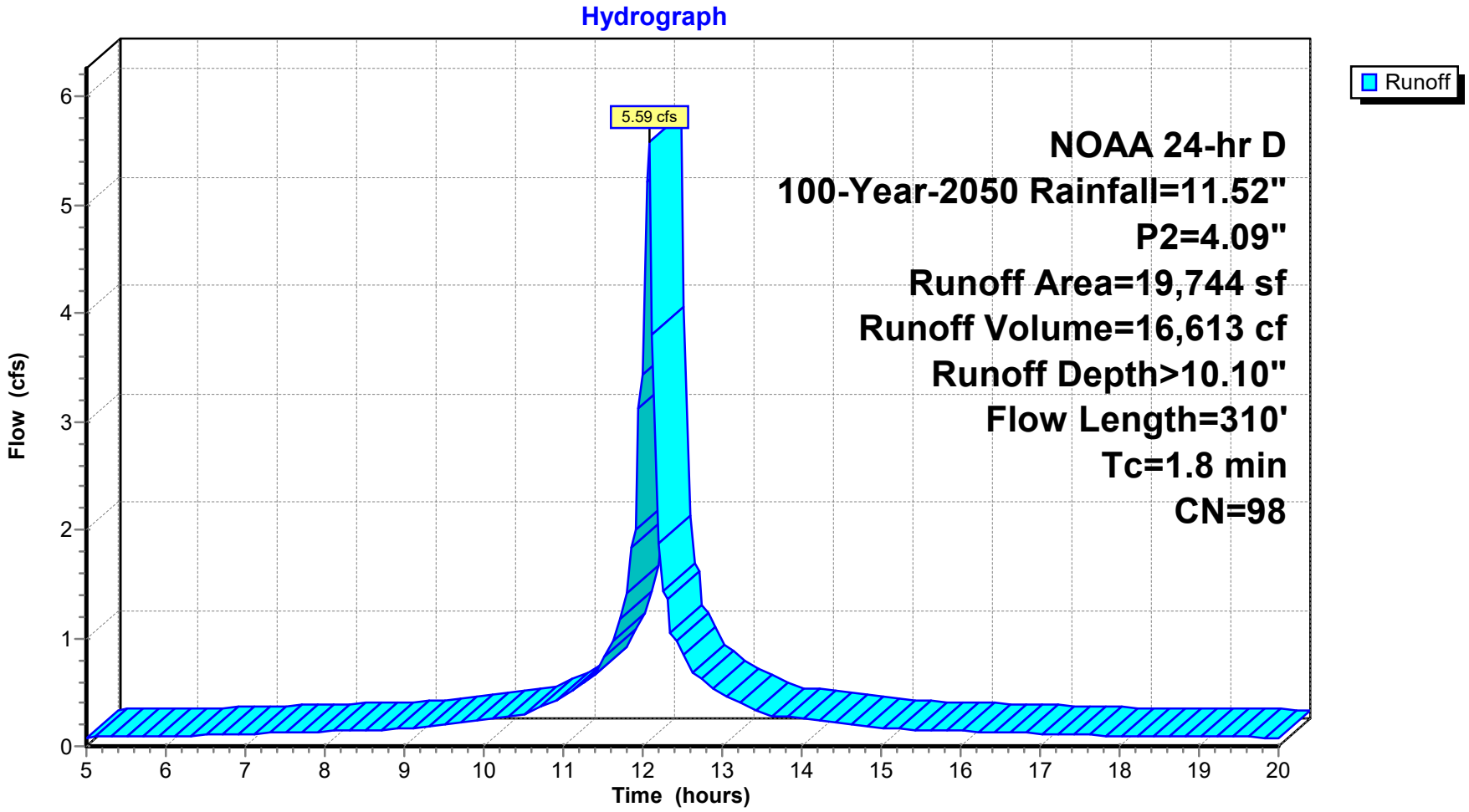
Runoff = 5.59 cfs @ 12.08 hrs, Volume= 16,613 cf, Depth>10.10"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	19,744	98	ROOF
	19,744		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0200	1.56		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.2	33	0.0200	2.87		**Shallow Concentrated Flow, ROOF** Paved Kv= 20.3 fps
0.5	177	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.8	310	Total			

Subcatchment E1A: E1A



Summary for Subcatchment E1B: E1B

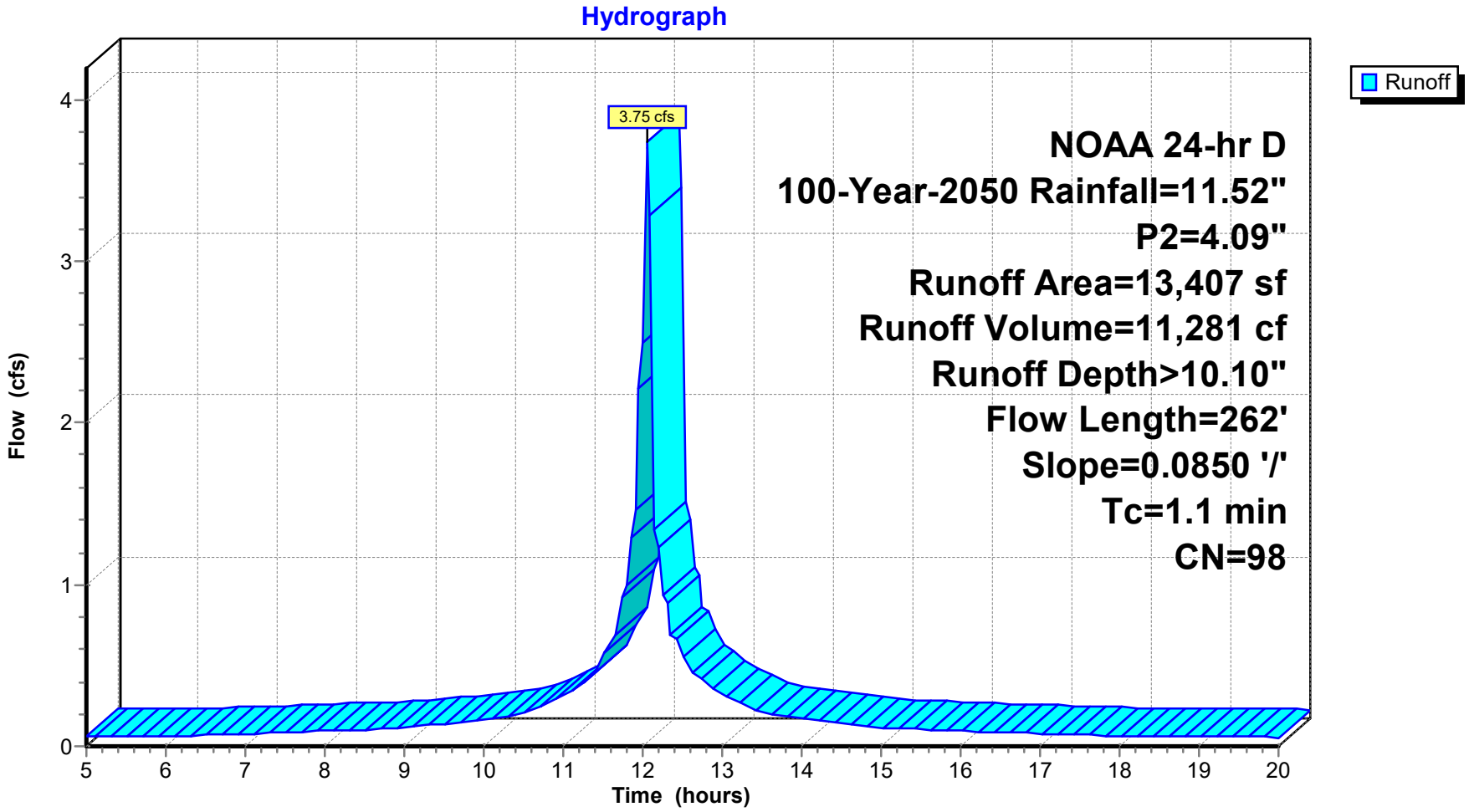
Runoff = 3.75 cfs @ 12.06 hrs, Volume= 11,281 cf, Depth>10.10"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	13,407	98	PAVED PARKING LOT
	13,407		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	100	0.0850	2.77		**Sheet Flow, PARKING LOT** Smooth surfaces n= 0.011 P2= 4.09"
0.5	162	0.0850	5.92		**Shallow Concentrated Flow, PARKING LOT** Paved Kv= 20.3 fps
1.1	262	Total			

Subcatchment E1B: E1B



Summary for Subcatchment E1C: E1C curb islands

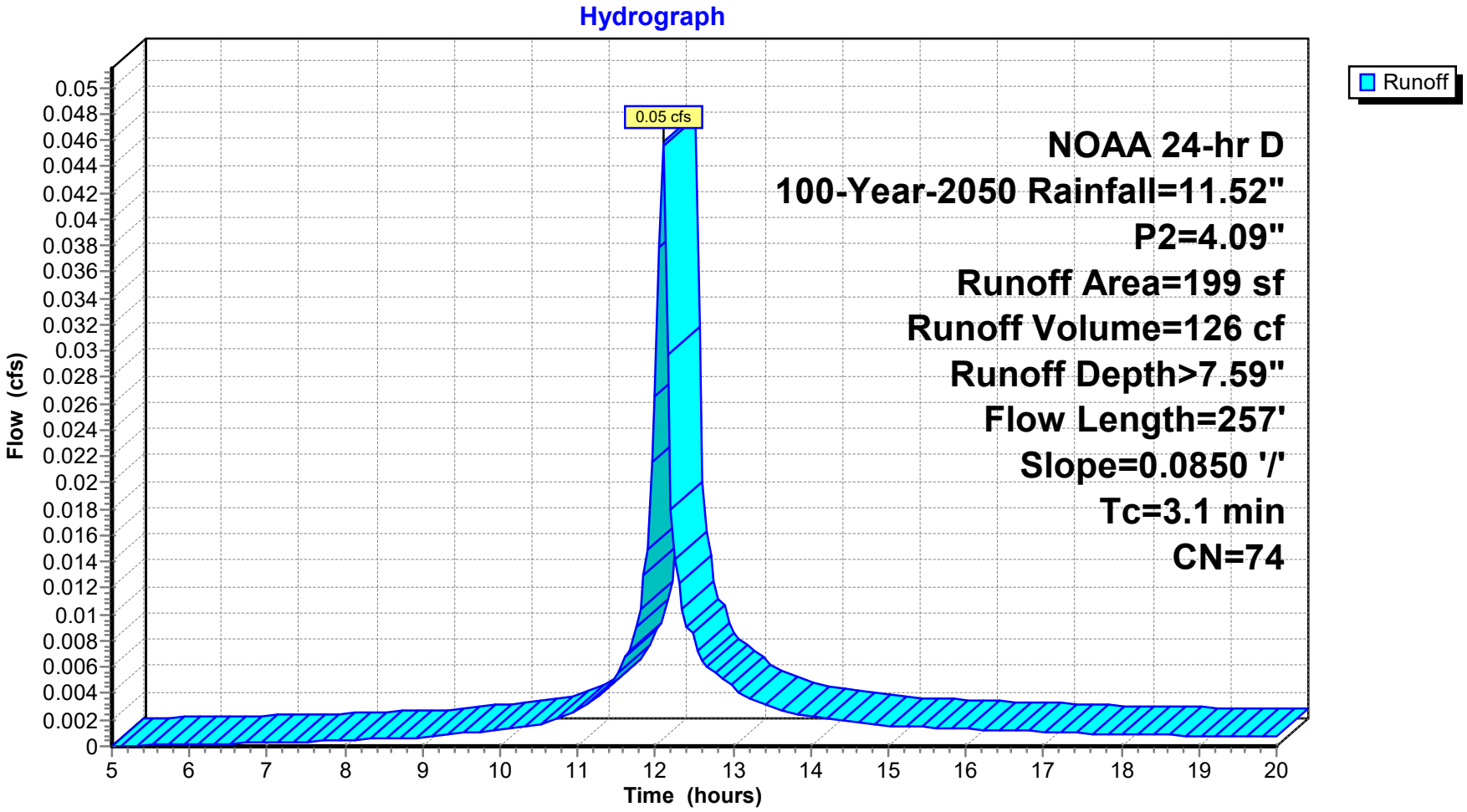
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 126 cf, Depth> 7.59"
Routed to Link 4L : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	199	74	CURBED ISLANDS
	199		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	43	0.0850	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 4.09"
0.6	214	0.0850	5.92		**Shallow Concentrated Flow, PAVED** Paved Kv= 20.3 fps
3.1	257	Total			

Subcatchment E1C: E1C curb islands



Summary for Subcatchment E2A: E2A

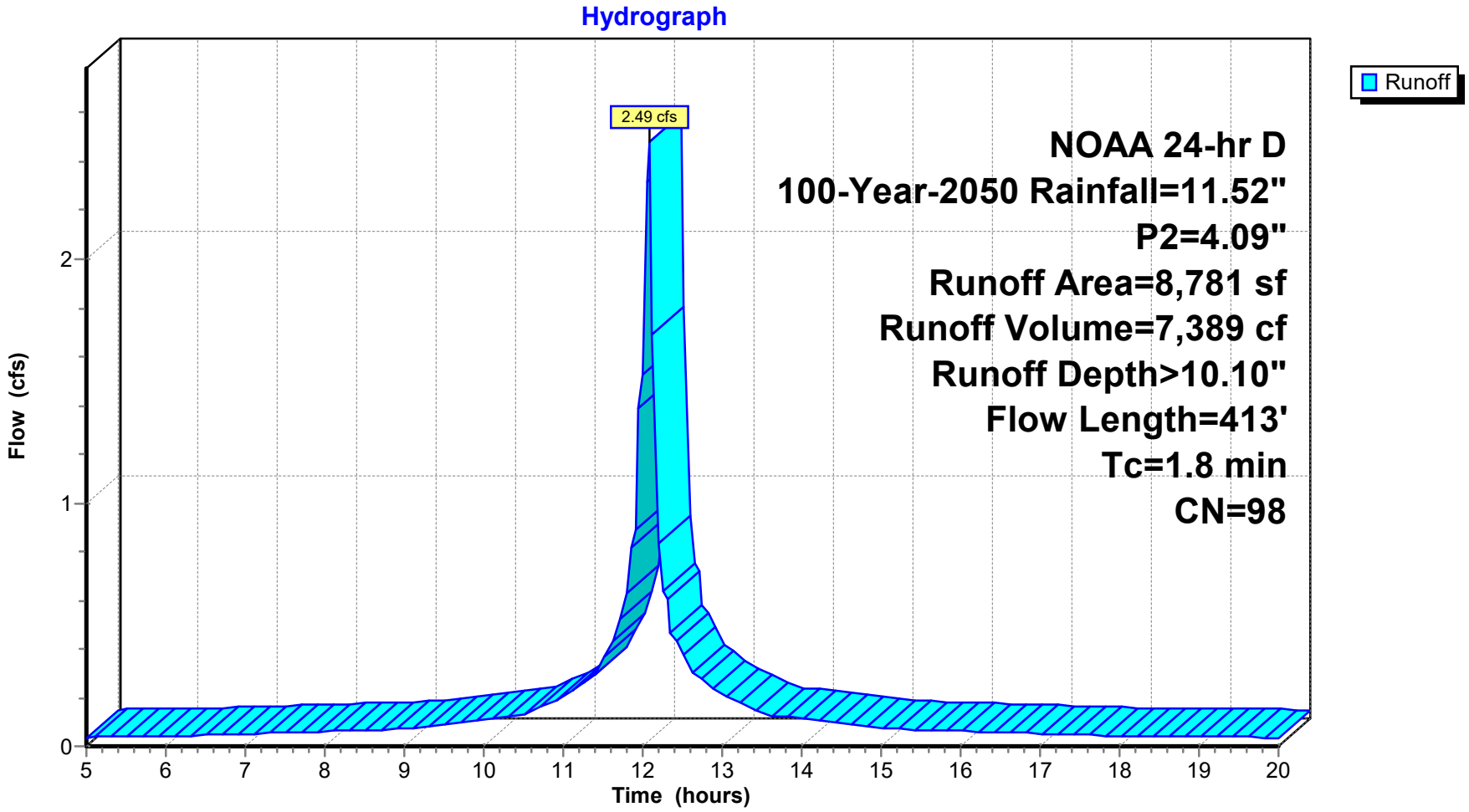
Runoff = 2.49 cfs @ 12.08 hrs, Volume= 7,389 cf, Depth>10.10"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	8,781	98	PARKING LOT
	8,781		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	100	0.0700	2.57		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"
1.2	313	0.0473	4.41		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	413	Total			

Subcatchment E2A: E2A



Summary for Subcatchment E2B: E2B

Runoff = 0.21 cfs @ 12.12 hrs, Volume= 635 cf, Depth> 7.59"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

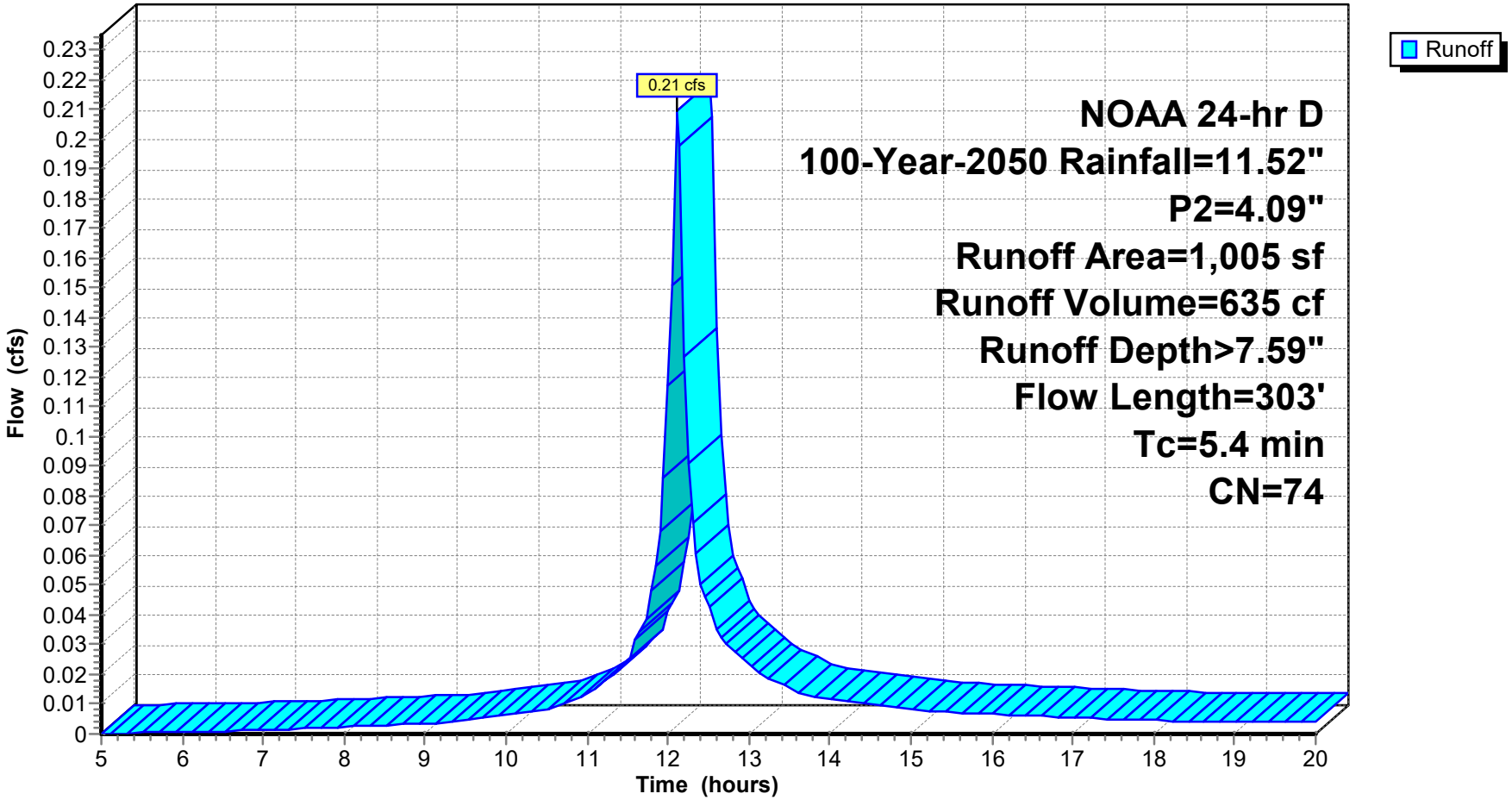
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
1,005	74	>75% Grass cover, Good, HSG C
1,005		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	30	0.0300	0.12		**Sheet Flow, LANDSCAPE** Grass: Dense n= 0.240 P2= 4.09"
0.6	70	0.0500	2.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"
0.7	203	0.0550	4.76		**Shallow Concentrated Flow, PARKING AND ROAD** Paved Kv= 20.3 fps
5.4	303	Total			

Subcatchment E2B: E2B

Hydrograph



Summary for Subcatchment E2C: E2C

Runoff = 0.15 cfs @ 12.06 hrs, Volume= 459 cf, Depth>10.10"
Routed to Link 5L : EXIST TOTAL BLOOMFIELD AVE

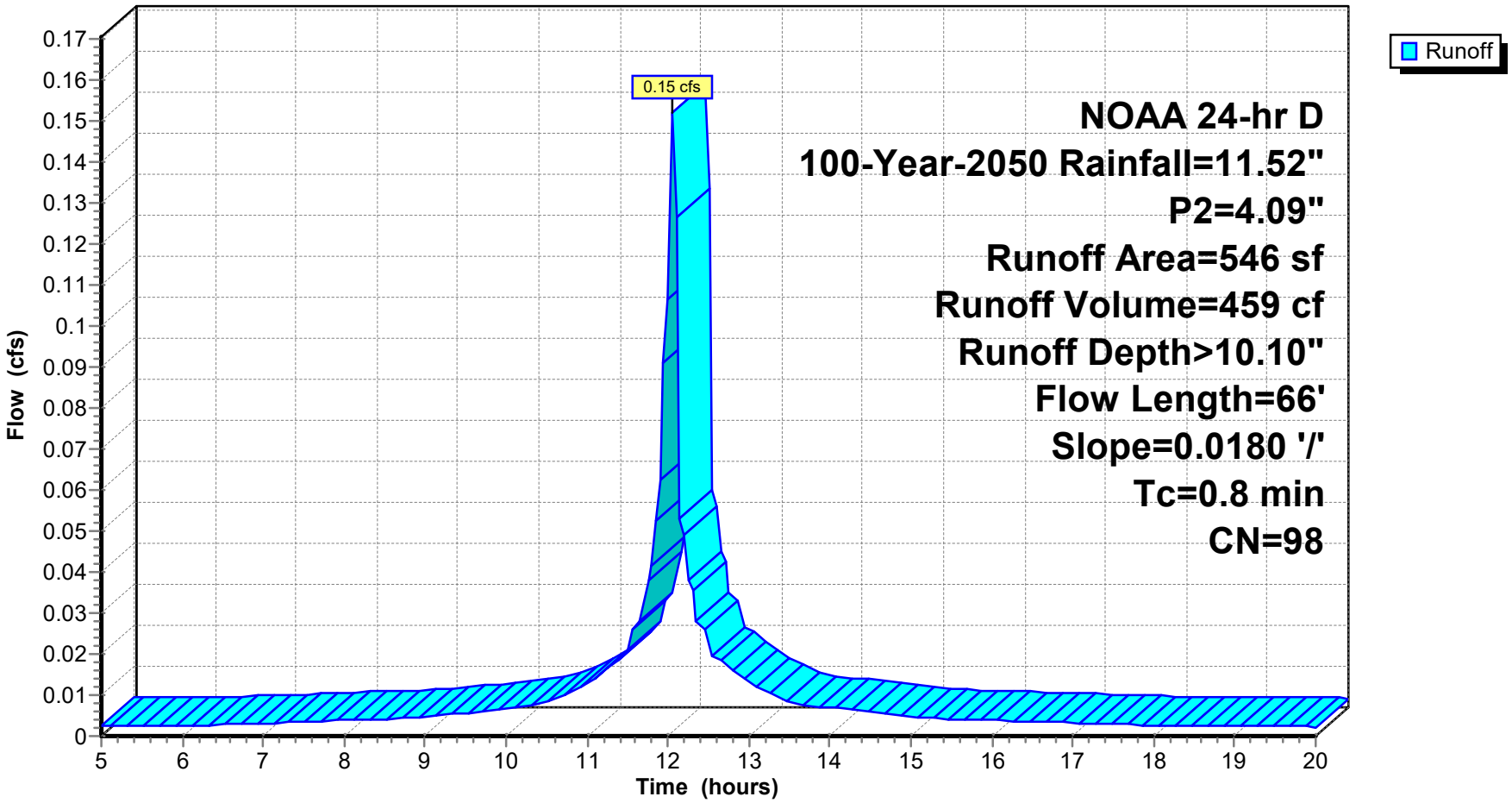
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	546	98	SIDEWALK
	546		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	66	0.0180	1.37		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.09"

Subcatchment E2C: E2C

Hydrograph

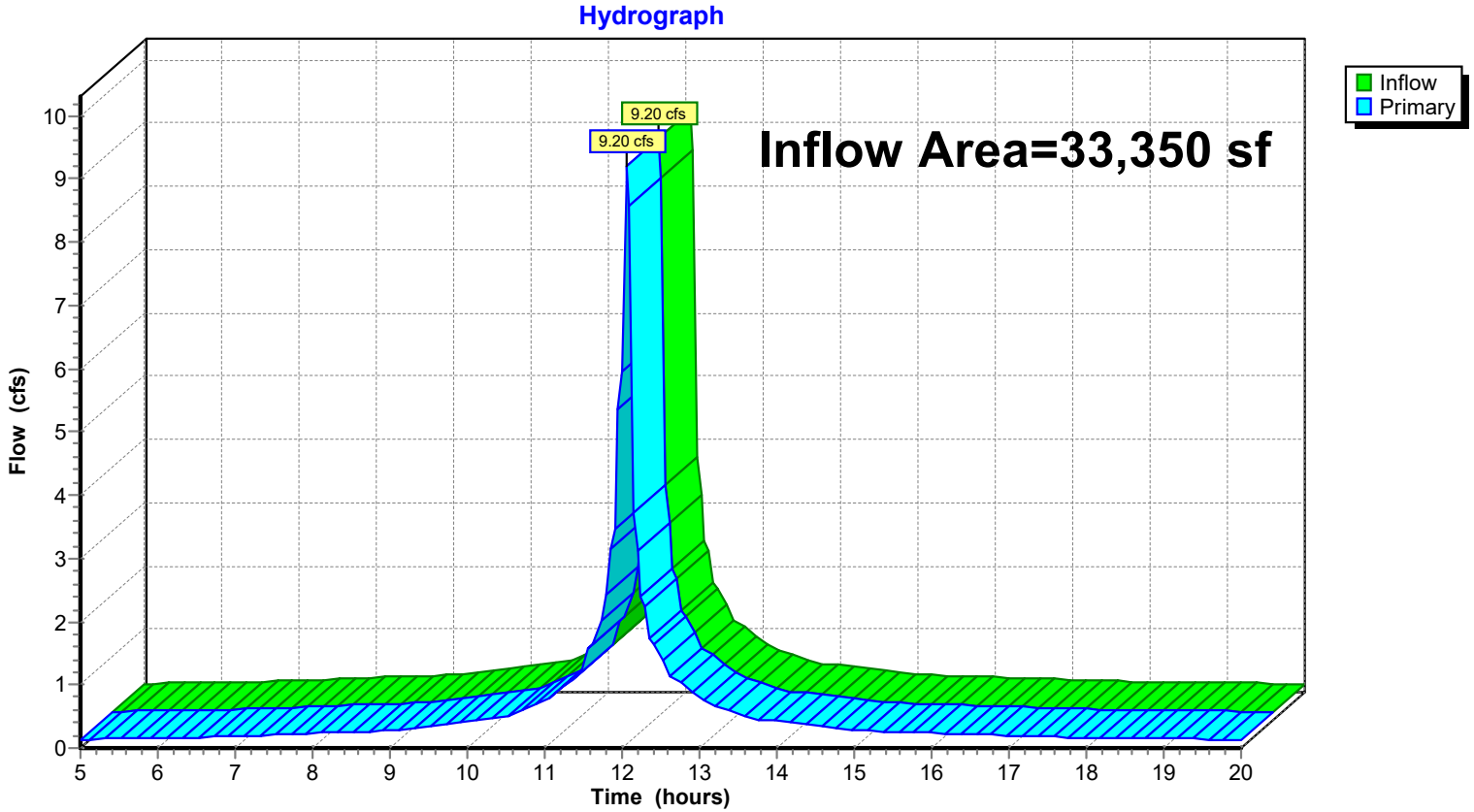


Summary for Link 4L: DESIGN POINT 1

Inflow Area = 33,350 sf, 99.40% Impervious, Inflow Depth > 10.08" for 100-Year-2050 event
Inflow = 9.20 cfs @ 12.07 hrs, Volume= 28,020 cf
Primary = 9.20 cfs @ 12.07 hrs, Volume= 28,020 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: DESIGN POINT 1

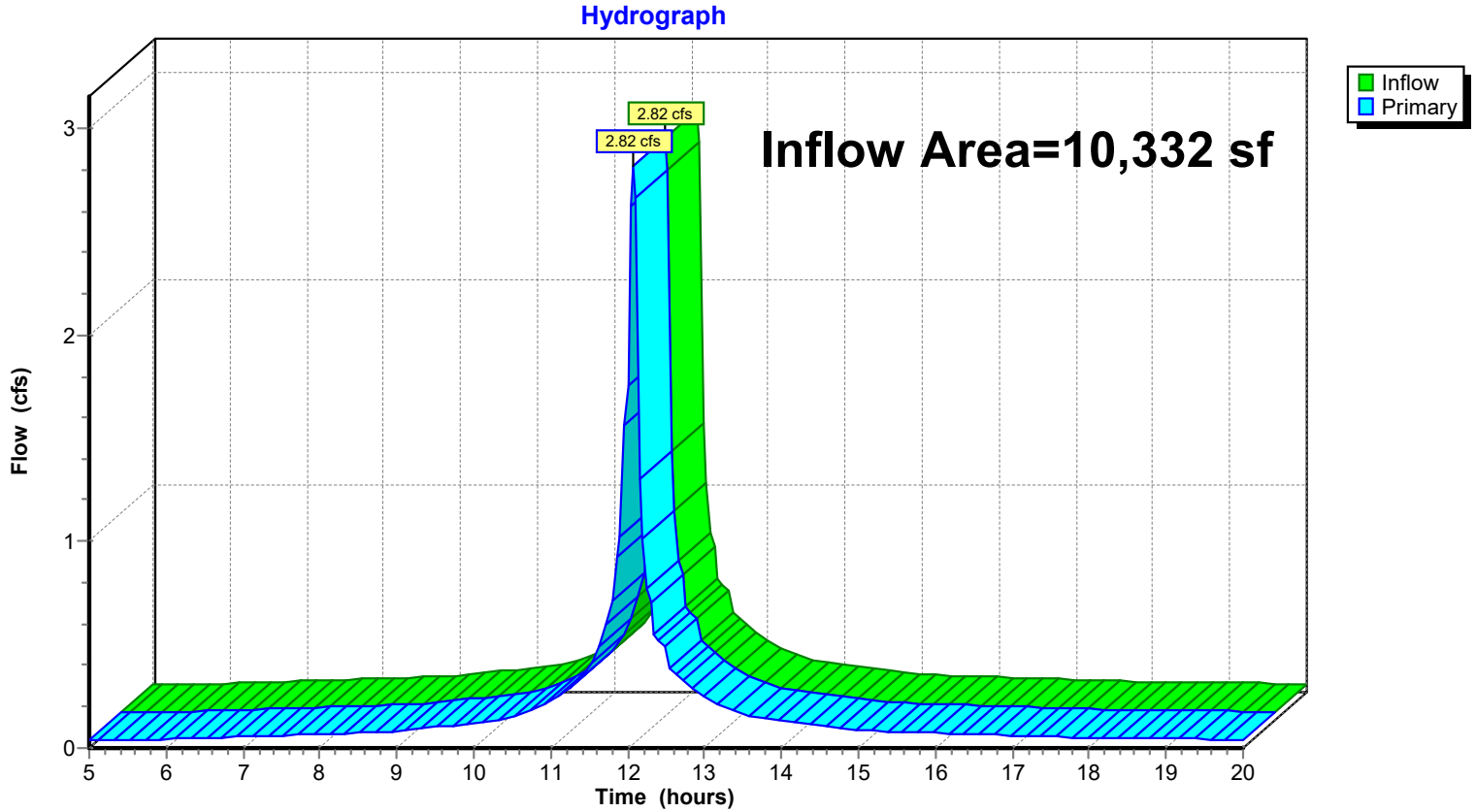


Summary for Link 5L: EXIST TOTAL BLOOMFIELD AVE

Inflow Area = 10,332 sf, 90.27% Impervious, Inflow Depth > 9.85" for 100-Year-2050 event
Inflow = 2.82 cfs @ 12.08 hrs, Volume= 8,483 cf
Primary = 2.82 cfs @ 12.08 hrs, Volume= 8,483 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : EXIST SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 5L: EXIST TOTAL BLOOMFIELD AVE

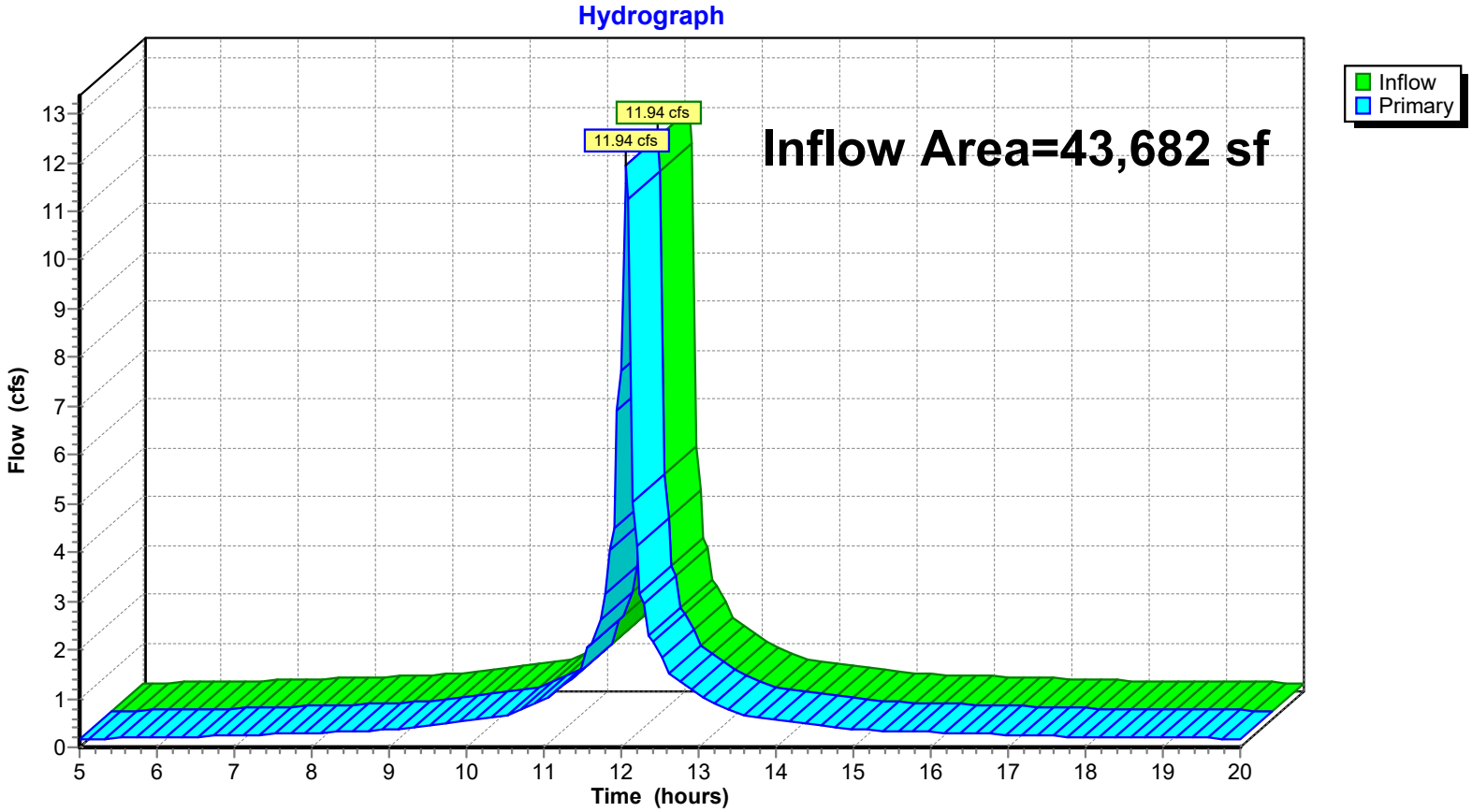


Summary for Link 7L: EXIST SITE TOTAL

Inflow Area = 43,682 sf, 97.24% Impervious, Inflow Depth > 10.03" for 100-Year-2050 event
Inflow = 11.94 cfs @ 12.07 hrs, Volume= 36,503 cf
Primary = 11.94 cfs @ 12.07 hrs, Volume= 36,503 cf, Atten= 0%, Lag= 0.0 min

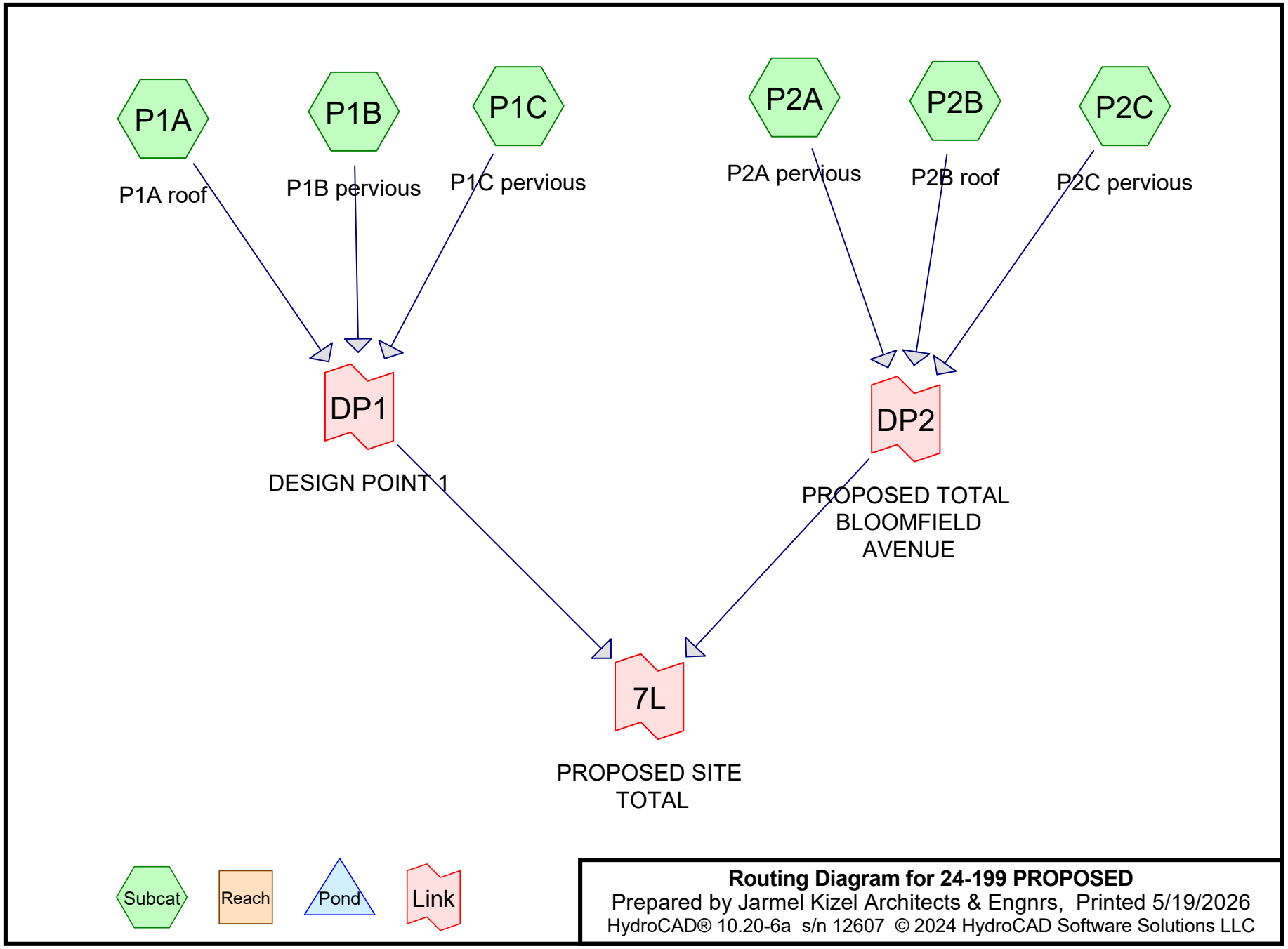
Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: EXIST SITE TOTAL



APPENDIX B

PROPOSED DRAINAGE CALCULATIONS



Routing Diagram for 24-199 PROPOSED

Prepared by Jarmel Kizel Architects & Engnrs, Printed 5/19/2026

HydroCAD® 10.20-6a s/n 12607 © 2024 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
3,730	74	>75% Grass cover, Good, HSG C (P1B, P2A)
988	86	LANDSCAPE (P1C, P2C)
31,214	98	ROOF (P1A)
7,750	98	roof (P2B)

Summary for Subcatchment P1A: P1A roof

Runoff = 2.61 cfs @ 12.08 hrs, Volume= 7,701 cf, Depth> 2.96"
Routed to Link DP1 : DESIGN POINT 1

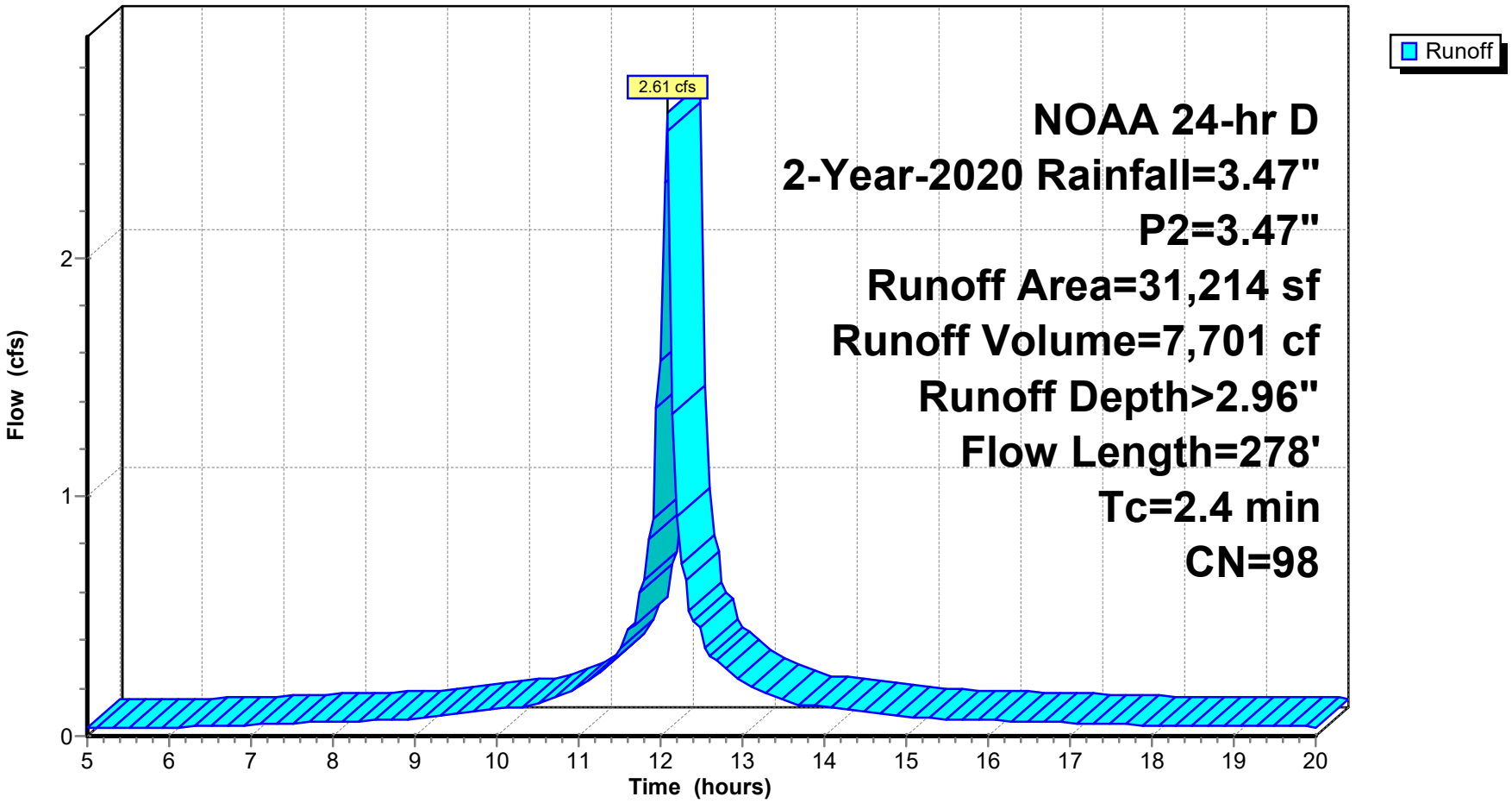
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	31,214	98	ROOF
	31,214		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.9	178	0.0050	3.47	2.73	**Pipe Channel, ROOF DRAIN** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
2.4	278	Total			

Subcatchment P1A: P1A roof

Hydrograph



Summary for Subcatchment P1B: P1B pervious

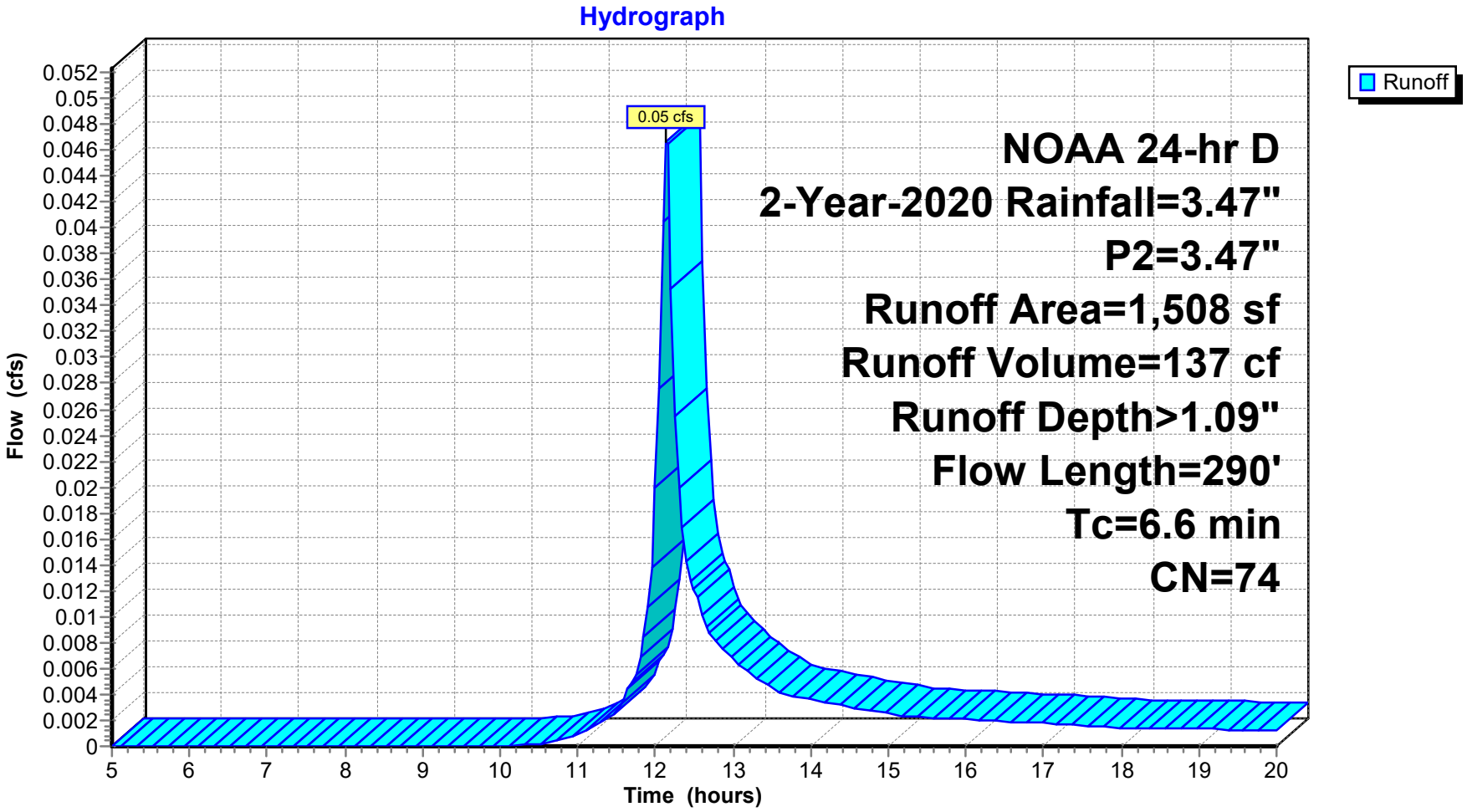
Runoff = 0.05 cfs @ 12.14 hrs, Volume= 137 cf, Depth> 1.09"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
1,508	74	>75% Grass cover, Good, HSG C
1,508		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	61	0.0650	0.18		**Sheet Flow, LANDSCAPE BUFFER** Grass: Dense n= 0.240 P2= 3.47"
0.3	39	0.0950	2.21		**Sheet Flow, CLAREMONT ROAD** Smooth surfaces n= 0.011 P2= 3.47"
0.5	190	0.0950	6.26		**Shallow Concentrated Flow, CLAREMONT** Paved Kv= 20.3 fps
6.6	290	Total			

Subcatchment P1B: P1B pervious



Summary for Subcatchment P1C: P1C pervious

Runoff = 0.04 cfs @ 12.09 hrs, Volume= 102 cf, Depth> 1.91"
Routed to Link DP1 : DESIGN POINT 1

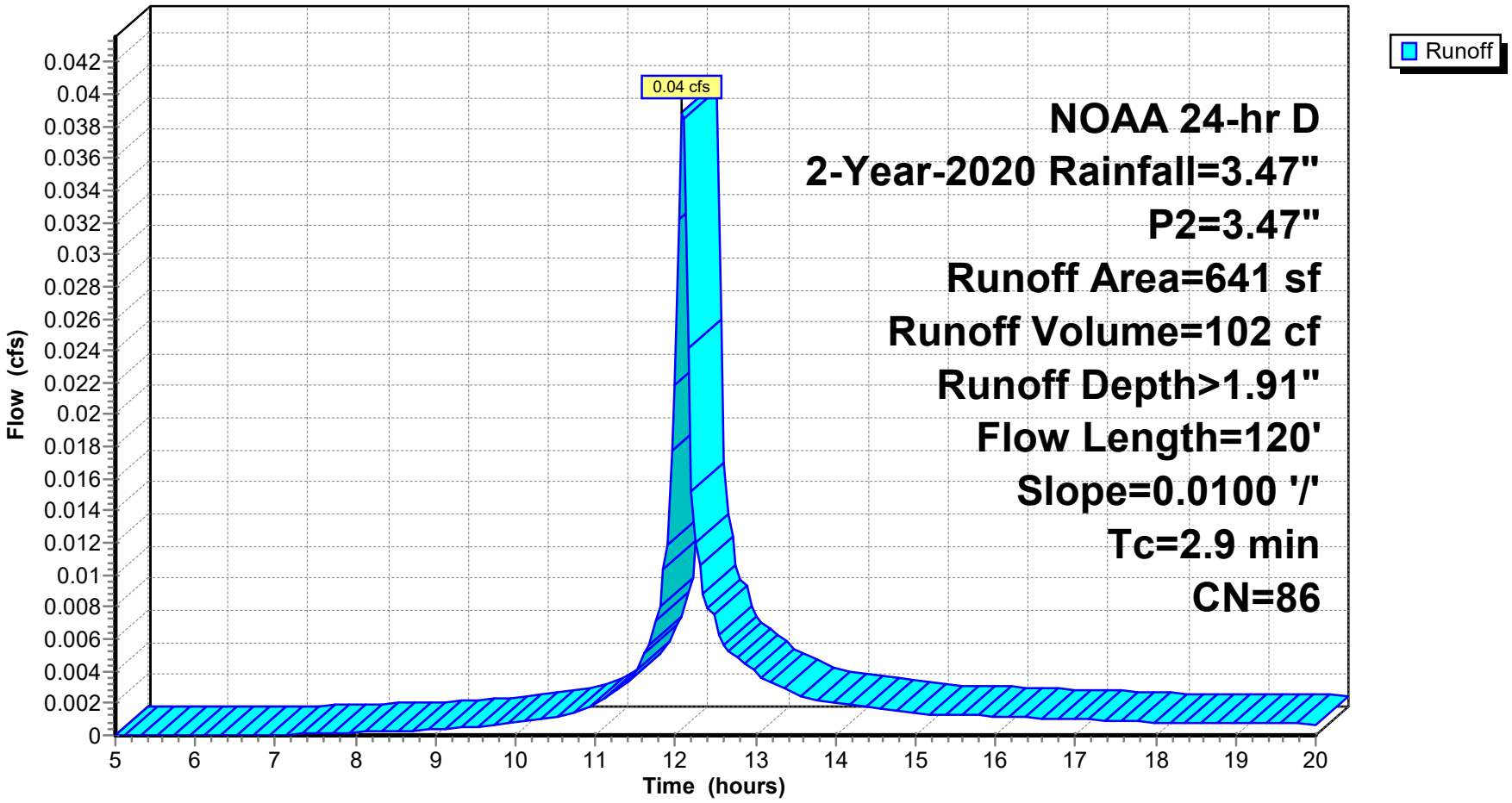
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	641	86	LANDSCAPE
	641		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	10	0.0100	0.08		**Sheet Flow, Landscaping** Grass: Short n= 0.150 P2= 3.47"
0.9	110	0.0100	2.03		**Shallow Concentrated Flow, Parking lot** Paved Kv= 20.3 fps
2.9	120	Total			

Subcatchment P1C: P1C pervious

Hydrograph



Summary for Subcatchment P2A: P2A pervious

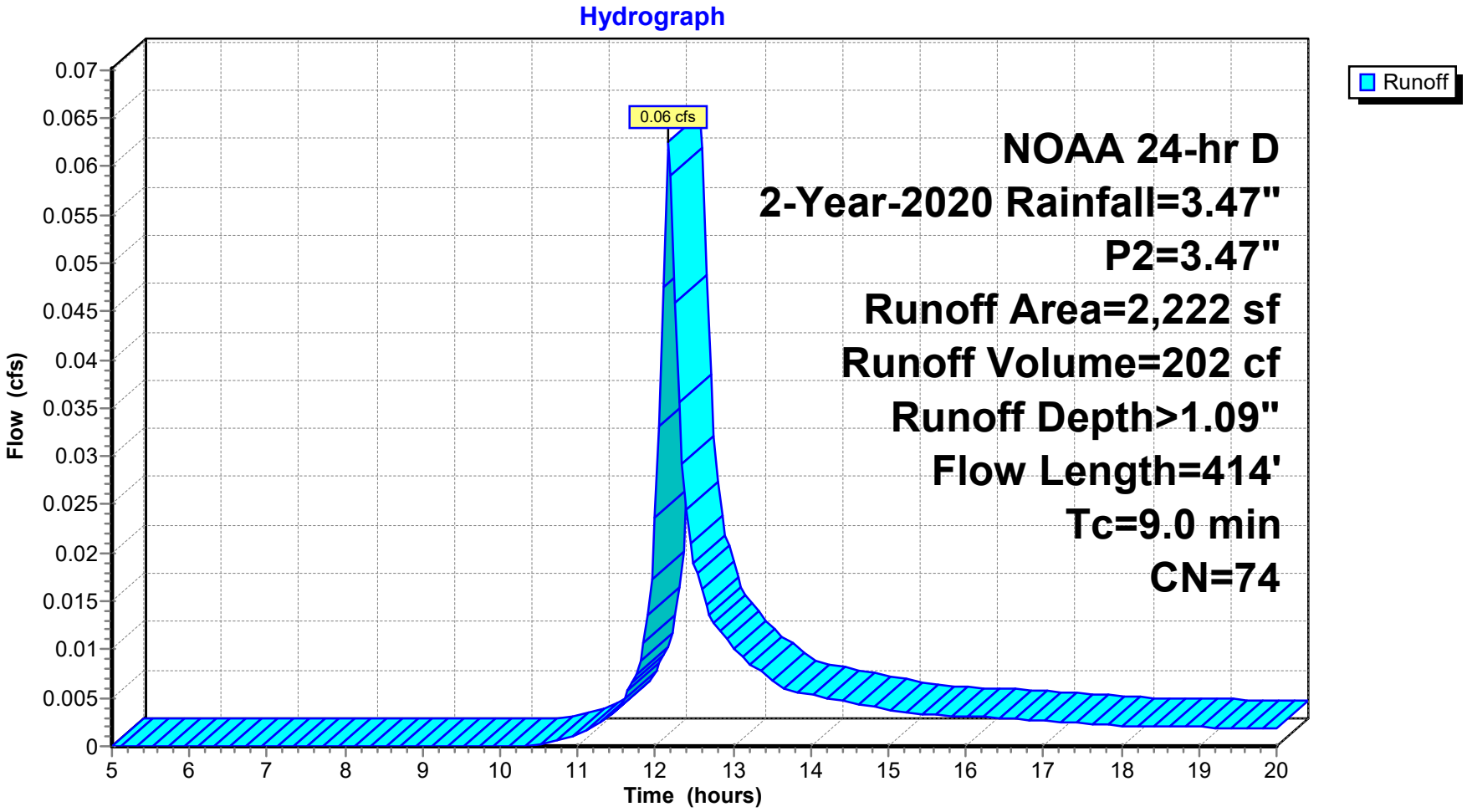
Runoff = 0.06 cfs @ 12.17 hrs, Volume= 202 cf, Depth> 1.09"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
2,222	74	>75% Grass cover, Good, HSG C
2,222		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	100	0.0800	0.21		**Sheet Flow, BUFFER** Grass: Dense n= 0.240 P2= 3.47"
0.2	48	0.1000	5.09		**Shallow Concentrated Flow, LAWN** Unpaved Kv= 16.1 fps
0.9	266	0.0600	4.97		**Shallow Concentrated Flow, BLOOMFIELD** Paved Kv= 20.3 fps
9.0	414	Total			

Subcatchment P2A: P2A pervious



Summary for Subcatchment P2B: P2B roof

Runoff = 0.65 cfs @ 12.08 hrs, Volume= 1,912 cf, Depth> 2.96"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

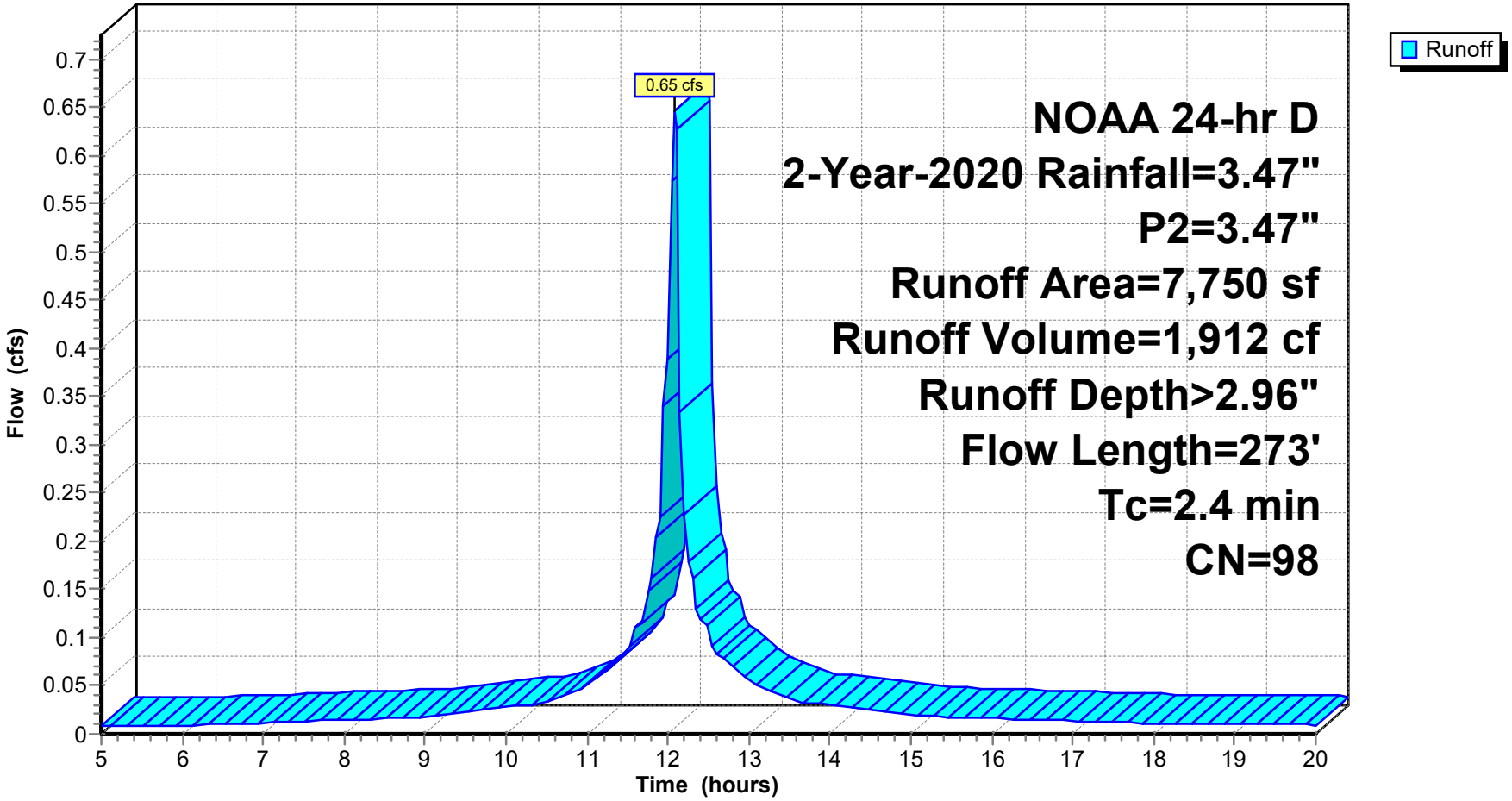
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	7,750	98	roof
	7,750		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.7	112	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	12	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	49	0.0482	15.81	49.67	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
2.4	273	Total			

Subcatchment P2B: P2B roof

Hydrograph



Summary for Subcatchment P2C: P2C pervious

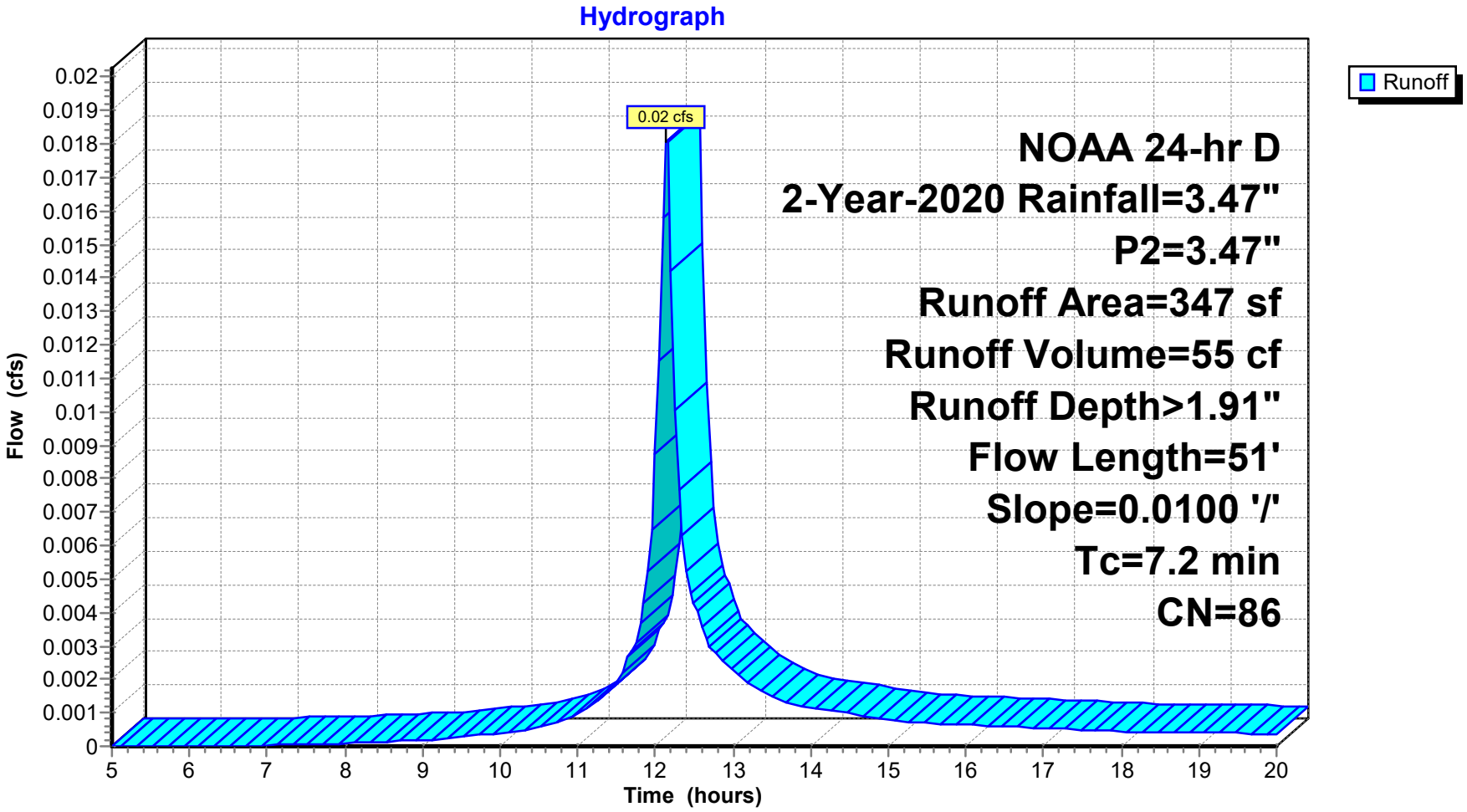
Runoff = 0.02 cfs @ 12.14 hrs, Volume= 55 cf, Depth> 1.91"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2020 Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	347	86	LANDSCAPE
	347		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	51	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.47"

Subcatchment P2C: P2C pervious

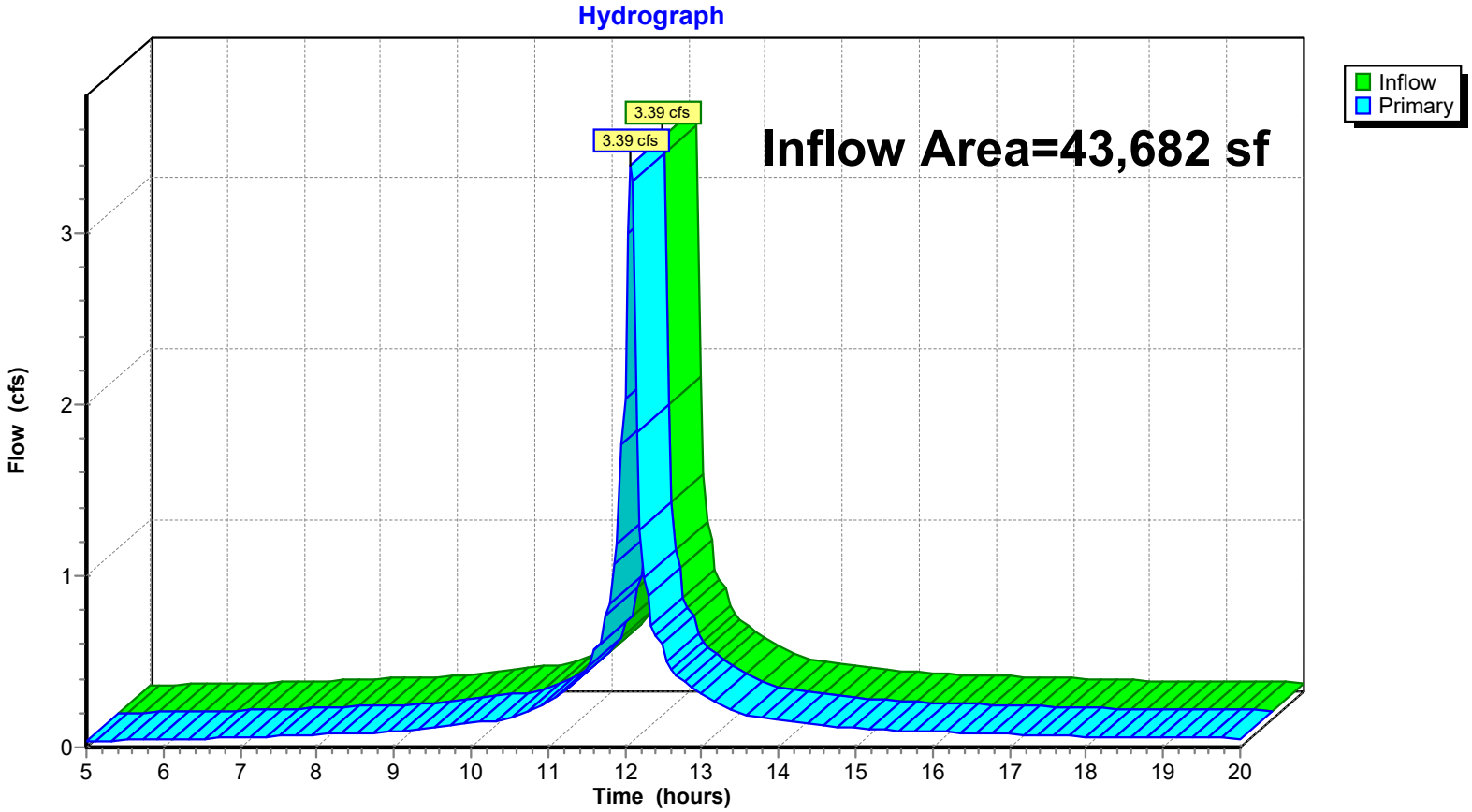


Summary for Link 7L: PROPOSED SITE TOTAL

Inflow Area = 43,682 sf, 89.20% Impervious, Inflow Depth > 2.78" for 2-Year-2020 event
Inflow = 3.39 cfs @ 12.08 hrs, Volume= 10,110 cf
Primary = 3.39 cfs @ 12.08 hrs, Volume= 10,110 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: PROPOSED SITE TOTAL

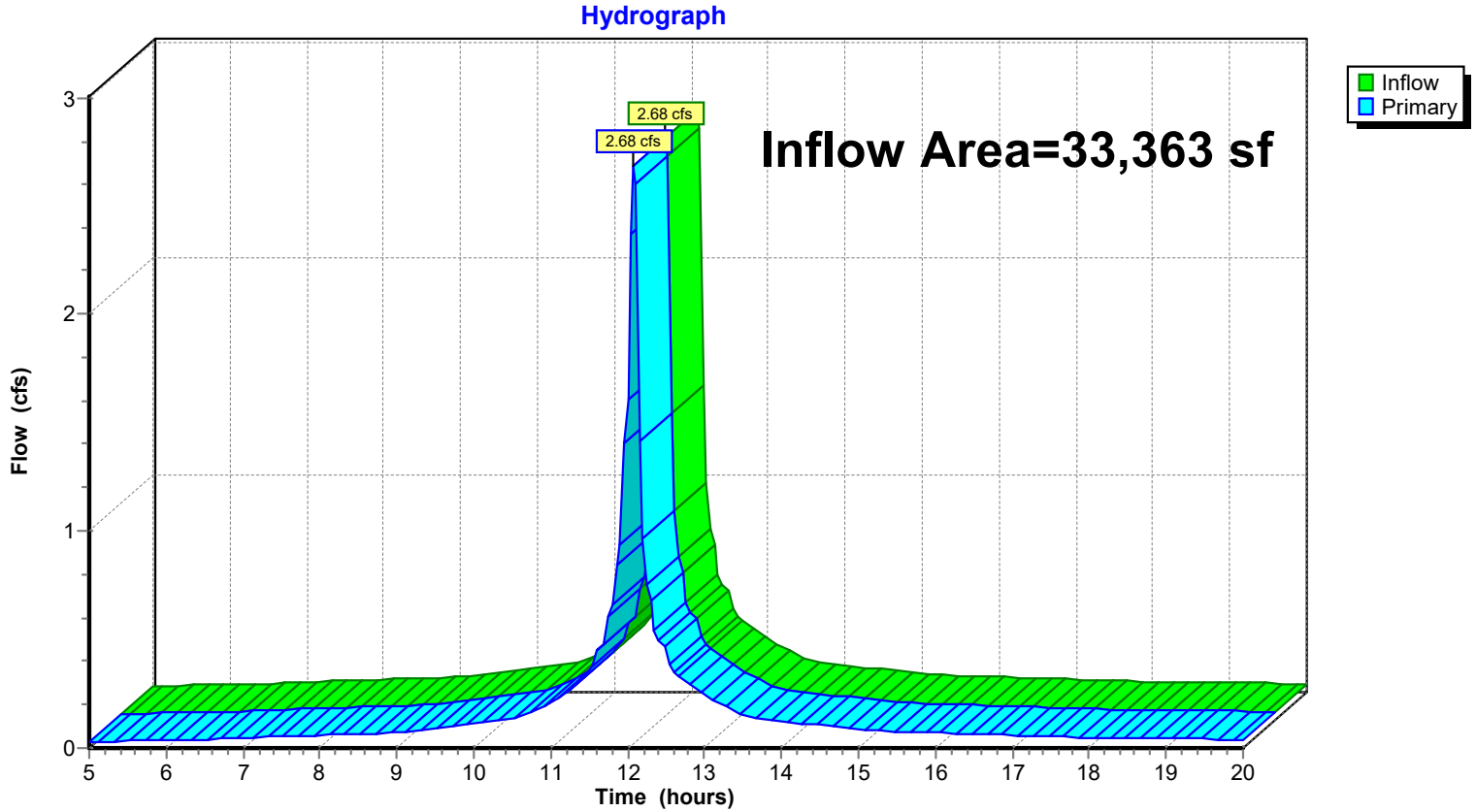


Summary for Link DP1: DESIGN POINT 1

Inflow Area = 33,363 sf, 93.56% Impervious, Inflow Depth > 2.86" for 2-Year-2020 event
Inflow = 2.68 cfs @ 12.08 hrs, Volume= 7,941 cf
Primary = 2.68 cfs @ 12.08 hrs, Volume= 7,941 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP1: DESIGN POINT 1

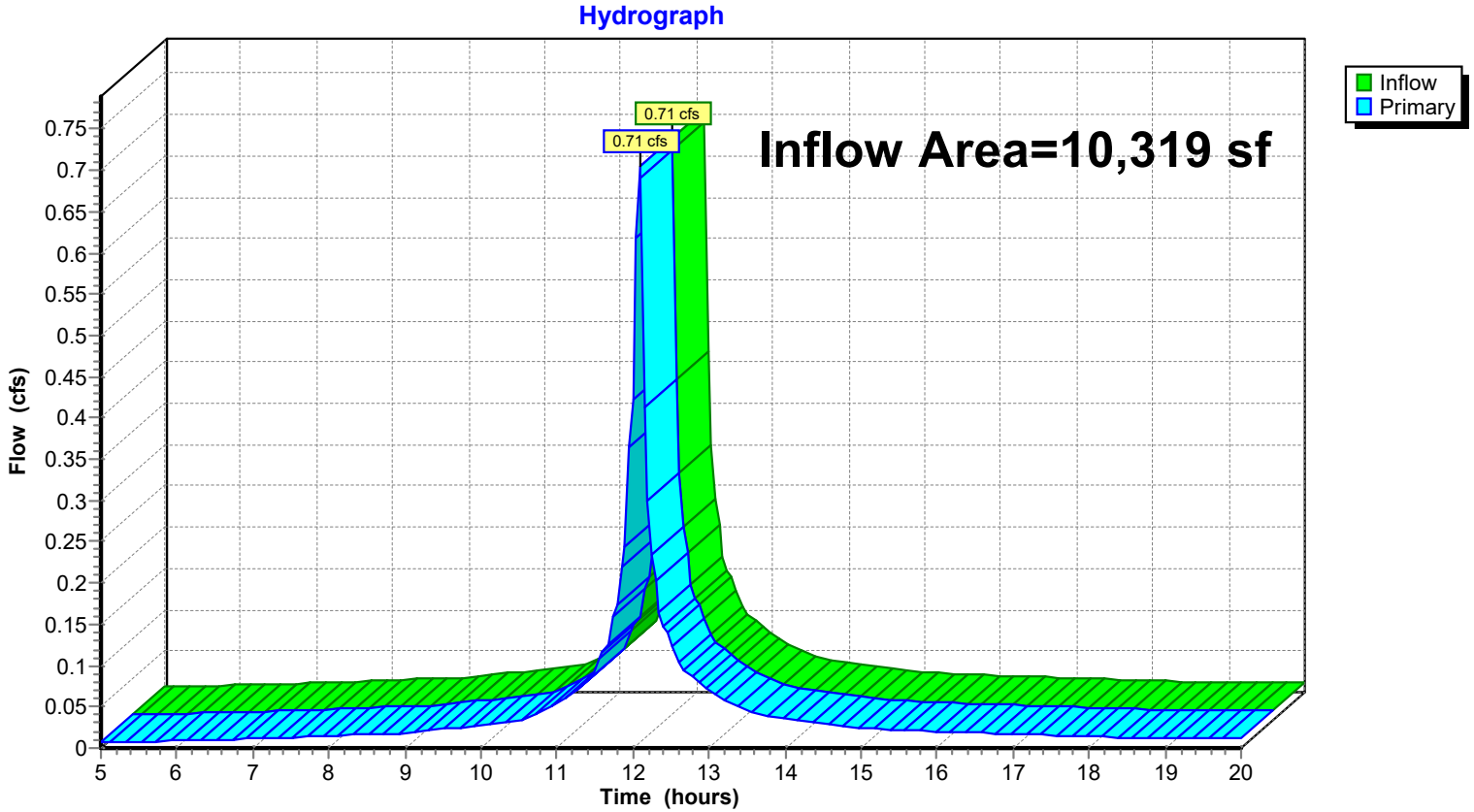


Summary for Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE

Inflow Area = 10,319 sf, 75.10% Impervious, Inflow Depth > 2.52" for 2-Year-2020 event
Inflow = 0.71 cfs @ 12.09 hrs, Volume= 2,170 cf
Primary = 0.71 cfs @ 12.09 hrs, Volume= 2,170 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE



Summary for Subcatchment P1A: P1A roof

Runoff = 3.09 cfs @ 12.08 hrs, Volume= 9,142 cf, Depth> 3.51"
Routed to Link DP1 : DESIGN POINT 1

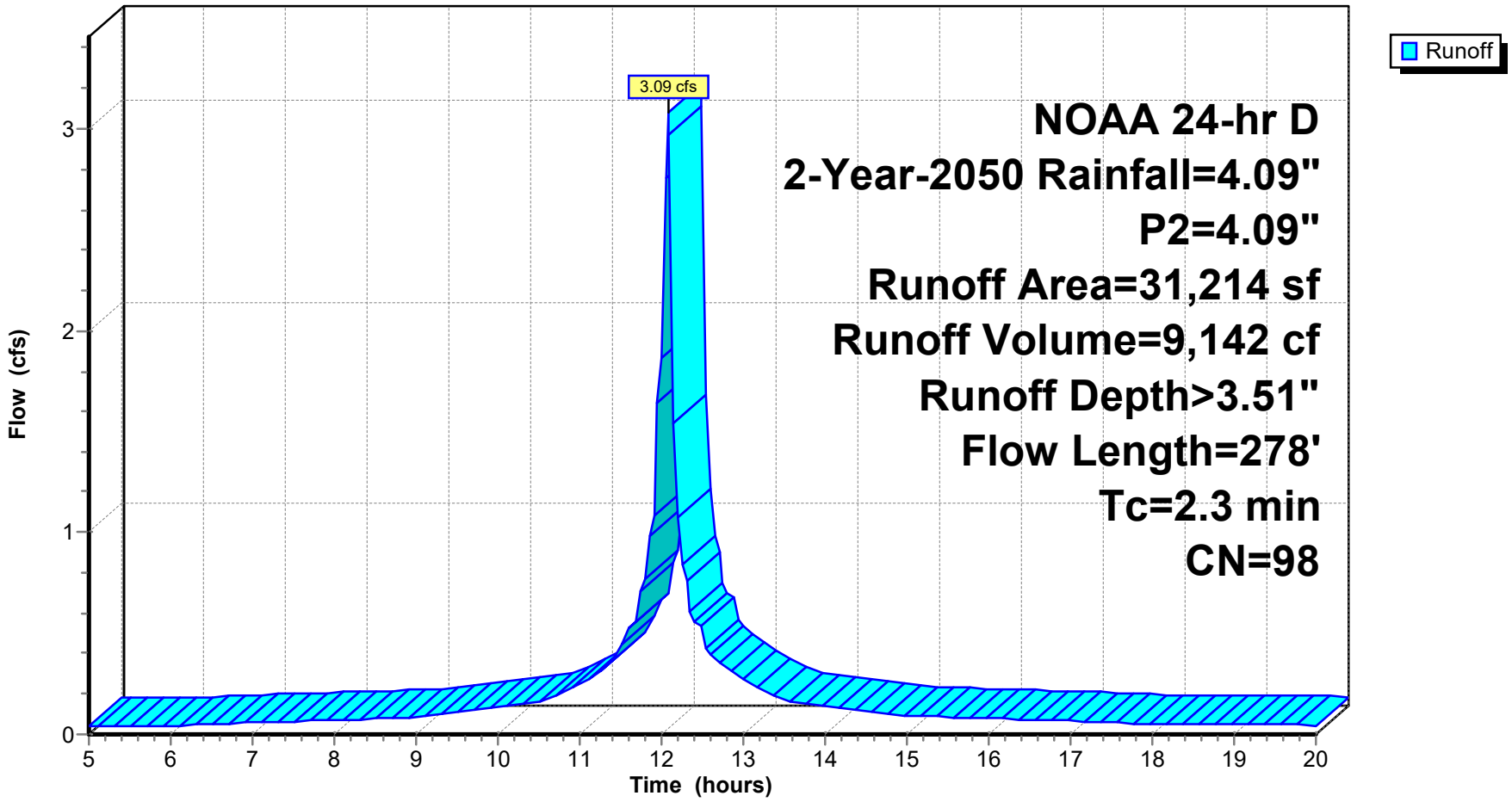
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	31,214	98	ROOF
	31,214		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.18		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.9	178	0.0050	3.47	2.73	**Pipe Channel, ROOF DRAIN** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
2.3	278	Total			

Subcatchment P1A: P1A roof

Hydrograph



Summary for Subcatchment P1B: P1B pervious

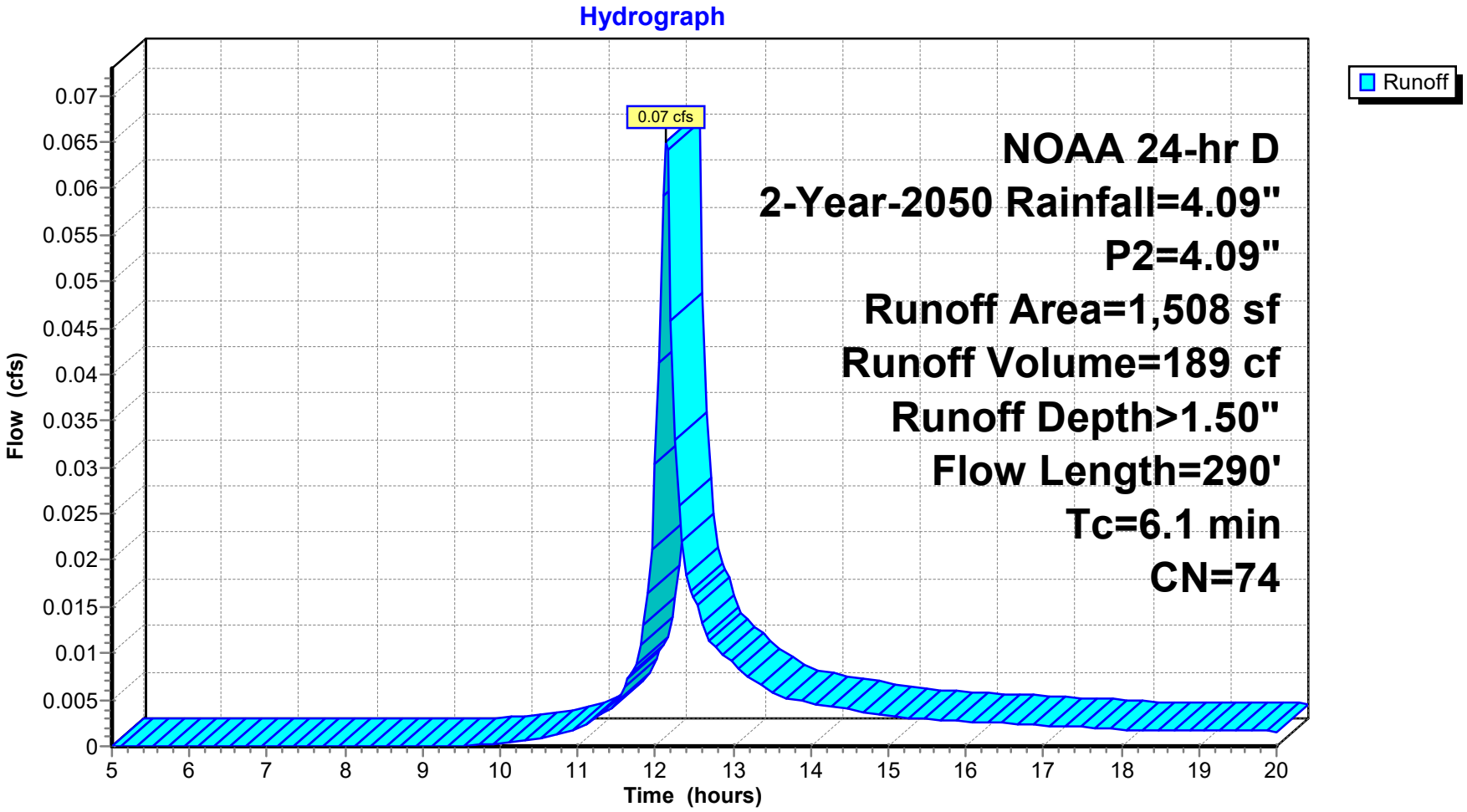
Runoff = 0.07 cfs @ 12.14 hrs, Volume= 189 cf, Depth> 1.50"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
1,508	74	>75% Grass cover, Good, HSG C
1,508		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	61	0.0650	0.19		**Sheet Flow, LANDSCAPE BUFFER** Grass: Dense n= 0.240 P2= 4.09"
0.3	39	0.0950	2.40		**Sheet Flow, CLAREMONT ROAD** Smooth surfaces n= 0.011 P2= 4.09"
0.5	190	0.0950	6.26		**Shallow Concentrated Flow, CLAREMONT** Paved Kv= 20.3 fps
6.1	290	Total			

Subcatchment P1B: P1B pervious



Summary for Subcatchment P1C: P1C pervious

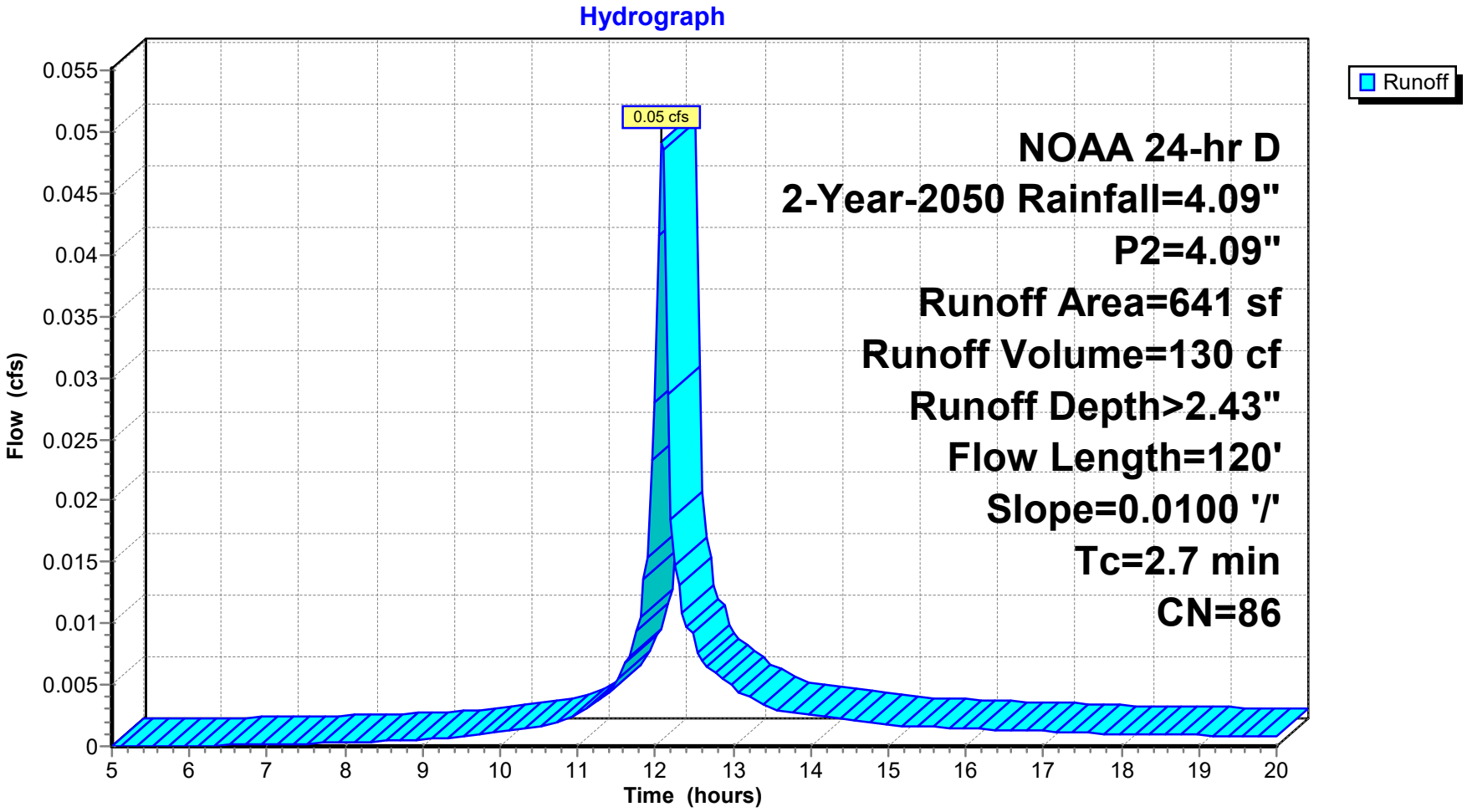
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 130 cf, Depth> 2.43"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	641	86	LANDSCAPE
	641		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	10	0.0100	0.09		**Sheet Flow, Landscaping** Grass: Short n= 0.150 P2= 4.09"
0.9	110	0.0100	2.03		**Shallow Concentrated Flow, Parking lot** Paved Kv= 20.3 fps
2.7	120	Total			

Subcatchment P1C: P1C pervious



Summary for Subcatchment P2A: P2A pervious

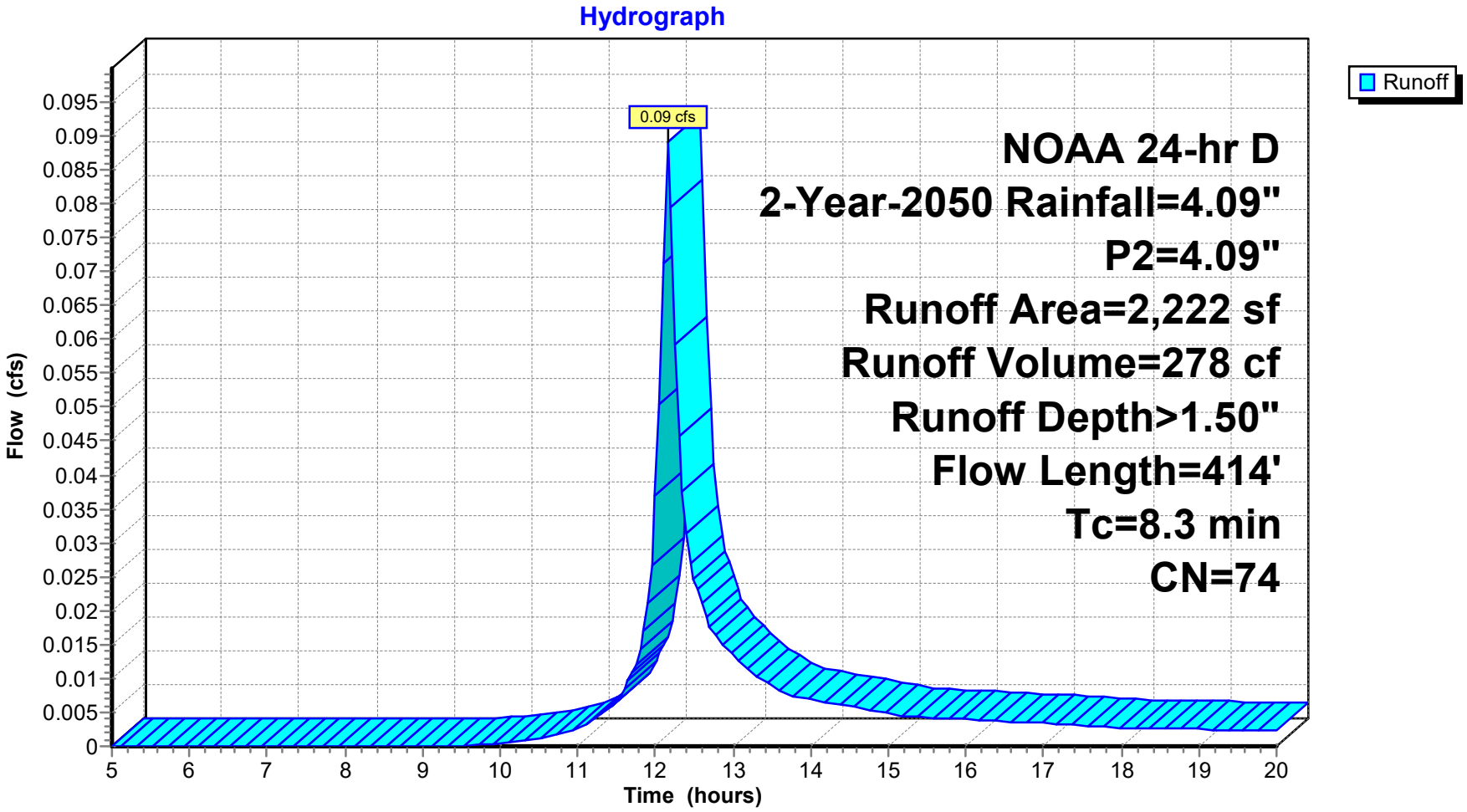
Runoff = 0.09 cfs @ 12.16 hrs, Volume= 278 cf, Depth> 1.50"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
2,222	74	>75% Grass cover, Good, HSG C
2,222		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0800	0.23		**Sheet Flow, BUFFER** Grass: Dense n= 0.240 P2= 4.09"
0.2	48	0.1000	5.09		**Shallow Concentrated Flow, LAWN** Unpaved Kv= 16.1 fps
0.9	266	0.0600	4.97		**Shallow Concentrated Flow, BLOOMFIELD** Paved Kv= 20.3 fps
8.3	414	Total			

Subcatchment P2A: P2A pervious



Summary for Subcatchment P2B: P2B roof

Runoff = 0.77 cfs @ 12.08 hrs, Volume= 2,270 cf, Depth> 3.51"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

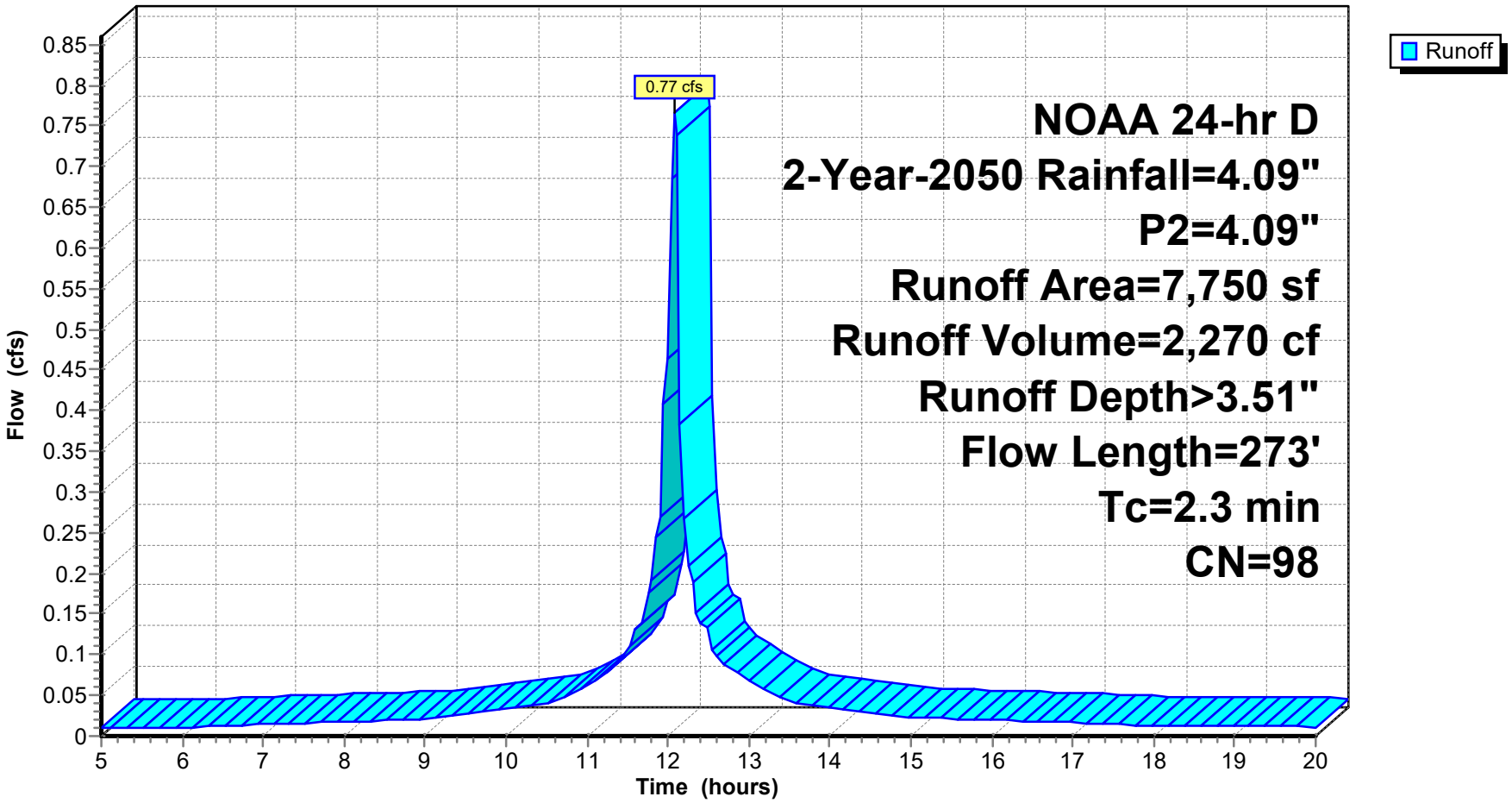
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	7,750	98	roof
	7,750		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.18		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.7	112	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	12	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	49	0.0482	15.81	49.67	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
2.3	273	Total			

Subcatchment P2B: P2B roof

Hydrograph



Summary for Subcatchment P2C: P2C pervious

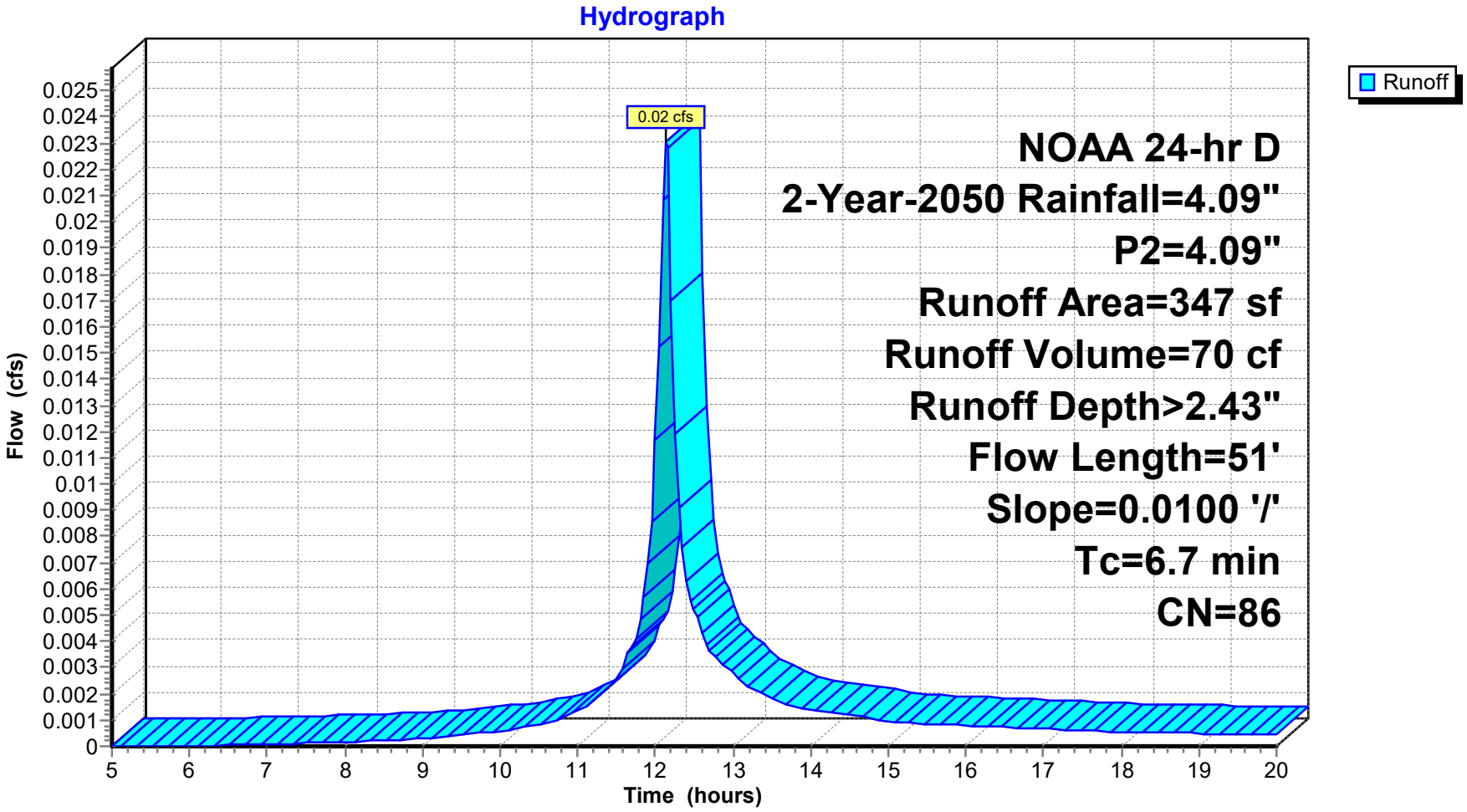
Runoff = 0.02 cfs @ 12.14 hrs, Volume= 70 cf, Depth> 2.43"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-2050 Rainfall=4.09", P2=4.09"

	Area (sf)	CN	Description
*	347	86	LANDSCAPE
	347		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	51	0.0100	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 4.09"

Subcatchment P2C: P2C pervious

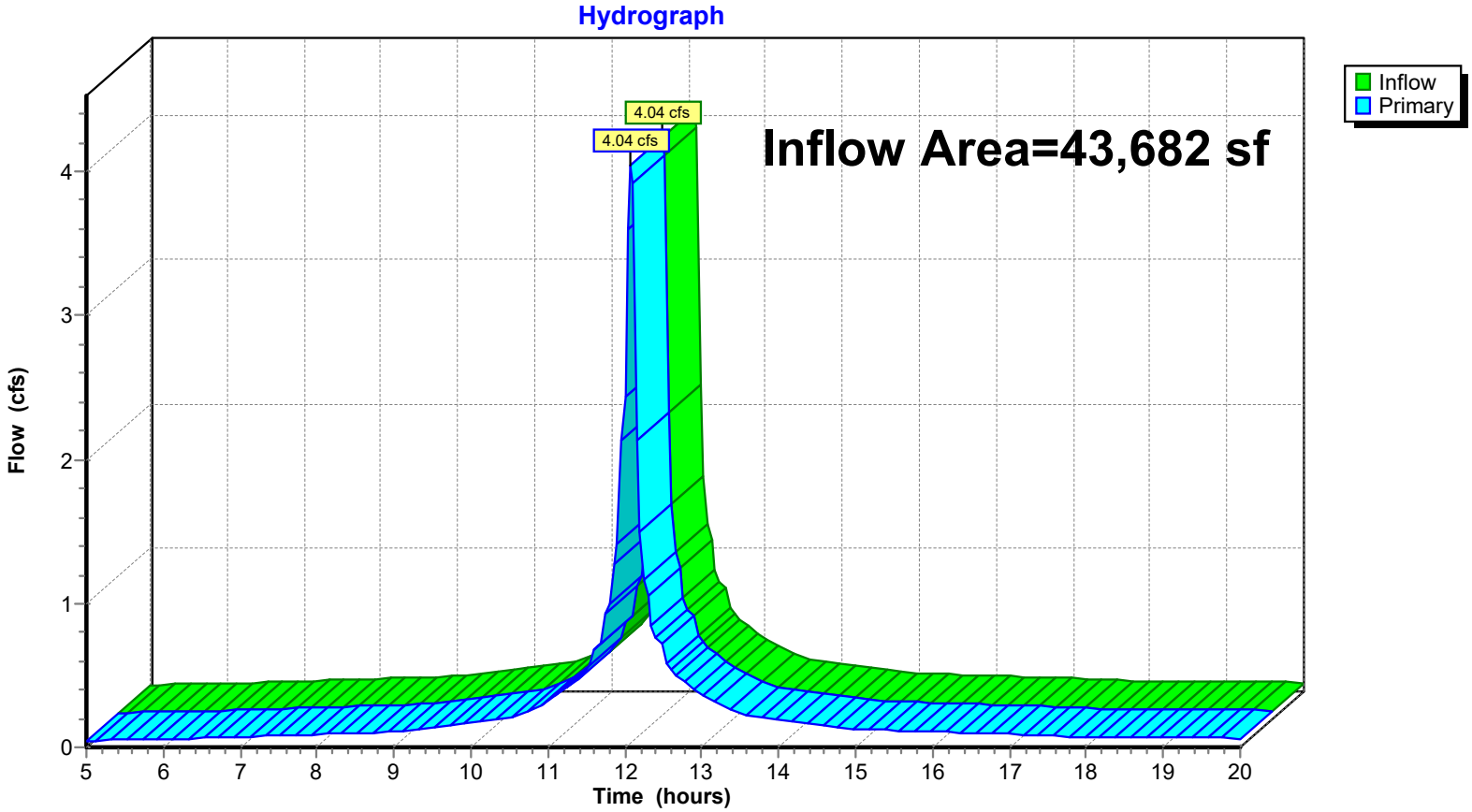


Summary for Link 7L: PROPOSED SITE TOTAL

Inflow Area = 43,682 sf, 89.20% Impervious, Inflow Depth > 3.32" for 2-Year-2050 event
Inflow = 4.04 cfs @ 12.08 hrs, Volume= 12,079 cf
Primary = 4.04 cfs @ 12.08 hrs, Volume= 12,079 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: PROPOSED SITE TOTAL

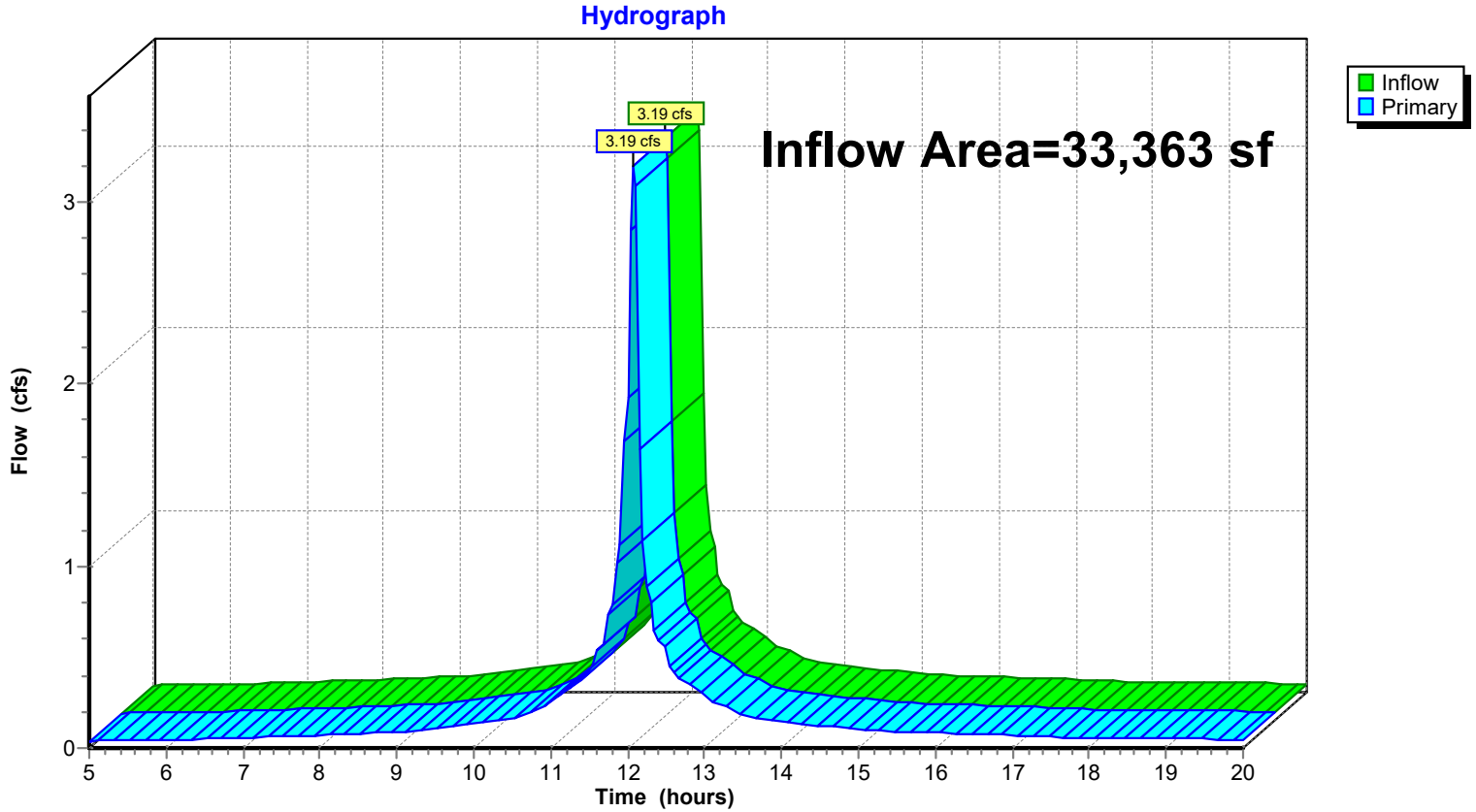


Summary for Link DP1: DESIGN POINT 1

Inflow Area = 33,363 sf, 93.56% Impervious, Inflow Depth > 3.40" for 2-Year-2050 event
Inflow = 3.19 cfs @ 12.08 hrs, Volume= 9,461 cf
Primary = 3.19 cfs @ 12.08 hrs, Volume= 9,461 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP1: DESIGN POINT 1

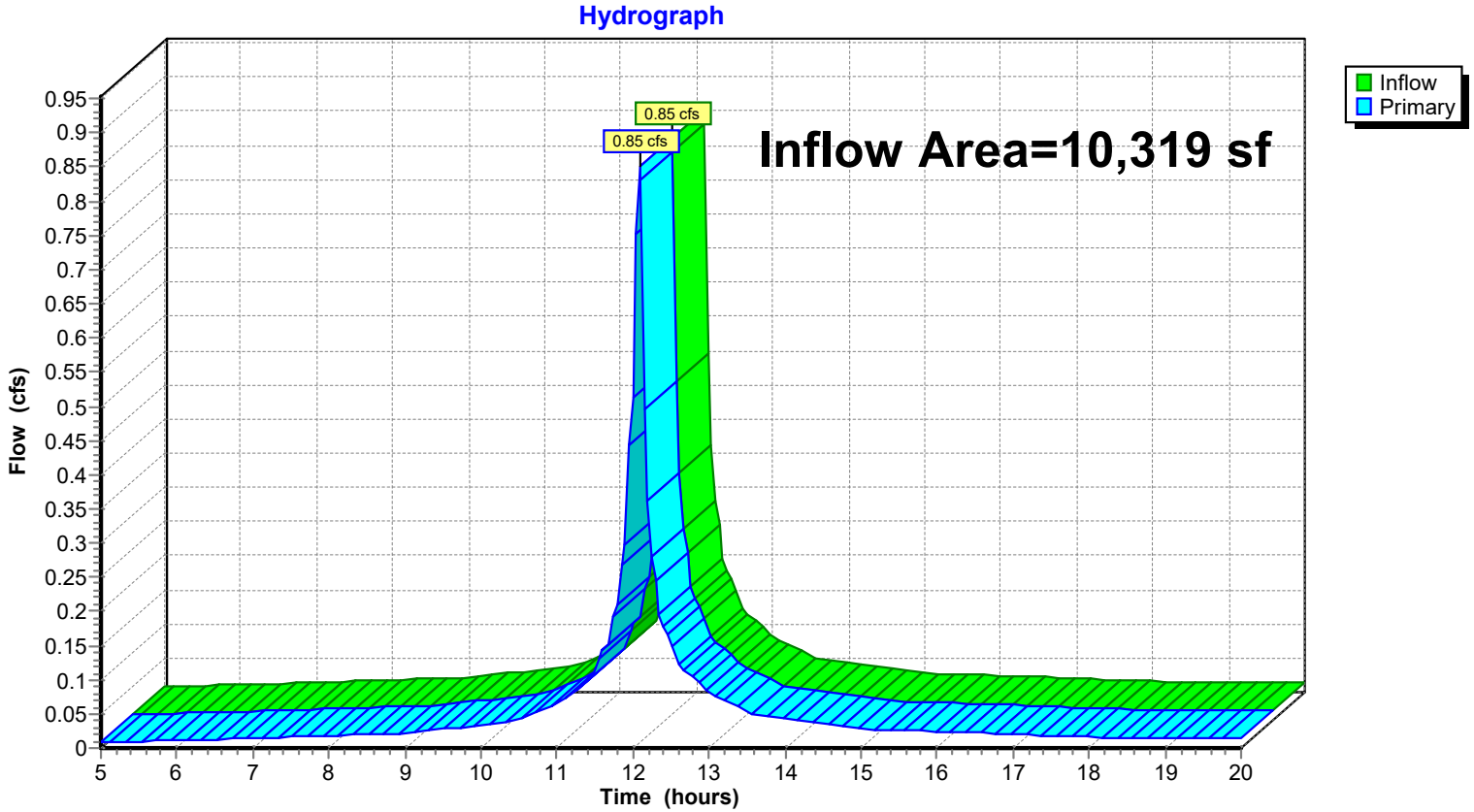


Summary for Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE

Inflow Area = 10,319 sf, 75.10% Impervious, Inflow Depth > 3.04" for 2-Year-2050 event
Inflow = 0.85 cfs @ 12.08 hrs, Volume= 2,618 cf
Primary = 0.85 cfs @ 12.08 hrs, Volume= 2,618 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE



Summary for Subcatchment P1A: P1A roof

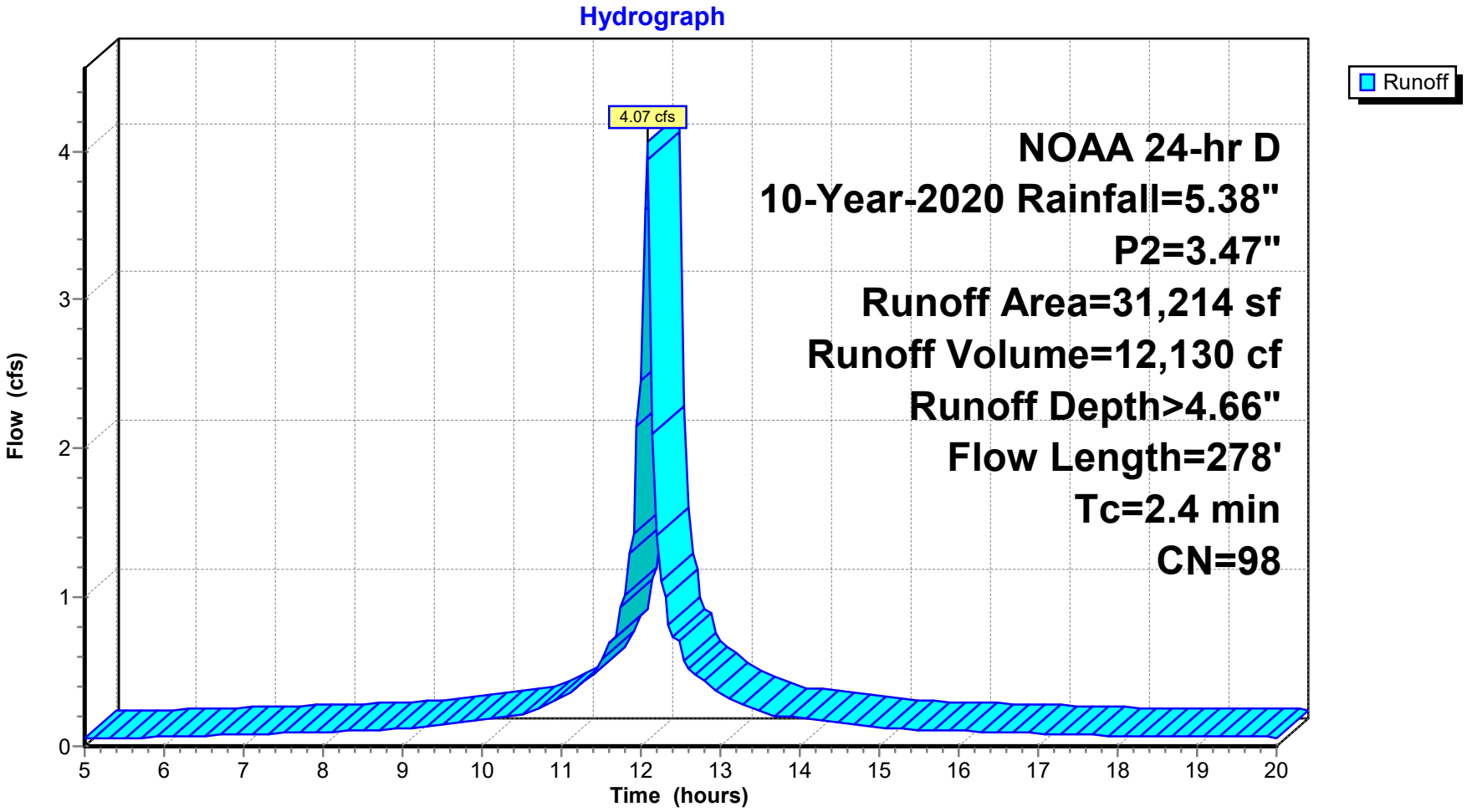
Runoff = 4.07 cfs @ 12.08 hrs, Volume= 12,130 cf, Depth> 4.66"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	31,214	98	ROOF
	31,214		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.9	178	0.0050	3.47	2.73	**Pipe Channel, ROOF DRAIN** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
2.4	278	Total			

Subcatchment P1A: P1A roof



Summary for Subcatchment P1B: P1B pervious

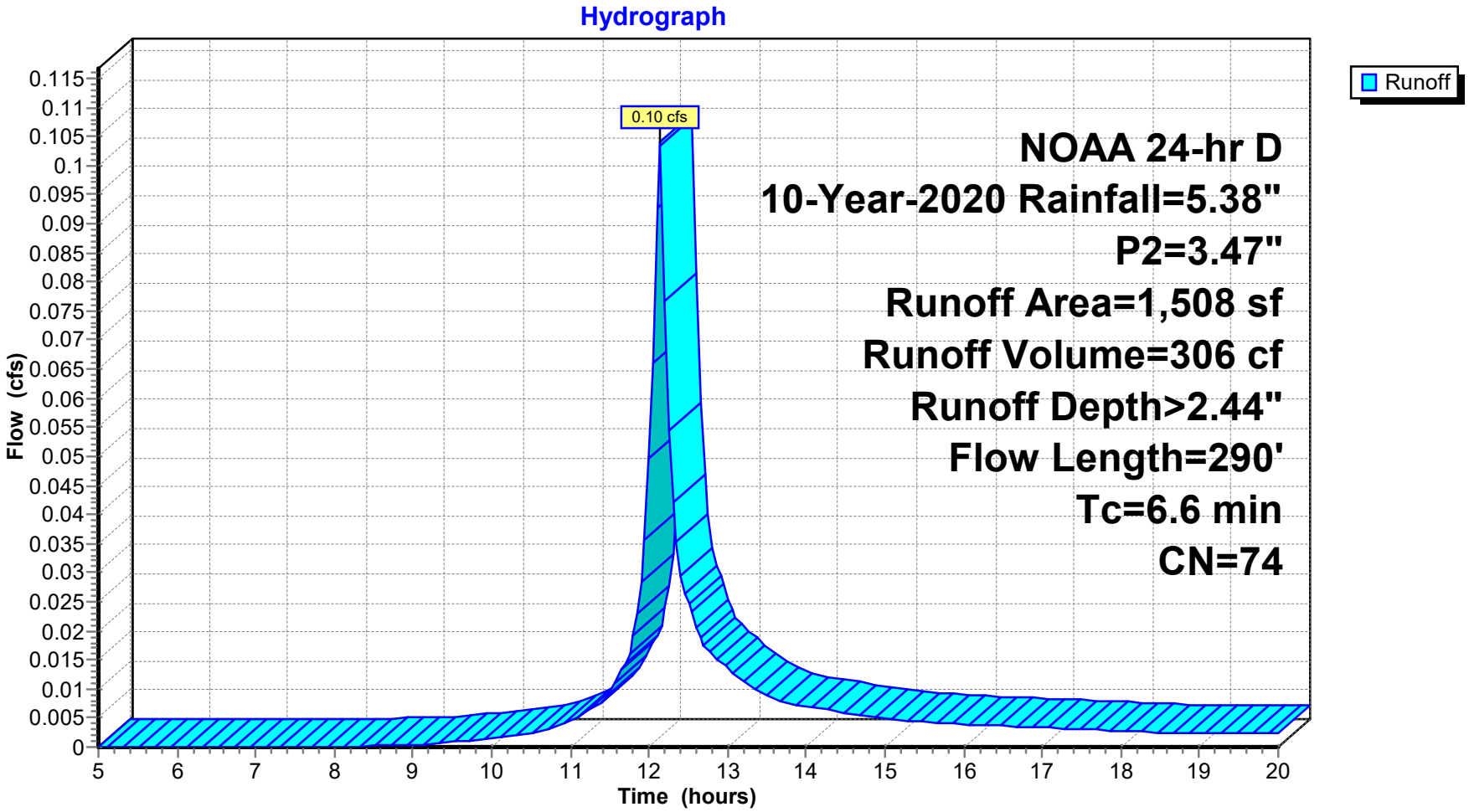
Runoff = 0.10 cfs @ 12.14 hrs, Volume= 306 cf, Depth> 2.44"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
1,508	74	>75% Grass cover, Good, HSG C
1,508		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	61	0.0650	0.18		**Sheet Flow, LANDSCAPE BUFFER** Grass: Dense n= 0.240 P2= 3.47"
0.3	39	0.0950	2.21		**Sheet Flow, CLAREMONT ROAD** Smooth surfaces n= 0.011 P2= 3.47"
0.5	190	0.0950	6.26		**Shallow Concentrated Flow, CLAREMONT** Paved Kv= 20.3 fps
6.6	290	Total			

Subcatchment P1B: P1B pervious



Summary for Subcatchment P1C: P1C pervious

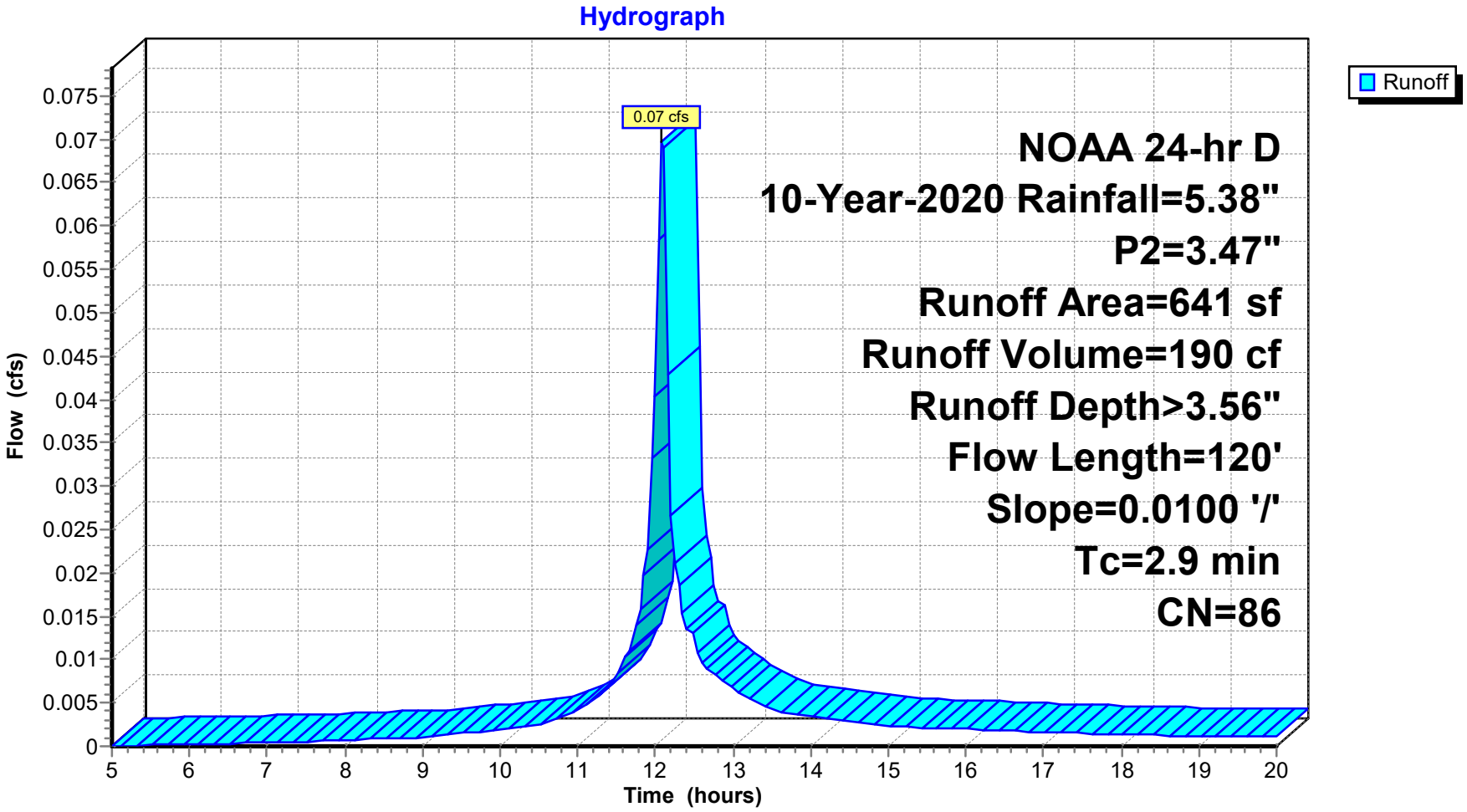
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 190 cf, Depth> 3.56"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	641	86	LANDSCAPE
	641		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	10	0.0100	0.08		**Sheet Flow, Landscaping** Grass: Short n= 0.150 P2= 3.47"
0.9	110	0.0100	2.03		**Shallow Concentrated Flow, Parking lot** Paved Kv= 20.3 fps
2.9	120	Total			

Subcatchment P1C: P1C pervious



Summary for Subcatchment P2A: P2A pervious

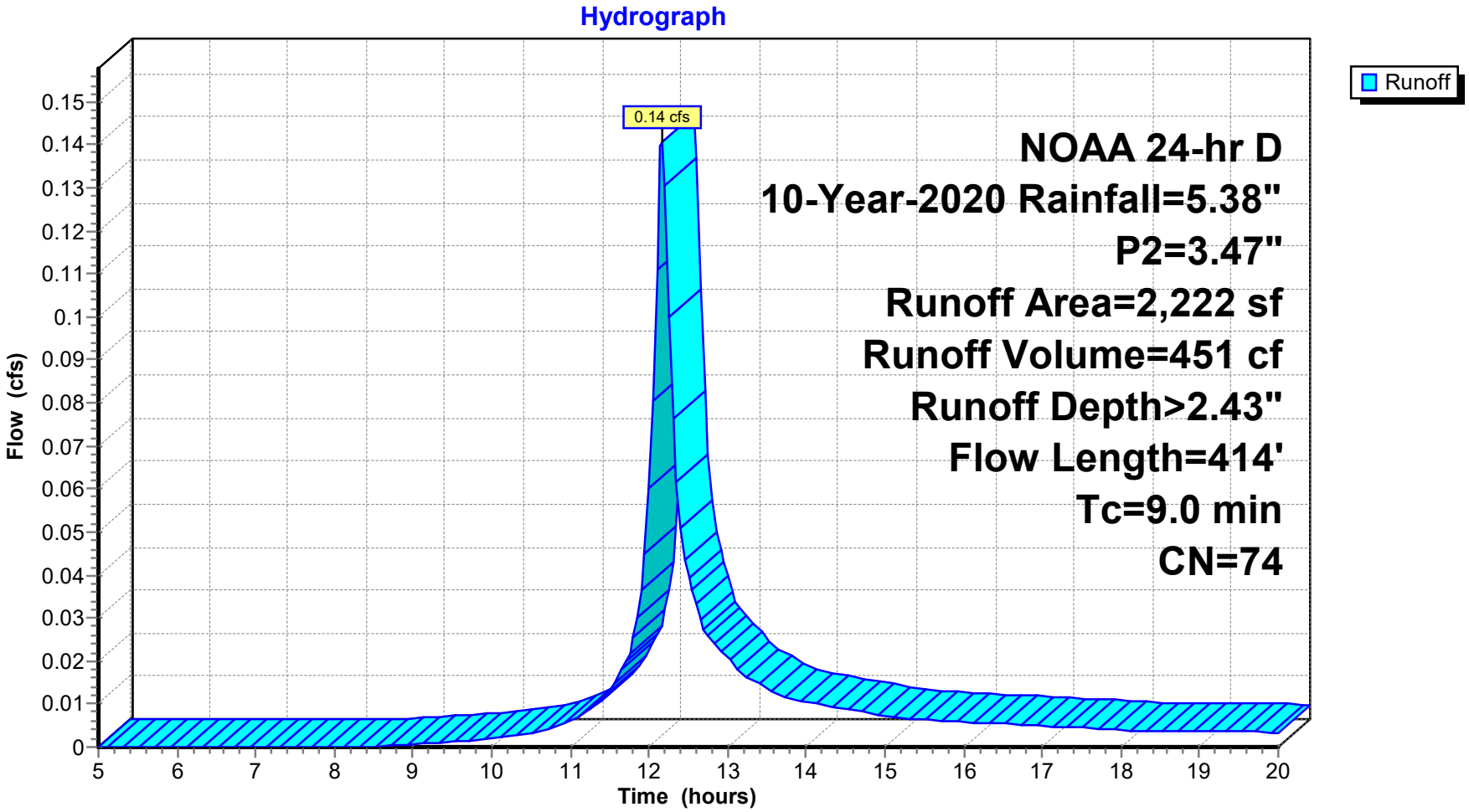
Runoff = 0.14 cfs @ 12.16 hrs, Volume= 451 cf, Depth> 2.43"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
2,222	74	>75% Grass cover, Good, HSG C
2,222		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	100	0.0800	0.21		**Sheet Flow, BUFFER** Grass: Dense n= 0.240 P2= 3.47"
0.2	48	0.1000	5.09		**Shallow Concentrated Flow, LAWN** Unpaved Kv= 16.1 fps
0.9	266	0.0600	4.97		**Shallow Concentrated Flow, BLOOMFIELD** Paved Kv= 20.3 fps
9.0	414	Total			

Subcatchment P2A: P2A pervious



Summary for Subcatchment P2B: P2B roof

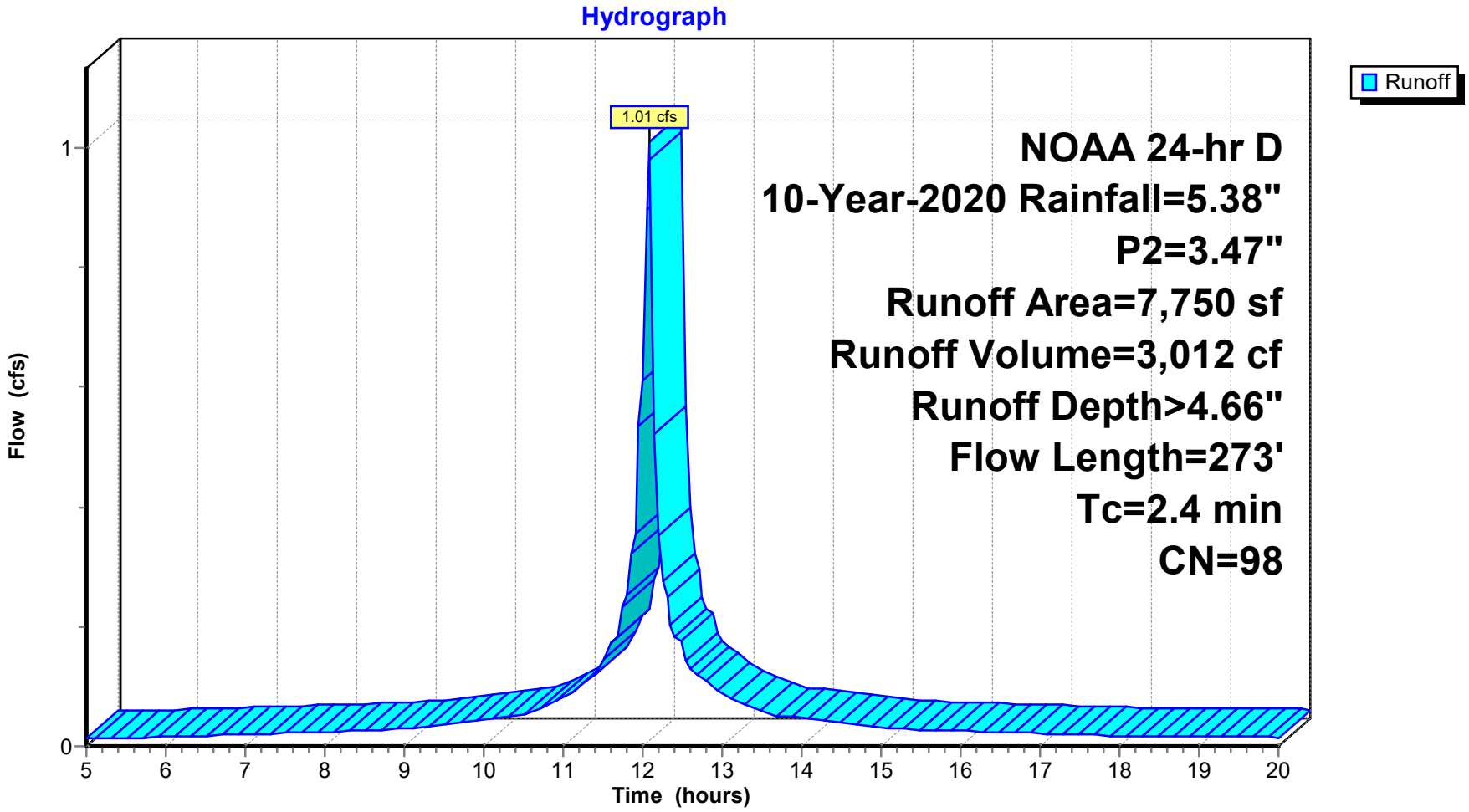
Runoff = 1.01 cfs @ 12.08 hrs, Volume= 3,012 cf, Depth> 4.66"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	7,750	98	roof
	7,750		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.7	112	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	12	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	49	0.0482	15.81	49.67	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
2.4	273	Total			

Subcatchment P2B: P2B roof



Summary for Subcatchment P2C: P2C pervious

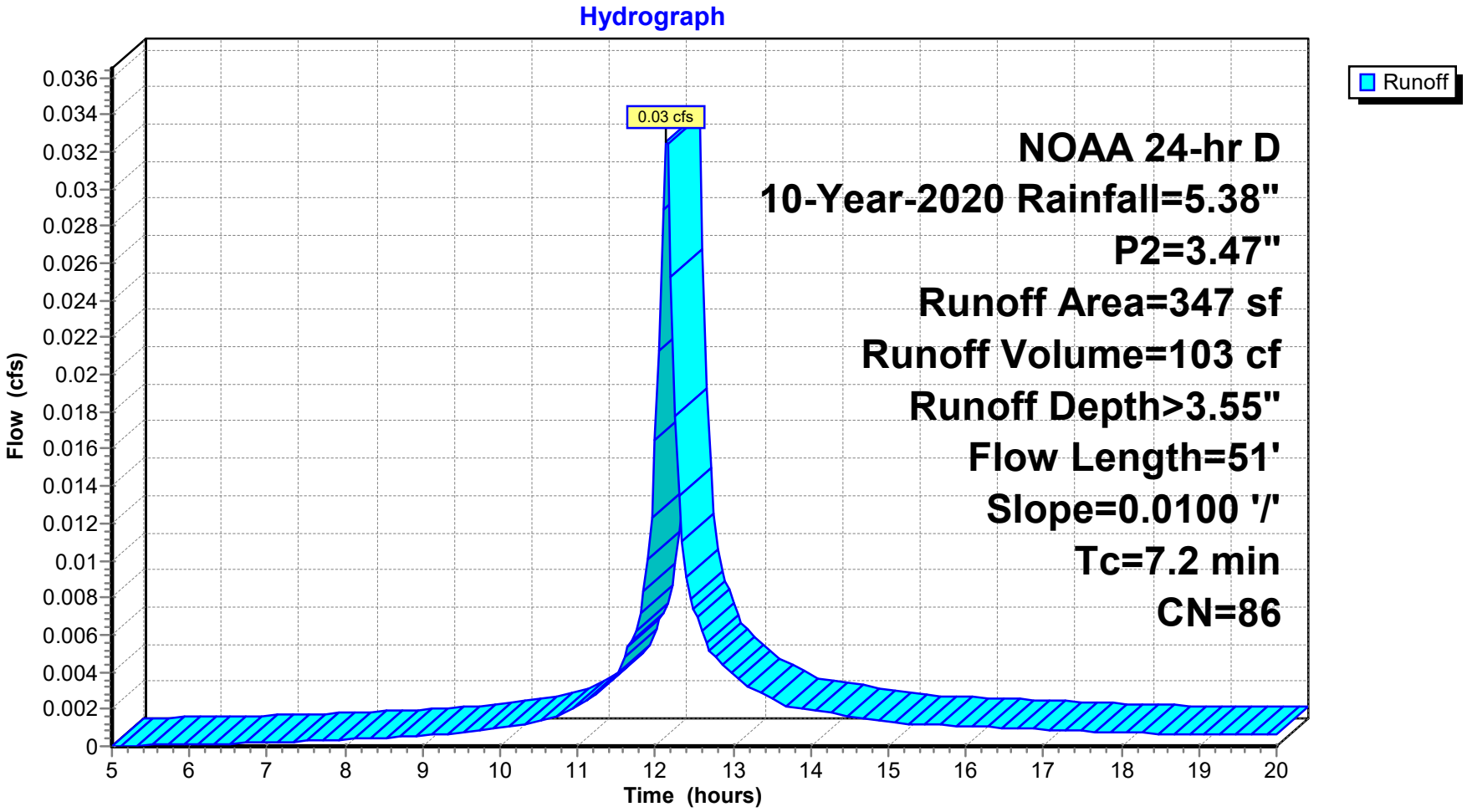
Runoff = 0.03 cfs @ 12.14 hrs, Volume= 103 cf, Depth> 3.55"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2020 Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	347	86	LANDSCAPE
	347		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	51	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.47"

Subcatchment P2C: P2C pervious

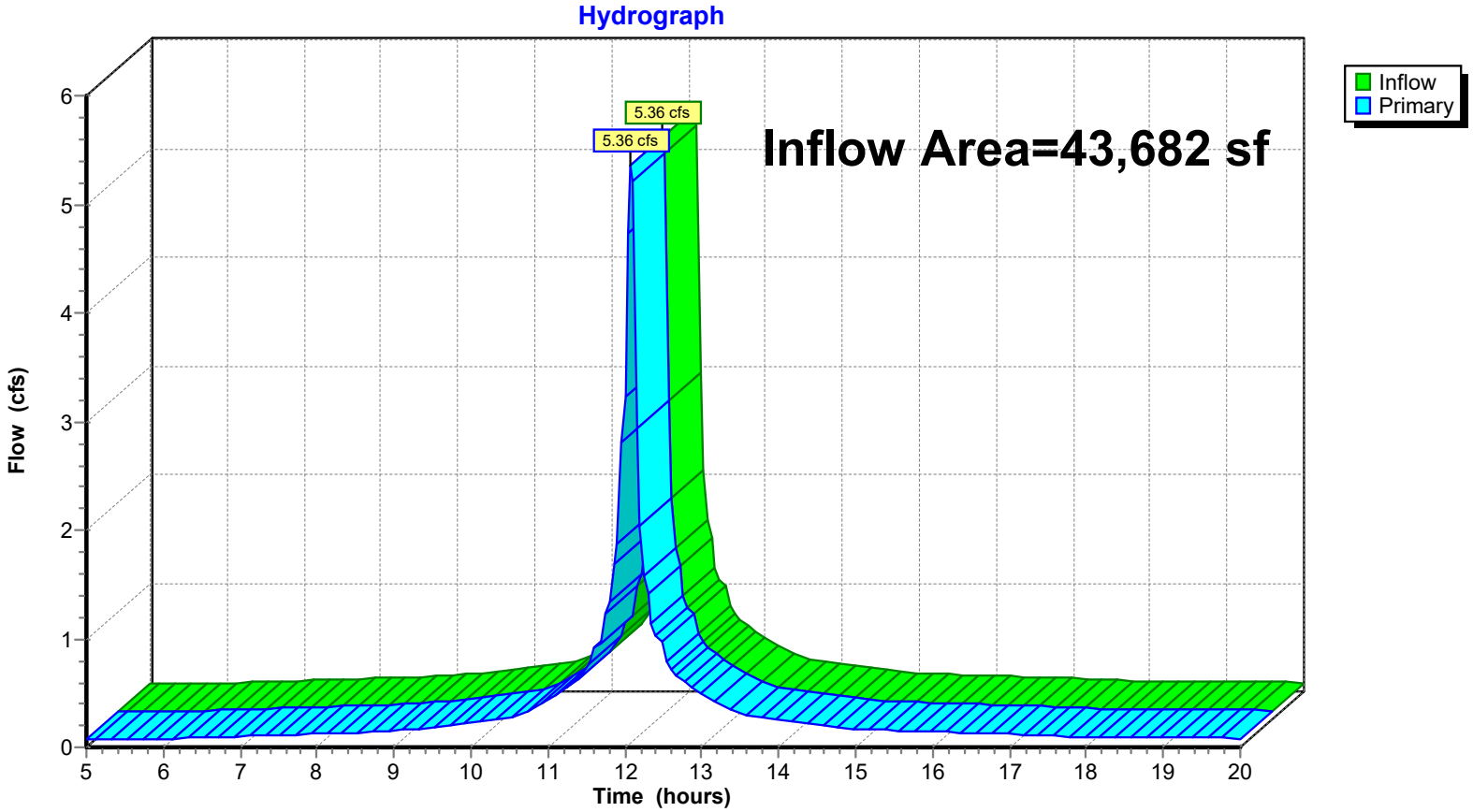


Summary for Link 7L: PROPOSED SITE TOTAL

Inflow Area = 43,682 sf, 89.20% Impervious, Inflow Depth > 4.45" for 10-Year-2020 event
Inflow = 5.36 cfs @ 12.08 hrs, Volume= 16,191 cf
Primary = 5.36 cfs @ 12.08 hrs, Volume= 16,191 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: PROPOSED SITE TOTAL

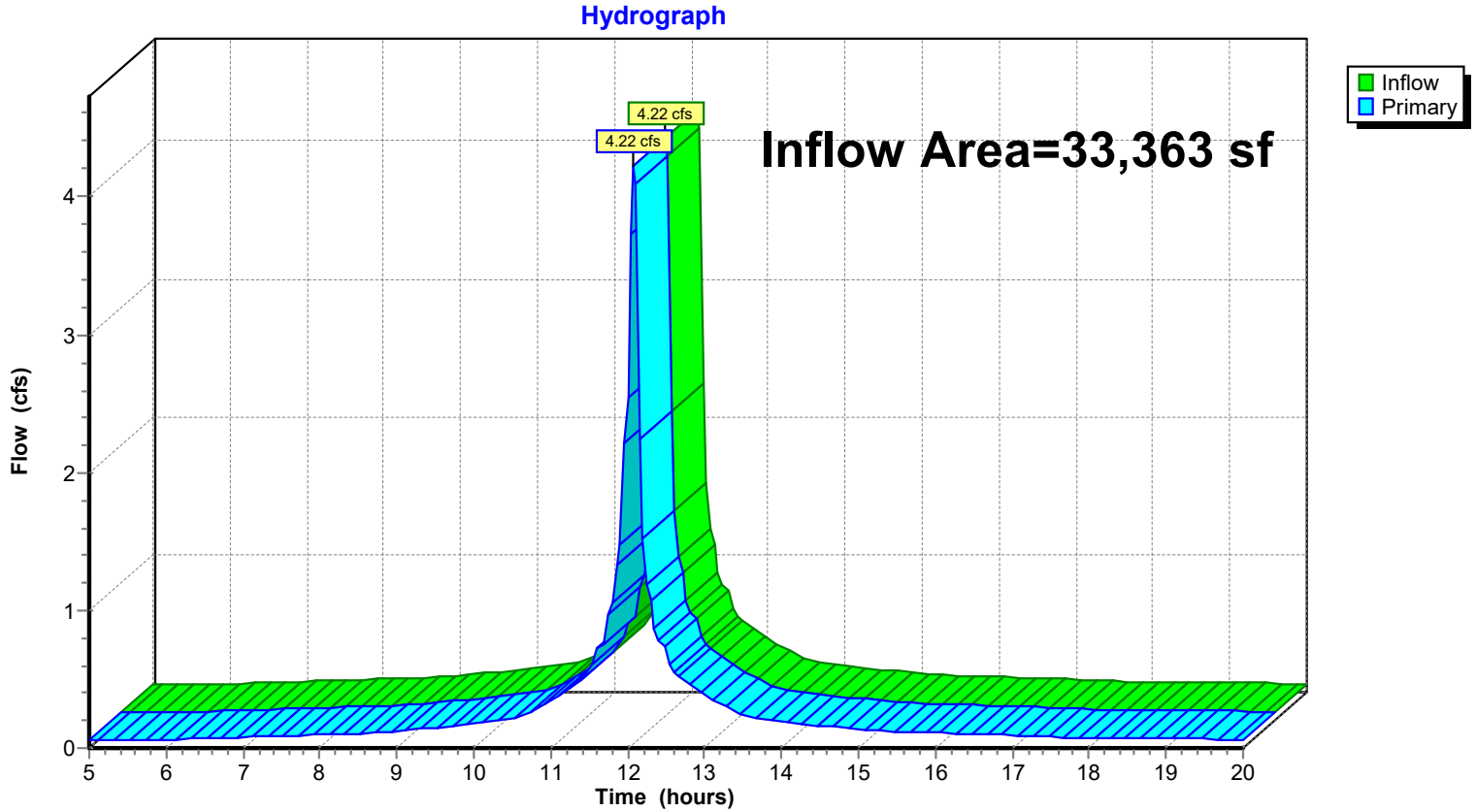


Summary for Link DP1: DESIGN POINT 1

Inflow Area = 33,363 sf, 93.56% Impervious, Inflow Depth > 4.54" for 10-Year-2020 event
Inflow = 4.22 cfs @ 12.08 hrs, Volume= 12,626 cf
Primary = 4.22 cfs @ 12.08 hrs, Volume= 12,626 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP1: DESIGN POINT 1

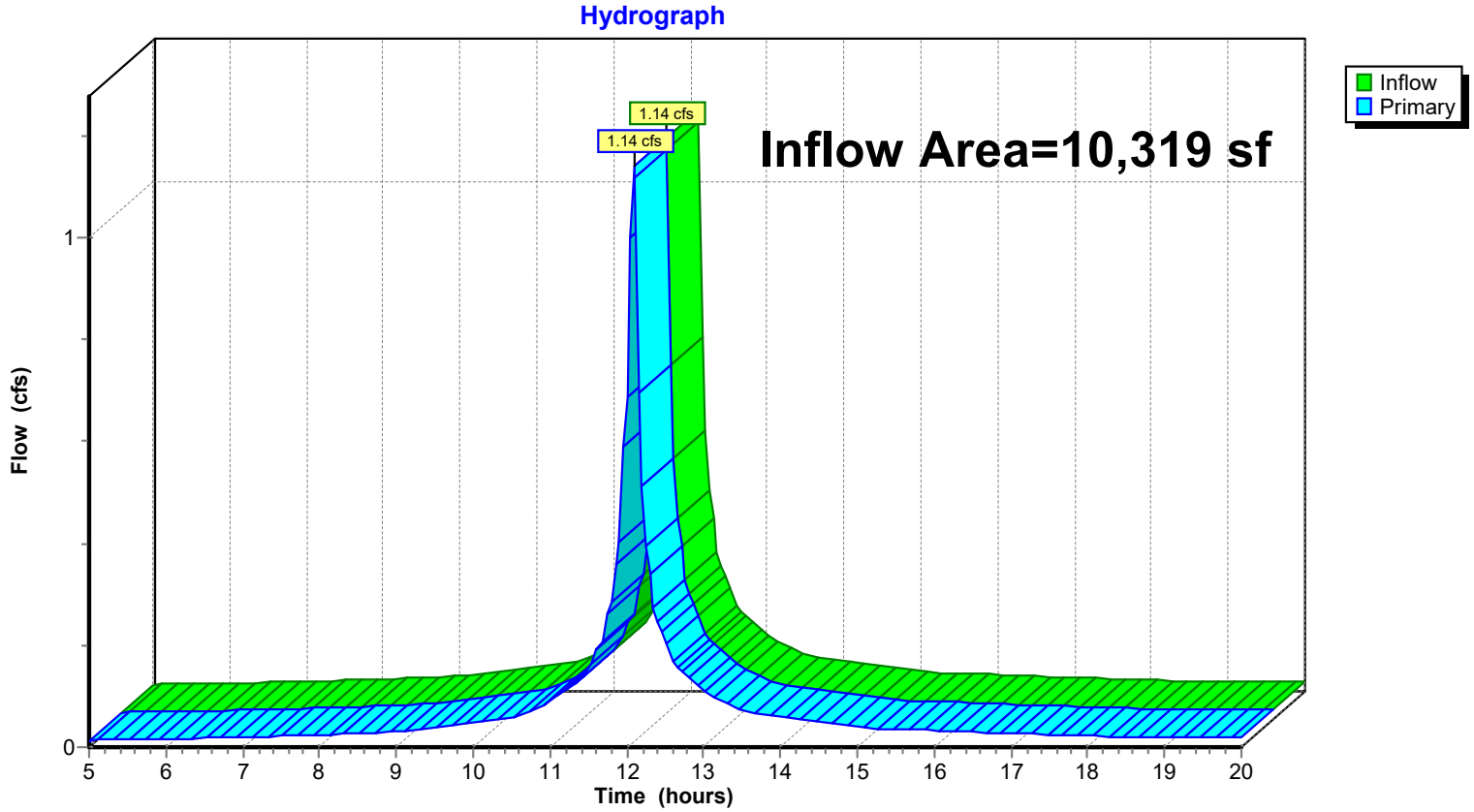


Summary for Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE

Inflow Area = 10,319 sf, 75.10% Impervious, Inflow Depth > 4.15" for 10-Year-2020 event
Inflow = 1.14 cfs @ 12.09 hrs, Volume= 3,565 cf
Primary = 1.14 cfs @ 12.09 hrs, Volume= 3,565 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE



Summary for Subcatchment P1A: P1A roof

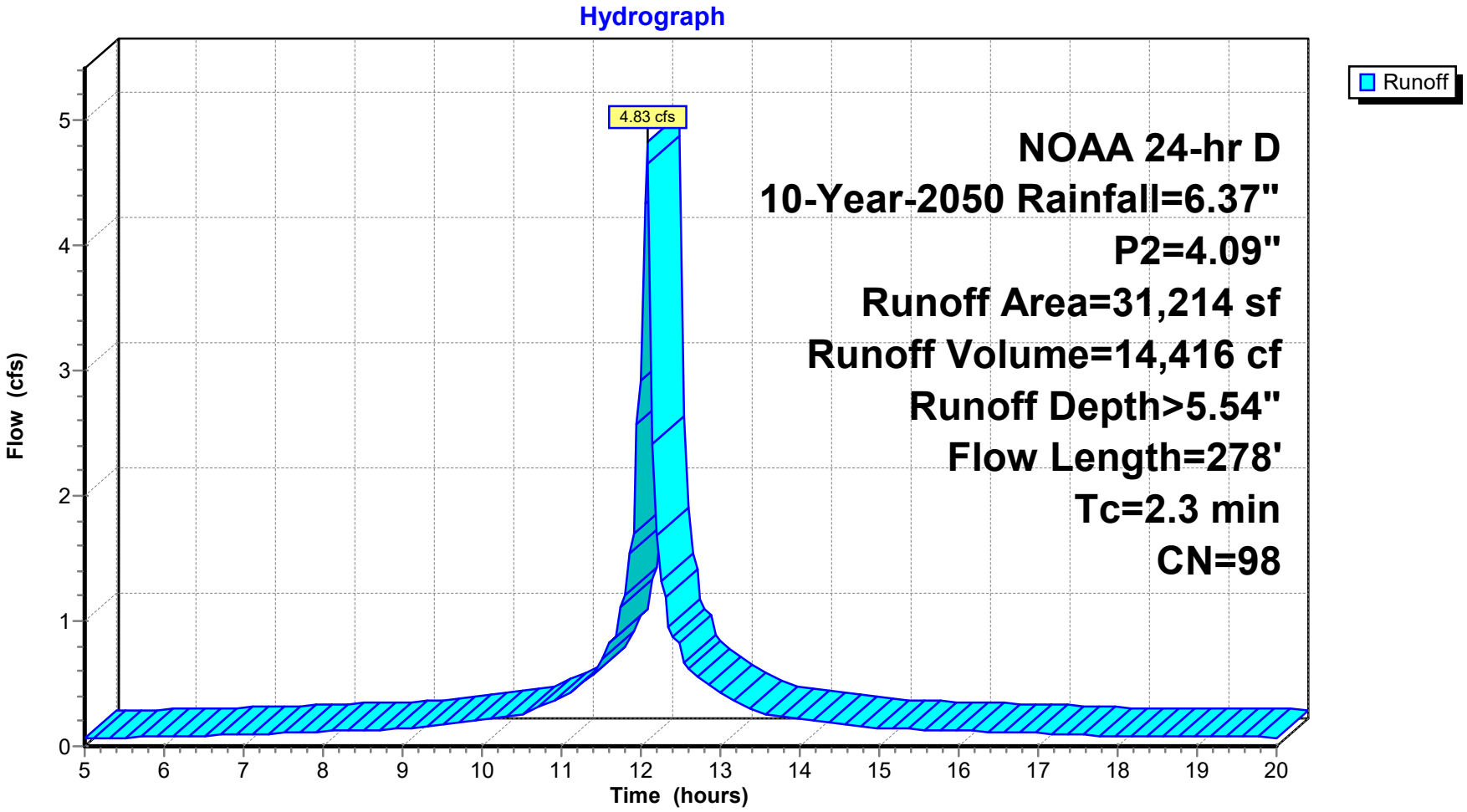
Runoff = 4.83 cfs @ 12.08 hrs, Volume= 14,416 cf, Depth> 5.54"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	31,214	98	ROOF
	31,214		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.18		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.9	178	0.0050	3.47	2.73	**Pipe Channel, ROOF DRAIN** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
2.3	278	Total			

Subcatchment P1A: P1A roof



Summary for Subcatchment P1B: P1B pervious

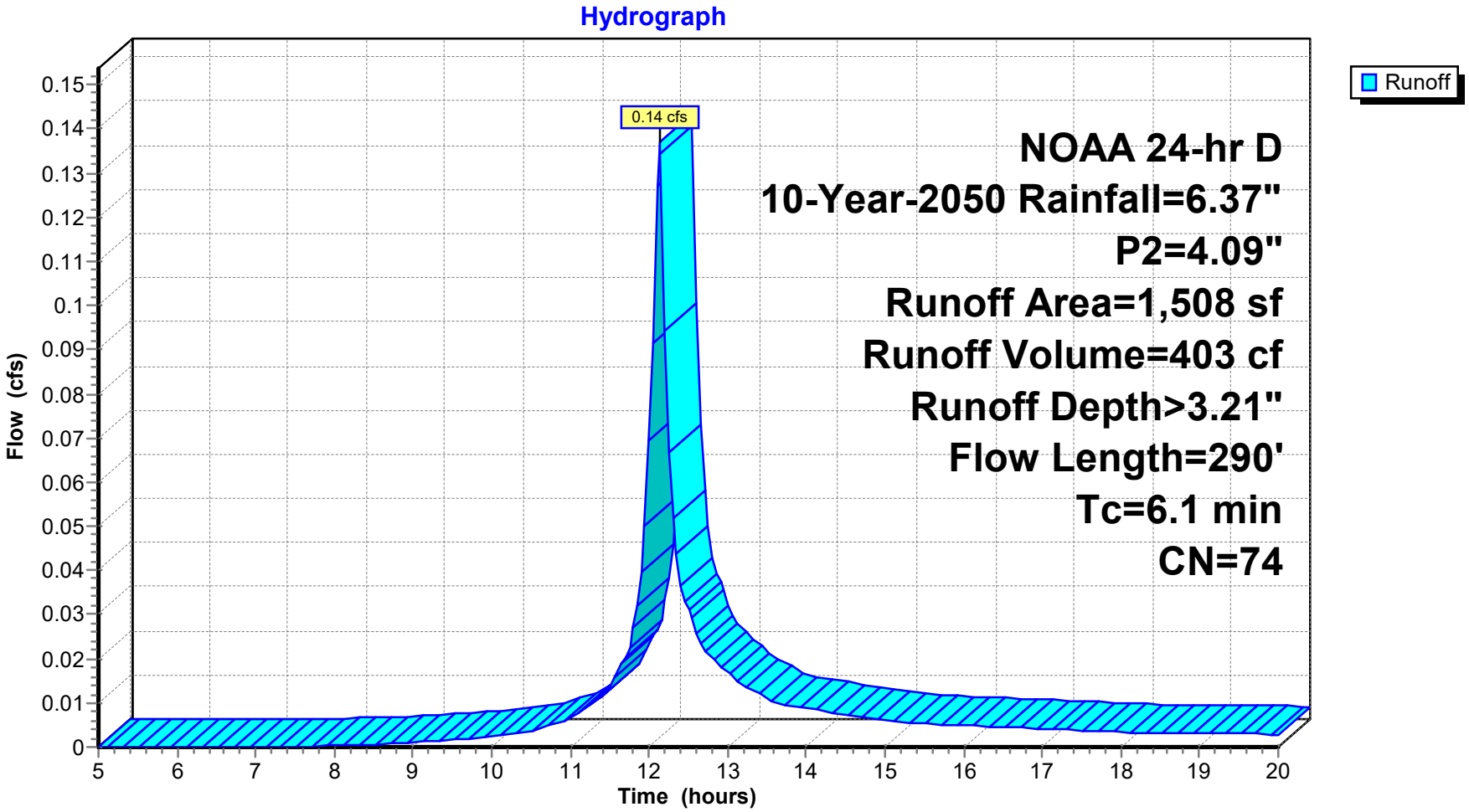
Runoff = 0.14 cfs @ 12.13 hrs, Volume= 403 cf, Depth> 3.21"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
1,508	74	>75% Grass cover, Good, HSG C
1,508		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	61	0.0650	0.19		**Sheet Flow, LANDSCAPE BUFFER** Grass: Dense n= 0.240 P2= 4.09"
0.3	39	0.0950	2.40		**Sheet Flow, CLAREMONT ROAD** Smooth surfaces n= 0.011 P2= 4.09"
0.5	190	0.0950	6.26		**Shallow Concentrated Flow, CLAREMONT** Paved Kv= 20.3 fps
6.1	290	Total			

Subcatchment P1B: P1B pervious



Summary for Subcatchment P1C: P1C pervious

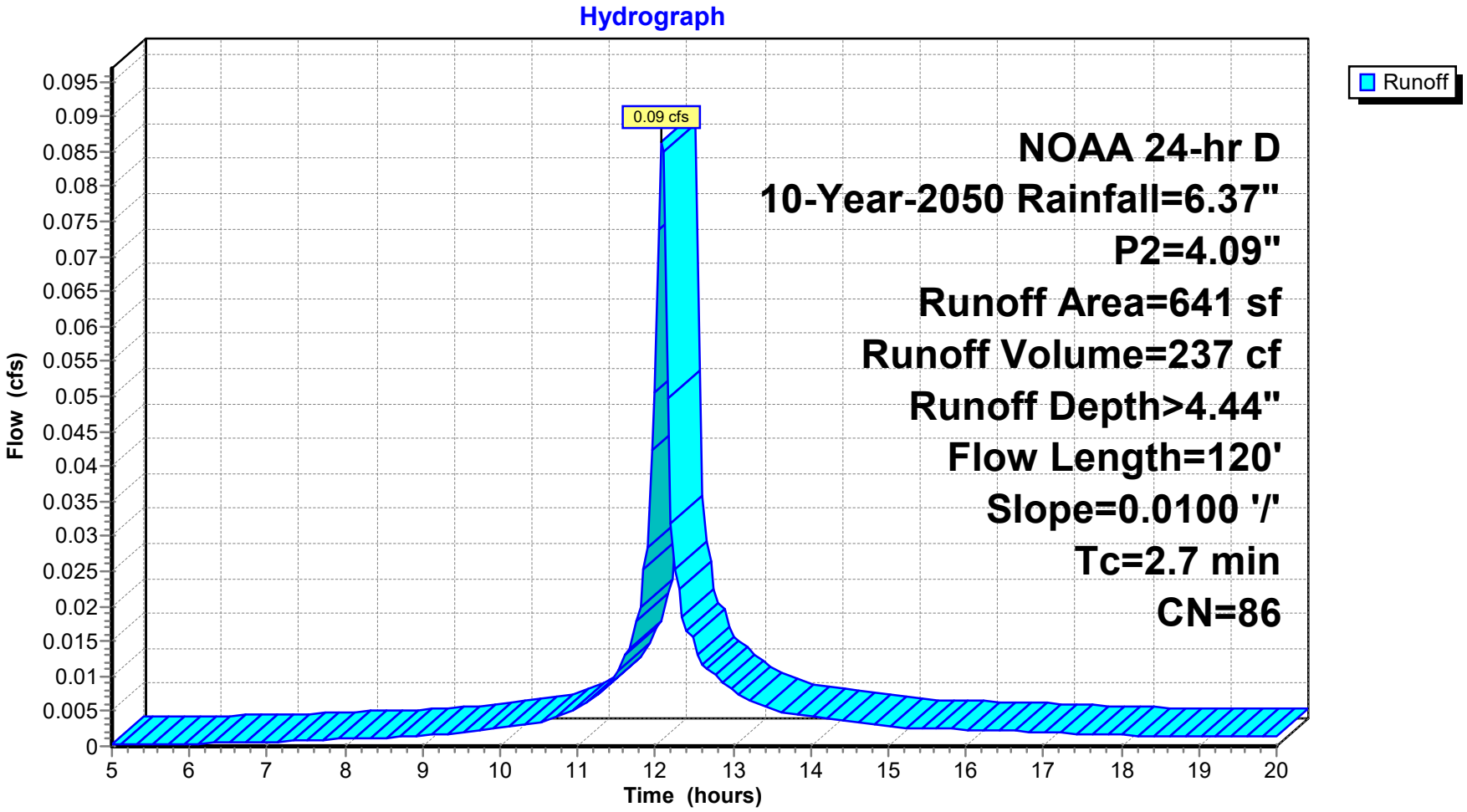
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 237 cf, Depth> 4.44"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	641	86	LANDSCAPE
	641		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	10	0.0100	0.09		**Sheet Flow, Landscaping** Grass: Short n= 0.150 P2= 4.09"
0.9	110	0.0100	2.03		**Shallow Concentrated Flow, Parking lot** Paved Kv= 20.3 fps
2.7	120	Total			

Subcatchment P1C: P1C pervious



Summary for Subcatchment P2A: P2A pervious

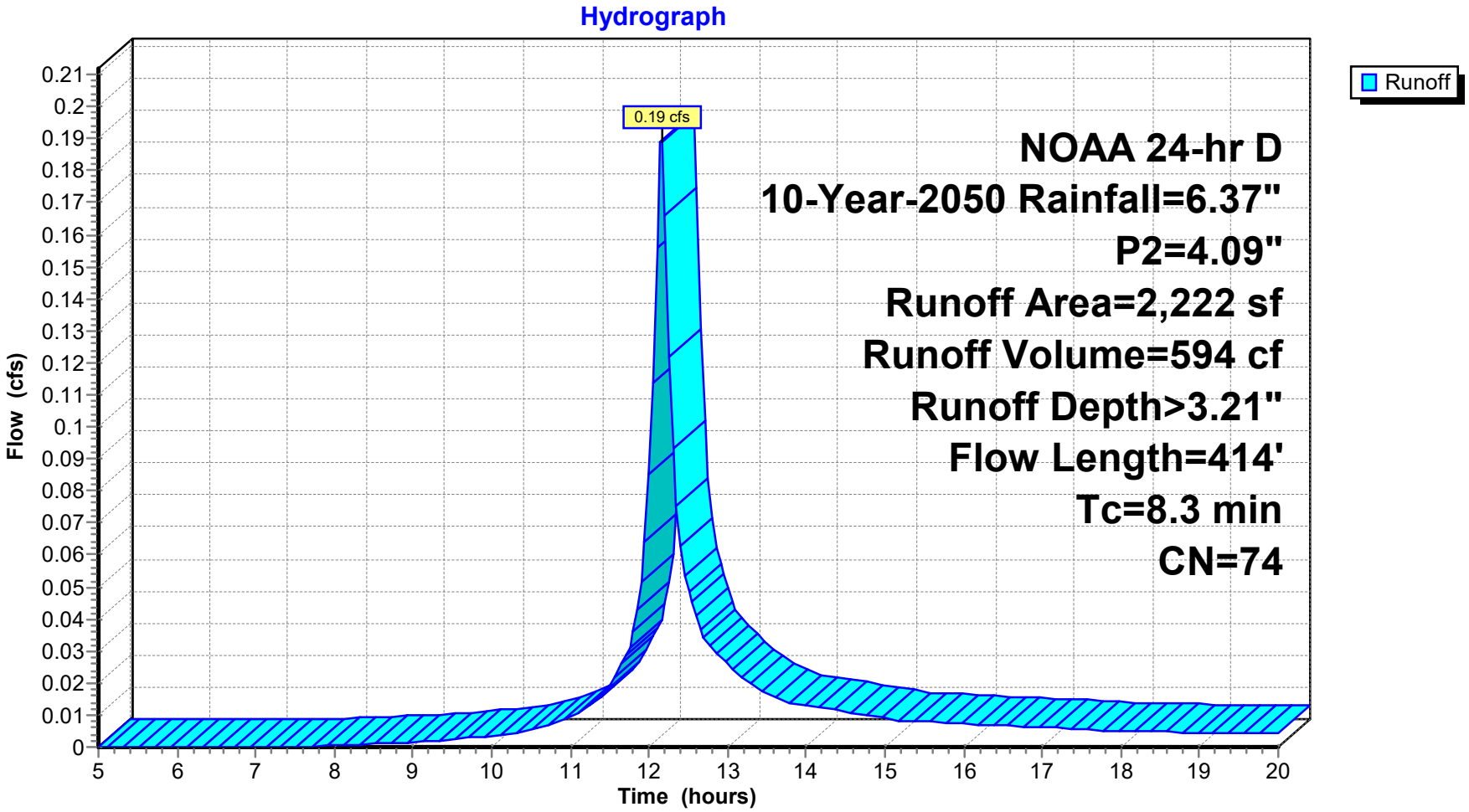
Runoff = 0.19 cfs @ 12.15 hrs, Volume= 594 cf, Depth> 3.21"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
2,222	74	>75% Grass cover, Good, HSG C
2,222		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0800	0.23		**Sheet Flow, BUFFER** Grass: Dense n= 0.240 P2= 4.09"
0.2	48	0.1000	5.09		**Shallow Concentrated Flow, LAWN** Unpaved Kv= 16.1 fps
0.9	266	0.0600	4.97		**Shallow Concentrated Flow, BLOOMFIELD** Paved Kv= 20.3 fps
8.3	414	Total			

Subcatchment P2A: P2A pervious



Summary for Subcatchment P2B: P2B roof

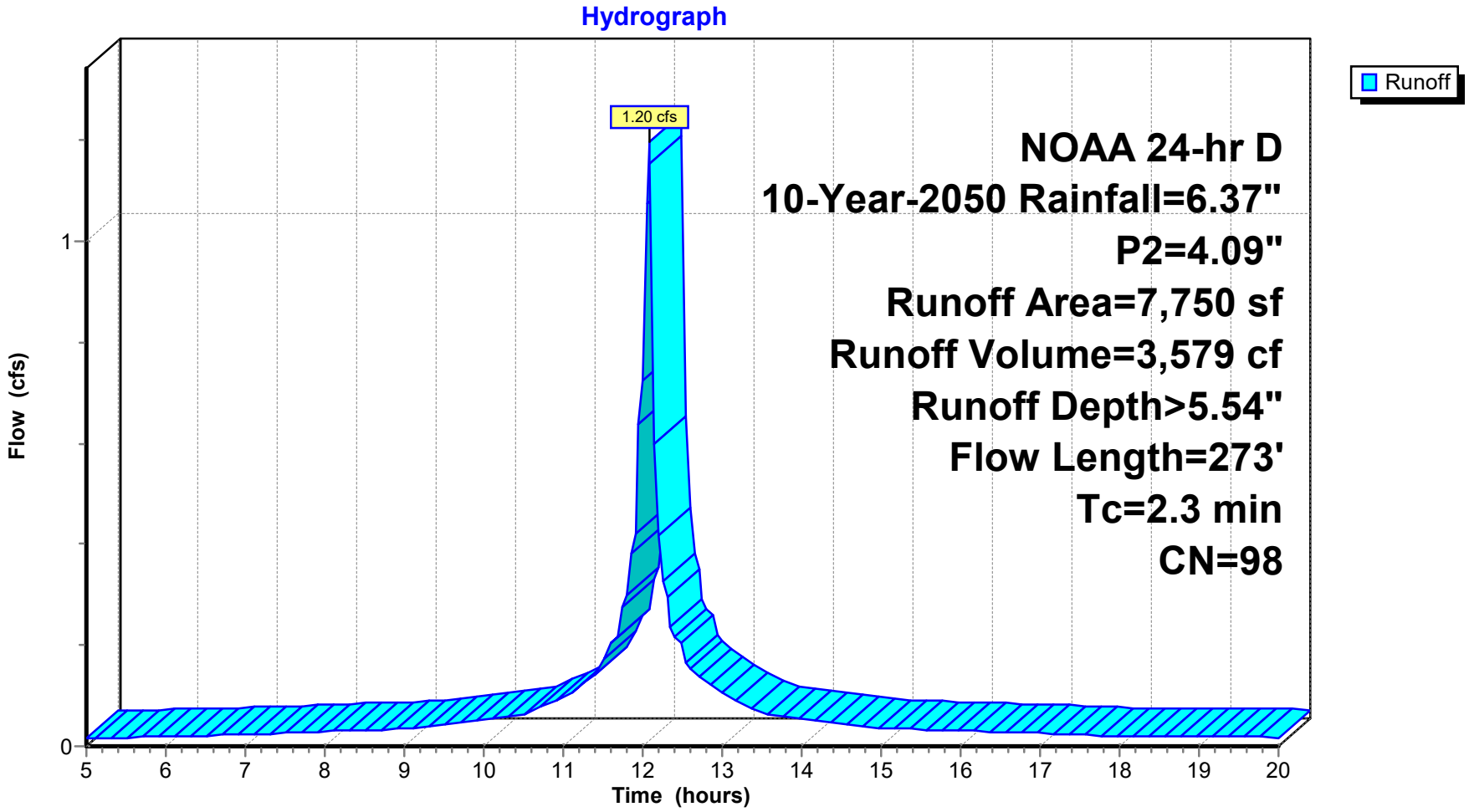
Runoff = 1.20 cfs @ 12.08 hrs, Volume= 3,579 cf, Depth> 5.54"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	7,750	98	roof
	7,750		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.18		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.7	112	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	12	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	49	0.0482	15.81	49.67	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
2.3	273	Total			

Subcatchment P2B: P2B roof



Summary for Subcatchment P2C: P2C pervious

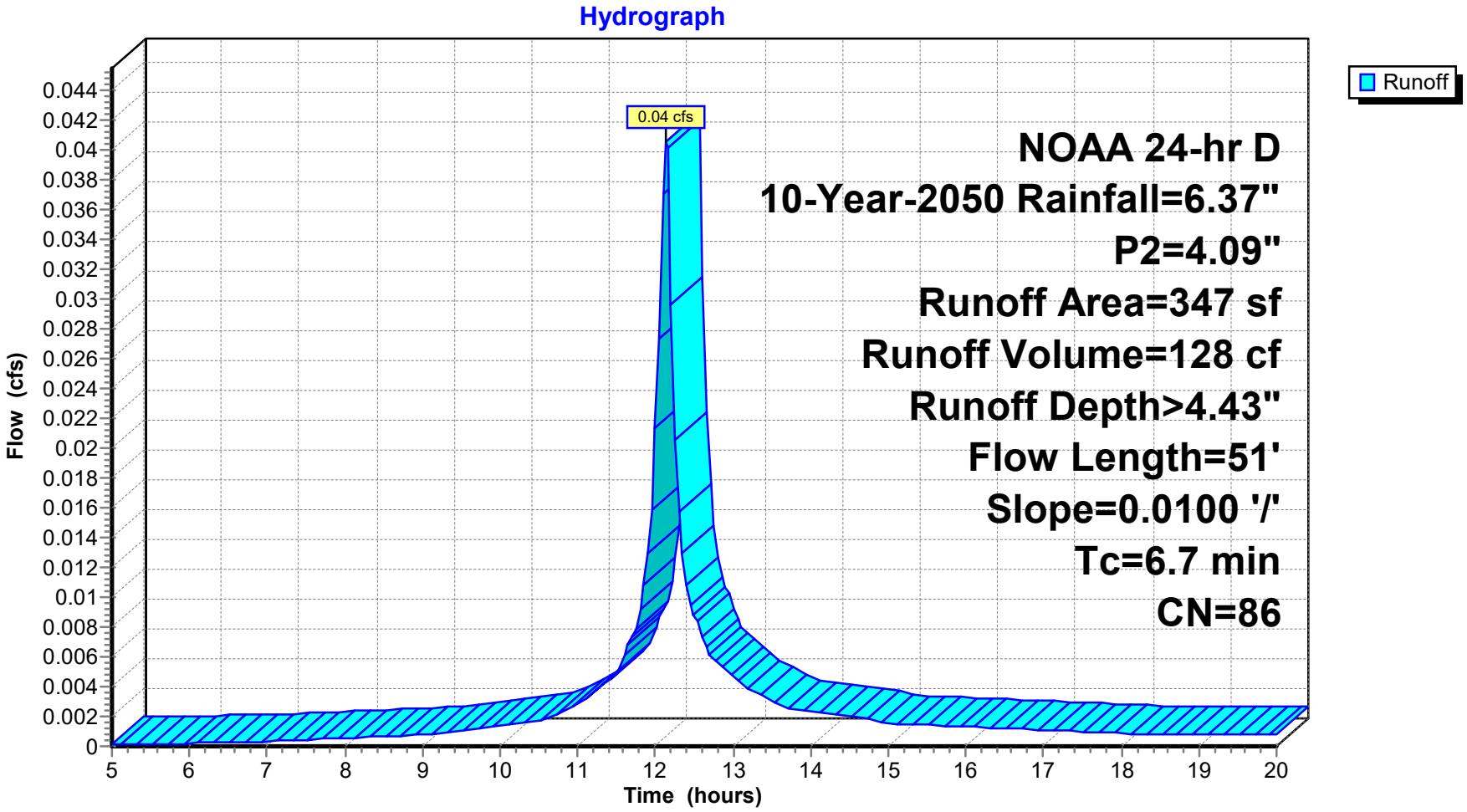
Runoff = 0.04 cfs @ 12.14 hrs, Volume= 128 cf, Depth> 4.43"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-2050 Rainfall=6.37", P2=4.09"

	Area (sf)	CN	Description
*	347	86	LANDSCAPE
	347		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	51	0.0100	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 4.09"

Subcatchment P2C: P2C pervious

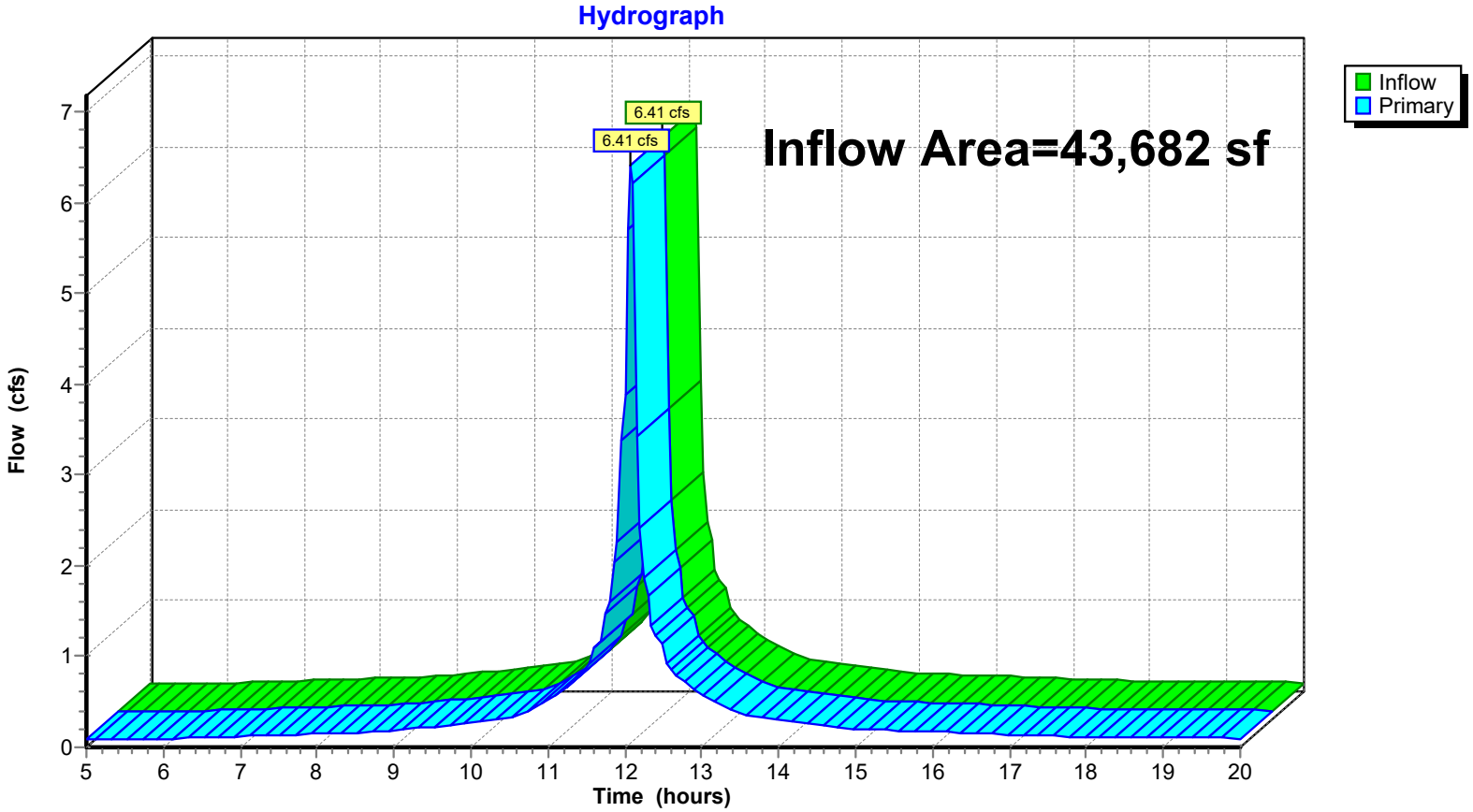


Summary for Link 7L: PROPOSED SITE TOTAL

Inflow Area = 43,682 sf, 89.20% Impervious, Inflow Depth > 5.32" for 10-Year-2050 event
Inflow = 6.41 cfs @ 12.08 hrs, Volume= 19,357 cf
Primary = 6.41 cfs @ 12.08 hrs, Volume= 19,357 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: PROPOSED SITE TOTAL

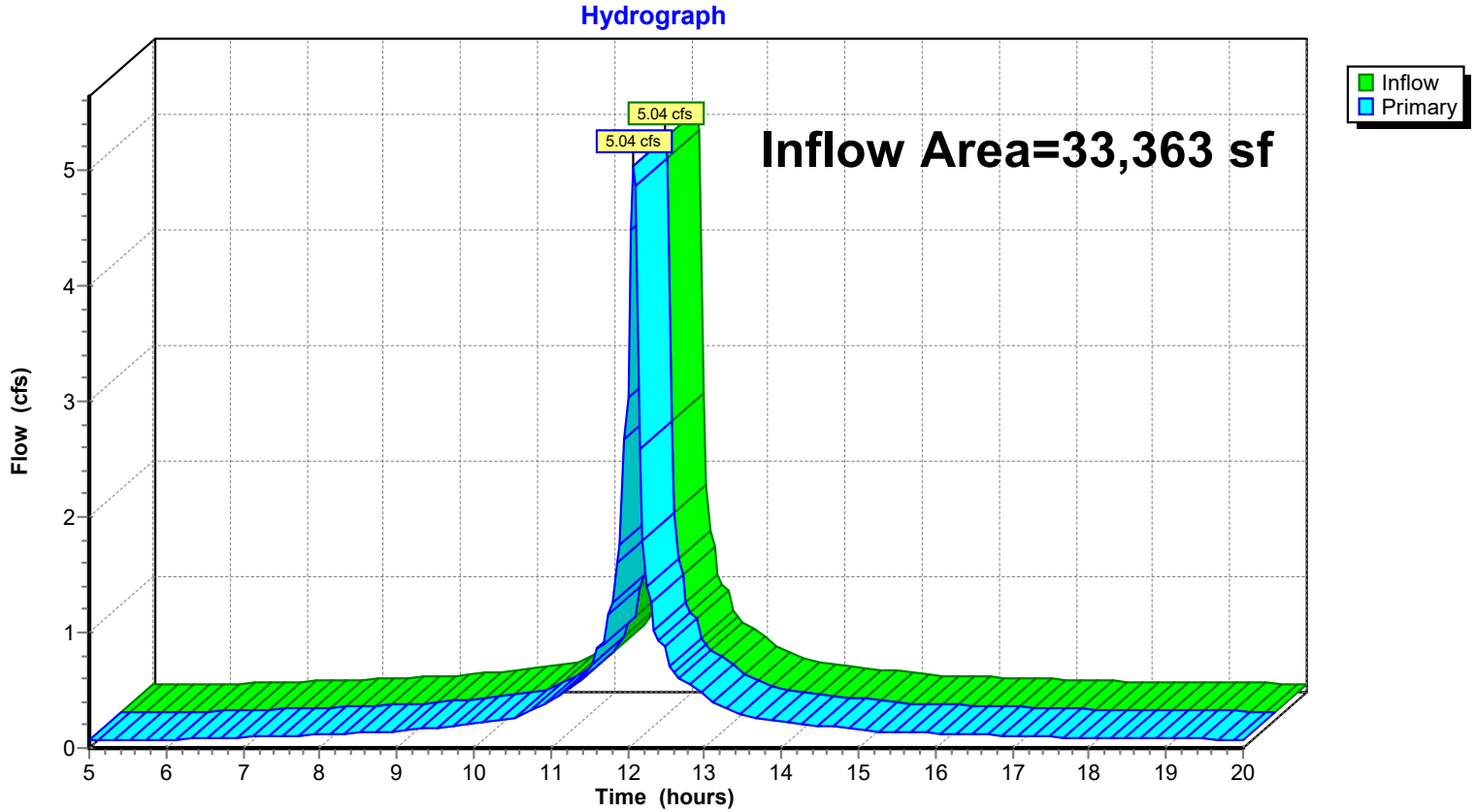


Summary for Link DP1: DESIGN POINT 1

Inflow Area = 33,363 sf, 93.56% Impervious, Inflow Depth > 5.42" for 10-Year-2050 event
Inflow = 5.04 cfs @ 12.08 hrs, Volume= 15,056 cf
Primary = 5.04 cfs @ 12.08 hrs, Volume= 15,056 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP1: DESIGN POINT 1

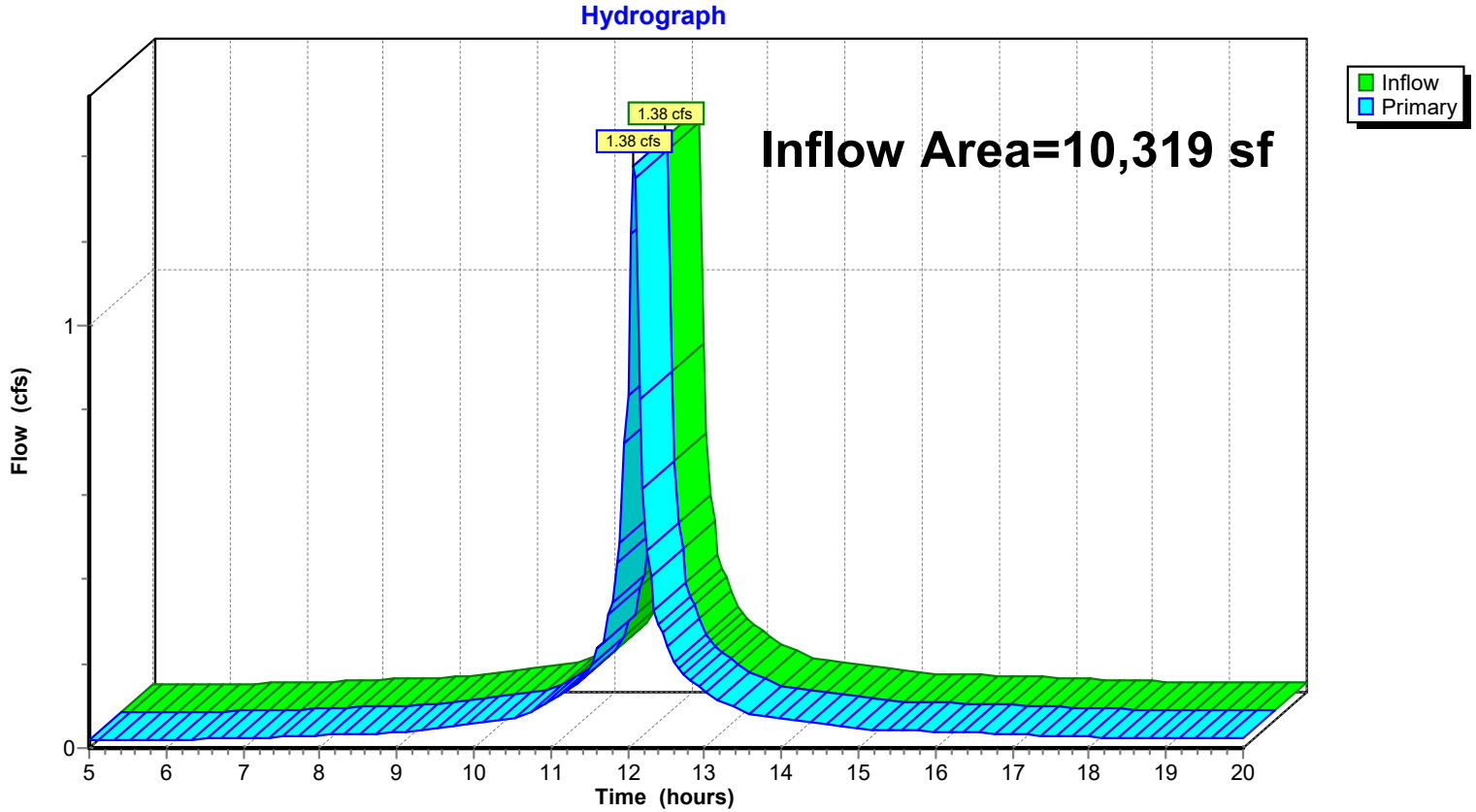


Summary for Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE

Inflow Area = 10,319 sf, 75.10% Impervious, Inflow Depth > 5.00" for 10-Year-2050 event
Inflow = 1.38 cfs @ 12.09 hrs, Volume= 4,301 cf
Primary = 1.38 cfs @ 12.09 hrs, Volume= 4,301 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE



Summary for Subcatchment P1A: P1A roof

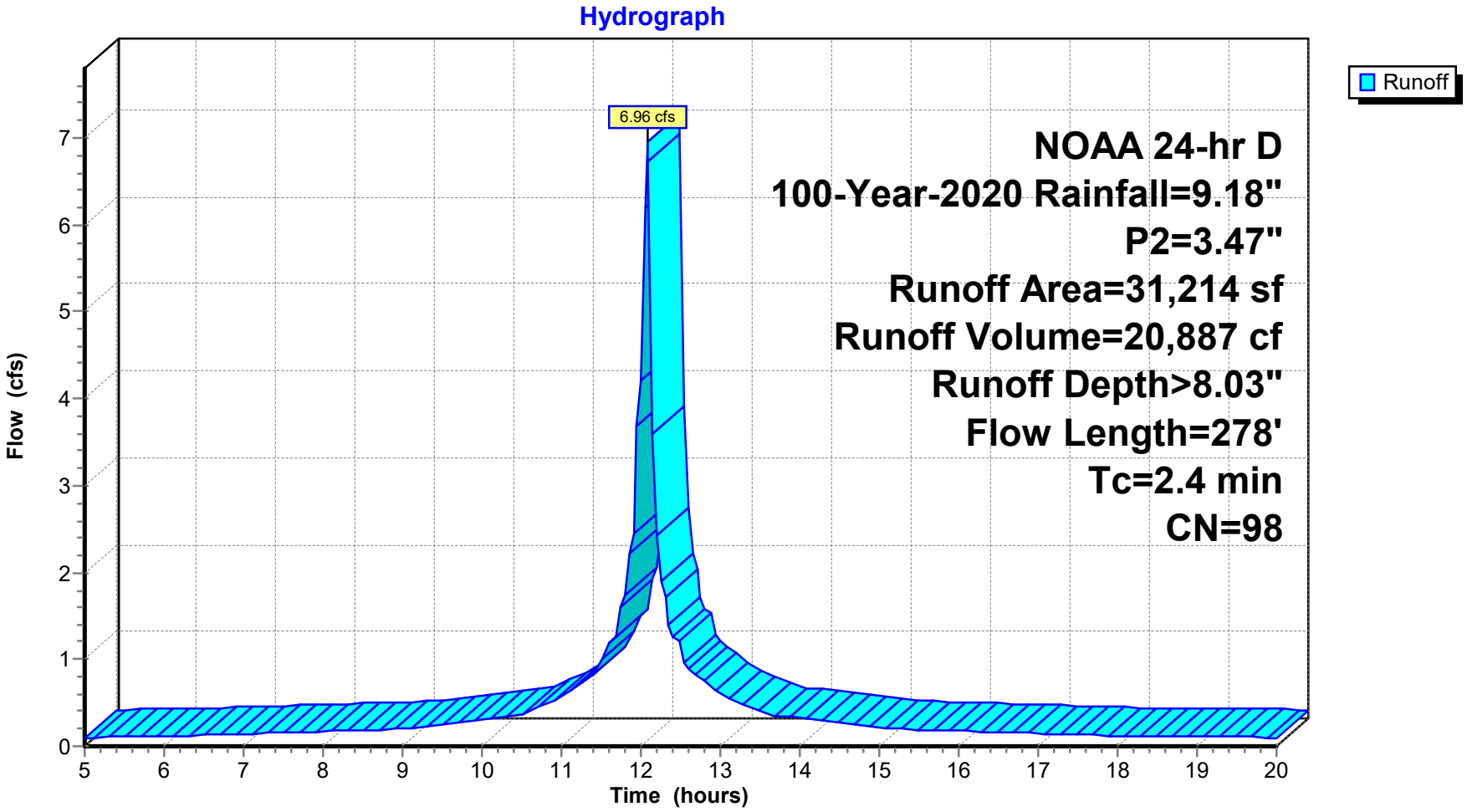
Runoff = 6.96 cfs @ 12.08 hrs, Volume= 20,887 cf, Depth> 8.03"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	31,214	98	ROOF
	31,214		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.9	178	0.0050	3.47	2.73	**Pipe Channel, ROOF DRAIN** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
2.4	278	Total			

Subcatchment P1A: P1A roof



Summary for Subcatchment P1B: P1B pervious

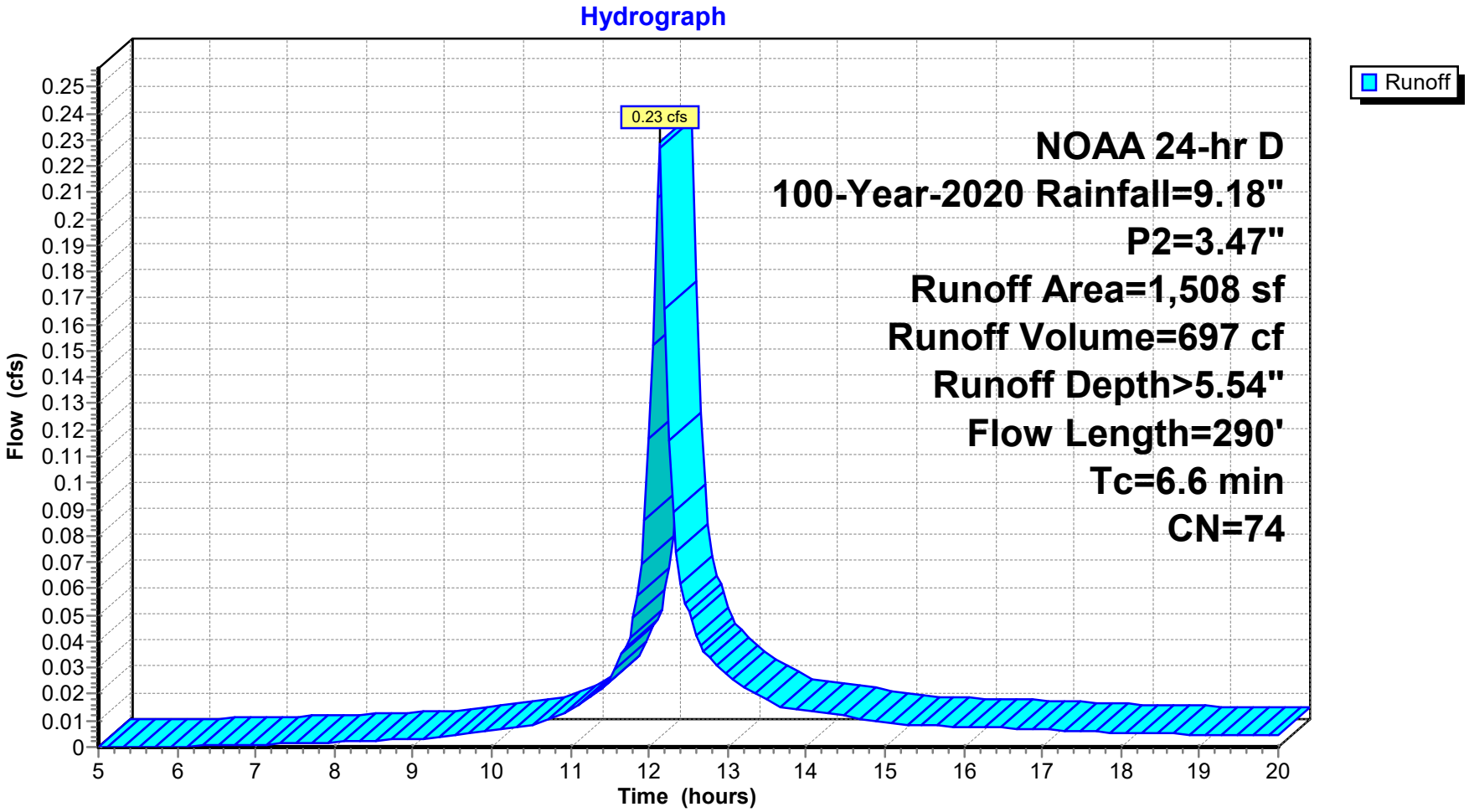
Runoff = 0.23 cfs @ 12.14 hrs, Volume= 697 cf, Depth> 5.54"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
1,508	74	>75% Grass cover, Good, HSG C
1,508		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	61	0.0650	0.18		**Sheet Flow, LANDSCAPE BUFFER** Grass: Dense n= 0.240 P2= 3.47"
0.3	39	0.0950	2.21		**Sheet Flow, CLAREMONT ROAD** Smooth surfaces n= 0.011 P2= 3.47"
0.5	190	0.0950	6.26		**Shallow Concentrated Flow, CLAREMONT** Paved Kv= 20.3 fps
6.6	290	Total			

Subcatchment P1B: P1B pervious



Summary for Subcatchment P1C: P1C pervious

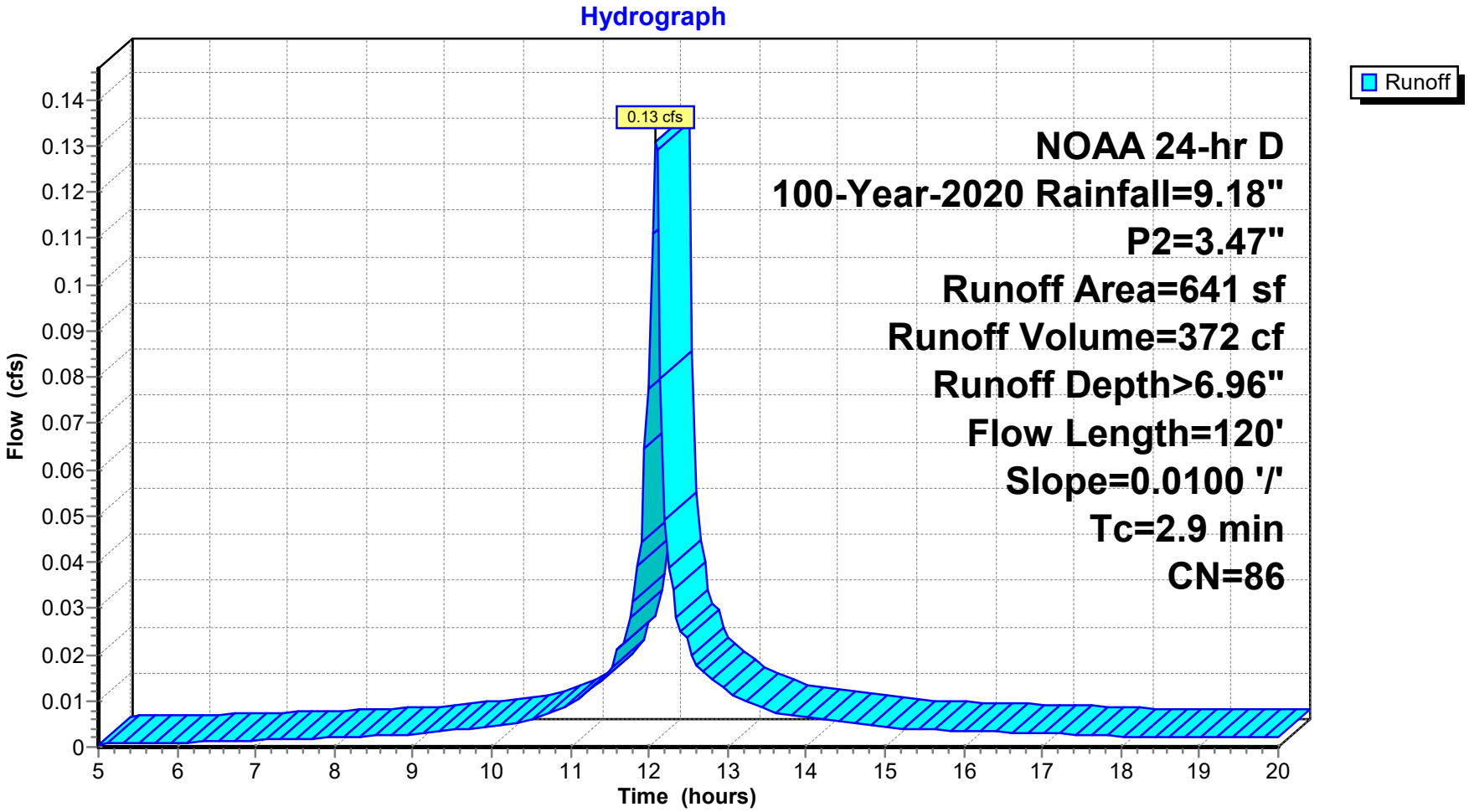
Runoff = 0.13 cfs @ 12.09 hrs, Volume= 372 cf, Depth> 6.96"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	641	86	LANDSCAPE
	641		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	10	0.0100	0.08		**Sheet Flow, Landscaping** Grass: Short n= 0.150 P2= 3.47"
0.9	110	0.0100	2.03		**Shallow Concentrated Flow, Parking lot** Paved Kv= 20.3 fps
2.9	120	Total			

Subcatchment P1C: P1C pervious



Summary for Subcatchment P2A: P2A pervious

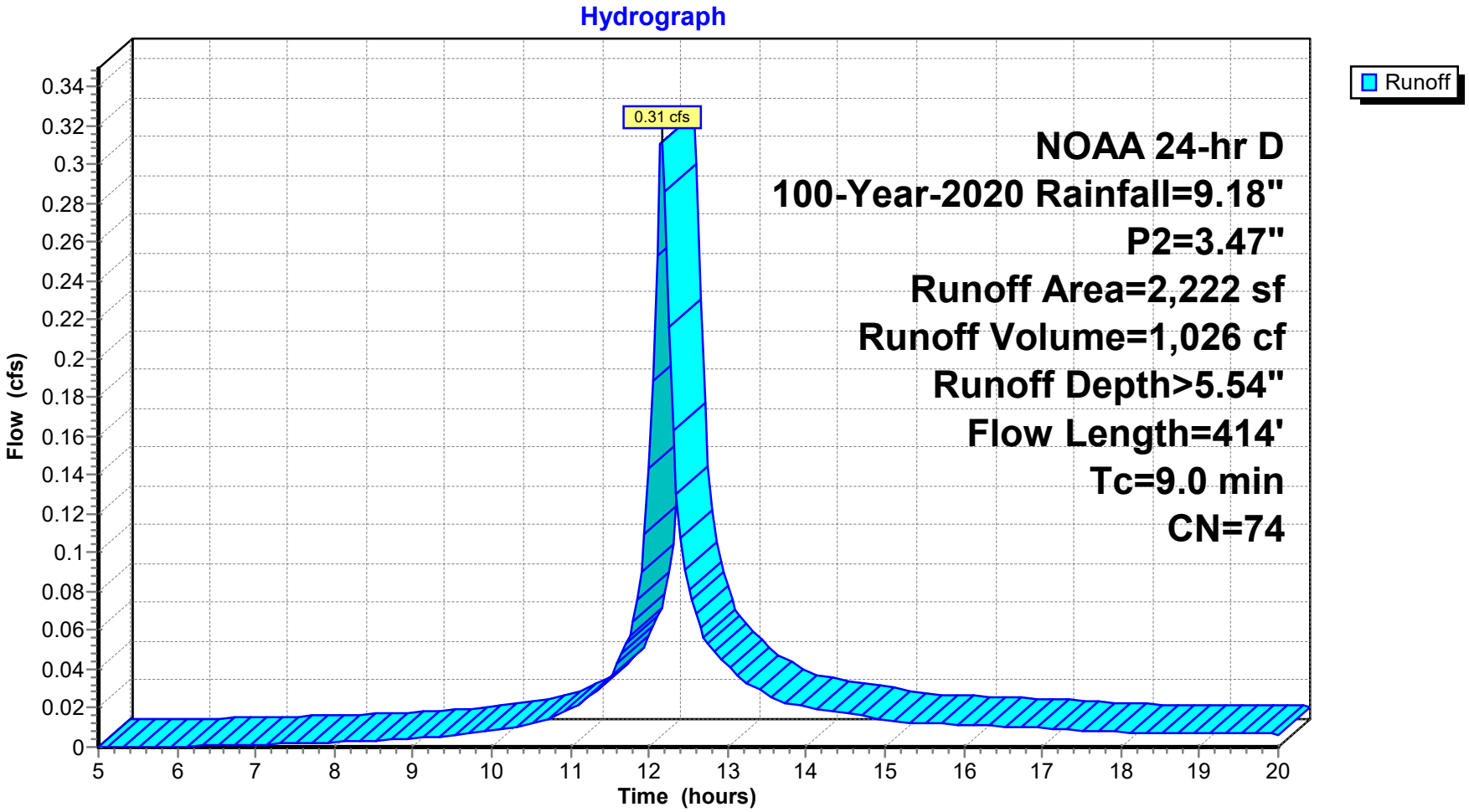
Runoff = 0.31 cfs @ 12.16 hrs, Volume= 1,026 cf, Depth> 5.54"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
2,222	74	>75% Grass cover, Good, HSG C
2,222		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	100	0.0800	0.21		**Sheet Flow, BUFFER** Grass: Dense n= 0.240 P2= 3.47"
0.2	48	0.1000	5.09		**Shallow Concentrated Flow, LAWN** Unpaved Kv= 16.1 fps
0.9	266	0.0600	4.97		**Shallow Concentrated Flow, BLOOMFIELD** Paved Kv= 20.3 fps
9.0	414	Total			

Subcatchment P2A: P2A pervious



Summary for Subcatchment P2B: P2B roof

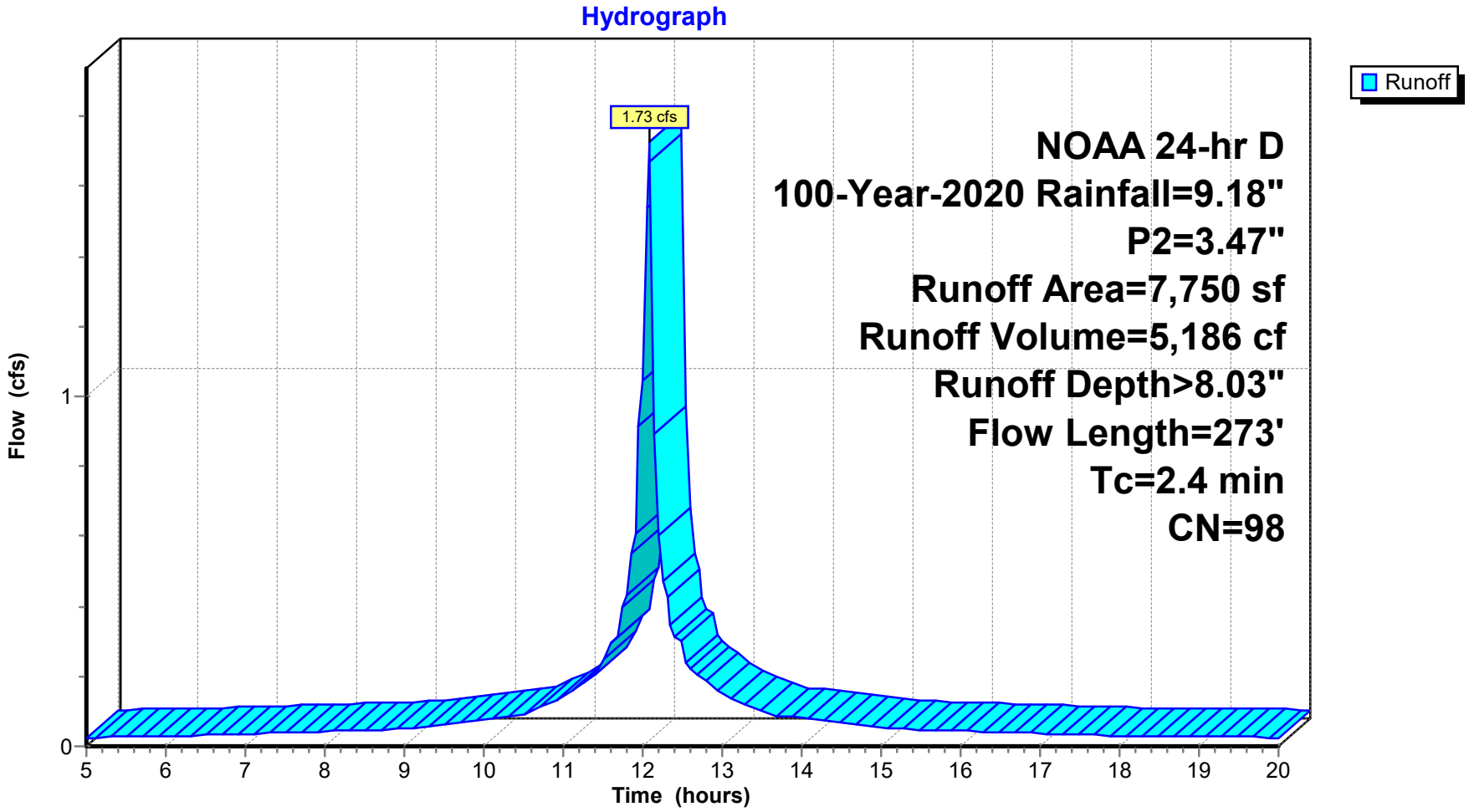
Runoff = 1.73 cfs @ 12.08 hrs, Volume= 5,186 cf, Depth> 8.03"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	7,750	98	roof
	7,750		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 3.47"
0.7	112	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	12	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	49	0.0482	15.81	49.67	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
2.4	273	Total			

Subcatchment P2B: P2B roof



Summary for Subcatchment P2C: P2C pervious

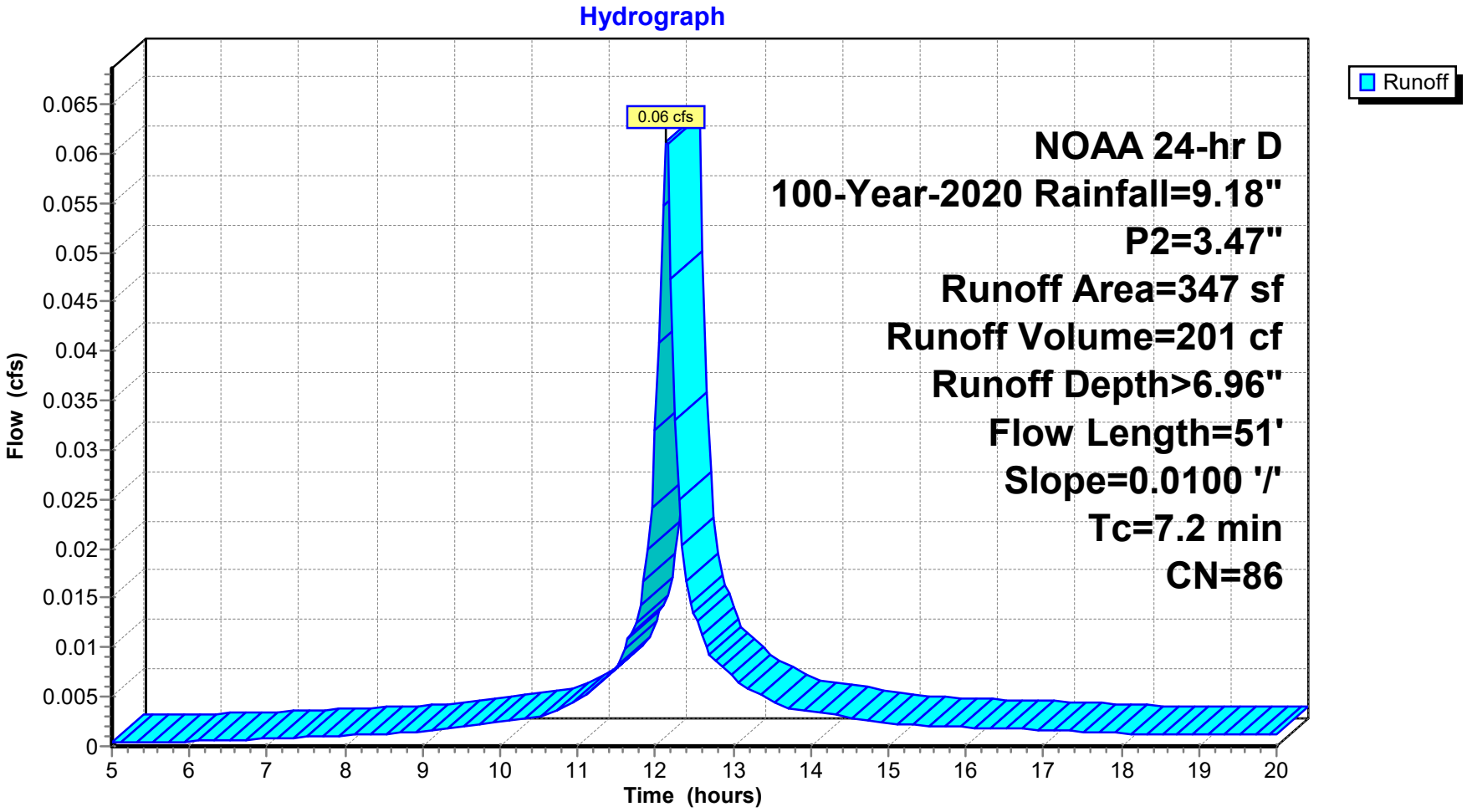
Runoff = 0.06 cfs @ 12.14 hrs, Volume= 201 cf, Depth> 6.96"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2020 Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	347	86	LANDSCAPE
	347		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	51	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.47"

Subcatchment P2C: P2C pervious

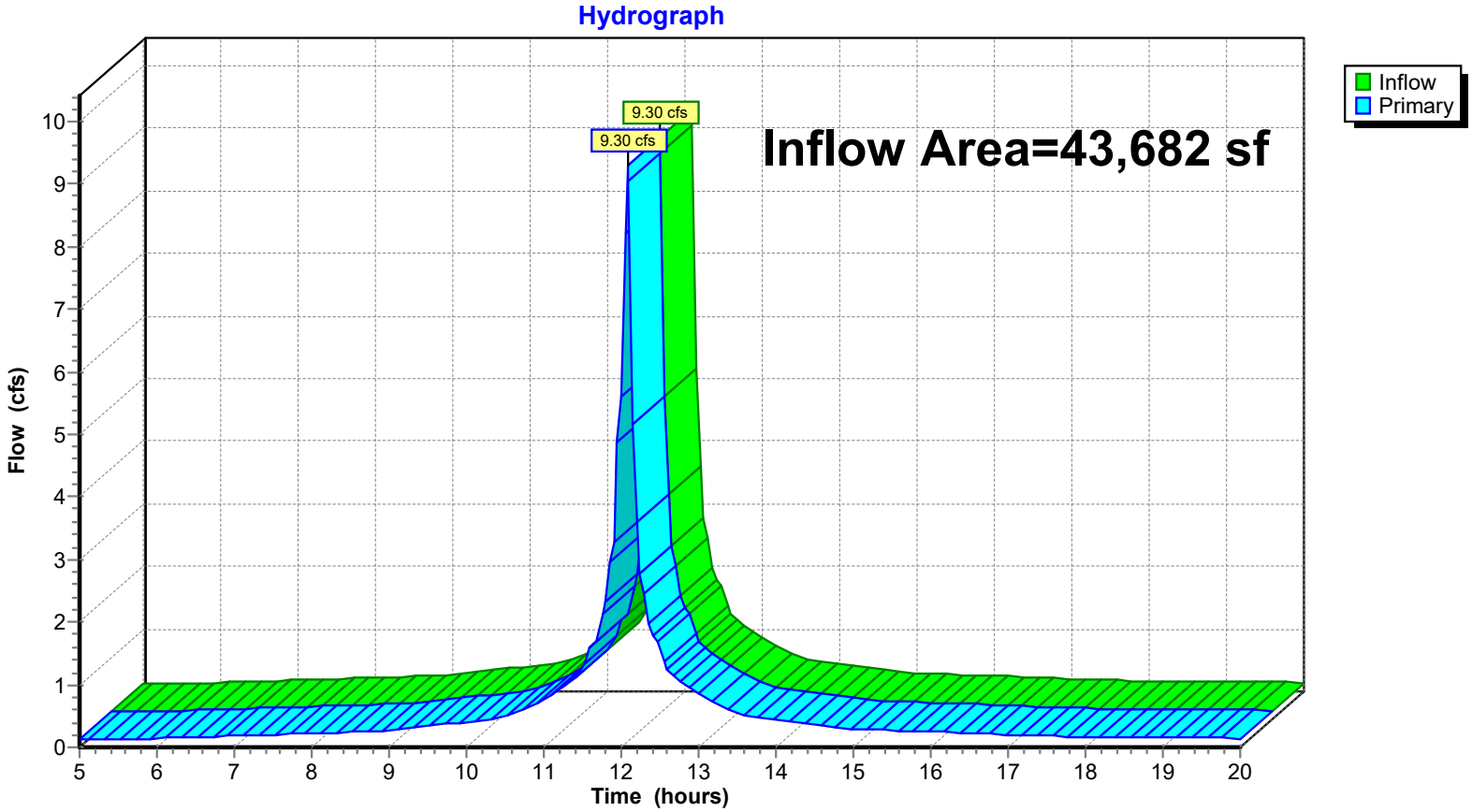


Summary for Link 7L: PROPOSED SITE TOTAL

Inflow Area = 43,682 sf, 89.20% Impervious, Inflow Depth > 7.79" for 100-Year-2020 event
Inflow = 9.30 cfs @ 12.08 hrs, Volume= 28,369 cf
Primary = 9.30 cfs @ 12.08 hrs, Volume= 28,369 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: PROPOSED SITE TOTAL

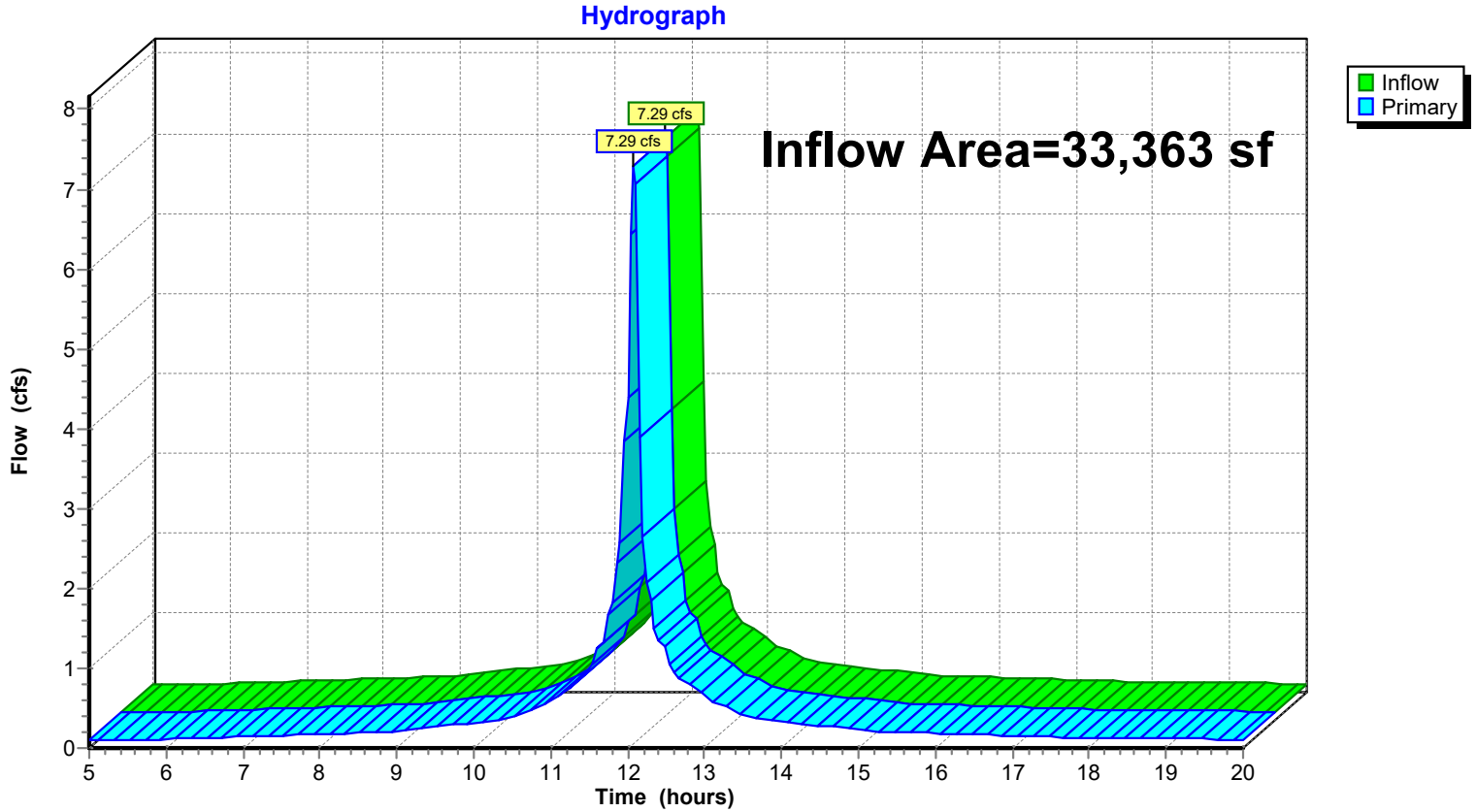


Summary for Link DP1: DESIGN POINT 1

Inflow Area = 33,363 sf, 93.56% Impervious, Inflow Depth > 7.90" for 100-Year-2020 event
Inflow = 7.29 cfs @ 12.08 hrs, Volume= 21,956 cf
Primary = 7.29 cfs @ 12.08 hrs, Volume= 21,956 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP1: DESIGN POINT 1

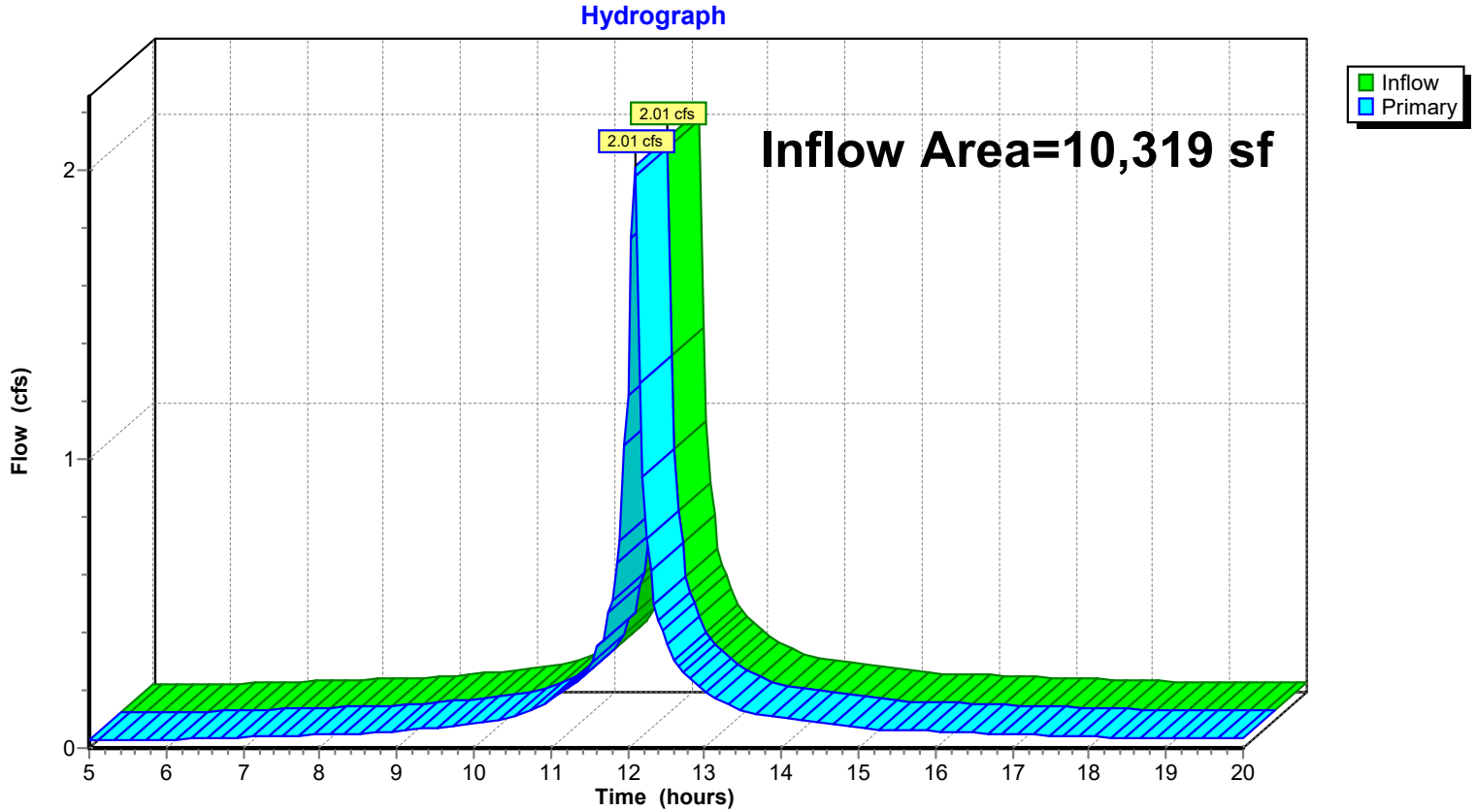


Summary for Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE

Inflow Area = 10,319 sf, 75.10% Impervious, Inflow Depth > 7.46" for 100-Year-2020 event
Inflow = 2.01 cfs @ 12.09 hrs, Volume= 6,413 cf
Primary = 2.01 cfs @ 12.09 hrs, Volume= 6,413 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE



Summary for Subcatchment P1A: P1A roof

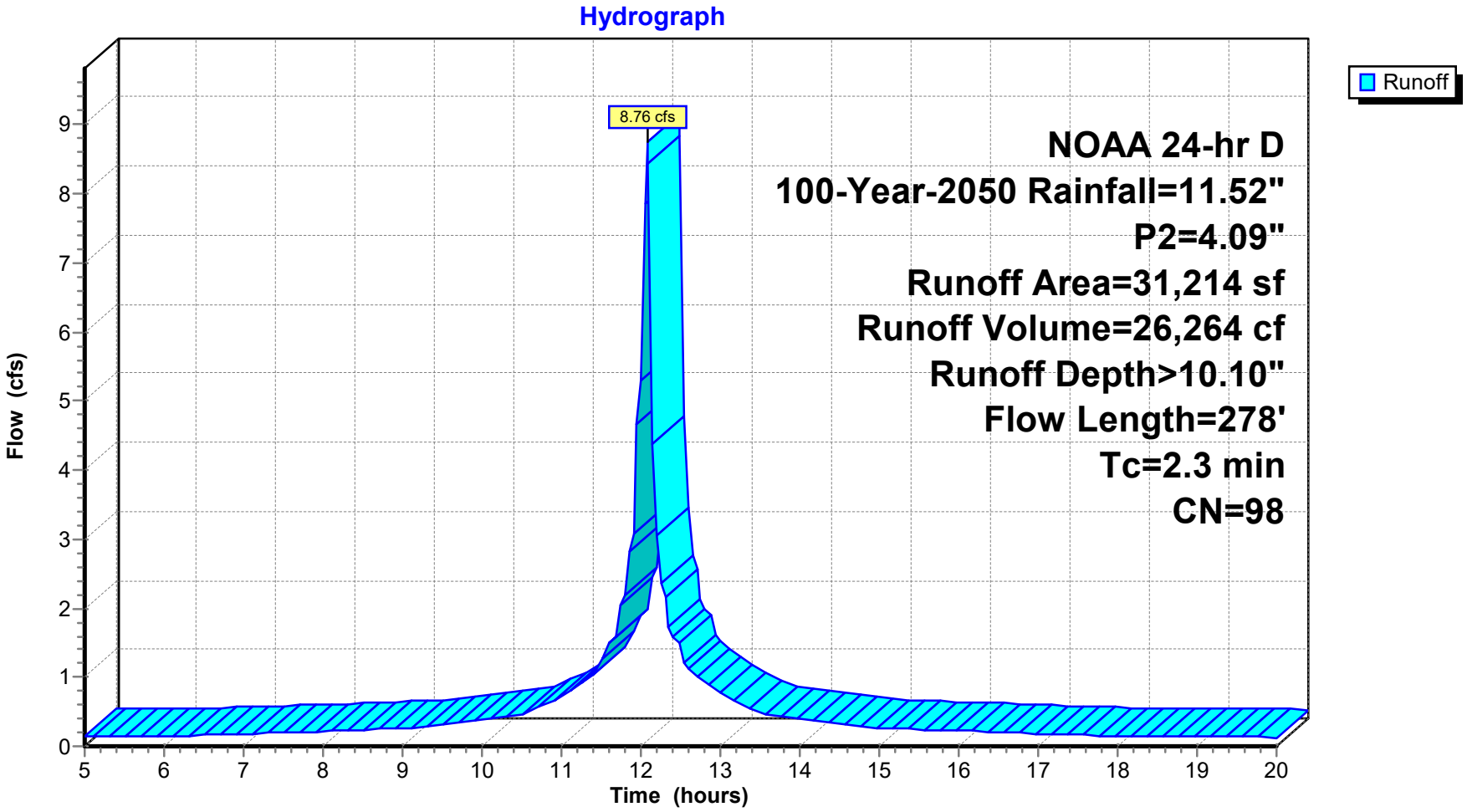
Runoff = 8.76 cfs @ 12.08 hrs, Volume= 26,264 cf, Depth>10.10"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	31,214	98	ROOF
	31,214		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.18		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.9	178	0.0050	3.47	2.73	**Pipe Channel, ROOF DRAIN** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
2.3	278	Total			

Subcatchment P1A: P1A roof



Summary for Subcatchment P1B: P1B pervious

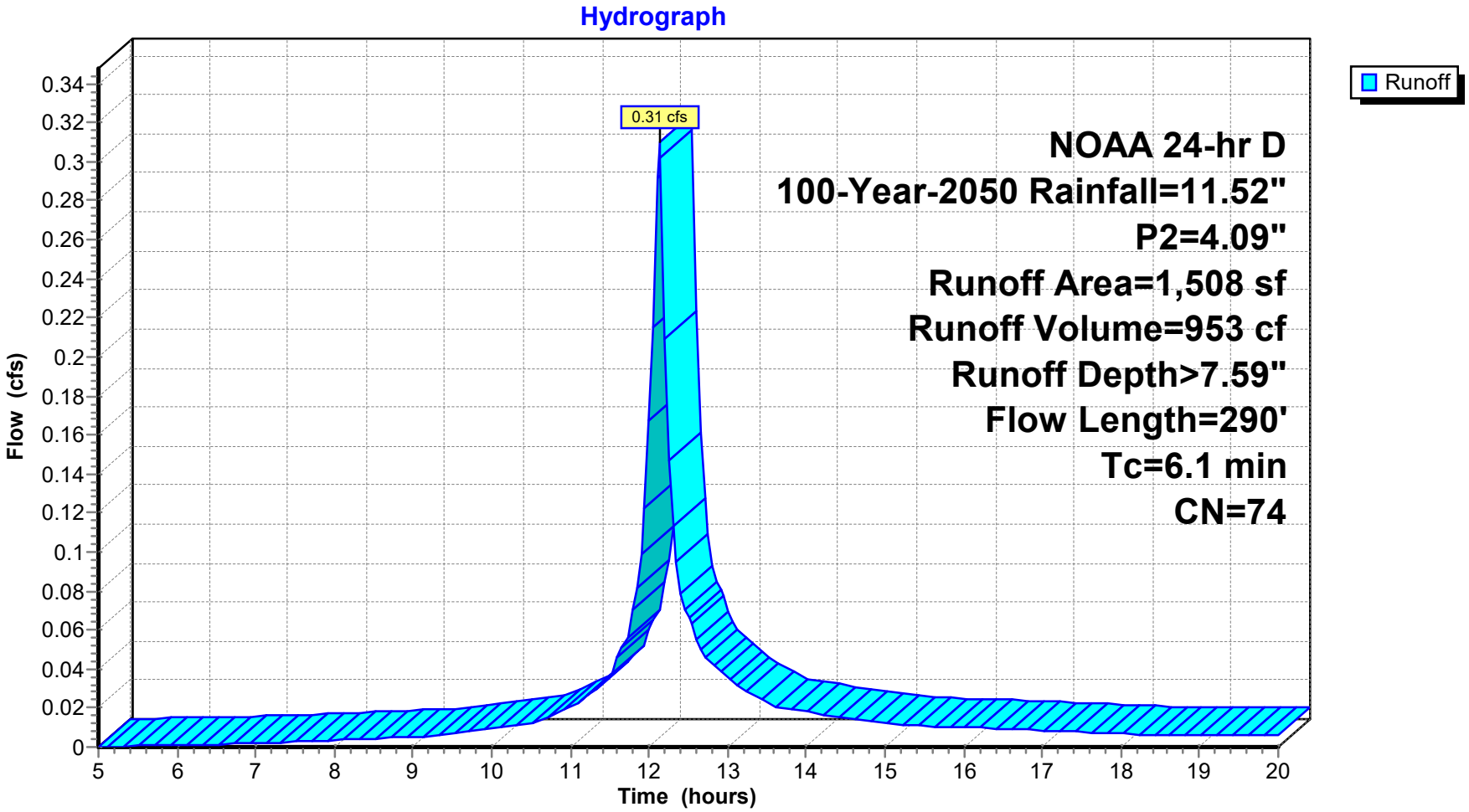
Runoff = 0.31 cfs @ 12.13 hrs, Volume= 953 cf, Depth> 7.59"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
1,508	74	>75% Grass cover, Good, HSG C
1,508		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	61	0.0650	0.19		**Sheet Flow, LANDSCAPE BUFFER** Grass: Dense n= 0.240 P2= 4.09"
0.3	39	0.0950	2.40		**Sheet Flow, CLAREMONT ROAD** Smooth surfaces n= 0.011 P2= 4.09"
0.5	190	0.0950	6.26		**Shallow Concentrated Flow, CLAREMONT** Paved Kv= 20.3 fps
6.1	290	Total			

Subcatchment P1B: P1B pervious



Summary for Subcatchment P1C: P1C pervious

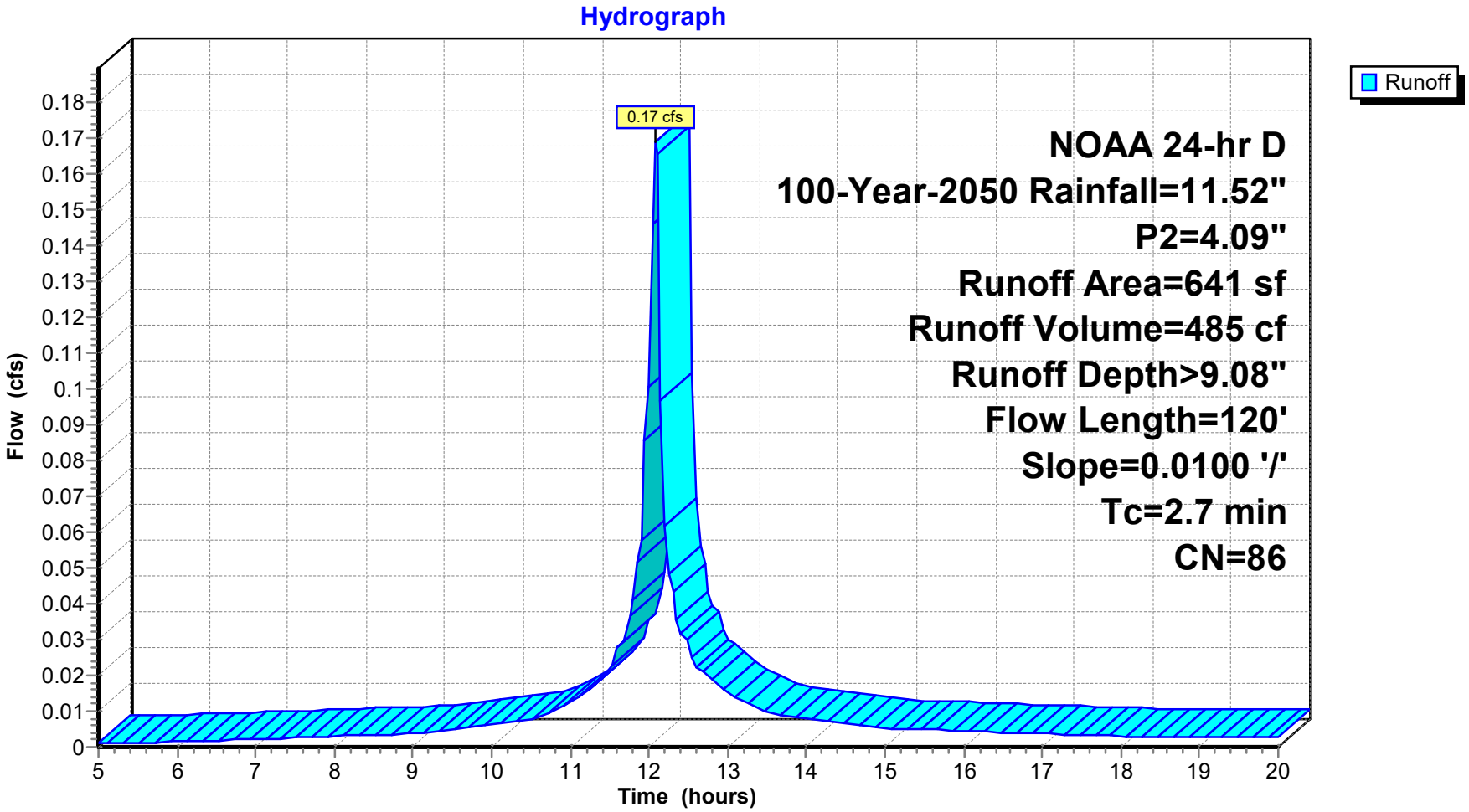
Runoff = 0.17 cfs @ 12.09 hrs, Volume= 485 cf, Depth> 9.08"
Routed to Link DP1 : DESIGN POINT 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	641	86	LANDSCAPE
	641		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	10	0.0100	0.09		**Sheet Flow, Landscaping** Grass: Short n= 0.150 P2= 4.09"
0.9	110	0.0100	2.03		**Shallow Concentrated Flow, Parking lot** Paved Kv= 20.3 fps
2.7	120	Total			

Subcatchment P1C: P1C pervious



Summary for Subcatchment P2A: P2A pervious

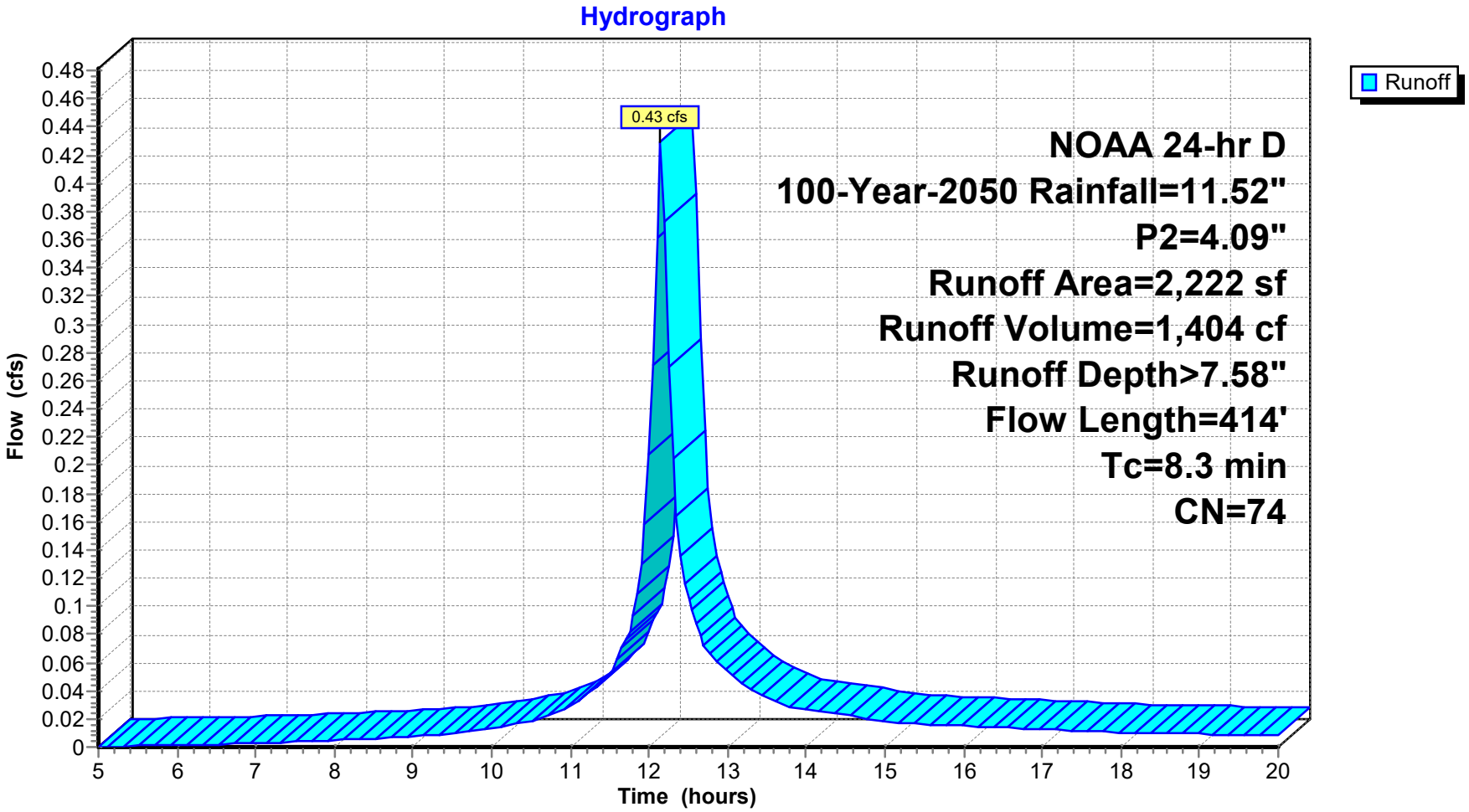
Runoff = 0.43 cfs @ 12.15 hrs, Volume= 1,404 cf, Depth> 7.58"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
2,222	74	>75% Grass cover, Good, HSG C
2,222		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0800	0.23		**Sheet Flow, BUFFER** Grass: Dense n= 0.240 P2= 4.09"
0.2	48	0.1000	5.09		**Shallow Concentrated Flow, LAWN** Unpaved Kv= 16.1 fps
0.9	266	0.0600	4.97		**Shallow Concentrated Flow, BLOOMFIELD** Paved Kv= 20.3 fps
8.3	414	Total			

Subcatchment P2A: P2A pervious



Summary for Subcatchment P2B: P2B roof

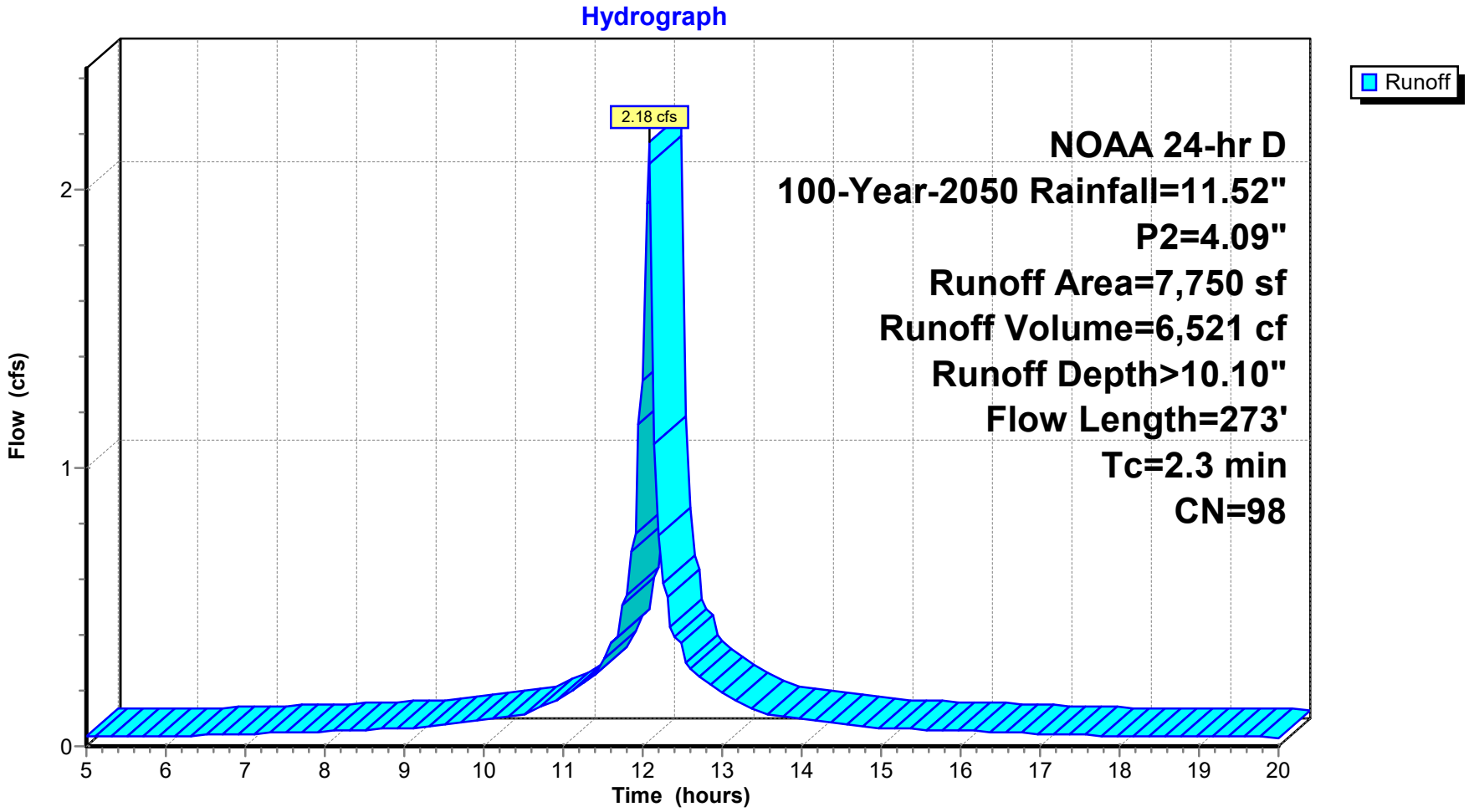
Runoff = 2.18 cfs @ 12.08 hrs, Volume= 6,521 cf, Depth>10.10"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	7,750	98	roof
	7,750		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0100	1.18		**Sheet Flow, ROOF** Smooth surfaces n= 0.011 P2= 4.09"
0.7	112	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	12	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.1	49	0.0482	15.81	49.67	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
2.3	273	Total			

Subcatchment P2B: P2B roof



Summary for Subcatchment P2C: P2C pervious

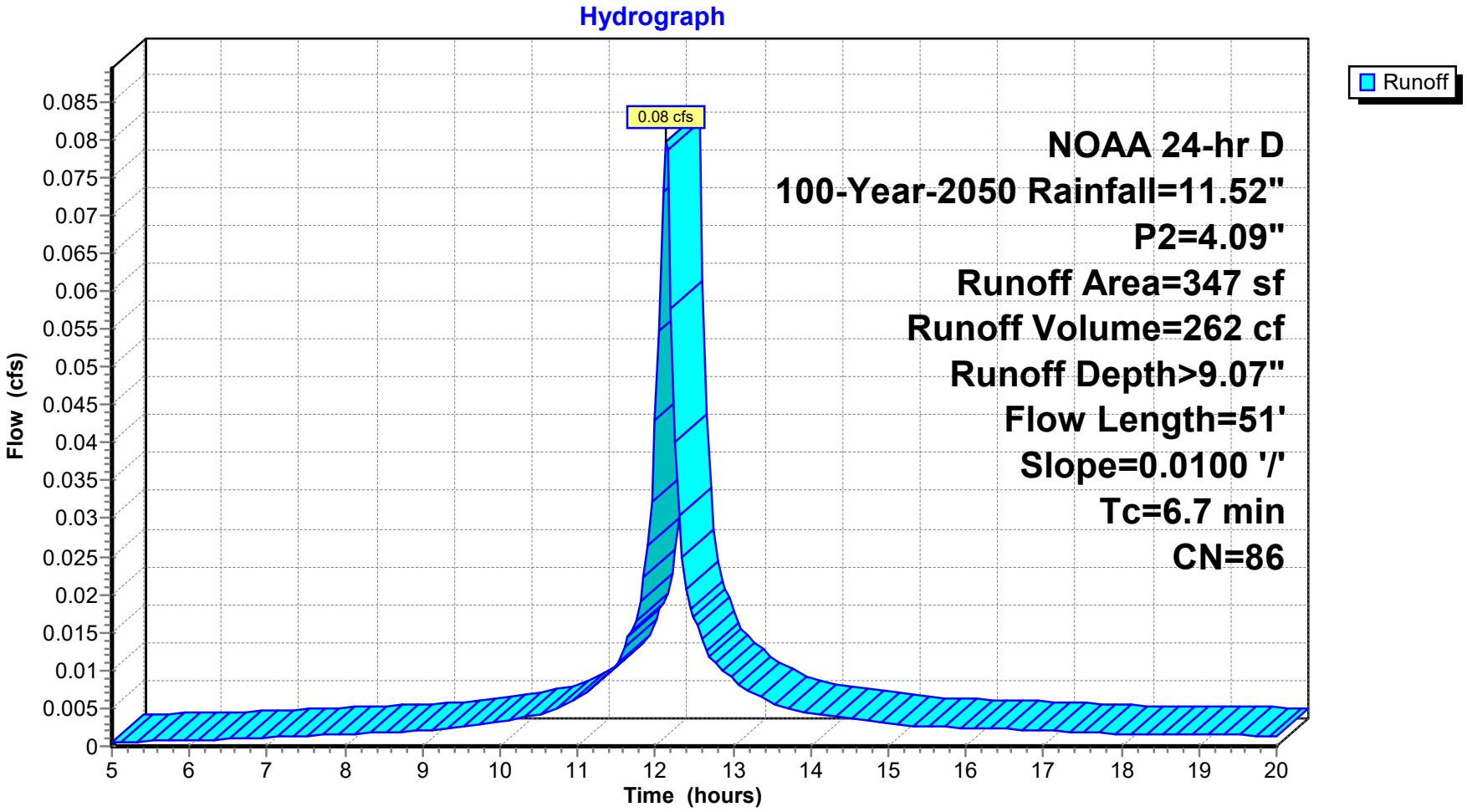
Runoff = 0.08 cfs @ 12.14 hrs, Volume= 262 cf, Depth> 9.07"
Routed to Link DP2 : PROPOSED TOTAL BLOOMFIELD AVENUE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-2050 Rainfall=11.52", P2=4.09"

	Area (sf)	CN	Description
*	347	86	LANDSCAPE
	347		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	51	0.0100	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 4.09"

Subcatchment P2C: P2C pervious

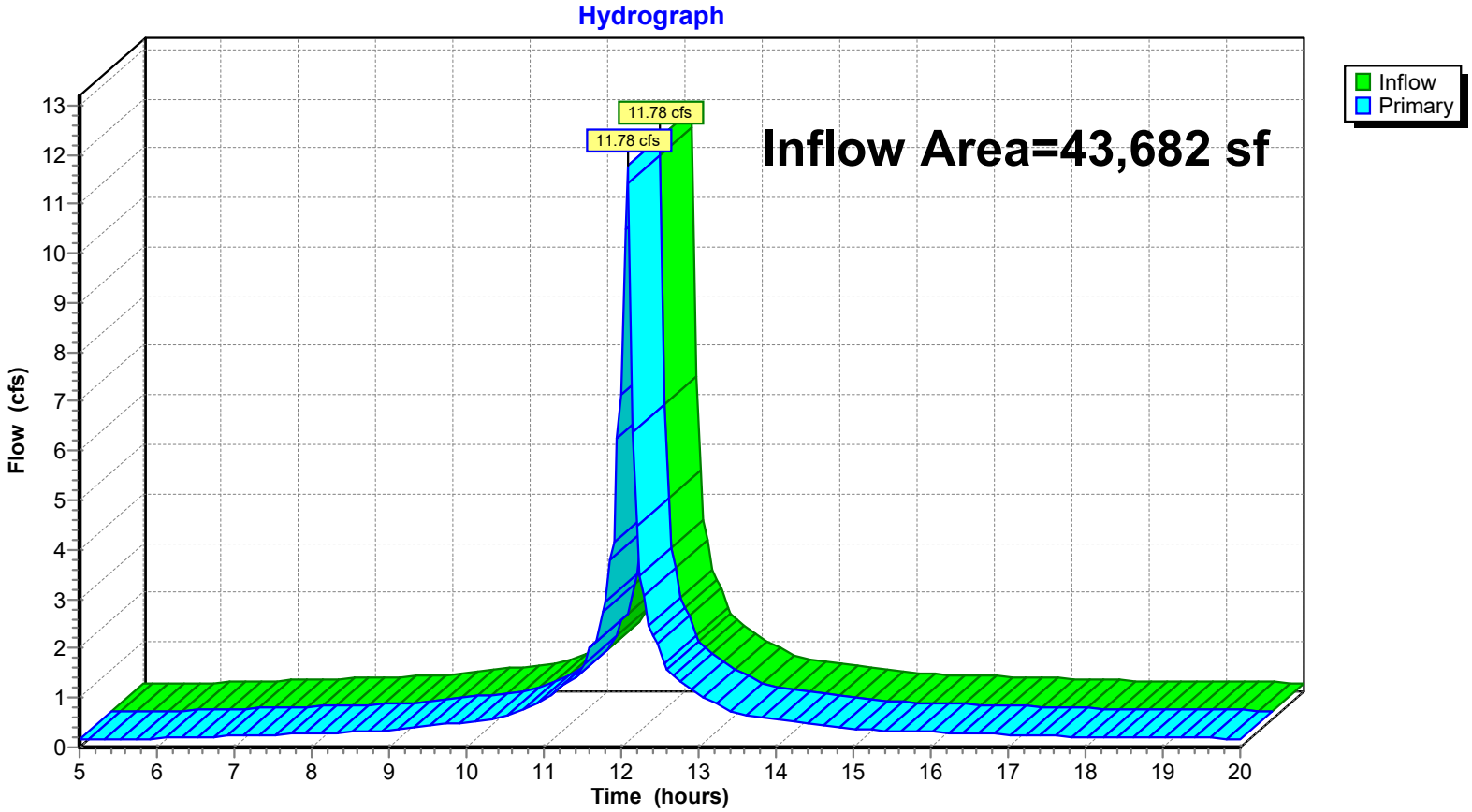


Summary for Link 7L: PROPOSED SITE TOTAL

Inflow Area = 43,682 sf, 89.20% Impervious, Inflow Depth > 9.86" for 100-Year-2050 event
Inflow = 11.78 cfs @ 12.08 hrs, Volume= 35,890 cf
Primary = 11.78 cfs @ 12.08 hrs, Volume= 35,890 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 7L: PROPOSED SITE TOTAL

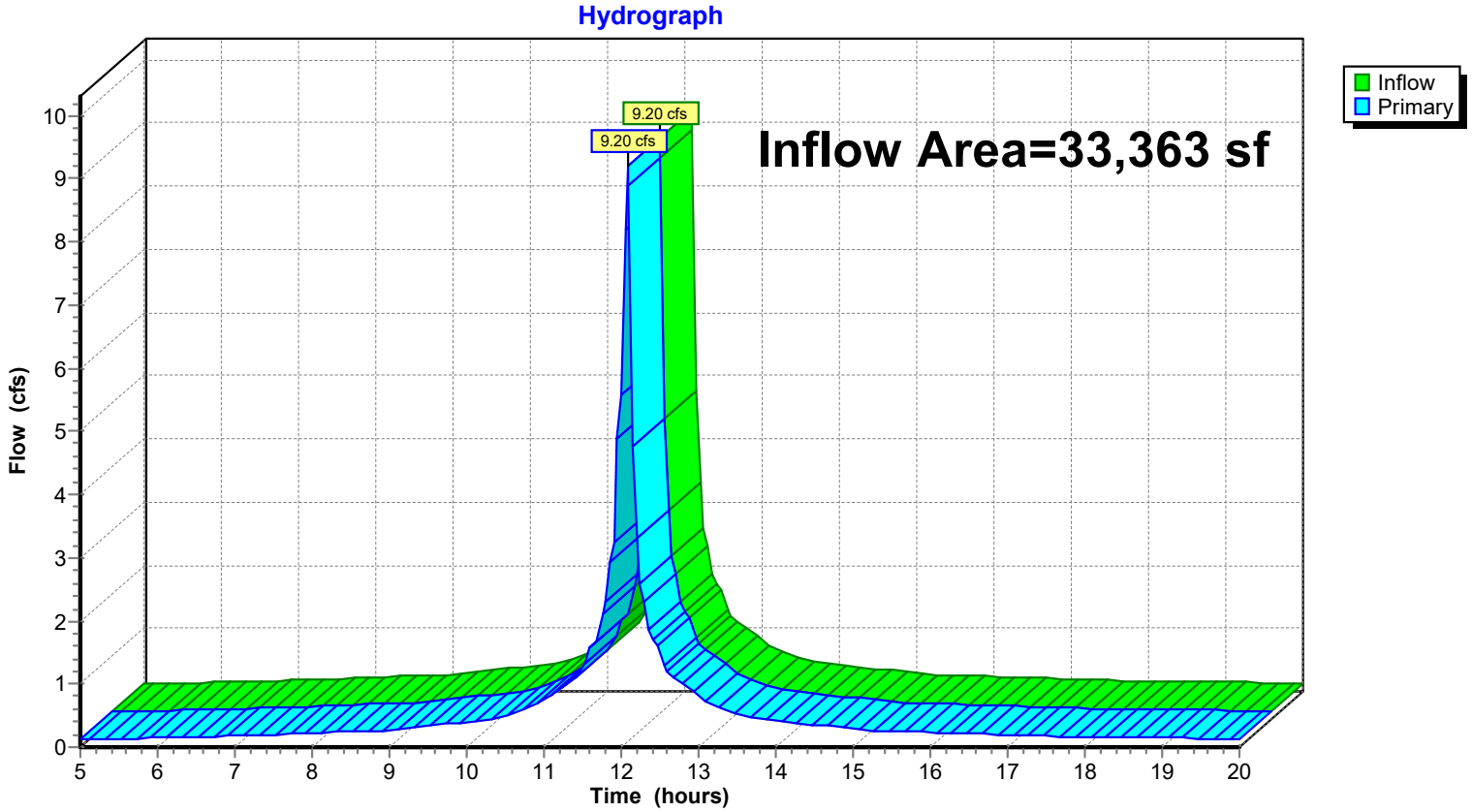


Summary for Link DP1: DESIGN POINT 1

Inflow Area = 33,363 sf, 93.56% Impervious, Inflow Depth > 9.96" for 100-Year-2050 event
Inflow = 9.20 cfs @ 12.08 hrs, Volume= 27,703 cf
Primary = 9.20 cfs @ 12.08 hrs, Volume= 27,703 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP1: DESIGN POINT 1

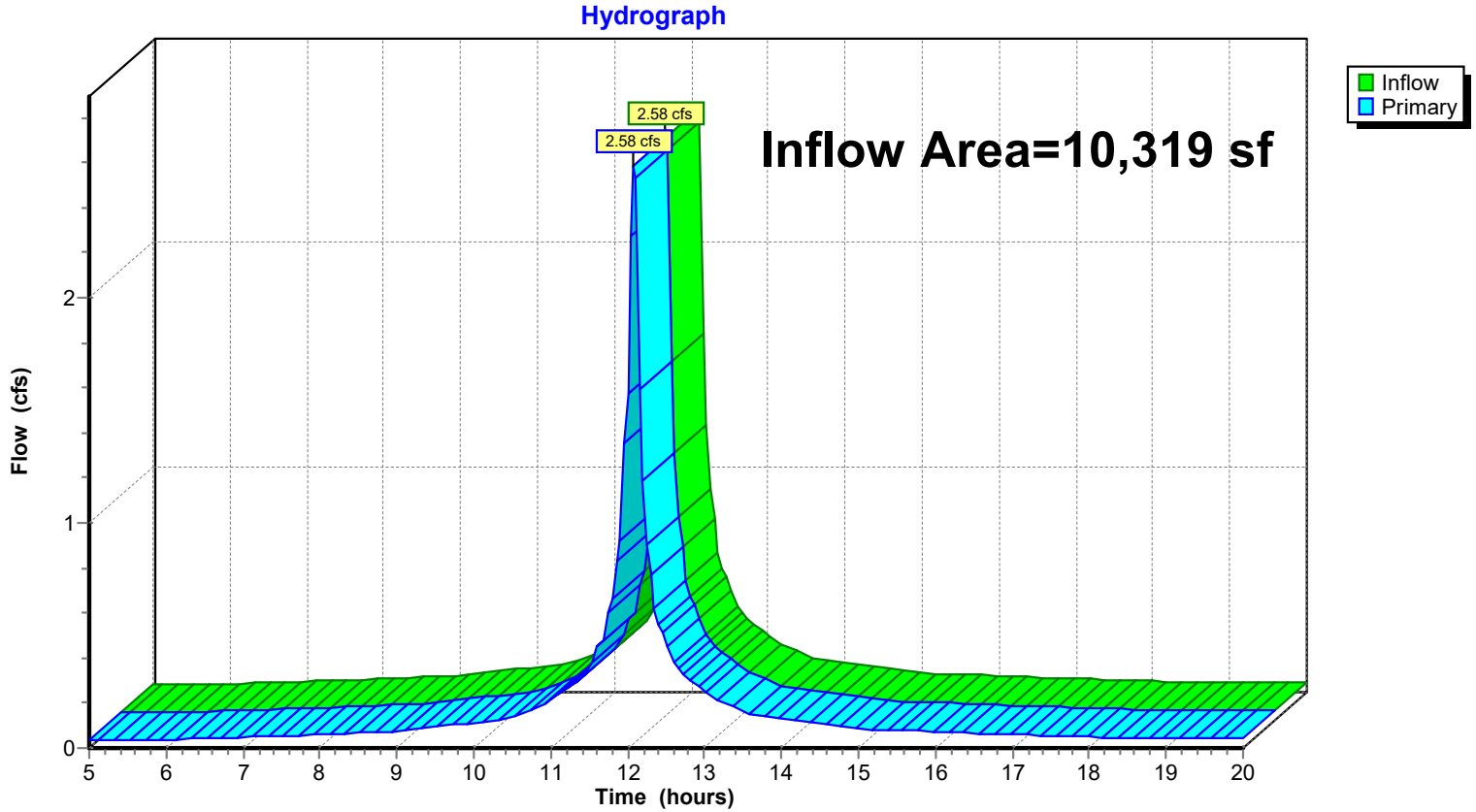


Summary for Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE

Inflow Area = 10,319 sf, 75.10% Impervious, Inflow Depth > 9.52" for 100-Year-2050 event
Inflow = 2.58 cfs @ 12.09 hrs, Volume= 8,187 cf
Primary = 2.58 cfs @ 12.09 hrs, Volume= 8,187 cf, Atten= 0%, Lag= 0.0 min
Routed to Link 7L : PROPOSED SITE TOTAL

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

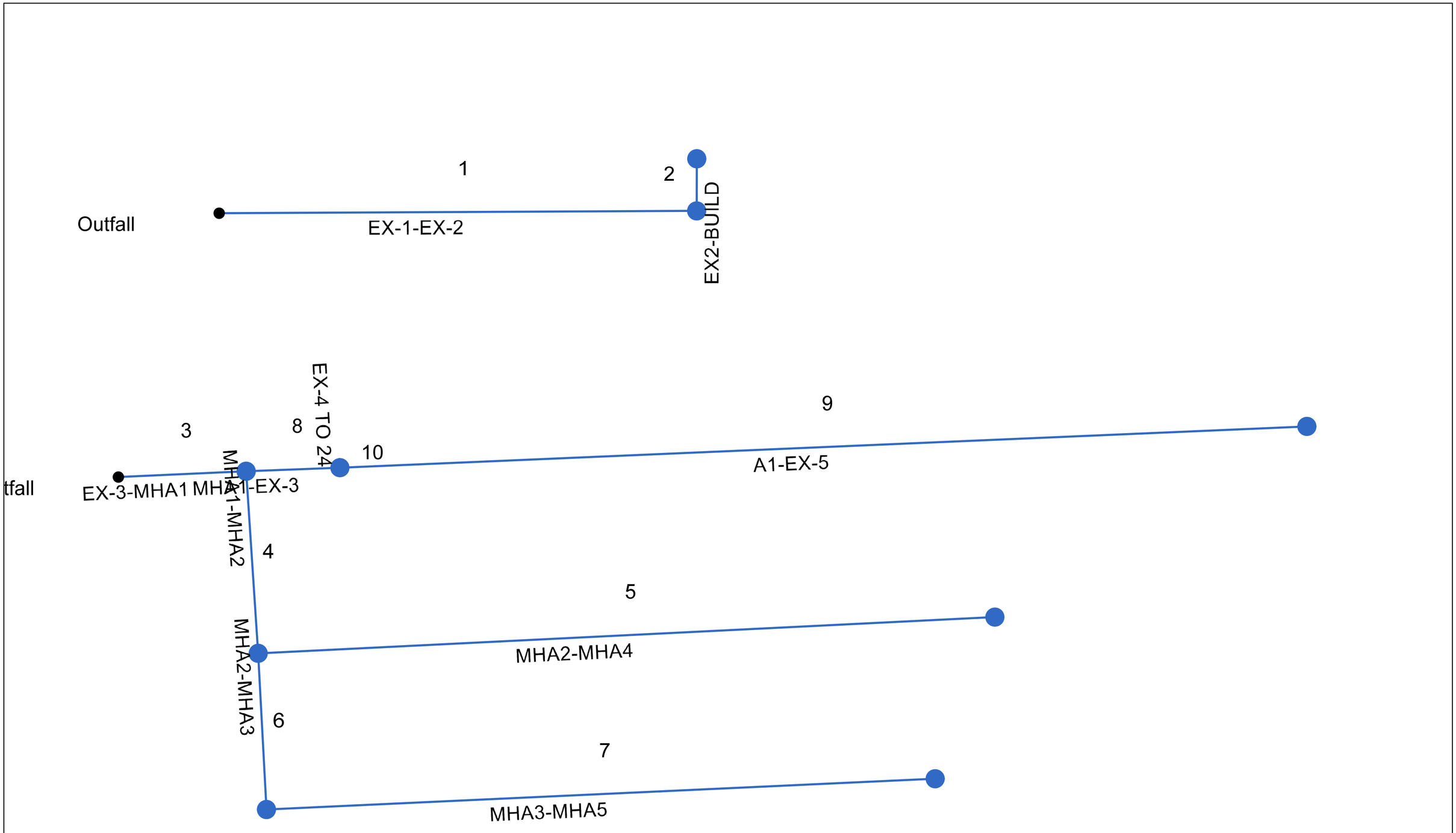
Link DP2: PROPOSED TOTAL BLOOMFIELD AVENUE



APPENDIX C

STORM SEWER CAPACITY CALCULATIONS

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



Project File: STORM SEWER.stm	Number of lines: 10	Date: 5/15/2026

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	112	0.68	0.86	0.93	0.63	0.81	5.0	5.0	9.5	7.70	53.04	5.34	24	5.50	371.60	377.76	372.49	378.75	376.34	382.42	EX-1-EX
2	1	12	0.18	0.18	0.99	0.18	0.18	3.0	3.0	9.5	1.69	7.27	3.25	12	4.17	378.00	378.50	378.75	379.05	382.42	382.00	EX2-BUI
3	End	30	0.00	1.19	0.00	0.00	1.15	5.0	10.3	7.7	8.86	75.52	5.24	24	9.50	373.40	376.25	374.46	377.31	378.99	381.36	EX-3-MH
4	3	42	0.16	0.72	0.99	0.16	0.71	5.0	6.4	9.0	6.38	9.35	7.08	15	1.79	377.00	377.75	377.76	378.77	381.36	381.57	MHA1-M
5	4	173	0.24	0.24	0.99	0.24	0.24	5.0	5.0	9.5	2.26	3.15	3.61	12	0.66	377.85	379.00	378.77	379.64	381.57	382.82	MHA2-M
6	4	36	0.14	0.32	0.99	0.14	0.32	5.0	6.2	9.0	2.86	3.80	4.24	12	0.97	377.85	378.20	378.77	378.92	381.57	381.64	MHA2-M
7	6	157	0.18	0.18	0.99	0.18	0.18	5.0	5.0	9.5	1.69	3.08	3.54	12	0.64	378.30	379.30	378.92	379.85	381.64	382.77	MHA3-M
8	3	22	0.00	0.47	0.00	0.00	0.44	5.0	10.0	7.8	3.40	77.31	2.95	24	9.95	376.25	378.44	377.31	379.08	381.36	382.95	MHA1-E
9	8	227	0.28	0.28	0.89	0.25	0.25	5.0	5.0	9.5	2.37	82.19	2.13	24	11.25	376.25	401.79	379.08	402.32	382.95	405.18	A1-EX-5
10	8	2	0.19	0.19	0.99	0.19	0.19	5.0	5.0	9.5	1.79	134.2	2.14	24	30.00	378.00	378.60	379.08	379.06	382.95	382.95	EX-4 TO

Project File: STORM SEWER.stm | Number of lines: 10 | Run Date: 5/15/2026

NOTES:Intensity = 150.20 / (Inlet time + 15.60) ^ 0.91; Return period =Yrs. 100 ; c = cir e = ellip b = box

APPENDIX D

NRCS SOIL MAPPING DATA

Soil Map—Essex County, New Jersey

Map Scale: 1:728 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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: Essex County, New Jersey
Survey Area Data: Version 21, Aug 28, 2025

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

Date(s) aerial images were photographed: Oct 10, 2022—Oct 16, 2022

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BouB	Boonton - Urban land, Boonton substratum complex, 0 to 8 percent slopes	1.1	100.0%
Totals for Area of Interest		**1.1**	**100.0%**

Essex County, New Jersey

BouB—Boonton - Urban land, Boonton substratum complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: b12f
Landscape: Till plains
Elevation: 50 to 500 feet
Mean annual precipitation: 30 to 64 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Boonton and similar soils: 50 percent
Urban land, boonton substratum: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boonton

Setting

Landscape: Till plains
Landform: Ground moraines
Landform position (three-dimensional): Upper third of mountainflank, center third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy basal till derived from basalt

Typical profile

A - 0 to 5 inches: loam
BA - 5 to 8 inches: silt loam
BE - 8 to 17 inches: silt loam
Bt - 17 to 30 inches: silt loam
Btx1 - 30 to 40 inches: gravelly fine sandy loam
Btx2 - 40 to 47 inches: fine sandy loam
CBt1 - 47 to 58 inches: loamy sand
CBt2 - 58 to 72 inches: loamy sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 20 to 36 inches to fragipan
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Description of Urban Land, Boonton Substratum

Setting

Landscape: Till plains
Landform: Ground moraines
Landform position (three-dimensional): Lower third of mountainflank, upper third of mountainflank, center third of mountainflank
Anthropogenic Feature: Urban land
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Surface covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material

Typical profile

H1 - 0 to 12 inches: material
H2 - 12 to 47 inches: silt loam
2CBt1 - 47 to 58 inches: loamy sand
2CBt2 - 58 to 72 inches: loamy sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Udorthents, boonton substratum

Percent of map unit: 10 percent
Landscape: Till plains
Landform: Ground moraines
Landform position (three-dimensional): Lower third of mountainflank, upper third of mountainflank, center third of mountainflank
Anthropogenic features: Artificial levees
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: Essex County, New Jersey
Survey Area Data: Version 21, Aug 28, 2025

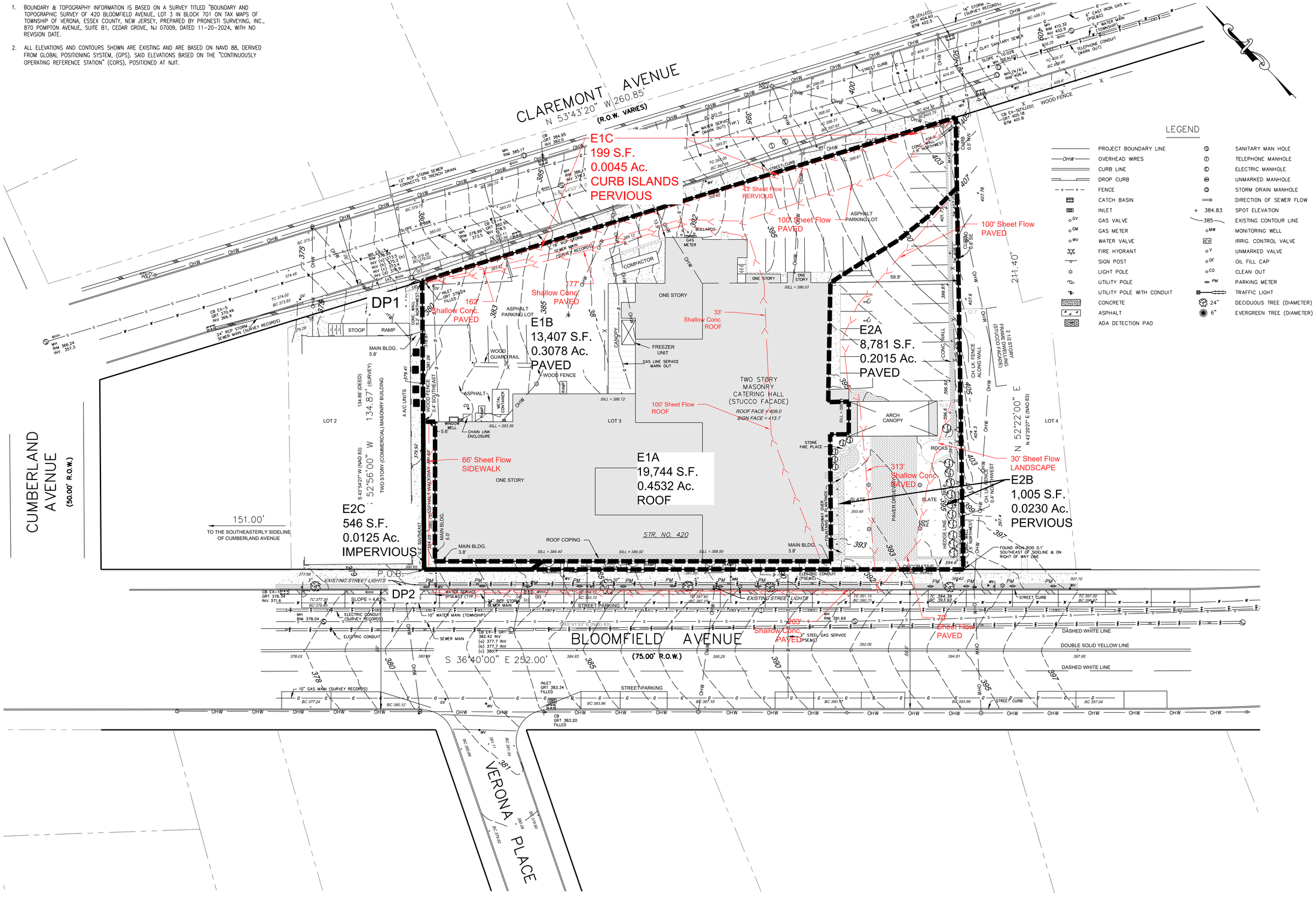
APPENDIX E

DRAINAGE AREA MAPS

SURVEY REFERENCE:

1. BOUNDARY & TOPOGRAPHY INFORMATION IS BASED ON A SURVEY TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY OF 420 BLOOMFIELD AVENUE, LOT 3 IN BLOCK 701 ON TAX MAPS OF TOWNSHIP OF VERONA, ESSEX COUNTY, NEW JERSEY, PREPARED BY PRONESTI SURVEYING, INC., 870 POMPTON AVENUE, SUITE B1, CEDAR GROVE, NJ 07009, DATED 11-20-2024, WITH NO REVISION DATE.

2. ALL ELEVATIONS AND CONTOURS SHOWN ARE EXISTING AND ARE BASED ON NAVD 88, DERIVED FROM GLOBAL POSITIONING SYSTEM, (GPS). SAID ELEVATIONS BASED ON THE "CONTINUOUSLY OPERATING REFERENCE STATION" (CORS), POSITIONED AT NJIT.



LEGEND

	PROJECT BOUNDARY LINE		SANITARY MAN HOLE
OHW	OVERHEAD WIRES		TELEPHONE MANHOLE
	CURB LINE		ELECTRIC MANHOLE
	DROP CURB		UNMARKED MANHOLE
— x — x —	FENCE		STORM DRAIN MANHOLE
	CATCH BASIN		DIRECTION OF SEWER FLOW
	INLET	+ 384.83	SPOT ELEVATION
GV	GAS VALVE	385	EXISTING CONTOUR LINE
GM	GAS METER	MW	MONITORING WELL
WV	WATER VALVE	ICV	IRRIG. CONTROL VALVE
	FIRE HYDRANT	V	UNMARKED VALVE
	SIGN POST	OF	OIL FILL CAP
	LIGHT POLE	CO	CLEAN OUT
	UTILITY POLE	PM	PARKING METER
	UTILITY POLE WITH CONDUIT		TRAFFIC LIGHT
	CONCRETE	24"	DECIDUOUS TREE (DIAMETER)
	ASPHALT	6"	EVERGREEN TREE (DIAMETER)
	ADA DETECTION PAD		

50 YEARS

Jarmel Kizel
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420 BLOOMFIELD AVENUE
TOWNSHIP OF VERONA
ESSEX COUNTY, NEW JERSEY
BLOCK 701, LOT 3

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GOMES-S-24-199	1" = 20'
Drawn By:	Approved By:
AF	AF

Drawing Name:
EXISTING DRAINAGE AREA MAP

Drawing Number:
DA-EX
3 OF 3

Initial Date: May 22, 2026

ENGINEER OF RECORD

ANTHONY FACCHINO, PE, PLS
NJ LIC 24GB04258500

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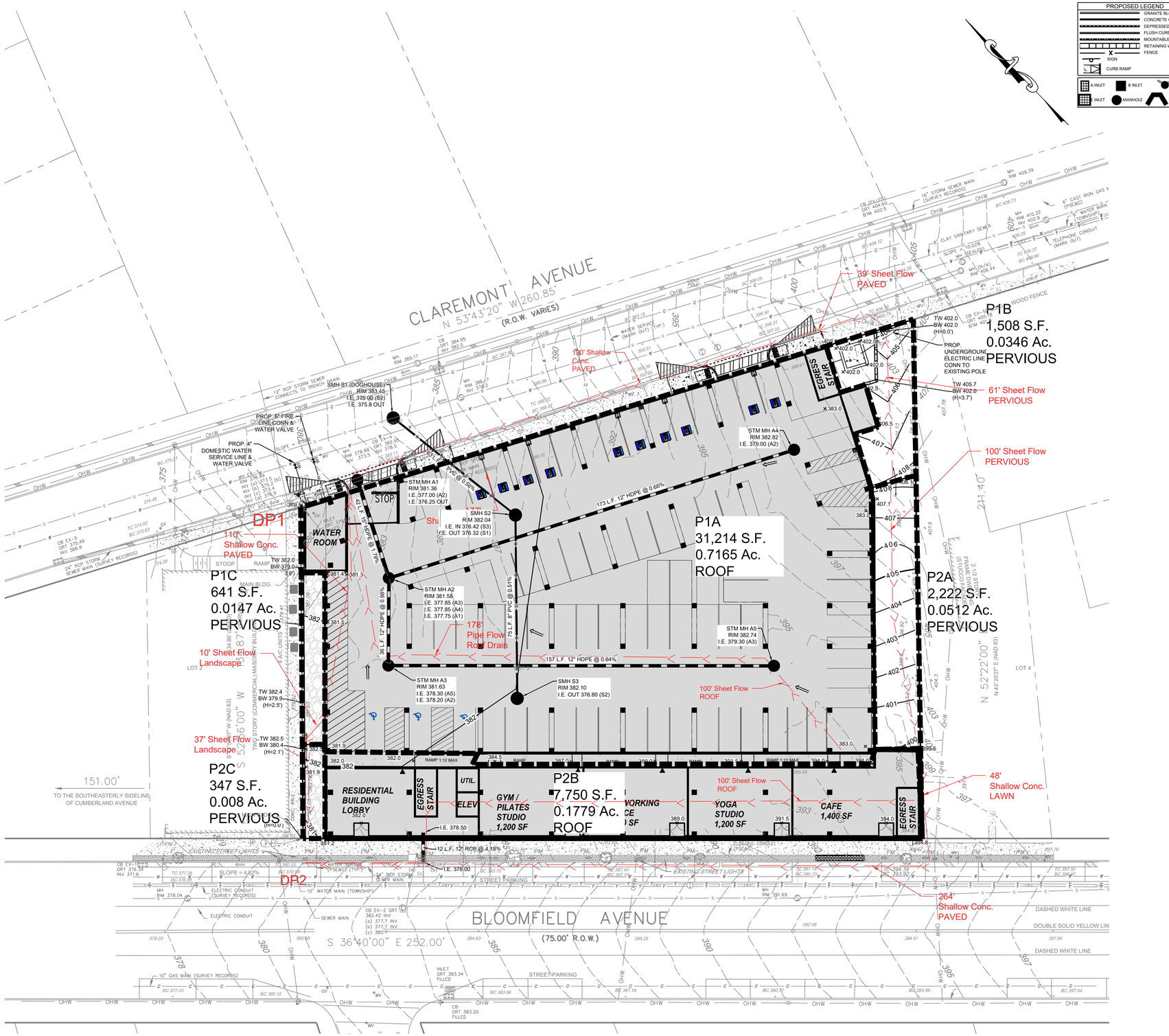

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Initial Date: May 22, 2026

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PROPOSED LEGEND

- GRANITE BLOCK CURB
- CONCRETE CURB
- DEPRESSED CURB
- FLUSH CURB
- MOUNTABLE CURB
- RETAINING WALL
- FENCE
- SIGN
- CURB RAMP
- A INLET
- B INLET
- HYDRANT
- C INLET
- MANHOLE
- HEADWALL

CLAREMONT AVENUE
N 53°43'20" W 260.85'
(R.O.W. VARIES)

BLOOMFIELD AVENUE
(75.00' R.O.W.)
S 36°40'00" E 252.00'

S 52°56'00" W 134.87'

N 52°22'00" E 211.40'
N 43°29'27" E (NAD 83)

S 43°54'27" W (NAD 83)

8,406 S.F.
0.193 Ac.
OVERLAND
TO EX-4

11,984 S.F.
0.275 Ac.
OVERLAND
TO EX-5

10,430 S.F.
0.2394 Ac.
ROOF TO A4

7,037 S.F.
0.1615 Ac.
ROOF TO A2

7,700 S.F.
0.1767 Ac.
ROOF TO A5

5,969 S.F.
0.137 Ac.
ROOF TO A3

7,750 S.F.
0.1779 Ac.
ROOF TO EX-2

29,890 S.F.
0..686 Ac.
OVERLAND FLOW
TO EX-2

PROP. 6" FIRE LINE CONN & WATER VALVE

PROP. 4" DOMESTIC WATER SERVICE LINE & WATER VALVE

SMH S1 (DOGHOUSE) RIM 383.45 I.E. 379.00 (S2) I.E. 375.8 OUT

12" RCP STORM SEWER CONNECTS TO TRENCH

STM MH A1 RIM 381.36 I.E. 377.00 (A2) I.E. 376.25 OUT

SMH S2 RIM 382.04

STM MH A2 RIM 381.58 I.E. 377.85 (A3) I.E. 377.85 (A4) I.E. 377.75 (A1)

STM MH A3 RIM 381.63 I.E. 378.30 (A5) I.E. 378.20 (A2)

SMH S3 RIM 382.10 I.E. OUT 376.80 (S2)

STM MH A4 RIM 382.82 I.E. 379.00 (A2)

STM MH A5 RIM 382.74 I.E. 379.30 (A3)

173 L.F. 12" HDPE @ 0.66%

21 L.F. 15" HDPE @ 0.50%

38 L.F. 12" HDPE @ 0.98%

75 L.F. 12" PVC @ 0.54%

157 L.F. 12" HDPE @ 0.64%

12 L.F. 12" RCP @ 4.16%

EGRESS STAIR

WATER ROOM

STOOP

RAMP

RESIDENTIAL BUILDING LOBBY

CO-WORKING SPACE 1,200 SF

YOGA STUDIO 1,200 SF

CAFE 1,400 SF

TW 382.0 BW 379.0 (H=3.0')

TW 382.0 BW 379.4 (H=2.6')

TW 382.4 BW 379.9 (H=2.5')

TW 382.5 BW 380.4 (H=2.1')

TW 380.5 BW 380.5 (H=0.0')

TW 402.0 BW 402.0 (H=0.0')

TW 405.7 BW 402.0 (H=3.7')

PROP. UNDERGROUND ELECTRIC LINE CONN TO EXISTING POLE

MAIN BLDG. 5.8'

MAIN BLDG. 5.7'

4 A/C UNITS

TWO STORY (COMMERCIAL) MASONRY BUILDING

2 1/2 STORY FRAME DWELLING (STUCCO & CLAPBOARD)

LOT 2

WOOD FENCE

CB EX-1 (FILLED) GRT 405.18 BTM 401.8

CB (FILLED) GRT 404.50 BTM 402.0

MH RIM 409.39

MH RIM 410.32

MH (N/A) RIM 406.44

6" CAST IRON GAS MAIN (SIZE ASS'D)

8" CLAY SANITARY SEWER (SIZE ASS'D)

TELEPHONE CONDUIT (MARK OUT)

WATER SERVICE (TYP.)

34" RCP STORM (c)

10" WATER MAIN (TOWNSHIP)

ELECTRIC CONDUIT (SURVEY RECORDS)

ELECTRIC CONDUIT

SEWER MAIN

10" GAS MAIN (SURVEY RECORDS)

EXISTING STREET LIGHTS

STREET PARKING

DASHED WHITE LINE

CB EX-2 GRT 382.42 INV (e) 377.7 INV (b) 377.7 INV (c) 380.7

INLET GRT 383.34 FILLED

CB GRT 383.20 FILLED

MH RIM 391.69

MH RIM 407.10

MH RIM 408.22

SCALE: 1"=20'

0 20 40 80 ft.

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