BREWSTER YARDS
SITE PLAN APPLICATION

FINAL ENVIRONMENTAL IMPACT STATEMENT

VOLUME 2 of 2

160 & 132 Pugsley Road - Tax Parcels: 45.-1-10 & 45.-1-11
TOWN OF SOUTHEAST, PUTNAM COUNTY, NEW YORK

Lead Agency: TOWN OF SOUTHEAST PLANNING BOARD

Project Sponsor: ProSwing Sports Realty, Inc.

DEIS Prepared by: KG+D Architects, PC

This DEIS can be viewed online at:
https://southeast-ny.gov/383/Brewster-Yards-pka-ProSwing

Lead Agency Acceptance Date: March 27, 2023

March 20, 2023

BREWSTER YARDS

FINAL ENVIRONMENTAL IMPACT STATEMENT

(VOLUME 2)

160 & 132 Pugsley Road
TOWN OF SOUTHEAST
PUTNAM COUNTY, NEW YORK

Tax Parcels: 45.-1-10 & 45.-1-11

Lead Agency: TOWN OF SOUTHEAST PLANNING BOARD
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The DEIS & FEIS can be viewed online at:
https://southeast-ny.gov/383/Brewster-Yards-pka-ProSwing

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BREWSTER YARDS
Final Environmental Impact Statement (FEIS)

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PRELIMINARY STORMWATER POLLUTION PREVENTION PLAN

For

Brewster Yards

Pugsley Road

Town of Southeast, New York

November 28, 2022

Owner Information:

Town of Southeast
1360 Route 22
Brewster, NY 10509

Applicant Information:

ProSwing Sports Realty, Inc.
27 Radio Circle Drive
Mount Kisco, NY 10590

Note: This report in conjunction with the project plans make up the complete Preliminary Stormwater Pollution Prevention Plan.

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1.0 INTRODUCTION

1.1 Project Description:

The project is located on two (2) parcels totaling 153.5± acres on Pugsley Road in the Town of Southeast. The parcels are identified as Tax Map No. 45.-1-10 and 45.1-11. The parcels are located in the Rural Community (RC) zone. The project site is bordered by Interstate-84 to the east and Pugsley Road and Fields Corner Road to the west with Barrett Road running east and west between the two parcels. The project proposes to subdivide and develop areas on two parcels with the following:

- 4 Baseball Fields
- 1 Baseball Showcase Field
- 3 Little League Fields
- 1 Little League Showcase Field
- 1 Multi-Sport Field
- 1 Batting Cage Facility
- 1 Maintenance Garage with Restroom Facilities
- 3 Concession/Restroom Facilities
- 2 Concession Facilities
- 46,000 s.f. Recreational Fieldhouse Facility
- Parking Areas (449 Parking Spaces, 8 Bus Parking Spaces)
- 1 Playground

The site is currently undeveloped and consists mainly of wooded areas. The two parcels consist of areas of steep slopes, Town of Southeast ridgeline protection and a NYSDEC regulated wetland, LC-28. The project site is located in the Middle Branch Watershed. The following permits are required for the project:

TOWN OF SOUTHEAST
Planning Board Site Plan and Lot Line Adjustment Approval
Wetland Permit
PUTNAM COUNTY DEPARTMENT OF HEALTH
Septic and Well Approval
NEW YORK CITY DEPARTMENT OF ENVIROMENTAL PROTECTION
SWPPP Approval
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SWPPP General Permit Coverage (GP-0-20-001)
Freshwater Wetland Permit

There are no known enforcement actions, and no lawsuits or administrative proceedings, commenced against the applicant, or any principal affiliate of the applicant, for any alleged violations of law related to the applicant of the site, in the five years preceding this application.

1.2 Existing Site Conditions

The project site is located on two parcels on Pugsley Road in the Town of Southeast. .The parcels are bordered by Interstate 84 to the east and Pugsley Road and Fields Corner Road to the west with Zimmer Road running east and west between the two parcels. Land cover at the site consists of mainly forested areas. An existing NYSDEC wetland, LC-28 is located on the southern portion of the site. The site also consists of areas of steep slopes and Town of Southeast protected ridgeline on the northern end of the site. Stormwater runoff across the project site is centrally divided by a ridge line running east to west with a highpoint to the east of the property line. To each side of this ridge the flow is then divided again to two design points per side resulting in four design points which will be utilized to analyze the stormwater runoff both qualitatively and quantitatively and the impact to the existing natural resources on the project site. Design Point 1 is located just outside the northwest corner of the property to the east of Fields Corner Road. Design Point 2 is located north of the property in a watercourse flowing offsite. Design Point 3 is located in a watercourse flowing

thought the southern property line. Design Point 4 is located in a watercourse along the southeastern property line prior to entering the southeast NYSDEC wetland.

The hydrologic soils groups for the project consists of "B", "C", and "D". The designations of the onsite soils located within the proposed limits of disturbance consist of Charlton Fine Sandy Loam (ChC), Charlton-Chatfield Complex (CrC), Chatfield-Charlton Complex (CsD), & Chatfield-Hollis-Rock Outcrop Complex (CtC) of B soils, Paxton Fine Sandy Loam (PnB & PnC) of C soils, and Leicester Loam (LcB), Ridgebury Complex (RdB & RgB), & Woodbridge Loam (WdB & WdC) of D soils as identified on the Soil Conservation Service Web Soil Survey.

1.3 Proposed Site Conditions

As noted above the proposed project site will be developed with multiple baseball fields, little league fields and a multi-use sports field. The development will also include the construction of a 46,000 ± square foot indoor facility, restroom and concession buildings, parking areas and associated pedestrian walkways. Access to the project site will be provided from Pugsley Road. In addition to the buildings, parking areas, walkways and playing fields, improvements will include water, sewer, and stormwater infrastructure.

Onsite runoff will be captured and treated in multiple stormwater infiltration basins. Pretreatment for the proposed stormwater infiltration basins 2.3 IB & 3.6 IB shall be provided by extended detention dry sediment basins upstream of the infiltration basins. Pretreatment for the proposed infiltration basins 1.1 IB shall be provided by a grass filter strip and a stone check dam. A flowsplitter will be designed upstream of infiltration basins 2.3 IB & 3.6 IB to send the water quality volume to the downstream practice while bypassing the larger storms. As infiltration basin 1.1 IB primarily receives stormwater from overland flows it has not been designed as an offline practice. The infiltration basins are proposed to meet the RR_v and Water Quality Volume (WQ_v) requirements of the *New York State Stormwater Management Design Manual* (Design Manual).

With respect to runoff volume, the project SWPPP will need to satisfy the RR_V requirements of Design Manual. These requirements are intended to replicate pre-development hydrology through the implementation of infiltration practices. In order to replicate pre-development hydrology to the maximum extent practicable, it is proposed to minimize the creation of impervious surfaces, and utilize infiltration to reduce 100% of the required RR_v, if practical.

The NYCDEP Rules and Regulations encourage the use of infiltration practices "to minimize loss of annual recharge to groundwater by maximizing the use of stormwater infiltration practices where suitable soil conditions exist". Consistent with the Rules and Regulations, infiltration practices have been proposed to treat stormwater runoff from the proposed impervious surfaces.

On-site soil testing witnessed by the New York City Department of Environmental Protection (NYCDEP) has been performed to verify the soils in the location of the proposed SMP's are adequate to support the design requirements for infiltration practices as stated in the Design Manual.

2.0 STORMWATER MANAGEMENT

The proposed stormwater management system for the proposed project has been designed to meet the requirements of local, regional, and state stormwater ordinances and guidelines, including but not limited to those of the Town of Southeast, the NYSDEC, and the NYCDEP. Specifically, the following codes / regulations have been used to design this SWPPP:

- *NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, General Permit GP-0-20-001* (GP-0-20-001).
- *NYCDEP Rules and Regulations for the Protection from Contamination, Degradation, and Pollution of the New York City Water Supply and its Sources* (Rules and Regulations).
- *Town of Southeast Town Code, Chapter 119 – Stormwater Management and Erosion and Sediment Control*.

Since the subject project proposes the disturbance of more than 1 acre, coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-20-001 is required. In order to meet the requirements set forth by this permit, the latest edition of the NYSDEC *New York State Stormwater Management Design Manual* (Design Manual) was referenced for the design of the proposed stormwater management system. The Design Manual specifies five design criteria that are discussed in detail below. They are Runoff Reduction Volume (RR_v), Water Quality Volume (WQ_v), Stream Channel Protection Volume (CP_v), Overbank Flood Control (Q_f), and Extreme Storm Control (Q_p). The first two requirements relate to treating water quality, while the later pertain to stormwater quantity (peak flow) attenuation.

In order to meet the requirements set forth by GP-0-20-001, and the latest edition of the NYSDEC *New York State Stormwater Management Design Manual* (NYSSMDM), including the requirements listed in Chapter 10: *Enhanced Phosphorus Removal Standards* (Chapter 10) was referenced for the design of the proposed stormwater collection, conveyance and treatment system. The Design Manual specifies five design criteria that are discussed in detail below. They are Runoff Reduction Volume (RR_v), Water Quality Volume (WQ_v), Stream Channel Protection Volume (CP_v), Overbank Flood Control (Q_f), and Extreme Storm Control (Q_p). The first two requirements relate to treating water quality, while the later pertain to stormwater quantity (peak flow) attenuation.

With regard to NYCDEP requirements, Section 18-39 of the Rules and Regulations requires a SWPPP Approval for this project. This project meets three (3) of the thresholds that require SWPPP approval from the NYCDEP. For further discussion on NYCDEP requirements, refer to Section 2.6 below. However, it should be noted that in addition to the Design Manual requirements, two different SMP's are required to be placed in series when drainage areas to an SMP is over 20% impervious and infiltration cannot be provided. This project proposes the use of infiltration practices and as such meets this requirement.

Where WQv/RRv treatment is required, the following post construction green infrastructure and stormwater management practices are proposed for the project:

Table 2.0.1 – Proposed GIP/SMP Design Criteria Summary Table

GIP/SMP ID	Proposed Subcatchment	NYSSMDM Ch. 6 Design Designation	NYSDEC Uniform Stormwater Sizing Criteria Satisfied	NYCDEP Requirement Satisfied
1.1 IB	1.1S	I-2 Infiltration Basin	RRv, WQ_v, CP_v[1]	Only Practice Required to be Provided.
2.3 IB	2.1S, 2.2S, 2.3S			
3.6 IB	3.1S, 3.2S, 3.3S, 3.4S, 3.5S, 3.6S			
2.2 EDB	2.1S, 2.2S	Dry Extended Detention Basin	Q_p, Q_f	Pretreatment and Attenuation
2.4 EDB	2.4S			
3.2 EDB	3.1S, 3.2S			
3.5 EDB	3.3S, 3.4S, 3.5S			
3.7 EDB	3.7S			

[1] The infiltration practices achieve the CP_v requirement as they are designed to infiltration the 1-year storm as a result of Chapter 10 requirements.

To address stormwater quantity requirements of the NYSDEC, the "HydroCAD" Stormwater Modeling System," by HydroCAD Software Solutions LLC in Tamworth, New Hampshire, was used to model and

assess the peak stormwater flows for the subject project. HydroCAD is a computer aided design program for modeling the hydrology and hydraulics of stormwater runoff. It is based primarily on hydrology techniques developed by the United States Department of Agriculture, Soil Conservation Service (USDA, SCS) TR-20 method combined with standard hydraulic calculations. Additionally, HydroCAD directly implements some of the key features of TR-55, such as curve-number lookup and calculating time-of-concentration. For details on the input data for the subcatchments and design storms, refer to Appendices A through C and for the supporting data relative to the soils breakdown within the overall contributing area shown in the HydroCAD analysis, see Figures 2 and 3 of this report:

The input requirements for the HydroCAD computer program are as follows:

Subcatchments (contributing watershed/sub-watersheds)

- Design storm rainfall in inches
- CN (runoff curve number) values which are based on soil type and land use/ground cover
- Tc (time of concentration) flow path information

Flow Splitters / Subsurface Infiltration System

- Surface area at appropriate elevations
- Flood elevation
- Outlet structure information

The following is a general description of the input data used to calculate the pre- and post-development stormwater runoff values. For detailed information for each subcatchment and practice, see Appendices B & C. The precipitation values for the 1-Year, 10-Year, 25-Year, & 100-Year 24-hour design storm events and rainfall distribution curves utilized for this report were obtained from the information provided by Northeast Regional Climate Center(NRCC) and the Natural Resources Conservation Service(NRCS) which is available online at *www.precip.eas.cornell.edu*. The values provided for all design storms analyzed are listed below.

Design Storm	**24-Hour Rainfall**
1-Year	2.76”
10-Year	4.94”
25-Year	6.21”
100-Year	8.77”

The CN (runoff curve number) values utilized in this report were referenced from the USDA, SCS publication *Urban Hydrology for Small Watersheds*.

2.1 Chapter 10: Enhanced Phosphorus Removal Standards

As noted above, the New York City East of Hudson Watershed has been identified in the SPDES General Permit GP-0-20-001 as a watershed requiring compliance with the Enhanced Phosphorus Removal Standards when post-construction stormwater management practices are proposed. Chapter 10 establishes four goals to meet sizing performance standards:

- Goal 1: Reducing Runoff Volumes
- Goal 2: Effective Bypass Treatment
- Goal 3: Achieving Effluent Concentrations for Particulate Phosphorus
- Goal 4: Achieving Effluent Concentrations for Dissolved Phosphorus

In order to achieve the first goal, the site design shall,” assess the feasibility of hydrological source controls and reduce the total water quality volume by source control, implementation of green infrastructure, or standard SMP’s with RR_v capacity, according to the process defined in Chapters 3 and 4 of the Design Manual. Each plan must include a rationale for acceptance and rejection of the various controls.” A discussion on RR_v can be found in section 2.2 below. Based upon the results of onsite soil testing, the soils onsite in select areas are suitable for infiltration. Therefore, the use of

infiltration practices (classified as Standard SMP's with RRv capacity) has been maximized, specifically infiltration basins were selected to treat the stormwater runoff from the proposed impervious surfaces and satisfy RRv requirements. As such, Goal 1 has been achieved in this SWPPP.

Goal 2 cites that proposed stormwater management practices should achieve less than 15% effective treatment bypass of the long-term runoff volume. Chapter 10 further notes this goal is satisfied by capturing and treating the 1-year 24-hour design storm. The NYSDEC stormwater quality treatment practices proposed for this have been designed in accordance with Chapter 10 by utilizing the 1-yr, 24-hour design storm to generate the WQ_v / RR_v. As such, Goal 2 has been achieved in this SWPPP.

Achieving effluent concentrations for particulate phosphorus, Goal 3, is satisfied by achieving an 80% net removal of particulate phosphorus for a median influent concentration of 0.5mg/l. Chapter 10 states that through designing proposed SMP's in accordance with Section 10.4 this goal will be achieved. The proposed infiltration systems have been designed in accordance with Section 10.4.3 of Chapter 10 thus satisfying the requirements of this goal.

Goal 4, achieving effluent concentration for dissolved phosphorus, is achieved by obtaining a 60% net removal of dissolved phosphorus given a median influent concentration of 0.15mg/l. As with Goal 3, Goal 4 is achieved by designing the proposed SMP's in accordance with Section 10.4 of Chapter 10. As noted above the proposed infiltration system have been designed in accordance with section 10.4.3 of Chapter 10 thus satisfying the requirements of this goal.

Given the project's location within the NYC EOH Watershed, the stormwater design will be developed in accordance with Chapter 10 (Enhanced Phosphorus Removal Supplement) of the New York State Stormwater Management Design Manual (Design Manual) as well as NYCDEP Rules and Regulations. These enhanced design requirements require targeted practices which are larger and more efficient at the removal of phosphorus than standard practices. Per Design Manual Section 10.1.3 Treatment Performance Goals, (specifically goals 3 and 4), stormwater practices will be designed in accordance with Chapter 10 to meet the phosphorus removal goals. Specifically the stormwater practices provide a minimum of 80% net removal of particulate phosphorus and 60% net removal of dissolved phosphorus. Although design in accordance with enhanced stormwater design in accordance with Chapter 10 is required per NYSDEC standards, supplemental simple method phosphorus loading calculations will be provided to show the pre development phosphorus load is equivalent to the post development phosphorus load from the completed project. The calculations will support the basis of Chapter 10 of the Design Manual, in that stormwater practices designed in accordance with the enhanced phosphorus standards will meet regional goals of not increasing phosphorus from new development.

2.2 NYSDEC Runoff Reduction Volume (RR_v)

The Runoff Reduction Volume (RR_v) criterion is intended to replicate pre-development hydrology by maintaining preconstruction infiltration, peak flow runoff, discharge volume, as well as minimizing concentrated stormwater flow. As stated in Chapter 4 of the NYSSMDM, RR_v may be treated with standard stormwater management practices (SMP's) sized in accordance with the Chapter 4/6 requirements, or with green infrastructure practices (GIP's) sized in accordance with the requirements set forth for each practice in Chapter 5. This requirement has been achieved on the subject project providing an infiltration practice, designed as a SMP in accordance with the latest design standards. Runoff reduction is achieved when runoff from a percentage of the impervious area on the site is captured, routed through a SMP or a GIP, infiltrated to the ground, reused, reduced by evapotranspiration, and eventually removed from the stormwater discharge from the site. Through this implementation, the design of the underground infiltration system as a SMP with the runoff reduction capacity equal to 100% of the WQ_v the RRv requirements will be achieved.

Section 4.3 of the NYSSMDM states for sites that do not achieve runoff reduction to pre-construction condition must, at a minimum reduce a percentage of the runoff from impervious areas to be constructed on the site a minimum RR_v. The following equation can be used to determine the minimum runoff reduction volume:

The minimum runoff reduction volume shall be $RRv_{minimum} = \frac{(P)(R_v)(A_i)}{12}$

Where,

S = Hydrologic Soil Group (HSG) Specific Reduction Factor
A*ic* = Total Area of New Impervious Cover
A*i* = Impervious cover targeted for Runoff Reduction
= (S)(A*ic*)
Rv = 0.95

For detailed calculations of the runoff reduction for the proposed stormwater infiltration system see Appendix A. Listed in Table 2.2.1 below is a summary of the NYSDEC compliant practice, and its satisfaction of the NYSDEC RRv requirements:

Table 2.2.1 Runoff Reduction Volume Summary

Subcatchments	**RR_v *Required* = WQ_v (c.f.)** From Appendix C	**RR_v *Minimum* (c.f.)** Calculated in Appendix A	**NYSDEC Practice Designation**	**Allowable % of WQv provided to be applied towards RRv**	**Storage Volume Provided below System Outlet (c.f.)** (From Appendix C)	**RRv *Provided* (c.f.)**
1.1S	2,178	571	I-2 Infiltration Basin	100%	2,310	2,178
2.1S, 2.2S, 2.3S	88,688	10,279		100%	89,740	88,688
3.1S, 3.2S, 3.3S, 3.4S, 3.5S, 3.6S	101,669	26,650		100%	102,697	101,669

As shown in the table above the $RRv_{provided}$ in each of the subcatchments is greater than the $RRv_{minimum}$ and $RRv_{required}$, therefore the RRv requirement has been met for the subject project.

2.3 NYSDEC Water Quality Volume (WQ_v)

The stormwater infiltration practices have been sized in accordance with Chapter 6 of the Design Manual, as it has been sized to capture and treat the entire water quality volume (WQ_v) from the proposed project. The subject project is located in the New York City Watershed, which is listed as a phosphorus-limited watershed per the NYSDEC regulations. Therefore the stormwater management practices have been designed in general accordance with the Enhanced Phosphorus Removal Supplement (Chapter 10) of the Design Manual. As outlined in Chapter 10, the treatment volume for the WQv is the runoff volume produced during the 1-year 24-hour design storm. See table 2.6.1 for a summary of the WQv that would be generated by the proposed project during the 1-year, 24-hour storm.

Table 2.2.1 above and table 2.3.1 below summarize the WQv treatment and Required Elements for the proposed infiltration practices, sized in accordance with Chapters 6 & 10 of the NYSSMDM for the proposed practice.

The infiltration practices have been sized to provide 100% storage of the water quality volume between the bottom of the practice and the outlet condition of the practice. By providing 100% storage of the WQv in the infiltration practices the water quality volume storage requirements set forth in the NYSSMDM have been met for the proposed system. By meeting the Water Quality Volume requirements through employment of the infiltration practices, the water quality objectives of the NYSDEC will be met.

Pretreatment for the proposed infiltrate practice 1.1 IB will be provided by a grass filter strip and a stone check dam. Pretreatment for the proposed infiltration practices 2.3 IB and 3.6 IB have been provided by Extended Detention Dry Pretreatment Basins upstream of the proposed infiltration basins. The Extended Detention Pretreatment Basins (2.2 EDB, 3.2 EDB, and 3.5 EDB) have been sized to provide pretreatment of their respective water quality volumes. The basin 1.2 EDB has been sized to provide storage of 25% of the WQv and basins 3.2 EDB & 3.5 EDB have been sized to

provide storage of 100% of the WQv as shown in Appendix C. Required storage of the WQv is provided below the weir in the outlet structure in the basins as shown in Table 2.3.1 below.

Table 2.3.1 Pretreatment Volume Summary

Subcatchments	WQ_v (c.f.) (From Appendix C)	Infiltration Rate (in/hr)	Required Minimum Pretreatment (%)	Minimum Pretreatment Volume (c.f.) (% of WQv)	Storage Volume Provided Below Overflow Weir (c.f.) (From Appendix C)
2.1S, 2.2S, 2.3S	88,688	0.5	25%	21,192	70,656
3.1S, 3.2S, 3.3S, 3.4S, 3.5S, 3.6S	101,669	102*	100%	101,669	113,472

* A conservative rate of 7.5 in/hr was used for the purposes of simulating the exfiltration rate in HydroCAD.

2.4 NYSDEC Stream Channel Protection Volume, CP_v

The Stream Channel Protection (CP_v) criterion is intended to protect stream channels from erosion and is accomplished by the 24-hour extended detention of the center-of-mass of the one-year, 24-hour storm event. As noted in Table 2.1.1 the stormwater infiltration system has been designed with a storage volume greater than the volume of stormwater runoff from the 1-year storm. By providing a stormwater infiltration practice to fully infiltrate the volume of stormwater runoff from the 1-year, 24-hour design storm, the CP_v has been met for the project. Soil and infiltration testing was performed in the locations of the proposed stormwater management practices and witnessed by the NYCDEP. Testing results can be found on the Testing Plans (Figure 4 of this report). The test results verify the design requirements for infiltration practices set forth in the NYSSMDM. All infiltration rates in the areas of the proposed infiltration practice we equal to or exceeded the minimum 0.5 inches/hour infiltration rate requirement.

2.5 NYSDEC Overbank Flood Control, Q_p, and Extreme Storm Control, Q_f

The Overbank Flood Control (Q_p) requirement is intended to prevent an increase in the frequency and magnitude of out-of-bank flooding events generated by urban development. Overbank control requires storage to attenuate the post-development 10-year, 24-hour peak discharge to pre-development rates. The Extreme Flood Control (Q_f) requirement is intended to prevent the increased risk of flood damage from large storm events, maintain the boundaries of the pre-development 100-year flood plain, and protect the physical integrity of stormwater management practice. Extreme flood control requires storage to attenuate the post-development 100-year, 24-hour peak discharge to pre-development rates. As shown in Table 2.5.1 attenuation for both the 10-year 25-year and 100-year 24-hour storms has been provided thus satisfying the Q_p and Q_f requirements.

Table 2.5.1– Existing and Proposed Conditions Peak Flows

	24-HOUR DESIGN STORM PEAK FLOWS (c.f.s.)							
	1-YEAR		10-YEAR (Channel Protection Volume)		25-YEAR		100-YEAR (Extreme Flood Control)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Design Point 1	1.94	0.84	9.14	3.95	13.88	7.98	24.27	24.24
Design Point 2	2.19	1.86	16.99	15.14	27.88	24.52	52.46	52.26
Design Point 3	2.92	4.37	16.54	14.60	26.10	24.04	47.35	46.98
Design Point 4	1.08	1.11	12.02	11.40	21.12	19.29	42.30	41.37

As shown in the above table the peak flows from the contributing areas to the design points in the post development condition has been mitigated to below the existing condition levels, thus meeting the general requirements of the NYSDEC.

2.6 NYCDEP Requirements

As previously discussed the proposed project meets three (3) of the thresholds that require SWPPP approval from the NYCDEP per Section 18-39 of the Rules and Regulations. The project meets the following thresholds listed in Section 18-39(b)(4) that require NYCDEP SWPPP approval:

(i) Plans for development or sale of land that will result in the disturbance of five (5) or more acres of total land area.

(iii) Construction of a new industrial, institutional, municipal, commercial, or multi-family residential project that will result in the creation of an impervious surface totaling over 40,000 square feet in size.

(iv) A land clearing project, involving two or more acres, located at least in part within the limiting distance of 100 feet of a watercourse or wetland, or within the limiting distance of 300 feet of a reservoir, reservoir stem or controlled lake or on a slope exceeding 15 percent.

There is no proposed stormwater discharge from industrial activities for the proposed development. The proposed project does not include any new solid waste management facilities or alterations / modifications to existing facilities.

The Rules and Regulations parallel the requirements of the NYSDEC and the Town of Southeast, with the exception that two different NYSDEC standard SMP's are required in series when the drainage area to a SMP is greater than 20% impervious and an infiltration practice is not provided. Although there are subcatchments where the percent impervious exceeds 20% (as shown in Table 2.6.2 below), by providing infiltration practices, there is no need for two different NYSDEC standard SMP's in series for all subcatchments.

Per the Rules and Regulations, the stormwater treatment volume used shall be the greater of the runoff volume from the 1-year, 24-hour storm event or the volume generated by the 90% storm. The initial WQ_v from the 1-year storm event was discussed above. The following equation, per Chapter 4, was used to determine the water quality volume for the 90% storm event for the subcatchments.

The water quality volume shall be $WQ_v = \frac{(P)(R_v)(A) \times 43{,}560 \text{ (ac/s.f.)}}{12}$

Where,

WQ_{v90} = water quality volume (in c.f.)

P = 90% Rainfall Event Number (1.4 in)

R_v = 0.05 + 0.009(I), where I is percent impervious cover

A = site area in acres

Table 2.6.1 - Water Quality Volume Calculation Summary 90% Storm vs. 1-Year Storm Comparison

Subcatchments	P (in.)	R_v[1]	A[2] (ac.)	WQ_{v90} (c.f.)	WQ_v[3] 1-year (c.f.)
1.1S	1.4	0.41	0.5	1,042	2,178
2.1S, 2.2S, 2.3S		0.20	17.9	18,194	88,688
3.1S, 3.2S, 3.3S, 3.4S, 3.5S, 3.6S		0.40	20.8	42,282	101,669

[1] A minimum R_v of 0.2 will be used.
[2] Information regarding contributing areas for the 1-year 24-hour storm event is shown in Appendix C.

[3] Refer to Appendix C for 1-year 24-hour water quality volume calculation.

As shown in Table 2.6.1 above, the volume produced by the 1-year, 24-hour design storm for subcatchments is larger than the volume produced by the 90% storm. Therefore, the 1-year, 24-hour design storm volumes shall be used for the WQv sizing for all of the proposed stormwater management practices.

The following table summarizes the amount of proposed impervious surfaces for each subcatchment and shows the proposed stormwater management practice that will treat each sub-watershed:

Table 2.6.2 – Imperviousness of Tributary Areas & Stormwater Management Practice

Sub-Catchments	Total Area (acres)	Existing Impervious Surface Within Subcatchment	Proposed Impervious Surface Within Subcatchment	% Impervious Surface of Total Subcatchment Area	Proposed Stormwater Management Practice (SMP) Treatment Train[1]	
					RR_v/SMP 1	SMP 2 (A second practice in series is only provided when % impervious is greater than 20% and infiltration is not provided)
1.1S	0.5	0.0	0.2	40%	I-2, Infiltration Basin	Not Required
2.1S, 2.2S, 2.3S	17.9	0.0	3.0	17%	I-2, Infiltration Basin	Not Required
3.1S, 3.2S, 3.3S, 3.4S, 3.5S, 3.6S	20.5	0.0	7.7	38%	I-2, Infiltration Basin	Not Required

[1] This table lists the standard SMP's used to treat the balance of the WQ_v / RR_v after the application of GIP's.

As shown in the above table, some of the subcatchments where treatment is required are greater than 20% imperviousness. To satisfy the requirement for two practices in series, standard SMP's with RRv capacity or infiltration practices have been used as the GIP's for the project. By proposing infiltration practices for all subcatchments, per the NYSDEP requirements, a second stormwater management practice in series is not required.

3.0 STORMWATER CONVEYANCE SYSTEM

The stormwater collection and conveyance systems for the project will consist of catch basins and HDPE pipe. As required by the Design Manual and NYCDEP the pipe system will be sized to collect and convey at minimum the 10-year, 1-hour design storm using the Rational Method. The Rational Method is a standard method used by engineers to develop flow rates for sizing collection systems. The Rational Method calculates flows based on a one-hour design storm. The collection system has been sized to convey, at a minimum, the 10-year design storm.

4.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control should be accomplished by four basic principles: diversion of clean water, containment of sediment, treatment of dirty water, and stabilization of disturbed areas. Diversion of clean water should be accomplished with swales. This diverted water should be safely conveyed around the construction area as necessary and discharged downstream of the disturbed areas. Sediment should be contained with the use of silt fence at the toe of disturbed slopes. Disturbed areas should be permanently stabilized within 7 days of final grading to limit the required length of time that the temporary facilities must be utilized. The owner will be responsible for the maintenance of the temporary erosion control facilities. Refer to the Project Drawings for further information on the implementation of the Erosion Control Plan and Construction Sequence.

4.1 Temporary Erosion and Sediment Control Facilities

Temporary erosion and sediment control facilities should be installed and maintained as required to reduce the impacts to off-site properties. The owner will be required to provide maintenance for the temporary erosion and sediment control facilities. In general, the following temporary methods and materials should be used to control erosion and sedimentation from the project site:

- Stabilized Construction Entrance
- Silt Fence Barriers
- Storm Drain Inlet Protection
- Temporary Soil Stabilization
- Temporary Sediment Trap

All temporary erosion control measures shall be maintained in accordance with the Erosion & Sediment Control Maintenance Schedule contained on the Project Drawings, and as discussed below.

A stabilized construction entrance should be installed at the site entrance as shown on the project plans. The design drawings will include details to guide the contractor in the construction of this entrance. The intent of the stabilized construction entrance is to prevent the "tracking" of soil from the site. Dust control should be accomplished with water sprinkling trucks if required. During dry periods, sprinkler trucks should wet all exposed earth surfaces as required to prevent the transport of air-borne particles to adjoining areas.

Siltation barriers constructed of geosynthetic filter cloth should be installed at the toe of all disturbed slopes. The intent of these barriers is to contain silt and sediment at the source and inhibit its transport by stormwater runoff. The siltation barriers will also help reduce the rate of runoff by creating filters through which the stormwater must pass. During construction, the siltation barriers shall be inspected weekly and after a rainfall event and shall be cleaned/replaced when needed.

Storm drain inlet protection in the form of stone drop inlet protection will be installed around all proposed inlets. The stone drop inlet protection will serve to filter stormwater runoff before it enters the collection system. Throughout construction the concrete drainage structures, associated piping and inlet protections shall be inspected weekly and after a rainfall event. These items shall be cleaned, repaired and/or replaced when needed.

The extended detention stormwater basins will act as temporary sediment traps during construction of the site. The stormwater runoff from disturbed areas will be directed to the sediment traps. These traps have been sized in accordance with the NYSSSESC, as shown in Appendix H of this report.

When land is exposed during development, the exposure shall be kept to the shortest practical period, but in no case more than 7 days. Temporary grass seed and mulch shall be applied to any construction area idle for two weeks. The temporary seeding and mulching shall be performed in accordance with the seeding notes illustrated on the project drawings. Disturbance shall be minimized in the areas required to perform construction. Upon completion of final grading topsoil, permanent seeding and mulch shall be applied in accordance with the project drawings.

The stormwater runoff will be managed by the temporary erosion and sediment control facilities during construction. As discussed in the construction sequences provided the project plans the stabilized construction entrance shall be installed at the site entrance and silt fence shall be installed along the down hill perimeter of where soil disturbing activities will occur containing sediment laden stormwater runoff on-site.

4.2 Permanent Erosion and Sediment Control Facilities

Permanent erosion and sediment control will be accomplished by diverting stormwater runoff from steep slopes, controlling/reducing stormwater runoff velocities and volumes, and vegetative and structural surface stabilization. All of the permanent facilities are relatively maintenance free and only require periodic inspections. The owner will provide maintenance for all the permanent erosion and sediment control facilities.

Rock outlet protection will be provided at the discharge end of all piped drainage systems, and will be sized in accordance with the Blue Book. The purpose of the rock outlet protection is to reduce the depth, velocity, and energy of water, such that the flow will not erode the receiving downstream reach. The rock outlet protection shall be inspected for evidence of scour beneath the riprap and/or for any dislodged stones. Inspections of the rock outlet protection shall be performed during the inspections of the post-construction SMP's for the project.

Other than the paved or gravel surfaces, disturbed surfaces will be stabilized with vegetation within 10 days of final grading. Permanent seed mix and mulch shall be applied to idle areas to minimize the amount of exposed soil. Permanent seed mixtures are proposed for the project and illustrated on project drawings. Application rates for the seed and mulch are provided on the project drawings. The vegetation will control stormwater runoff by preventing soil erosion, reducing runoff volume and velocities, and providing a filter medium. Permanent seeding should optimally be undertaken in the spring from March 21st through May 20th and in late summer from August 15th to October 15th.

5.0 IMPLEMENTATION, MAINTENANCE & GENERAL HOUSEKEEPING

5.1 Construction Phase

Details associated with the implementation and maintenance of the proposed stormwater facilities and erosion control measures during construction are shown on the project drawings. Soil disturbance for the proposed project will be phased so it will not exceed five acres at one time. The erosion control plan will include associated details and notes to aid the contractor in implementing the plan.

During construction, a Site Log Book, Appendix D, is required to be kept per NYSDEC SPDES General Permit GP-0-20-001. Erosion and sediment control inspections are required to be conducted as necessary under coverage of the permit. The erosion and sediment control inspections must be performed daily by a trained contractor and the two (2) weekly inspection performed by a qualified inspector shall be performed on days separated by two (2) full calendar days. The owner or operator must begin implementing corrective actions within one business day and complete the corrective actions in a reasonable time frame. An updated logbook and a copy of the SWPPP is required to be kept on site for the duration of the construction activities. The Construction Site Log Book is an appendix taken from the *New York Standards and Specifications for Erosion and Sediment Control* (Blue Book).

In addition to the proposed erosion and sediment control facilities, the following good housekeeping best management practices shall be implemented to mitigate potential pollution during the construction phase of the project. The general contractor overseeing the day-to-day site operation shall be responsible for the good housekeeping best management practices included in the following general categories:

- Material Handling and Waste Management
- Establishment of Staging Areas
- Establishment of Washout Areas
- Proper Equipment Fueling and Maintenance Practices
- Spill Prevention and Control Plan

All construction waste materials shall be collected and removed from the site regularly by the general contractor. The general contractor shall supply waste barrels for proper disposal of waste materials. All personnel working on the site shall be instructed of the proper procedures for construction waste disposal.

Although it is not anticipated any hazardous waste materials will be utilized during construction, any hazardous waste materials shall be disposed of in accordance with federal, state, and local regulations. No hazardous waste shall be disposed of on-site. Hazardous waste materials shall be stored in appropriate and clearly marked containers and segregated from the other non-waste materials. All hazardous waste shall be stored in a structurally sound and sealed shipping containers located in the staging areas. Material safety data sheets, material inventory, and emergency contact numbers will be maintained in the office trailer. All personnel working on the site shall be instructed of the proper procedures for hazardous waste disposal.

Temporary sanitary facilities (portable toilets) shall be provided on site during the entire length of construction. The sanitary facilities shall be located in the project staging area, or in an alternate area away from the construction activities on the site. The portable toilets shall be inspected weekly for evidence of leaking holding tanks.

All recyclables, including wood pallets, cardboard boxes, and all other recyclable construction scraps shall be disposed of in a designated recycling barrel provided by the contractor and removed from the site regularly. All personnel working on the site shall be instructed of the proper procedures for construction waste recycling.

All construction equipment and maintenance materials shall be stored in a construction staging area. Silt fence shall be installed down gradient of the construction staging area. Shipping containers shall be utilized to store hand tools, small parts, and other construction materials, not taken off site daily. Construction waste barrels, recycling barrels and if necessary hazardous waste containers shall be located within the limits of the construction staging area.

Throughout the construction of the project several types of vehicles and equipment will be used on-site. Fueling of the equipment shall occur within the limits of the construction staging area. Fuel will be delivered to the site as needed, by the general contractor, or a party chosen by the general contractor. Only minor vehicle equipment maintenance shall occur on-site, all major maintenance shall be performed off-site. All equipment fluids generated from minor maintenance activities shall be disposed of into designated drums and stored in accordance with the hazardous waste storage as previously discussed.

Vehicles and equipment shall be inspected on each day of use. Any leak discovered shall be repaired immediately. All leaking equipment unable to be repaired shall be removed from the site. Ample supplies of absorbent, spill-cleanup materials, and spill kits shall be located in the construction staging area. All spills shall be cleaned up immediately upon discovery. Spent absorbent materials and rags shall be hauled off-site immediately after the spill is cleaned for disposal at a local landfill. All personnel working on the site shall be instructed of the proper procedures for spill prevention and control. Any spill large enough to discharge to surface water will be immediately reported to the local fire / police departments, NYCDEP, and the National Response Center 1-800-424-8802.

Vegetation should be inspected every 30 days and after every major storm event until established, after which inspections should take place on a quarterly basis and after every large storm event. Damaged areas should be immediately re-seeded and re-mulched.

5.2 Soil Restoration

Soil Restoration is required to be applied across areas of the development site where soils have been disturbed and will be vegetated. The purpose is to recover the original properties and porosity of the soil compacted during construction activity. Soil Restoration is applied in the cleanup, restoration, and landscaping phase of construction followed by the permanent establishment of an appropriate, deep-rooted groundcover to help maintain the restored soil structure. Soil restoration includes mechanical decompaction and compost amendment. The table below describes various soil disturbance activities related to land development, soil types and the requirements for soil restoration for each activity as identified in the Design Manual. Restoration is applied across areas of a development site where soils have been compacted and will be vegetated according to the criteria defined in the table below:

<table>
<tr><th colspan="4">Soil Restoration Requirements[1, 2,4]
(Onsite soils within the limit of disturbance belong to Hydrologic Soil Groups (HSG) A, B & D)</th></tr>
<tr><th>Type of Soil Disturbance</th><th colspan="2">Soil Restoration Requirement</th><th>Comments/Examples</th></tr>
<tr><td>No soil disturbance</td><td colspan="2">Restoration not permitted</td><td>Preservation of Natural Features</td></tr>
<tr><td>Minimal soil disturbance</td><td colspan="2">Restoration not required</td><td>Clearing and grubbing</td></tr>
<tr><td rowspan="2">Areas where topsoil is stripped only - no change in grade</td><td>HSG A & B</td><td>HSG C&D</td><td rowspan="2">Protect area from any ongoing construction activities.</td></tr>
<tr><td>Apply 6 inches of topsoil</td><td>Aerate[3] and apply 6 inches of topsoil</td></tr>
<tr><td rowspan="2">Areas of cut or fill</td><td>HSG A &B</td><td>HSG C&D</td><td rowspan="2"></td></tr>
<tr><td>Aerate[1] and apply 6 inches of topsoil</td><td>Apply full Soil Restoration [2]</td></tr>
<tr><td>Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5-foot perimeter around foundation walls)</td><td colspan="2">Apply full Soil Restoration (decompaction and compost Enhancement[6])</td><td></td></tr>
<tr><td>Areas where Runoff Reduction and/or Infiltration practices are applied</td><td colspan="2">Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.</td><td>Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area</td></tr>
<tr><td>Redevelopment projects</td><td colspan="2">Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.</td><td></td></tr>
</table>

1. Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.
2. Per "Deep Ripping and De-compaction, DEC 2008".
3. Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which functions like a mini-subsoiler.
4. During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:
   - 5.1. Apply 3 inches of compost over subsoil.
   - 5.2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.
   - 5.3. Rock-pick until uplifted stone/rock materials of four inches and larger size area cleaned off the site.
   - 5.4. Apply topsoil to a depth of 6 inches.
   - 5.5. Vegetate as required by seeding notes located on the project drawings.
   - 5.6. Tilling should not be performed within the drip line of any existing trees or over any utility installations that are within 24 inches of the surface.
6. Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.

After soil restoration is completed, an inspector should be able to push a 3/8" metal bar twelve inches into the soil with just body weight. Following decompaction/soil restoration activities, the following maintenance is anticipated during the first year:

- Initial inspections for the first six months (once after each storm greater than a half-inch).
- Reseeding to repair bare or eroding areas to assure grass stabilization.
- Water once every three days for first month, and then provide a half inch of water per week during first year. Irrigation plan may be adjusted according to the rain event.
- Fertilization may be needed in the fall after the first growing season to increase plant vigor.

In order to ensure the soil remains decompacted the following ongoing maintenance is recommended:

- Planting the appropriate ground cover with deep roots to maintain the soil structure.
- Keeping the site free of vehicular and foot traffic or other weight loads. Consider pedestrian footpaths (sometimes it may be necessary to de-thatch the turf every few years).

5.3 Long Term Maintenance Plan

The stormwater facilities for the subject project have been designed to minimize the required maintenance. This section discusses the minimum maintenance requirements to insure long-term performance of the stormwater facilities. Initially the stormwater facilities will require an increased maintenance and inspection schedule until all portions of the site are stable. Generally the stormwater facilities consist of either collection and conveyance components or treatment components.

The owner will be responsible for the maintenance of the permanent erosion control and stormwater facilities. Each spring the paved areas should be cleaned to remove the winter's accumulation of traction sand. After this is completed, all catch basin sumps and pipes should be checked for debris and blockages and cleaned as required. During the cleaning process, the catch basins and pipes should be inspected for structural integrity and overall condition; repairs and/or replacement will be made as required.

Once the desired vegetative cover is established over the infiltration system, only limited maintenance is required. The infiltration system should be inspected after major storm events and semi-annually. During the inspections, the following should be checked:

- Evidence of clogging in the outlet structures / flow splitters.
- Drain down times exceeding 48 hours in the infiltration system and basins
- Adequacy of upstream/downstream channel erosion control measures.
- Sources of erosion in the contributory drainage, which should be stabilized

In addition to guidelines discussed above all maintenance requirements outlined in the Design Manual shall be followed. See Appendix G.

APPENDIX A
RR_v Calculations

RRv Calculation Worksheet - 1.1

Project: Brewster Yards
Project #: 19249.100
Date: 1/18/2022

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

1. RRv Initial = Water Quality Volume (WQv) *0.050 ac-ft* = *2,178 c.f.*
(refer to HydroCAD Subcatchments 1.1S for Water Quality Volume)

2. *RRv Minimum* = [(P) (Rv) (S) (Aic)] /12 where…

P = Rainfall (in.)	=	2.76	in.
Rv = 0.05 + 0.009 (100%)	=	0.95	
S = Hydrologic Soil Group Specific Reduction Factor	=	0.30	
[HSG A = 0.55] [HSG B = 0.40] [HSG C = 0.30] [HSG D = 0.20]			
Aic = Total area of new impervious cover	=	0.2	Acres
RRv Minimum	=	*571*	*c.f.*

3. *RRv Required* = RRv Initial - Green Infrastructure Practice (GIP) with Area Reduction

GIP with Area Reduction Applied in Project		
5.3.1 Conservation of Natural Area	N/A	
5.3.2 Sheet Flow to Riparian Buffers or Filter Strips	N/A	
5.3.4 Tree Planting / Tree Box		c.f.
5.3.5 Disconnection of Rooftop Runoff	-	
5.3.6 Stream Daylighting	N/A	
RRv Required(=WQv-RRV by area)(Refer to HydroCAD output in this Appendix)	= 2,178	c.f.

4. *RRv Provided*

GIP with Volume Reduction Applied in Project	WQv Treated (c.f.)	% of WQv Applied to *RRv Provided*	*RRv Provided (c.f.)*
5.3.3 Vegetated Open Swales		20%	0
[HSG A / B = 20%] [HSG C / D = 10%] {Modified HSG C - D = 15% - 12%]		10%	0
5.3.7 Rain Garden		40%	0
[No underdrains / Good Soils = 100%] [With underdrains / Poor Soils = 40%]			
5.3.8 Green Roof		100%	0
[RRv provided equals volume provided in Green Roof]			
5.3.9 Stormwater Planters		45%	0
[Infiltration Planters = 100%] [Flow Through HSG C = 45%] [Flow Though HSG D = 30%]			
5.3.10 Rain Tank / Cisterns		100%	0
5.3.11 Porous Pavement		100%	0
Infiltration Practice (Standard SMP)	2,178	100%	2,178
Bioretention Practice (Standard SMP)		40%	0
[Without Underdrains HSG A/B = 80%] [With Underdrain HSG C\D = 40%]			
Dry Swale (Open Channel Practice) (Standard SMP)		20%	0
[HSG A/B = 40%] [HSG C/D = 20%]			
RRv Provided =			*2,178*

5. Summary

RRv Initial	=	2,178 c.f.	
RRv Required	=	2,178 c.f.	
RRv Minimum	=	571 c.f.	
RRv Provided	=	2,178 c.f.	
WQv Required for Downstream SMP	=	0 c.f.	(= RRv Required - RRv Provided)

Is RRv Provided greater than or equal to RRv Minimum? Yes

Refer to the " Analysis of Green Infrastructure Practices" contained in Appendix F for an explanation demonstrating the maximum RRv Provided has been achieved for the site.

RRv Calculation Worksheet - 2.1, 2.2, 2.3

Project: Brewster Yards
Project #: 19249.100
Date: 1/18/2022

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

1. RRv Initial = Water Quality Volume (WQv) *1.946 ac-ft* = *84,768 c.f.*
(refer to HydroCAD Subcatchments 1.1S for Water Quality Volume)

2. *RRv Minimum* = [(P) (Rv) (S) (Aic)] /12 where…

P = Rainfall (in.)	=	2.76	in.
Rv = 0.05 + 0.009 (100%)	=	0.95	
S = Hydrologic Soil Group Specific Reduction Factor	=	0.36	
[HSG A = 0.55] [HSG B = 0.40] [HSG C = 0.30] [HSG D = 0.20]			
Aic = Total area of new impervious cover	=	3.0	Acres
RRv Minimum	=	*10,279*	*c.f.*

3. *RRv Required* = RRv Initial - Green Infrastructure Practice (GIP) with Area Reduction

GIP with Area Reduction Applied in Project		
5.3.1 Conservation of Natural Area	N/A	
5.3.2 Sheet Flow to Riparian Buffers or Filter Strips	N/A	
5.3.4 Tree Planting / Tree Box		c.f.
5.3.5 Disconnection of Rooftop Runoff	-	
5.3.6 Stream Daylighting	N/A	
RRv Required(=WQv-RRV by area)(Refer to HydroCAD output in this Appendix)	= 84,768	c.f.

4. *RRv Provided*

GIP with Volume Reduction Applied in Project	WQv Treated (c.f.)	% of WQv Applied to *RRv Provided*	*RRv Provided (c.f.)*
5.3.3 Vegetated Open Swales		20%	0
[HSG A / B = 20%] [HSG C / D = 10%] {Modified HSG C - D = 15% - 12%]		10%	0
5.3.7 Rain Garden		40%	0
[No underdrains / Good Soils = 100%] [With underdrains / Poor Soils = 40%]			
5.3.8 Green Roof		100%	0
[RRv provided equals volume provided in Green Roof]			
5.3.9 Stormwater Planters		45%	0
[Infiltration Planters = 100%] [Flow Through HSG C = 45%] [Flow Though HSG D = 30%]			
5.3.10 Rain Tank / Cisterns		100%	0
5.3.11 Porous Pavement		100%	0
Infiltration Practice (Standard SMP)	84,768	100%	84,768
Bioretention Practice (Standard SMP)		40%	0
[Without Underdrains HSG A/B = 80%] [With Underdrain HSG C\D = 40%]			
Dry Swale (Open Channel Practice) (Standard SMP)		20%	0
[HSG A/B = 40%] [HSG C/D = 20%]			
RRv Provided =			*84,768*

5. Summary

RRv Initial	=	84,768 c.f.	
RRv Required	=	84,768 c.f.	
RRv Minimum	=	10,279 c.f.	
RRv Provided	=	84,768 c.f.	
WQv Required for Downstream SMP	=	0 c.f.	(= RRv Required - RRv Provided)

Is RRv Provided greater than or equal to RRv Minimum? Yes

Refer to the " Analysis of Green Infrastructure Practices" contained in Appendix F for an explanation demonstrating the maximum RRv Provided has been achieved for the site.

RRv Calculation Worksheet - 3.1, 3.2, 3.3, 3.4, 3.5, 3.6

Project: Brewster Yards
Project #: 19249.100
Date: 1/18/2022

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

1. RRv Initial = Water Quality Volume (WQv) — *2.334 ac-ft* = *101,669 c.f.*
(refer to HydroCAD Subcatchments 1.1S for Water Quality Volume)

2. *RRv Minimum* = [(P) (Rv) (S) (Aic)] /12 where…

P = Rainfall (in.)	=	2.76	in.
Rv = 0.05 + 0.009 (100%)	=	0.95	
S = Hydrologic Soil Group Specific Reduction Factor	=	0.35	
[HSG A = 0.55] [HSG B = 0.40] [HSG C = 0.30] [HSG D = 0.20]			
Aic = Total area of new impervious cover	=	8.0	Acres
RRv Minimum	=	*26,650*	*c.f.*

3. *RRv Required* = RRv Initial - Green Infrastructure Practice (GIP) with Area Reduction

GIP with Area Reduction Applied in Project		
5.3.1 Conservation of Natural Area	N/A	
5.3.2 Sheet Flow to Riparian Buffers or Filter Strips	N/A	
5.3.4 Tree Planting / Tree Box		c.f.
5.3.5 Disconnection of Rooftop Runoff	-	
5.3.6 Stream Daylighting	N/A	
RRv Required(=WQv-RRV by area)(Refer to HydroCAD output in this Appendix)	= 101,669	c.f.

4. *RRv Provided*

GIP with Volume Reduction Applied in Project	WQv Treated (c.f.)	% of WQv Applied to *RRv Provided*	*RRv Provided (c.f.)*
5.3.3 Vegetated Open Swales		20%	0
[HSG A / B = 20%] [HSG C / D = 10%] {Modified HSG C - D = 15% - 12%]		10%	0
5.3.7 Rain Garden		40%	0
[No underdrains / Good Soils = 100%] [With underdrains / Poor Soils = 40%]			
5.3.8 Green Roof		100%	0
[RRv provided equals volume provided in Green Roof]			
5.3.9 Stormwater Planters		45%	0
[Infiltration Planters = 100%] [Flow Through HSG C = 45%] [Flow Though HSG D = 30%]			
5.3.10 Rain Tank / Cisterns		100%	0
5.3.11 Porous Pavement		100%	0
Infiltration Practice (Standard SMP)	101,669	100%	101,669
Bioretention Practice (Standard SMP)		40%	0
[Without Underdrains HSG A/B = 80%] [With Underdrain HSG C\D = 40%]			
Dry Swale (Open Channel Practice) (Standard SMP)		20%	0
[HSG A/B = 40%] [HSG C/D = 20%]			
RRv Provided =			*101,669*

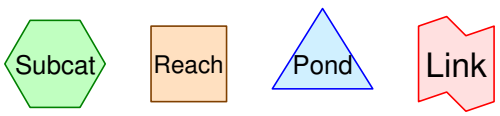
5. Summary

RRv Initial	=	101,669 c.f.	
RRv Required	=	101,669 c.f.	
RRv Minimum	=	26,650 c.f.	
RRv Provided	=	101,669 c.f.	
WQv Required for Downstream SMP	=	0 c.f.	(= RRv Required - RRv Provided)

Is RRv Provided greater than or equal to RRv Minimum? Yes

Refer to the " Analysis of Green Infrastructure Practices" contained in Appendix F for an explanation demonstrating the maximum RRv Provided has been achieved for the site.

APPENDIX B
Pre Development Computer Data



Routing Diagram for Brewster Yards Pre

Prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., Printed 12/1/2022

HydroCAD® 10.00-15 s/n 00891 © 2015 HydroCAD Software Solutions LLC

Summary for Subcatchment 1.0: Pre

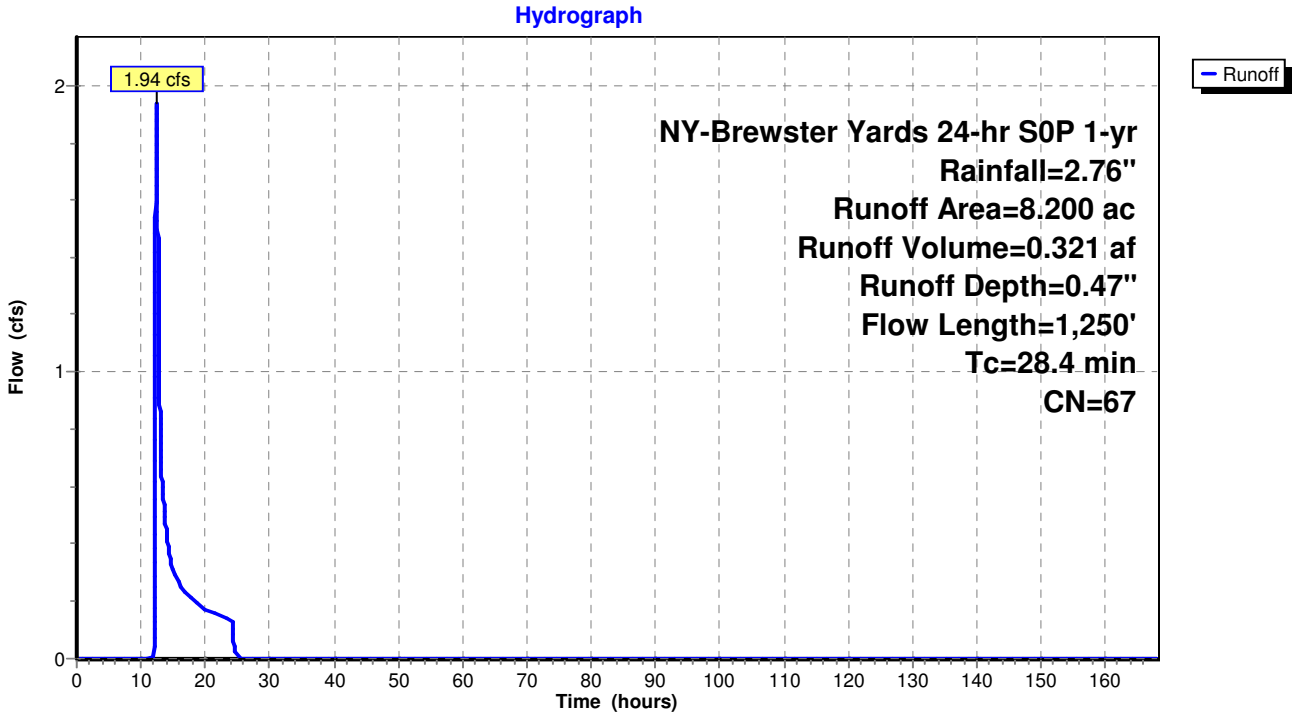
Runoff = 1.94 cfs @ 12.40 hrs, Volume= 0.321 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
1.900	55	Woods, Good, HSG B
6.000	70	Woods, Good, HSG C
0.300	87	Dirt roads, HSG C
8.200	67	Weighted Average
8.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0510	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
14.2	1,150	0.0730	1.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.4	1,250	Total			

Subcatchment 1.0: Pre



Summary for Subcatchment 2.0: Pre

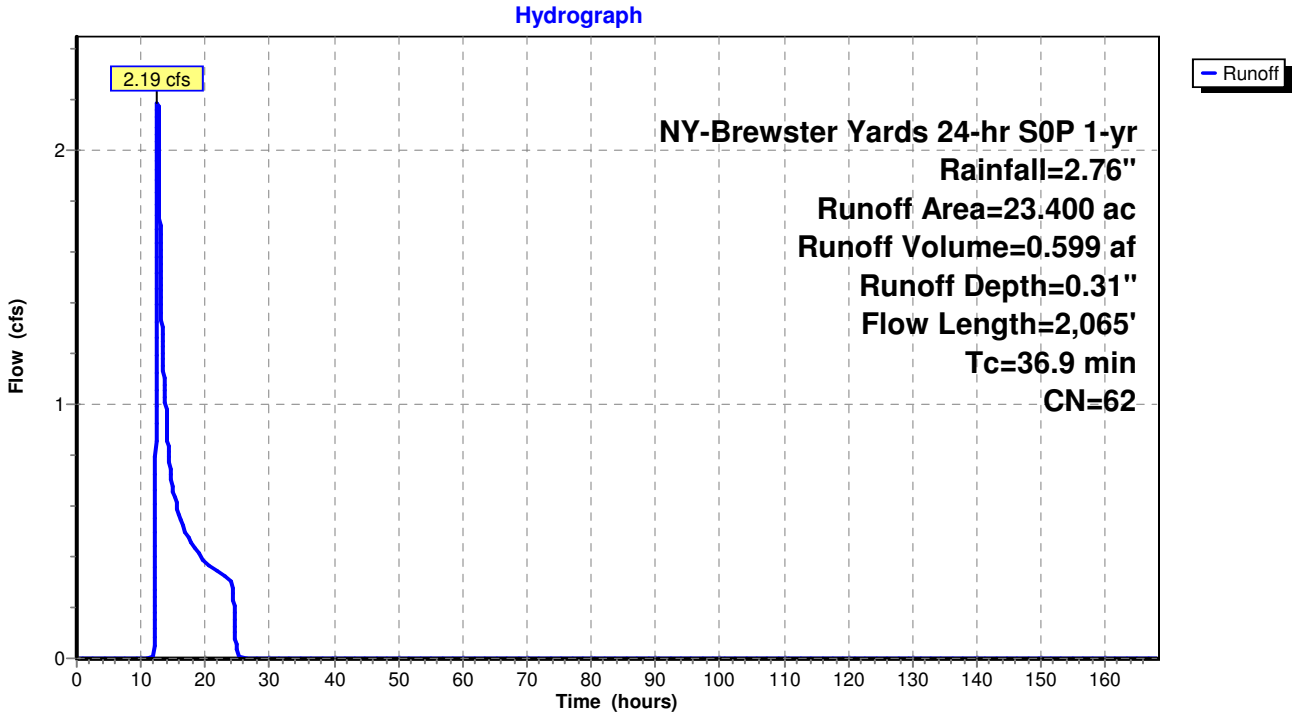
Runoff = 2.19 cfs @ 12.59 hrs, Volume= 0.599 af, Depth= 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
13.700	55	Woods, Good, HSG B
8.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
23.400	62	Weighted Average
23.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
2.8	380	0.2020	2.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	230	0.1830	2.14		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	280	0.1070	1.64		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
36.9	2,065	Total			

Subcatchment 2.0: Pre



Summary for Subcatchment 3.0: Pre

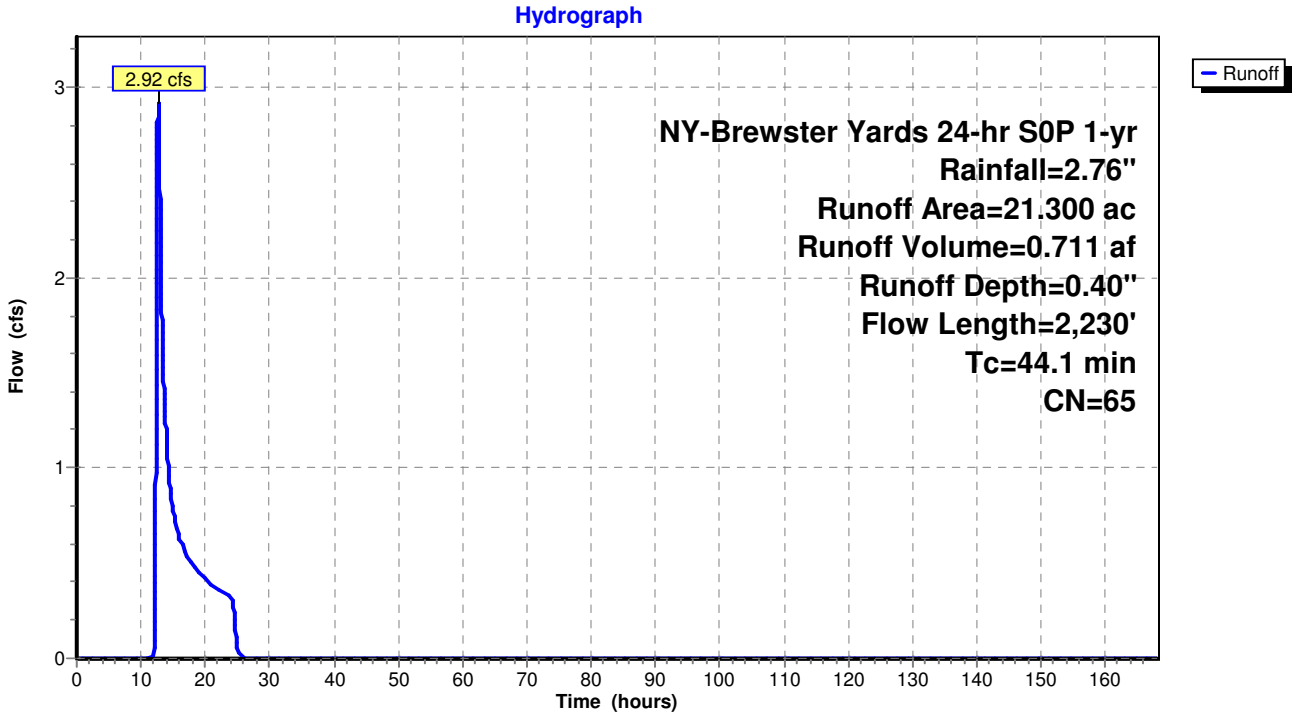
Runoff = 2.92 cfs @ 12.69 hrs, Volume= 0.711 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
12.700	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
7.600	77	Woods, Good, HSG D
0.200	89	Dirt roads, HSG D
0.200	98	Water Surface, HSG D
0.500	98	Paved parking, HSG D
21.300	65	Weighted Average
20.600		96.71% Pervious Area
0.700		3.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
16.6	920	0.0340	0.92		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	270	0.0890	1.49		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.2	110		11.35		**Lake or Reservoir,** Mean Depth= 4.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
44.1	2,230	Total			

Subcatchment 3.0: Pre



Summary for Subcatchment 4.0: Pre

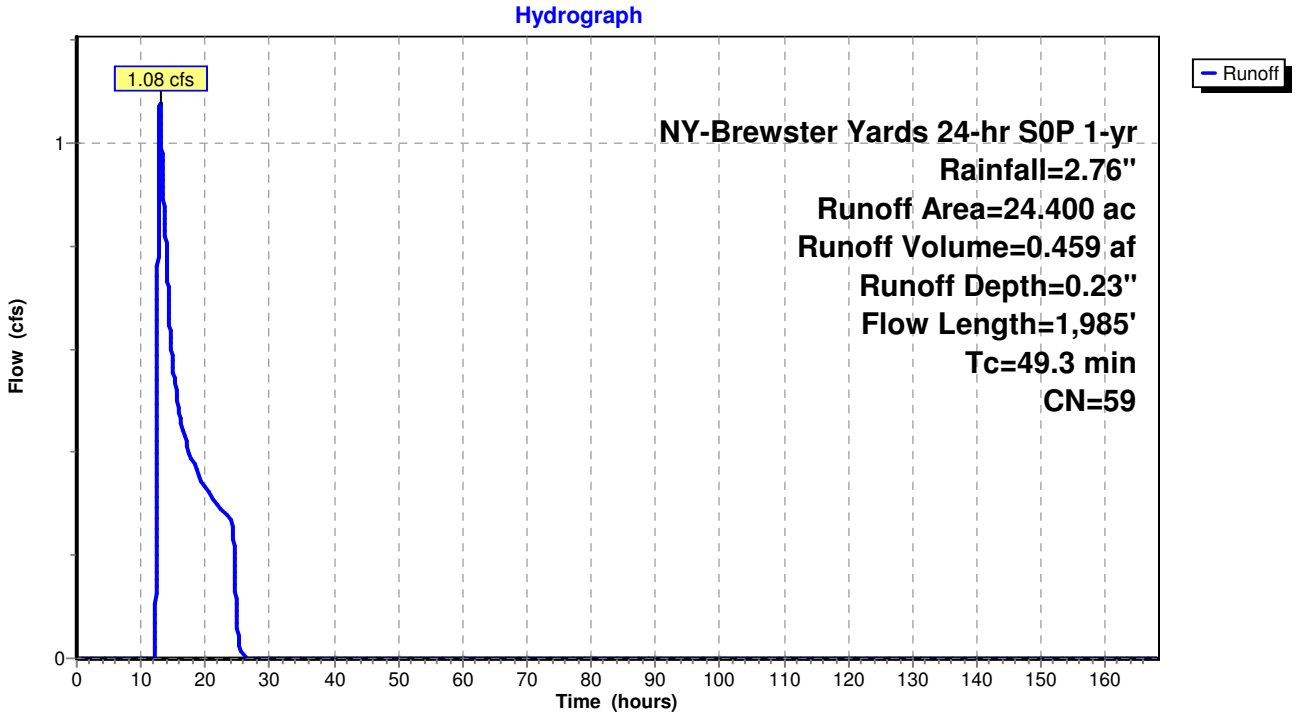
Runoff = 1.08 cfs @ 12.93 hrs, Volume= 0.459 af, Depth= 0.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
20.400	55	Woods, Good, HSG B
3.900	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
24.400	59	Weighted Average
24.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
9.2	350	0.0160	0.63		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	85	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.2	365	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.5	430	0.0470	2.87	14.36	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
49.3	1,985	Total			

Subcatchment 4.0: Pre

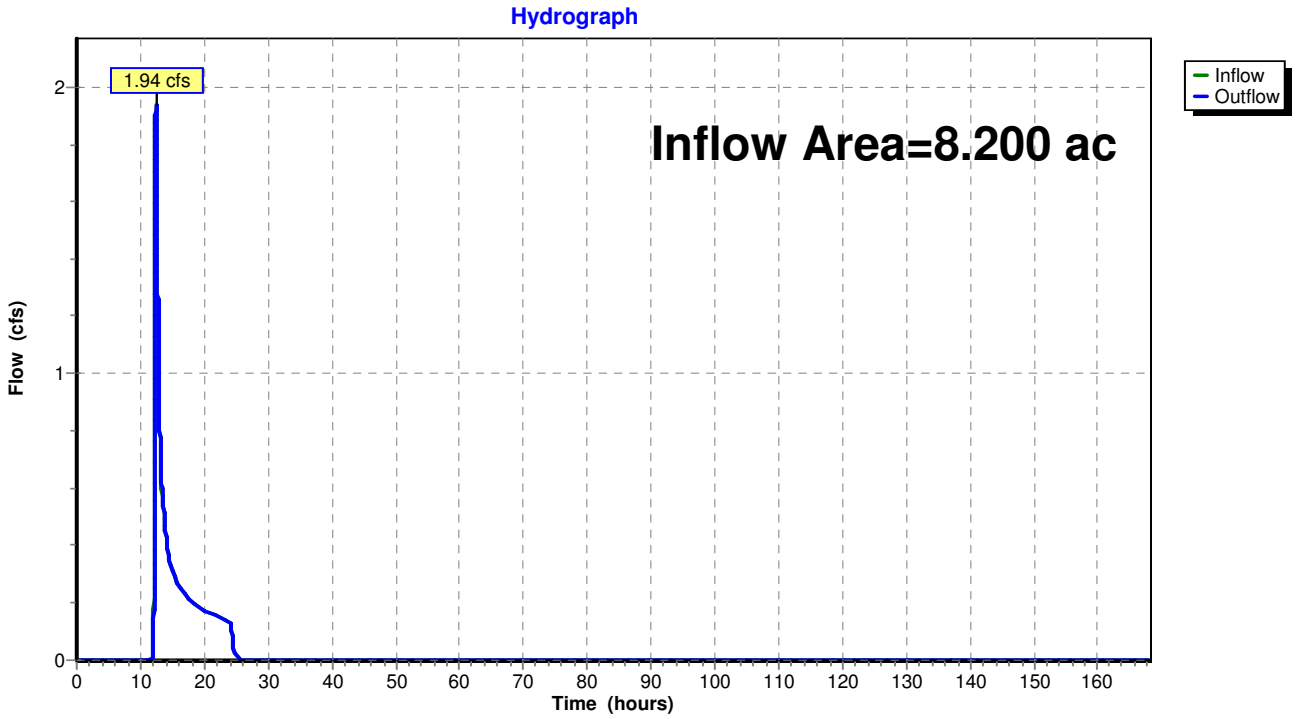


Summary for Reach PRE 1:

Inflow Area = 8.200 ac, 0.00% Impervious, Inflow Depth = 0.47" for 1-yr event
Inflow = 1.94 cfs @ 12.40 hrs, Volume= 0.321 af
Outflow = 1.94 cfs @ 12.41 hrs, Volume= 0.321 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 1:

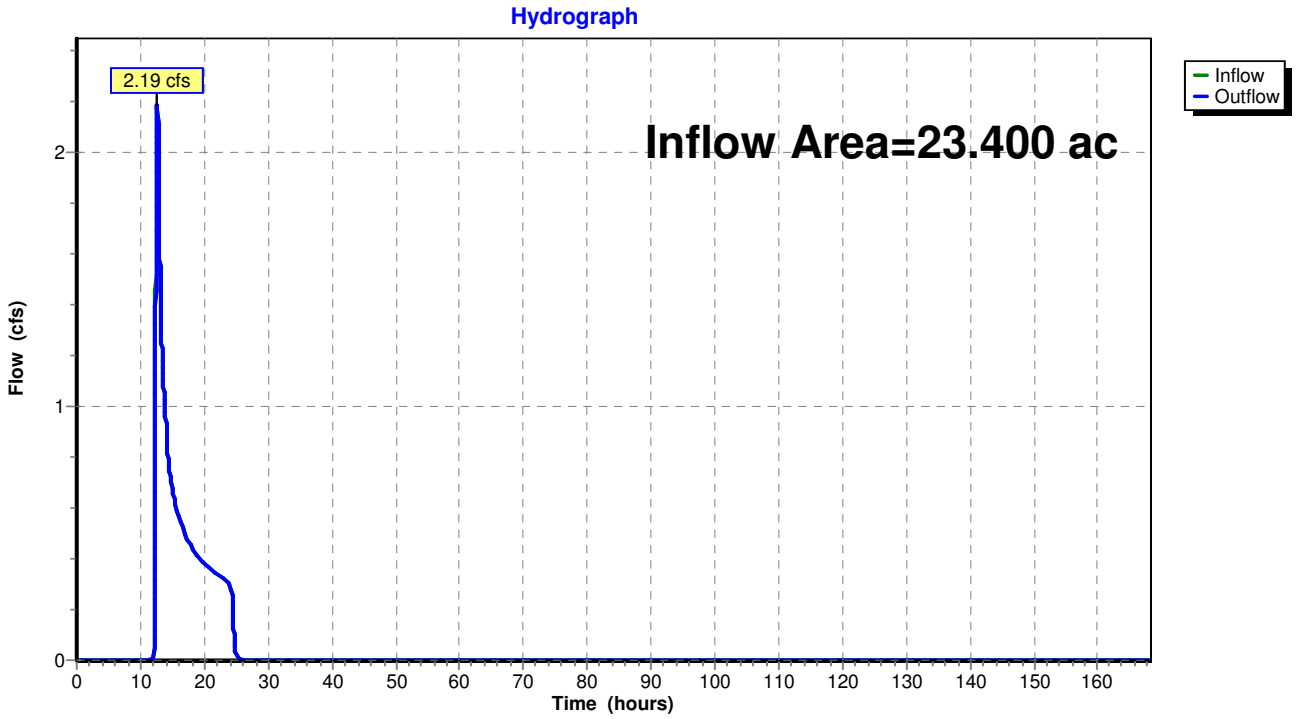


Summary for Reach PRE 2:

Inflow Area = 23.400 ac, 0.00% Impervious, Inflow Depth = 0.31" for 1-yr event
Inflow = 2.19 cfs @ 12.59 hrs, Volume= 0.599 af
Outflow = 2.19 cfs @ 12.60 hrs, Volume= 0.599 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 2:

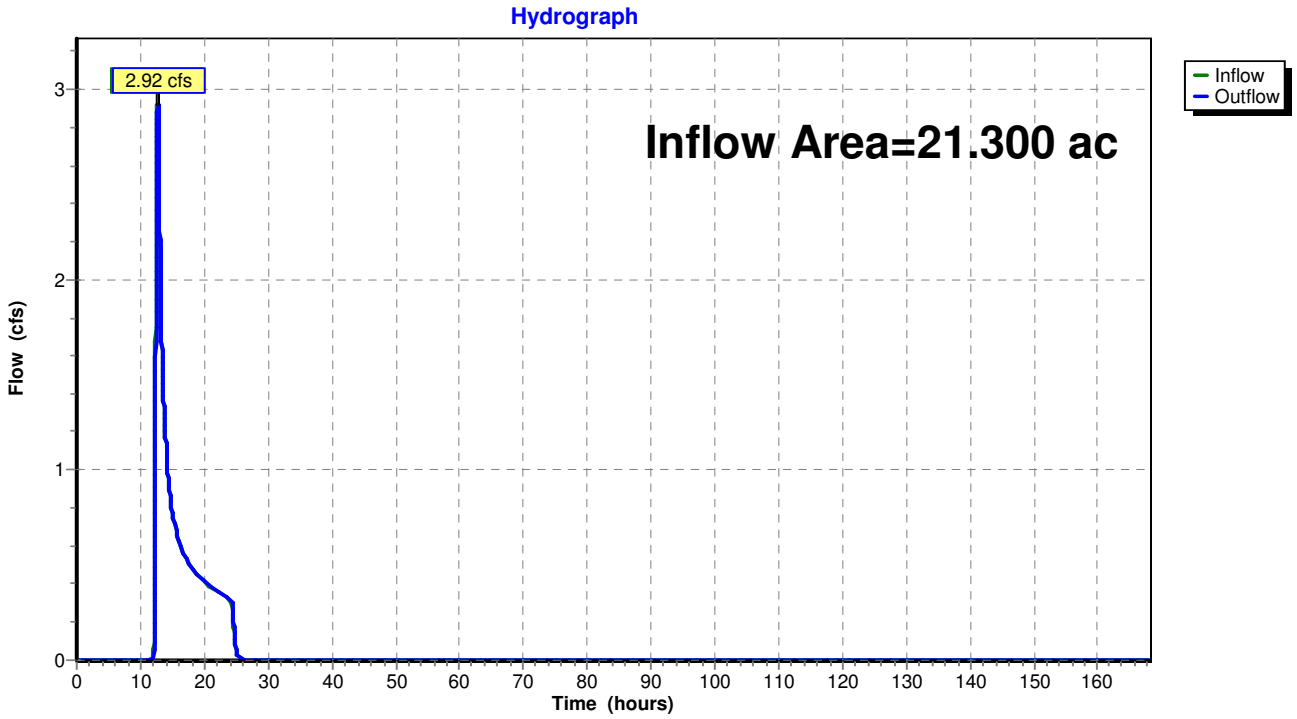


Summary for Reach PRE 3:

Inflow Area = 21.300 ac, 3.29% Impervious, Inflow Depth = 0.40" for 1-yr event
Inflow = 2.92 cfs @ 12.69 hrs, Volume= 0.711 af
Outflow = 2.92 cfs @ 12.70 hrs, Volume= 0.711 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 3:

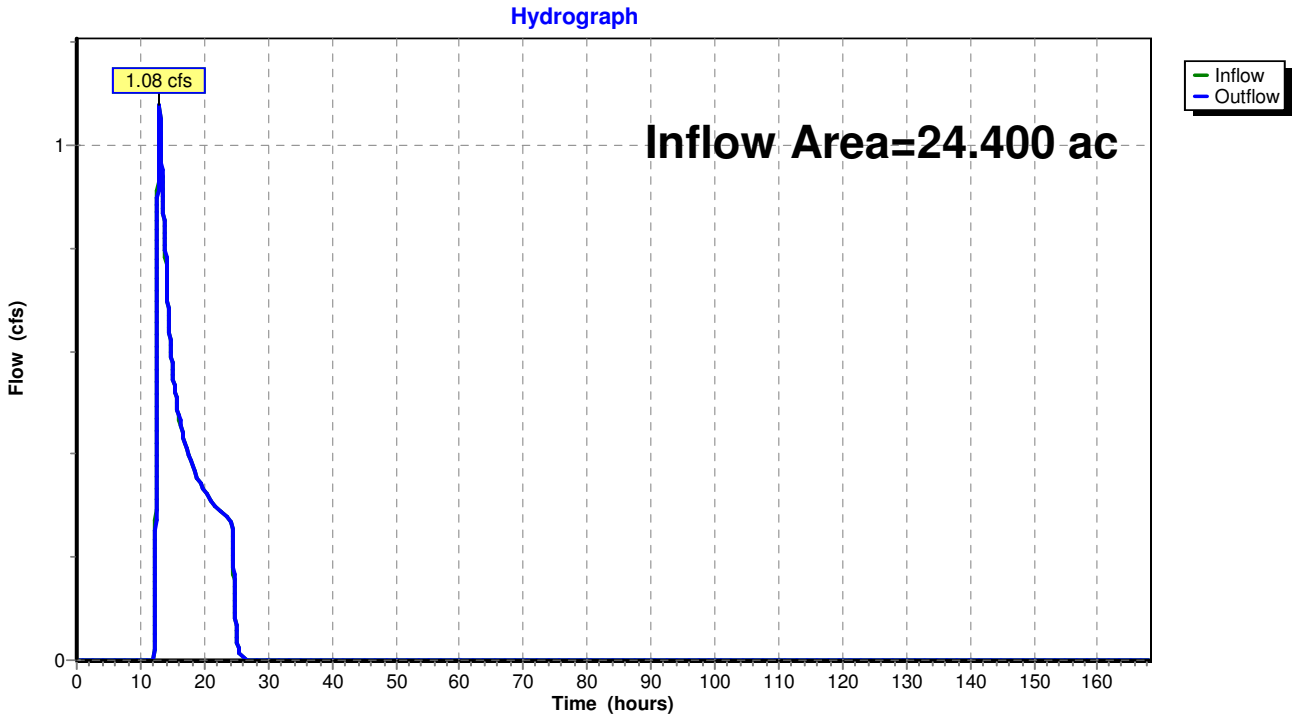


Summary for Reach PRE 4:

Inflow Area = 24.400 ac, 0.00% Impervious, Inflow Depth = 0.23" for 1-yr event
Inflow = 1.08 cfs @ 12.93 hrs, Volume= 0.459 af
Outflow = 1.08 cfs @ 12.94 hrs, Volume= 0.459 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 4:



Summary for Subcatchment 1.0: Pre

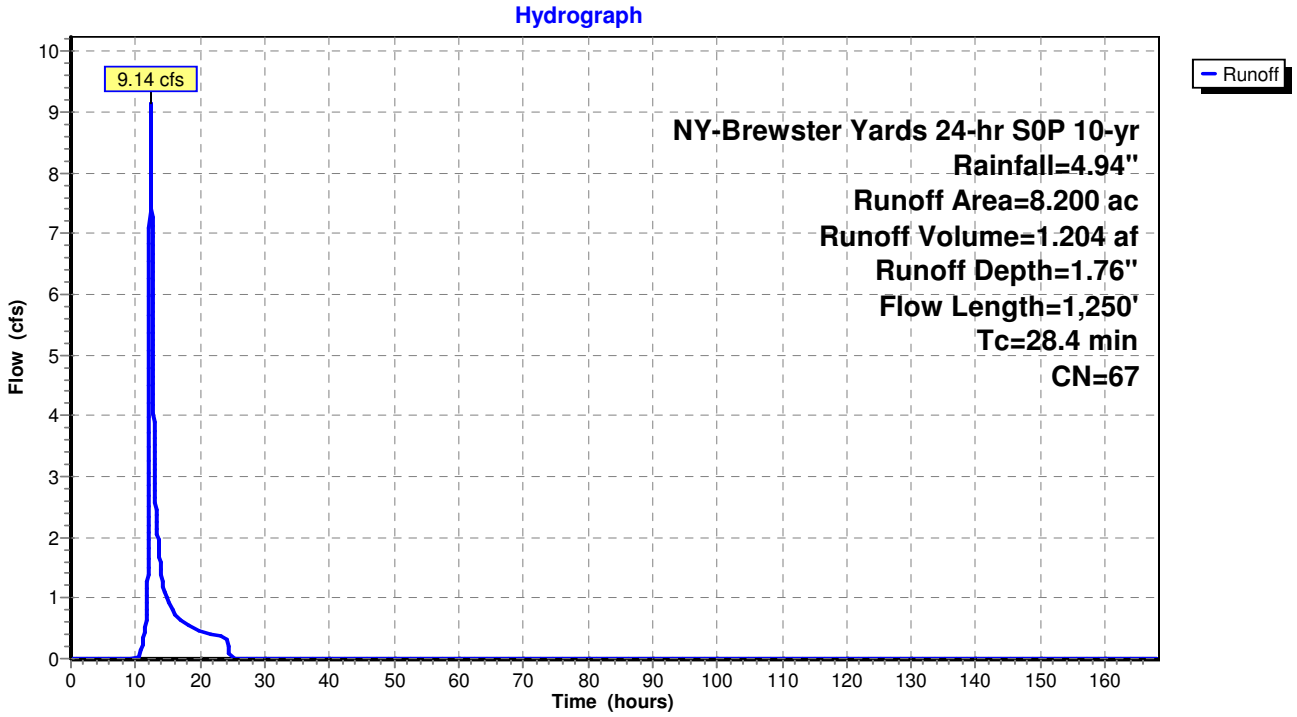
Runoff = 9.14 cfs @ 12.37 hrs, Volume= 1.204 af, Depth= 1.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
1.900	55	Woods, Good, HSG B
6.000	70	Woods, Good, HSG C
0.300	87	Dirt roads, HSG C
8.200	67	Weighted Average
8.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0510	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
14.2	1,150	0.0730	1.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.4	1,250	Total			

Subcatchment 1.0: Pre



Summary for Subcatchment 2.0: Pre

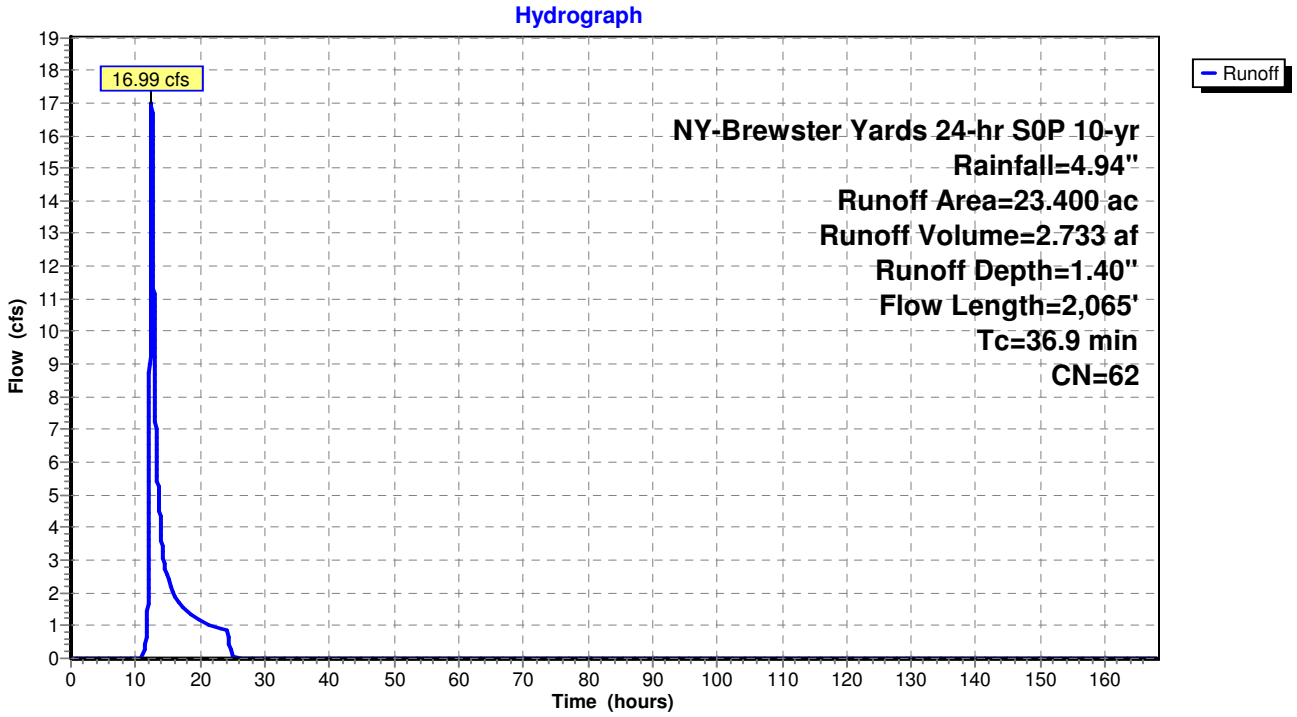
Runoff = 16.99 cfs @ 12.50 hrs, Volume= 2.733 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
13.700	55	Woods, Good, HSG B
8.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
23.400	62	Weighted Average
23.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
2.8	380	0.2020	2.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	230	0.1830	2.14		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	280	0.1070	1.64		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
36.9	2,065	Total			

Subcatchment 2.0: Pre



Summary for Subcatchment 3.0: Pre

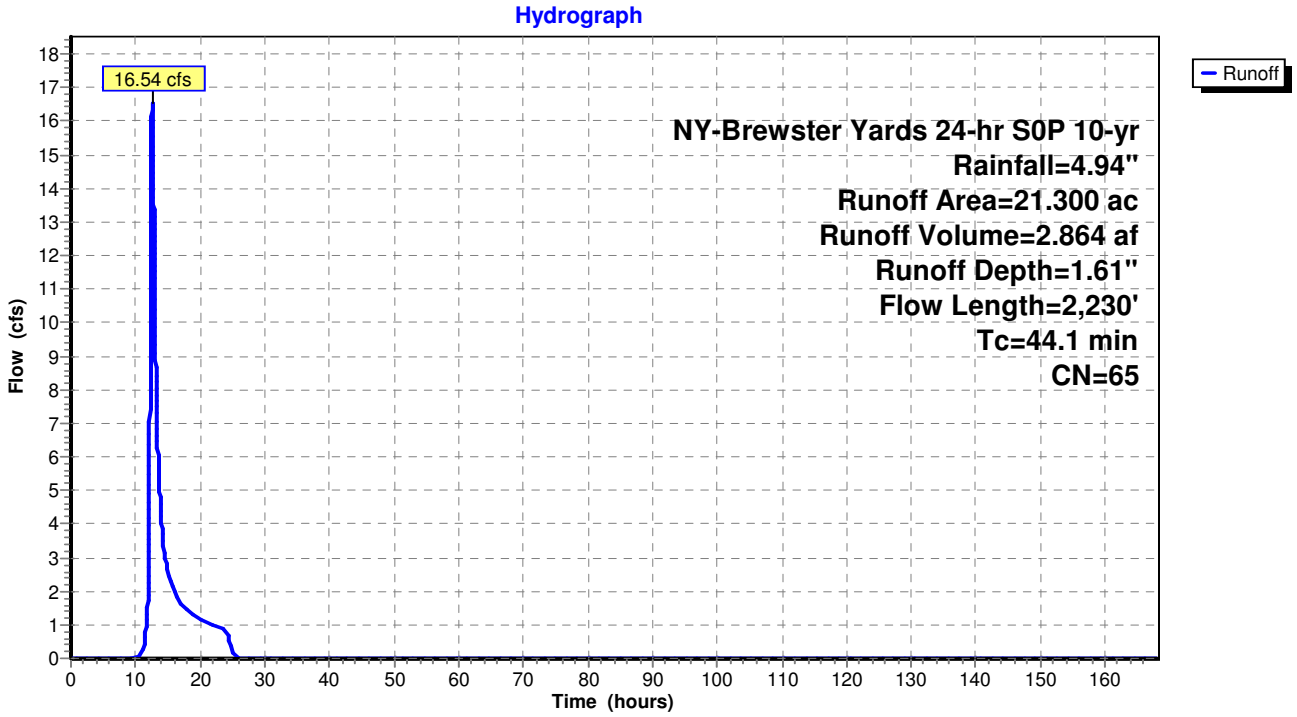
Runoff = 16.54 cfs @ 12.59 hrs, Volume= 2.864 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
12.700	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
7.600	77	Woods, Good, HSG D
0.200	89	Dirt roads, HSG D
0.200	98	Water Surface, HSG D
0.500	98	Paved parking, HSG D
21.300	65	Weighted Average
20.600		96.71% Pervious Area
0.700		3.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
16.6	920	0.0340	0.92		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	270	0.0890	1.49		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.2	110		11.35		**Lake or Reservoir,** Mean Depth= 4.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
44.1	2,230	Total			

Subcatchment 3.0: Pre



Summary for Subcatchment 4.0: Pre

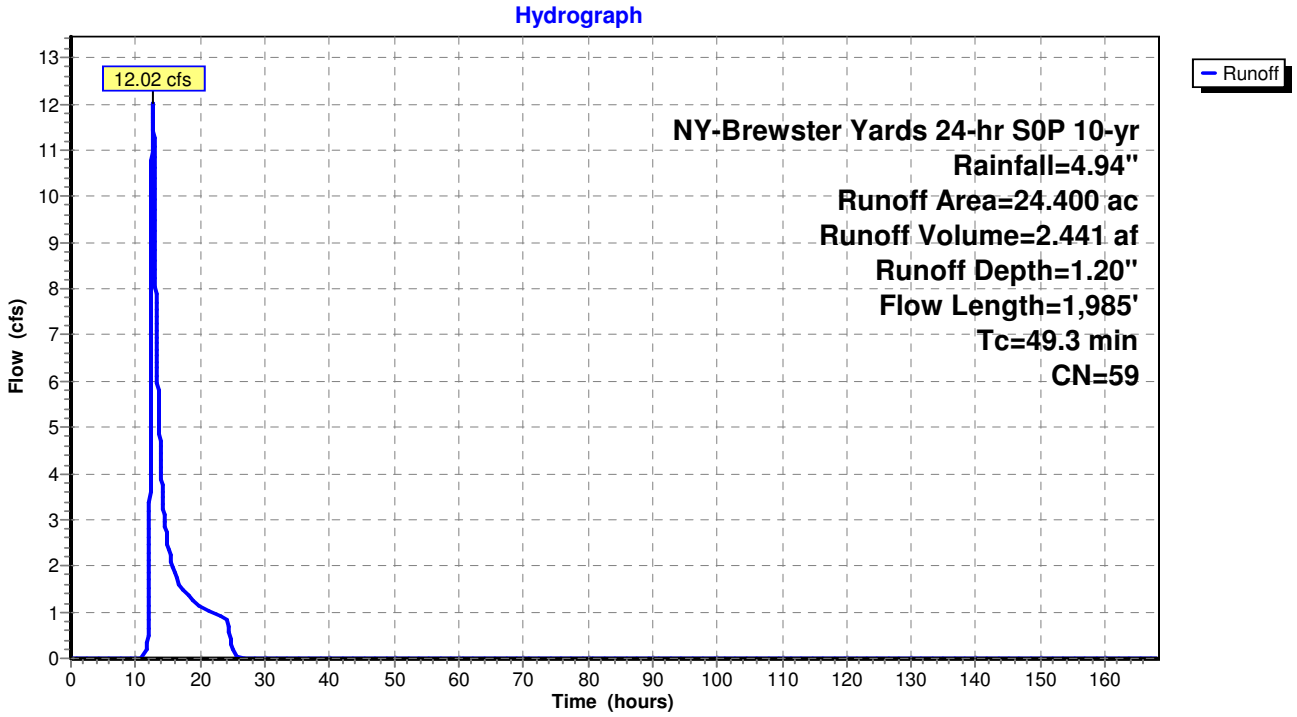
Runoff = 12.02 cfs @ 12.70 hrs, Volume= 2.441 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
20.400	55	Woods, Good, HSG B
3.900	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
24.400	59	Weighted Average
24.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
9.2	350	0.0160	0.63		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	85	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.2	365	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.5	430	0.0470	2.87	14.36	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
49.3	1,985	Total			

Subcatchment 4.0: Pre

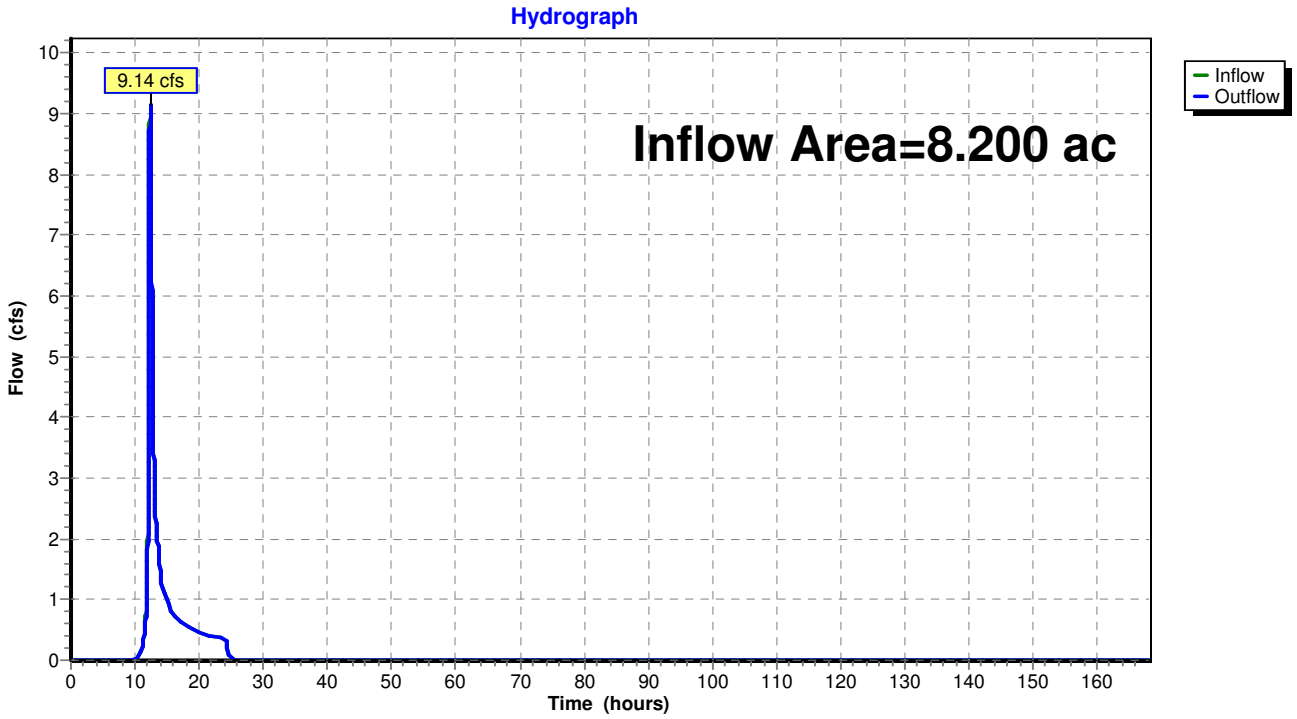


Summary for Reach PRE 1:

Inflow Area = 8.200 ac, 0.00% Impervious, Inflow Depth = 1.76" for 10-yr event
Inflow = 9.14 cfs @ 12.37 hrs, Volume= 1.204 af
Outflow = 9.14 cfs @ 12.38 hrs, Volume= 1.204 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 1:

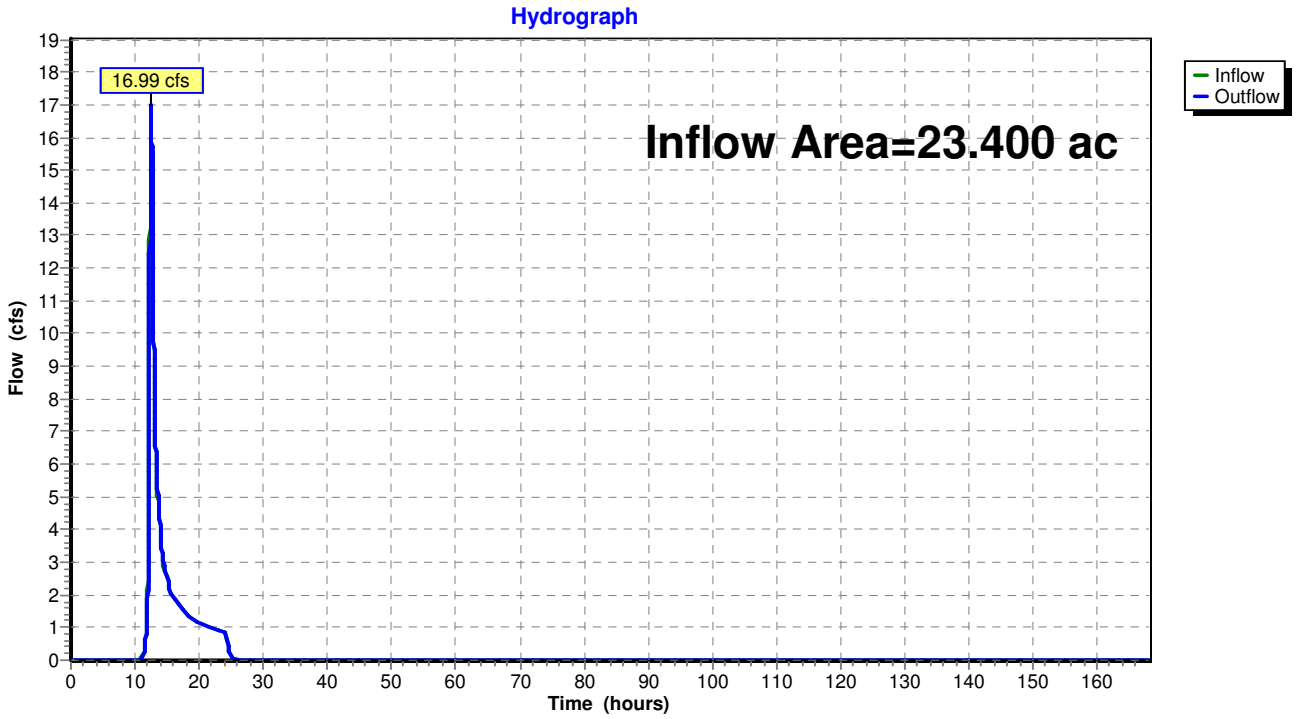


Summary for Reach PRE 2:

Inflow Area = 23.400 ac, 0.00% Impervious, Inflow Depth = 1.40" for 10-yr event
Inflow = 16.99 cfs @ 12.50 hrs, Volume= 2.733 af
Outflow = 16.99 cfs @ 12.51 hrs, Volume= 2.733 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 2:

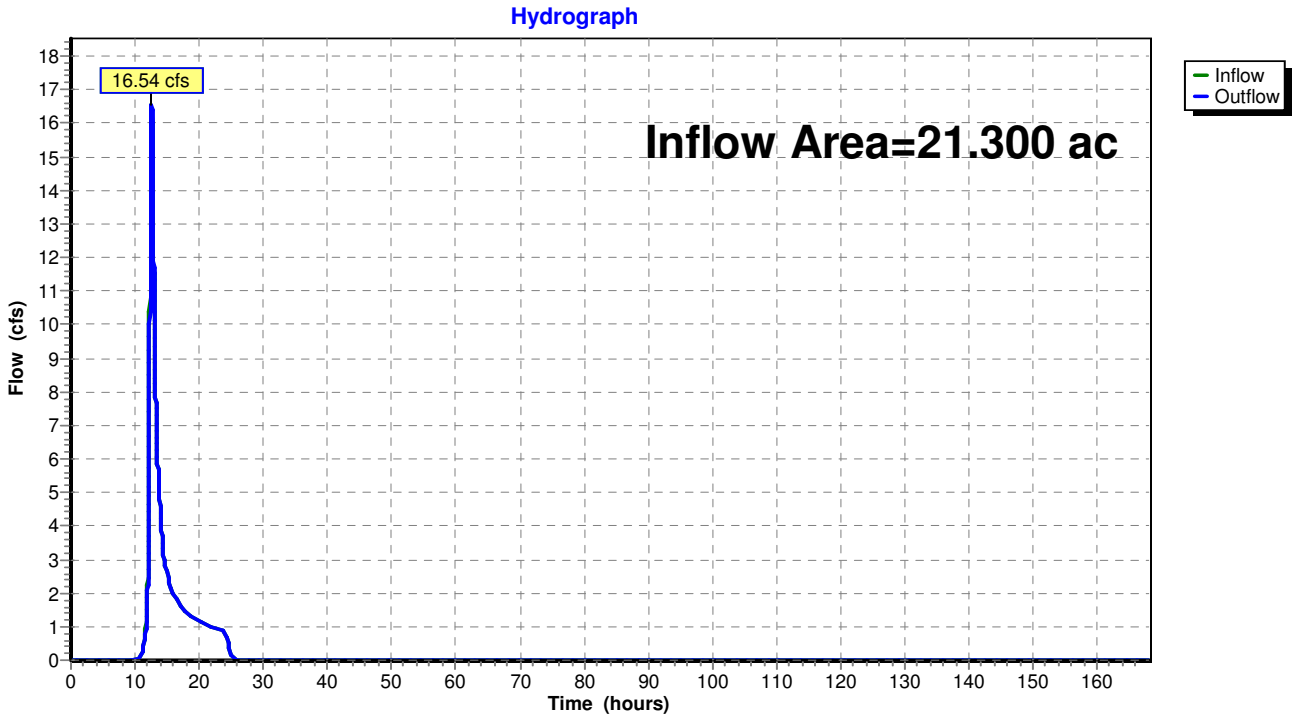


Summary for Reach PRE 3:

Inflow Area = 21.300 ac, 3.29% Impervious, Inflow Depth = 1.61" for 10-yr event
Inflow = 16.54 cfs @ 12.59 hrs, Volume= 2.864 af
Outflow = 16.54 cfs @ 12.60 hrs, Volume= 2.864 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 3:

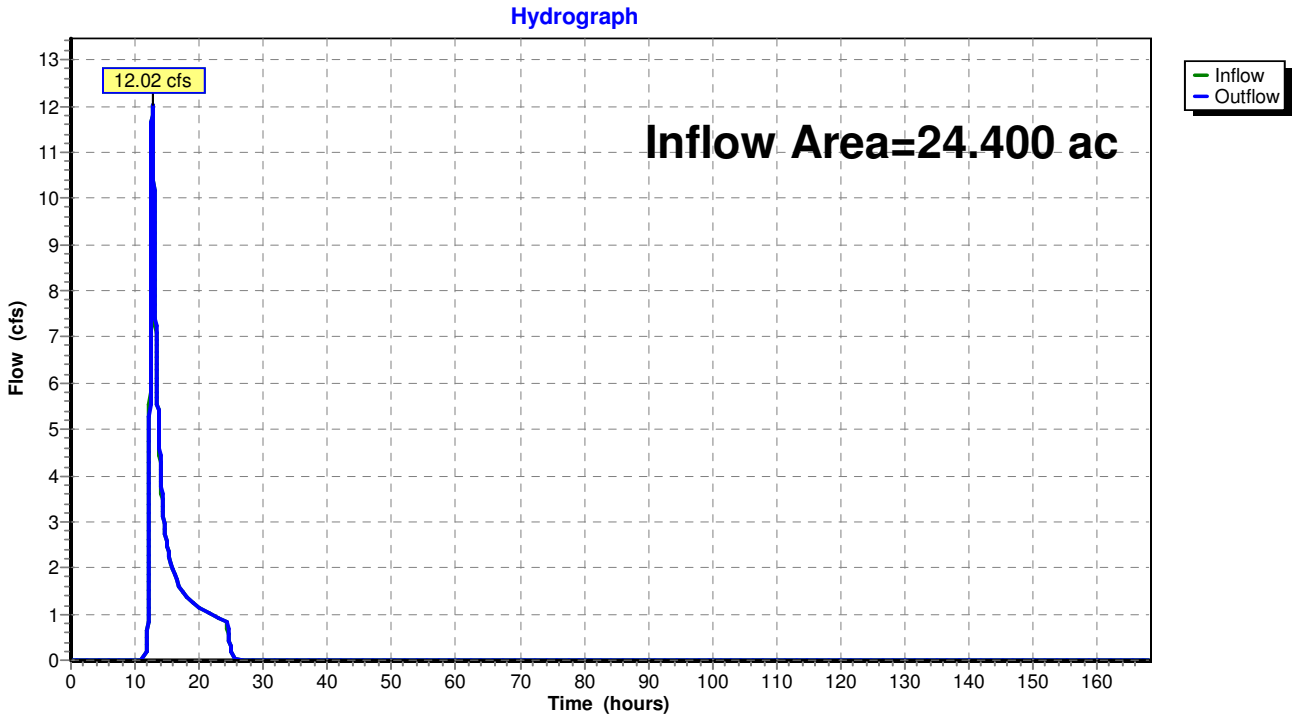


Summary for Reach PRE 4:

Inflow Area = 24.400 ac, 0.00% Impervious, Inflow Depth = 1.20" for 10-yr event
Inflow = 12.02 cfs @ 12.70 hrs, Volume= 2.441 af
Outflow = 12.02 cfs @ 12.71 hrs, Volume= 2.441 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 4:



Summary for Subcatchment 1.0: Pre

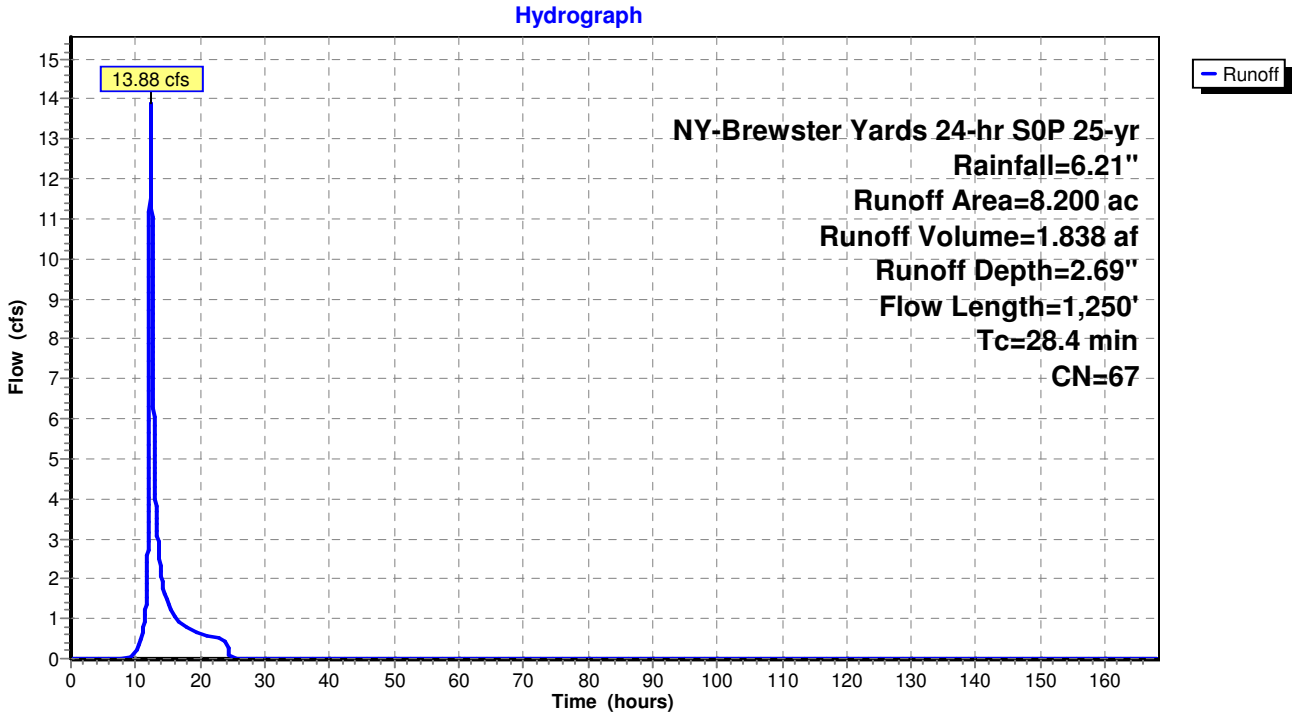
Runoff = 13.88 cfs @ 12.36 hrs, Volume= 1.838 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
1.900	55	Woods, Good, HSG B
6.000	70	Woods, Good, HSG C
0.300	87	Dirt roads, HSG C
8.200	67	Weighted Average
8.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0510	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
14.2	1,150	0.0730	1.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.4	1,250	Total			

Subcatchment 1.0: Pre



Summary for Subcatchment 2.0: Pre

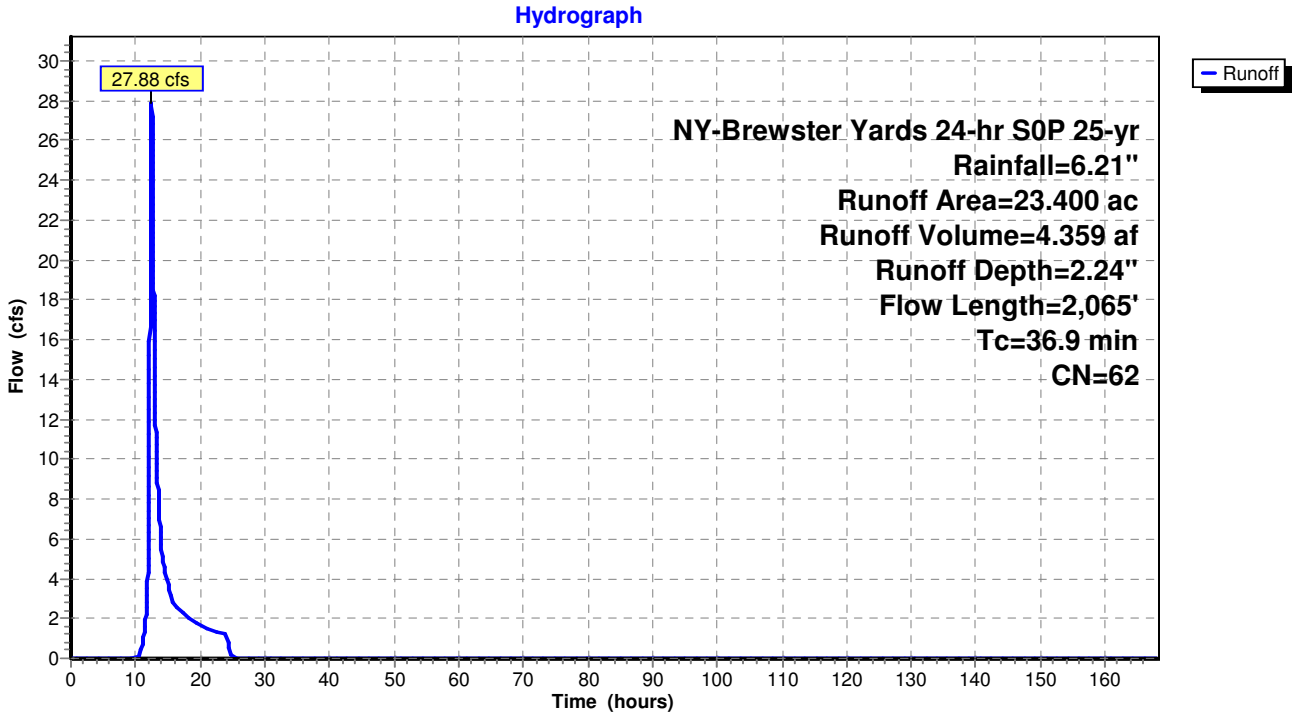
Runoff = 27.88 cfs @ 12.50 hrs, Volume= 4.359 af, Depth= 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
13.700	55	Woods, Good, HSG B
8.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
23.400	62	Weighted Average
23.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
2.8	380	0.2020	2.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	230	0.1830	2.14		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	280	0.1070	1.64		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
36.9	2,065	Total			

Subcatchment 2.0: Pre



Summary for Subcatchment 3.0: Pre

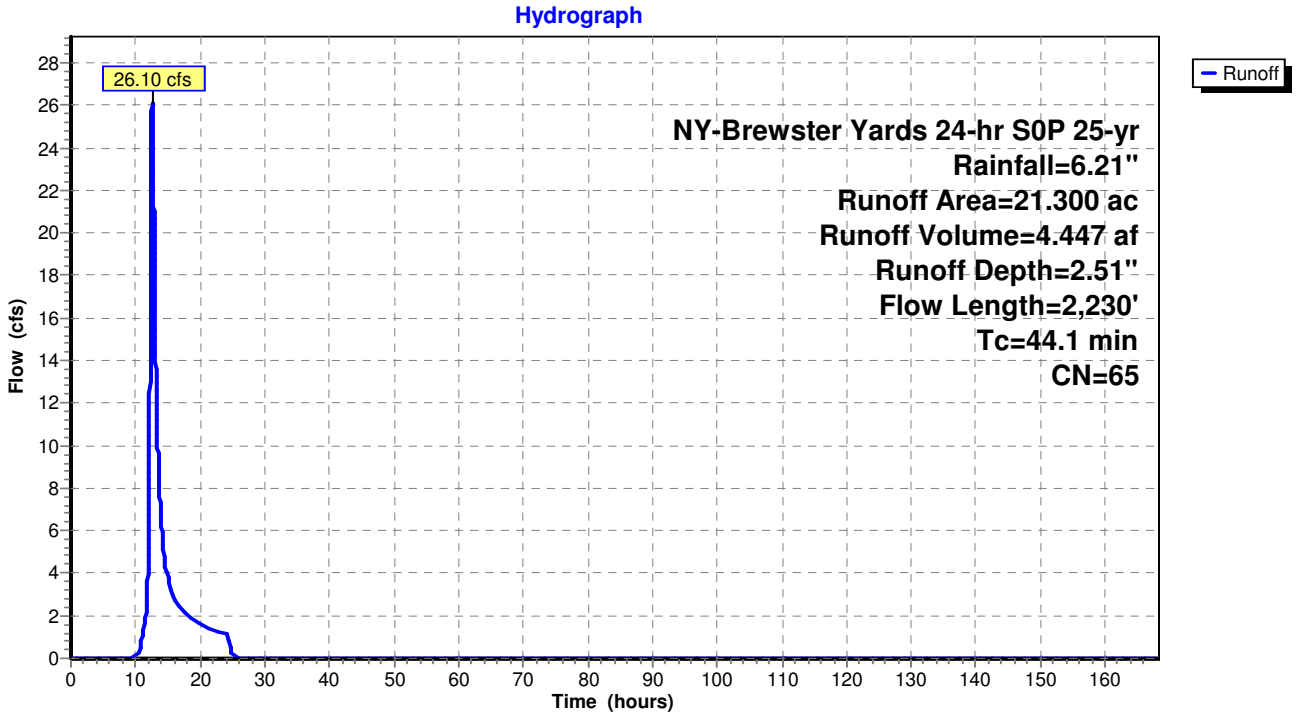
Runoff = 26.10 cfs @ 12.59 hrs, Volume= 4.447 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
12.700	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
7.600	77	Woods, Good, HSG D
0.200	89	Dirt roads, HSG D
0.200	98	Water Surface, HSG D
0.500	98	Paved parking, HSG D
21.300	65	Weighted Average
20.600		96.71% Pervious Area
0.700		3.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
16.6	920	0.0340	0.92		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	270	0.0890	1.49		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.2	110		11.35		**Lake or Reservoir,** Mean Depth= 4.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
44.1	2,230	Total			

Subcatchment 3.0: Pre



Summary for Subcatchment 4.0: Pre

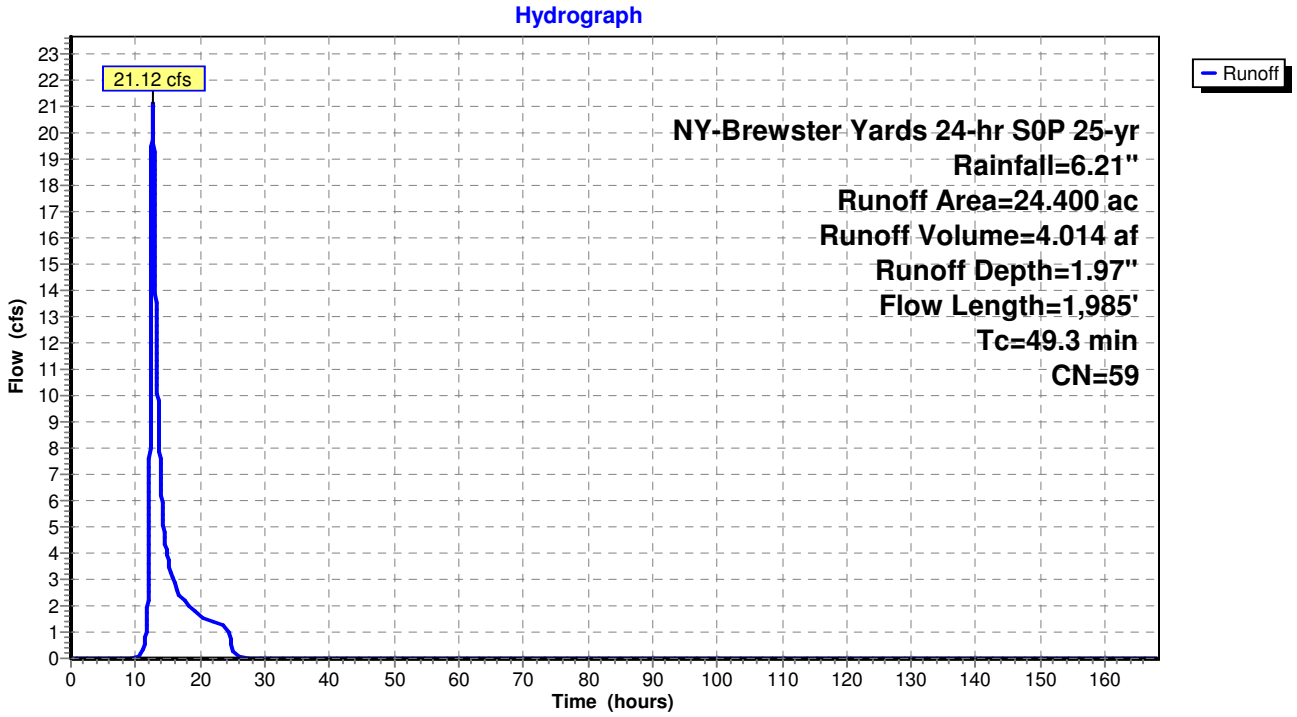
Runoff = 21.12 cfs @ 12.66 hrs, Volume= 4.014 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
20.400	55	Woods, Good, HSG B
3.900	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
24.400	59	Weighted Average
24.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
9.2	350	0.0160	0.63		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	85	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.2	365	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.5	430	0.0470	2.87	14.36	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
49.3	1,985	Total			

Subcatchment 4.0: Pre

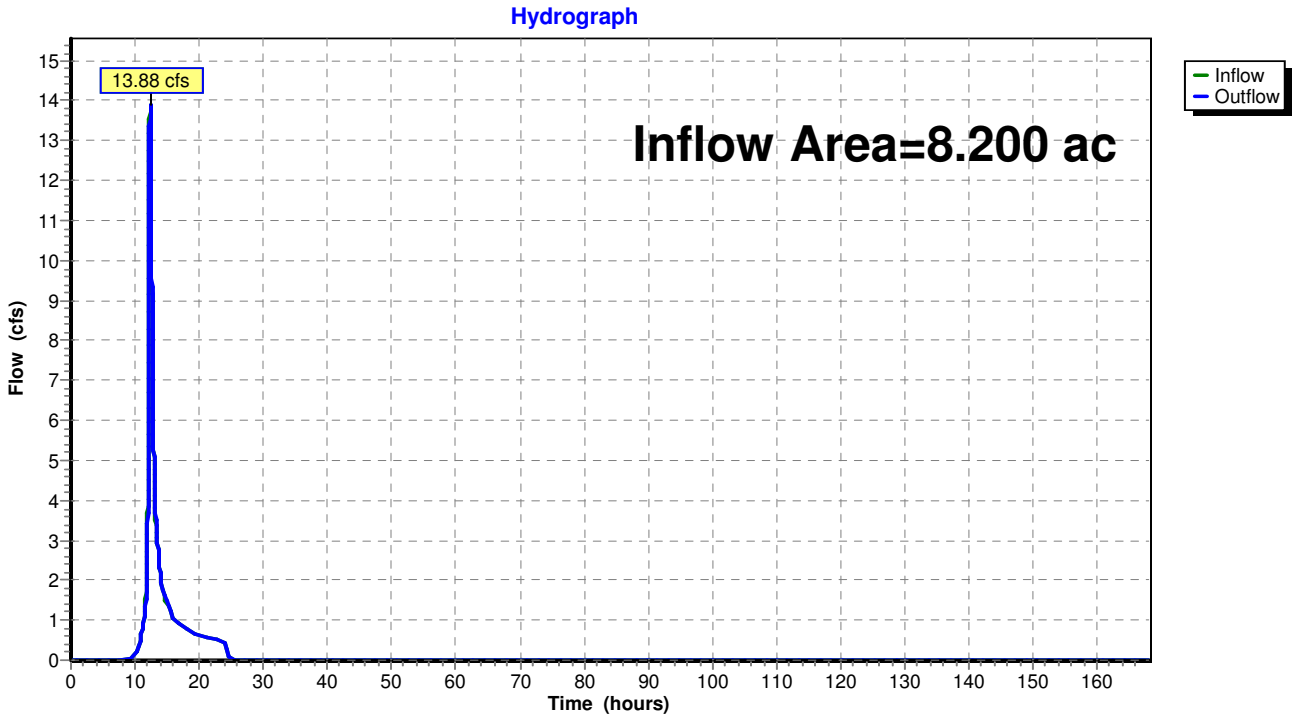


Summary for Reach PRE 1:

Inflow Area = 8.200 ac, 0.00% Impervious, Inflow Depth = 2.69" for 25-yr event
Inflow = 13.88 cfs @ 12.36 hrs, Volume= 1.838 af
Outflow = 13.88 cfs @ 12.37 hrs, Volume= 1.838 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 1:

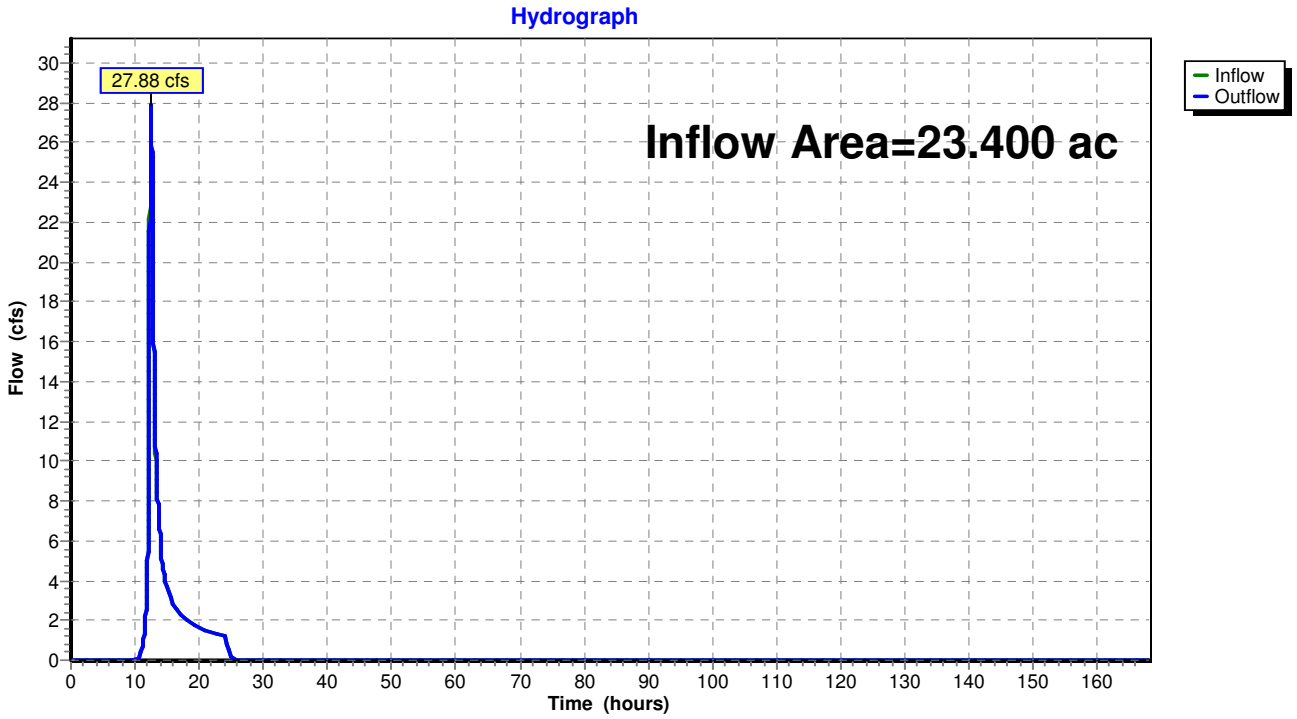


Summary for Reach PRE 2:

Inflow Area = 23.400 ac, 0.00% Impervious, Inflow Depth = 2.24" for 25-yr event
Inflow = 27.88 cfs @ 12.50 hrs, Volume= 4.359 af
Outflow = 27.88 cfs @ 12.51 hrs, Volume= 4.359 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 2:

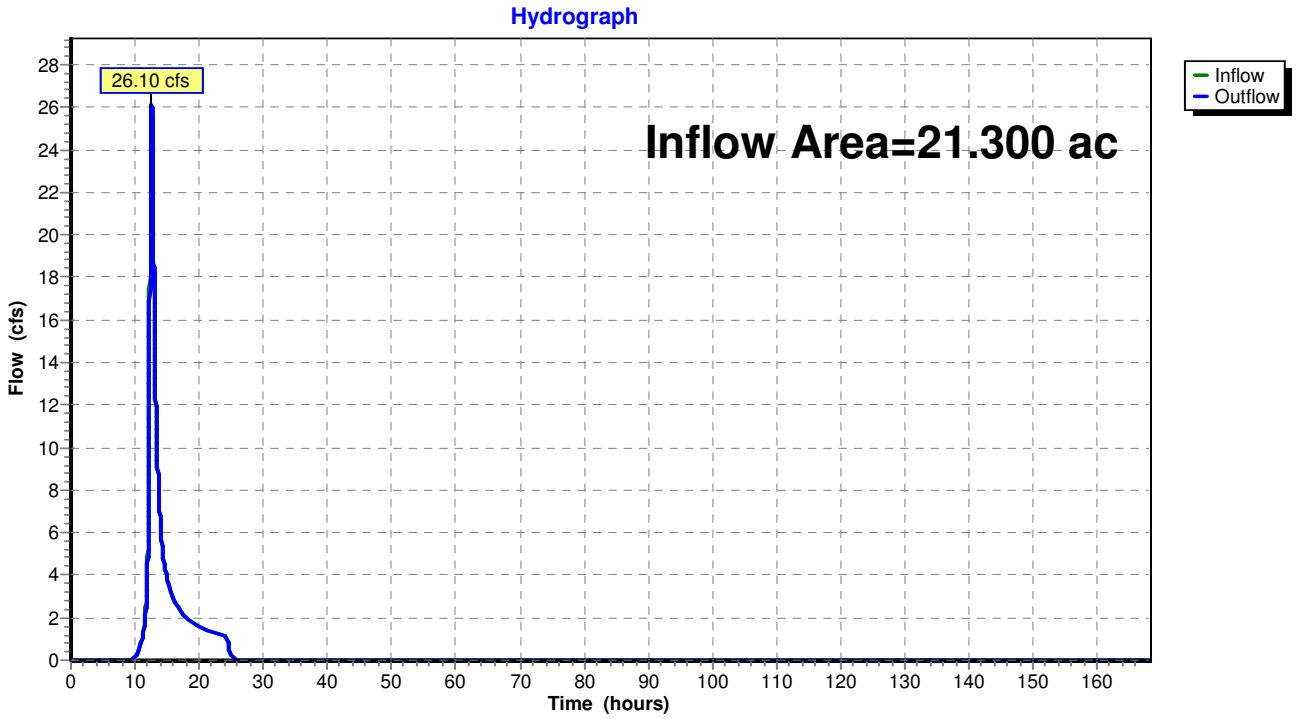


Summary for Reach PRE 3:

Inflow Area = 21.300 ac, 3.29% Impervious, Inflow Depth = 2.51" for 25-yr event
Inflow = 26.10 cfs @ 12.59 hrs, Volume= 4.447 af
Outflow = 26.10 cfs @ 12.60 hrs, Volume= 4.447 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 3:

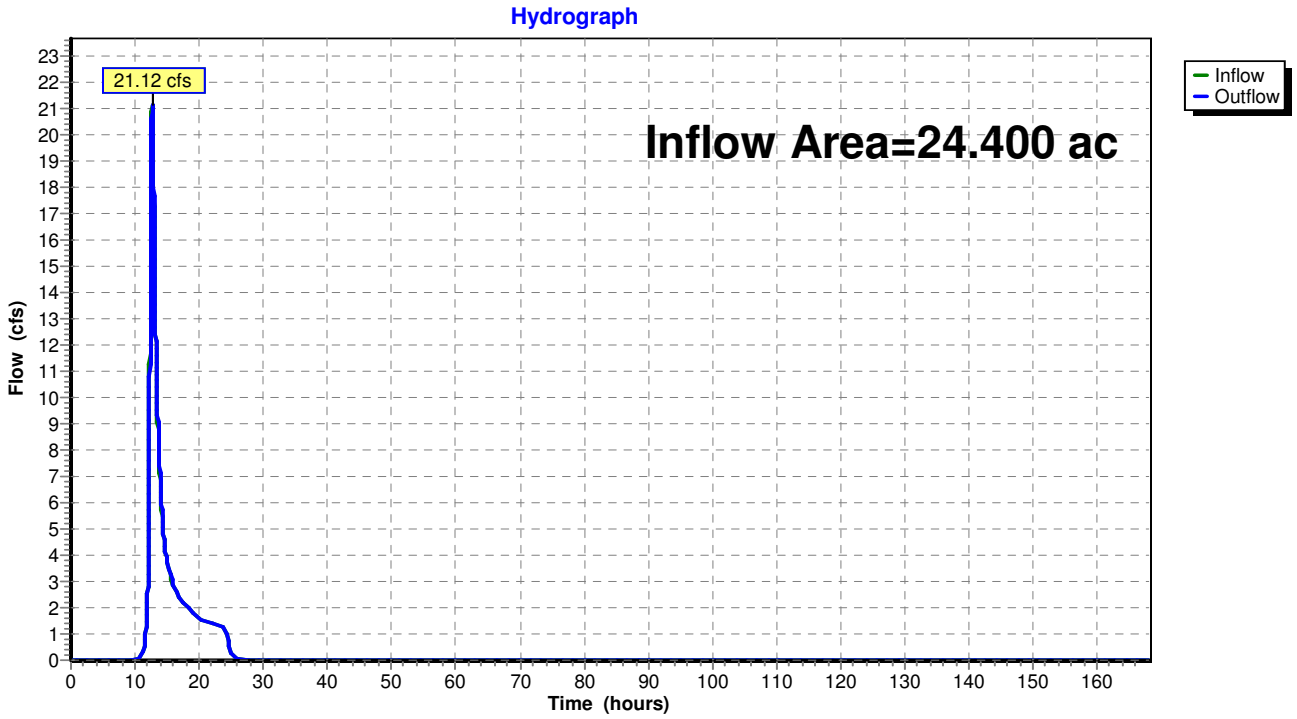


Summary for Reach PRE 4:

Inflow Area = 24.400 ac, 0.00% Impervious, Inflow Depth = 1.97" for 25-yr event
Inflow = 21.12 cfs @ 12.66 hrs, Volume= 4.014 af
Outflow = 21.12 cfs @ 12.67 hrs, Volume= 4.014 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 4:



Summary for Subcatchment 1.0: Pre

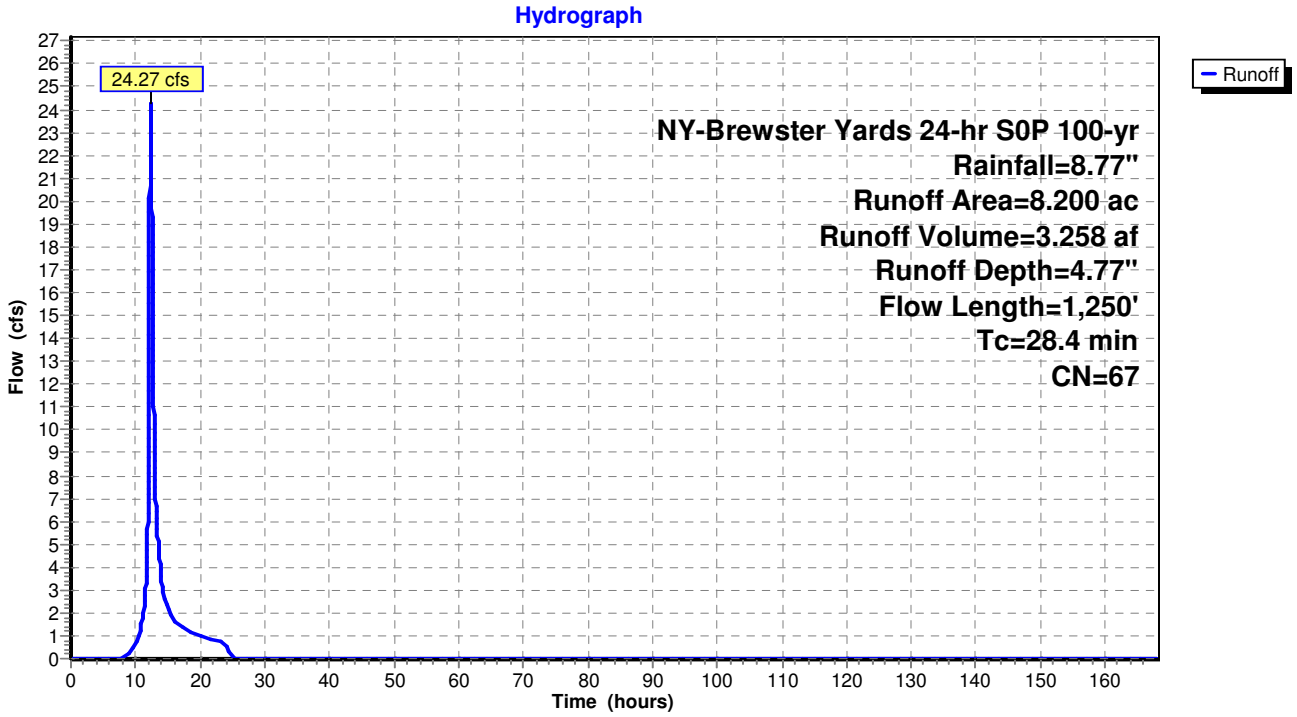
Runoff = 24.27 cfs @ 12.34 hrs, Volume= 3.258 af, Depth= 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
1.900	55	Woods, Good, HSG B
6.000	70	Woods, Good, HSG C
0.300	87	Dirt roads, HSG C
8.200	67	Weighted Average
8.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0510	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
14.2	1,150	0.0730	1.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.4	1,250	Total			

Subcatchment 1.0: Pre



Summary for Subcatchment 2.0: Pre

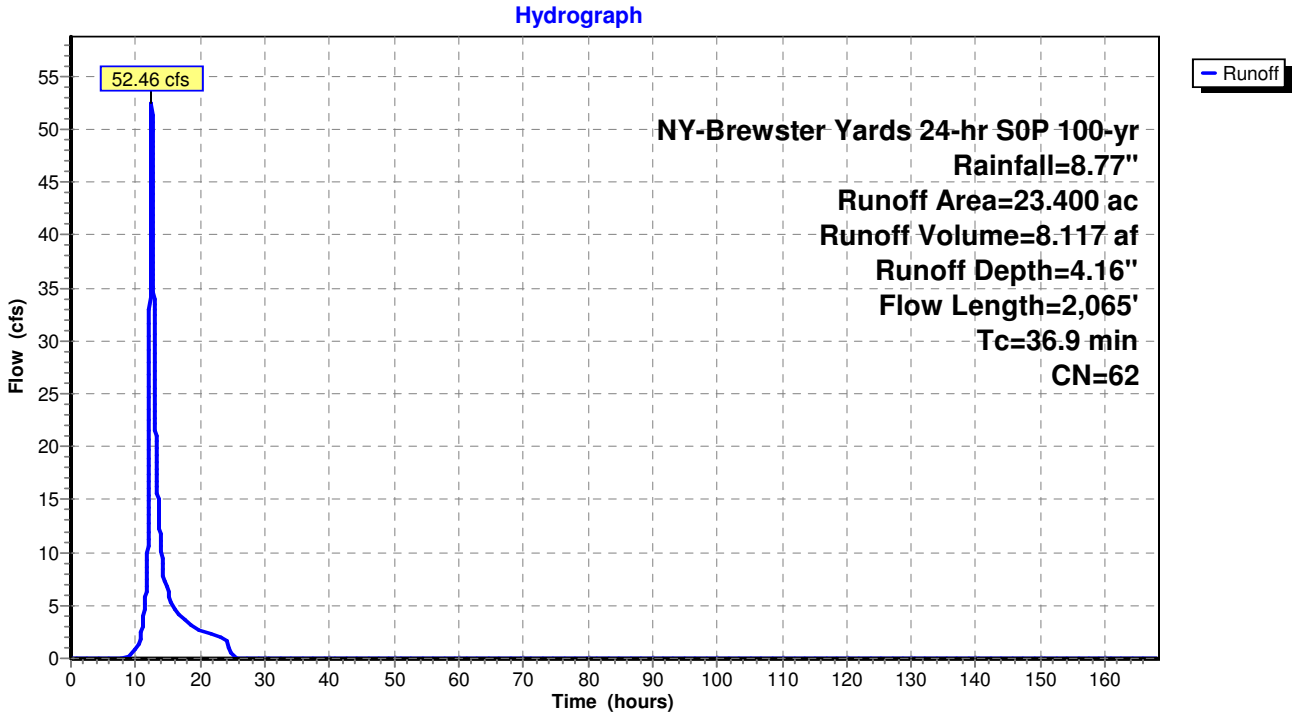
Runoff = 52.46 cfs @ 12.50 hrs, Volume= 8.117 af, Depth= 4.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
13.700	55	Woods, Good, HSG B
8.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
23.400	62	Weighted Average
23.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
2.8	380	0.2020	2.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	230	0.1830	2.14		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	280	0.1070	1.64		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
36.9	2,065	Total			

Subcatchment 2.0: Pre



Summary for Subcatchment 3.0: Pre

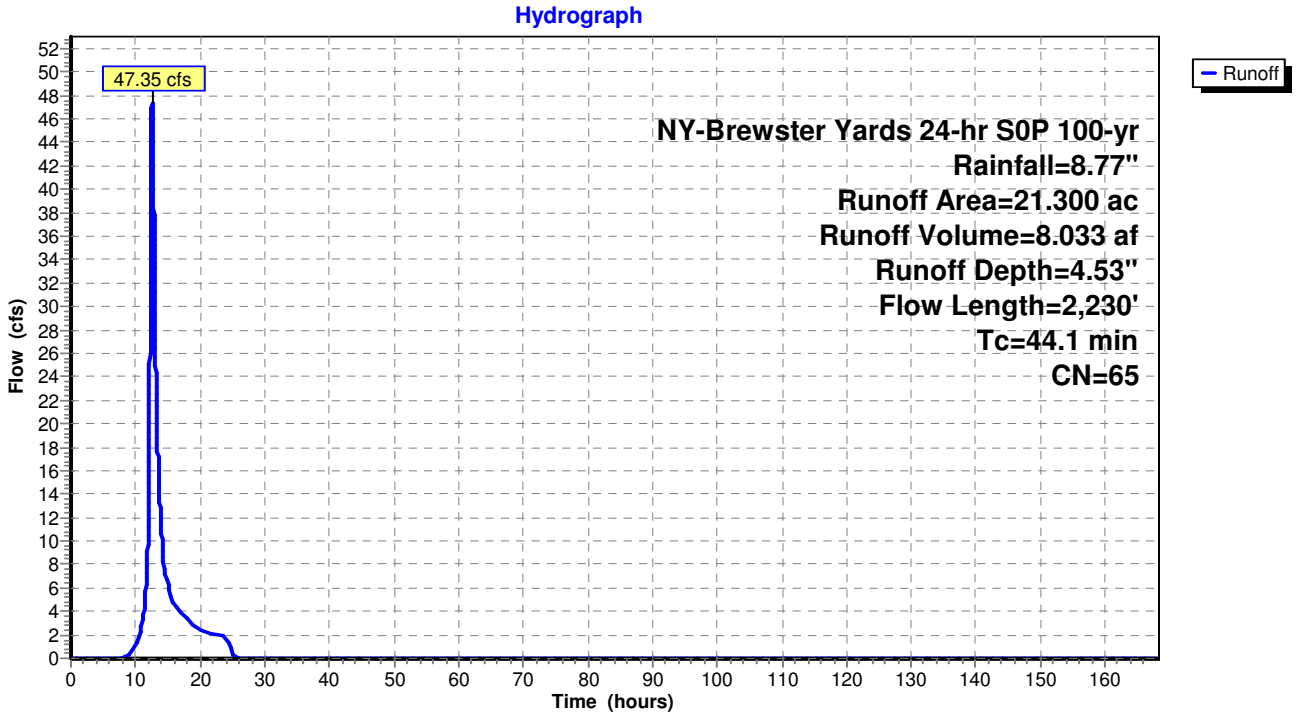
Runoff = 47.35 cfs @ 12.59 hrs, Volume= 8.033 af, Depth= 4.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
12.700	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
7.600	77	Woods, Good, HSG D
0.200	89	Dirt roads, HSG D
0.200	98	Water Surface, HSG D
0.500	98	Paved parking, HSG D
21.300	65	Weighted Average
20.600		96.71% Pervious Area
0.700		3.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
16.6	920	0.0340	0.92		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.0	270	0.0890	1.49		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.2	110		11.35		**Lake or Reservoir,** Mean Depth= 4.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
44.1	2,230	Total			

Subcatchment 3.0: Pre



Summary for Subcatchment 4.0: Pre

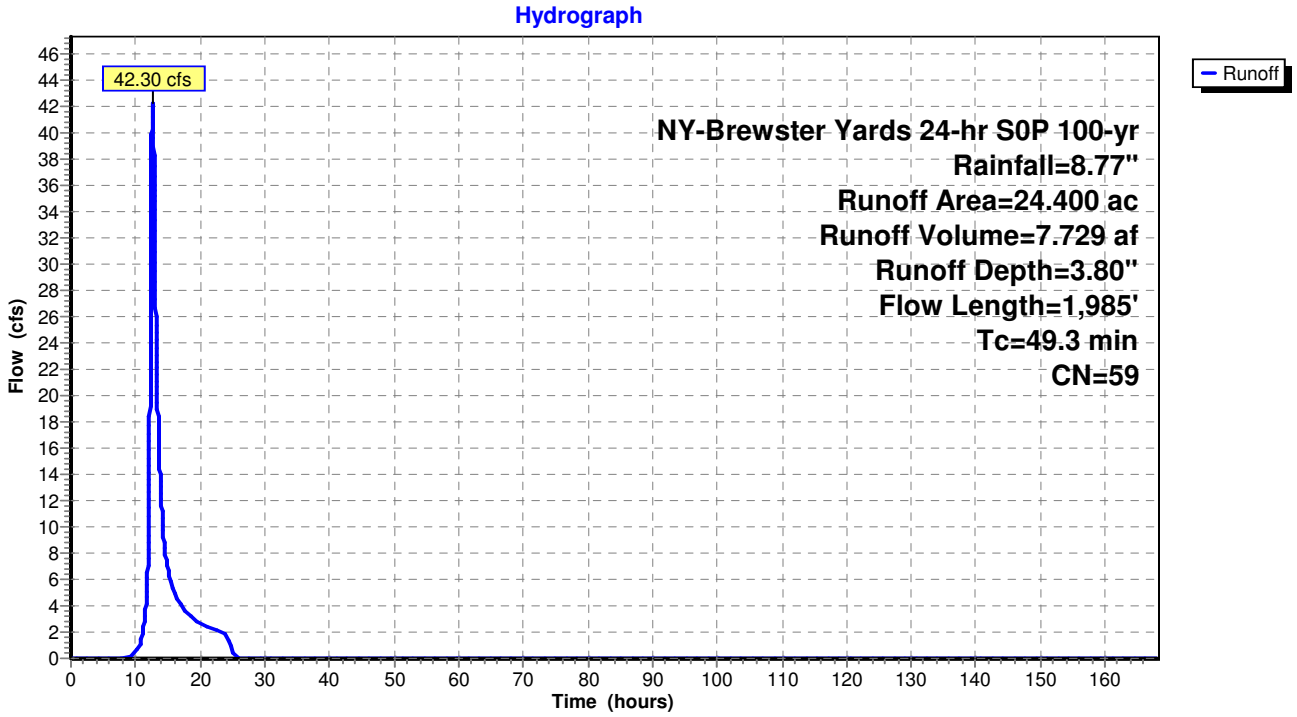
Runoff = 42.30 cfs @ 12.65 hrs, Volume= 7.729 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
20.400	55	Woods, Good, HSG B
3.900	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
24.400	59	Weighted Average
24.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0200	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
9.2	350	0.0160	0.63		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	655	0.0490	1.11		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	85	0.1200	1.73		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.2	365	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.5	430	0.0470	2.87	14.36	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
49.3	1,985	Total			

Subcatchment 4.0: Pre

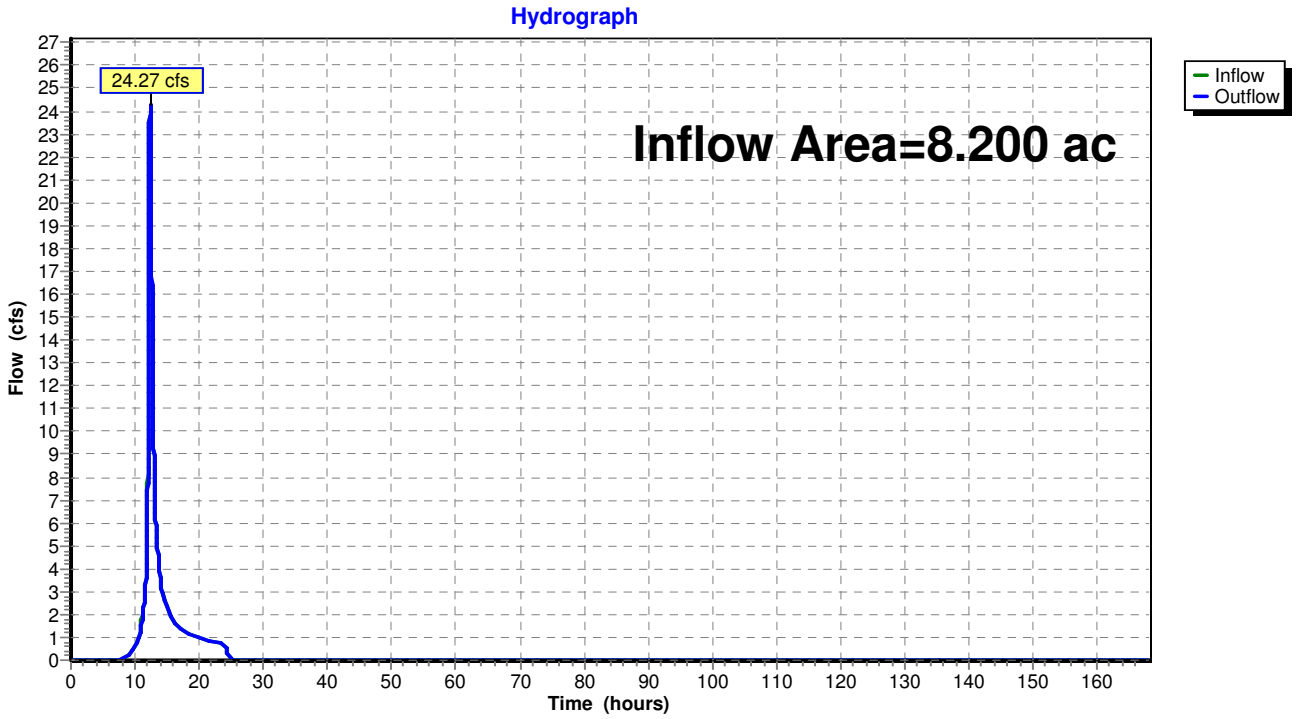


Summary for Reach PRE 1:

Inflow Area = 8.200 ac, 0.00% Impervious, Inflow Depth = 4.77" for 100-yr event
Inflow = 24.27 cfs @ 12.34 hrs, Volume= 3.258 af
Outflow = 24.27 cfs @ 12.35 hrs, Volume= 3.258 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 1:

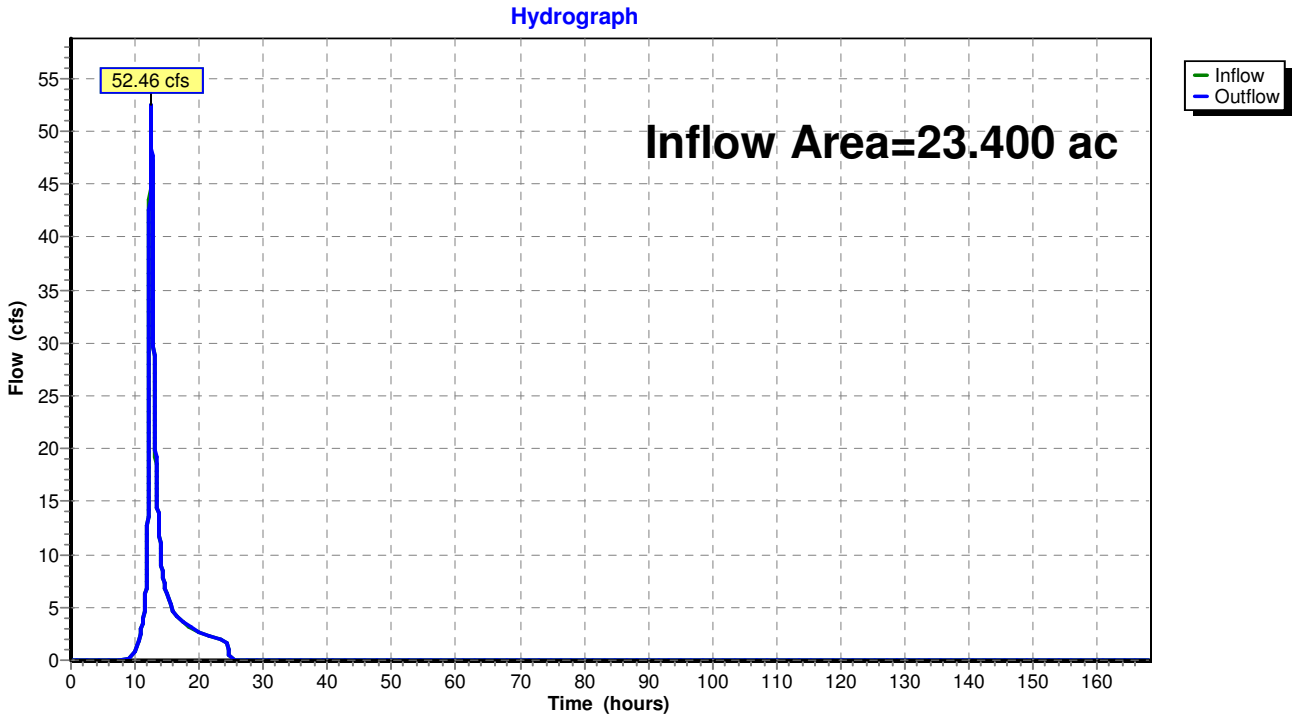


Summary for Reach PRE 2:

Inflow Area = 23.400 ac, 0.00% Impervious, Inflow Depth = 4.16" for 100-yr event
Inflow = 52.46 cfs @ 12.50 hrs, Volume= 8.117 af
Outflow = 52.46 cfs @ 12.51 hrs, Volume= 8.117 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 2:

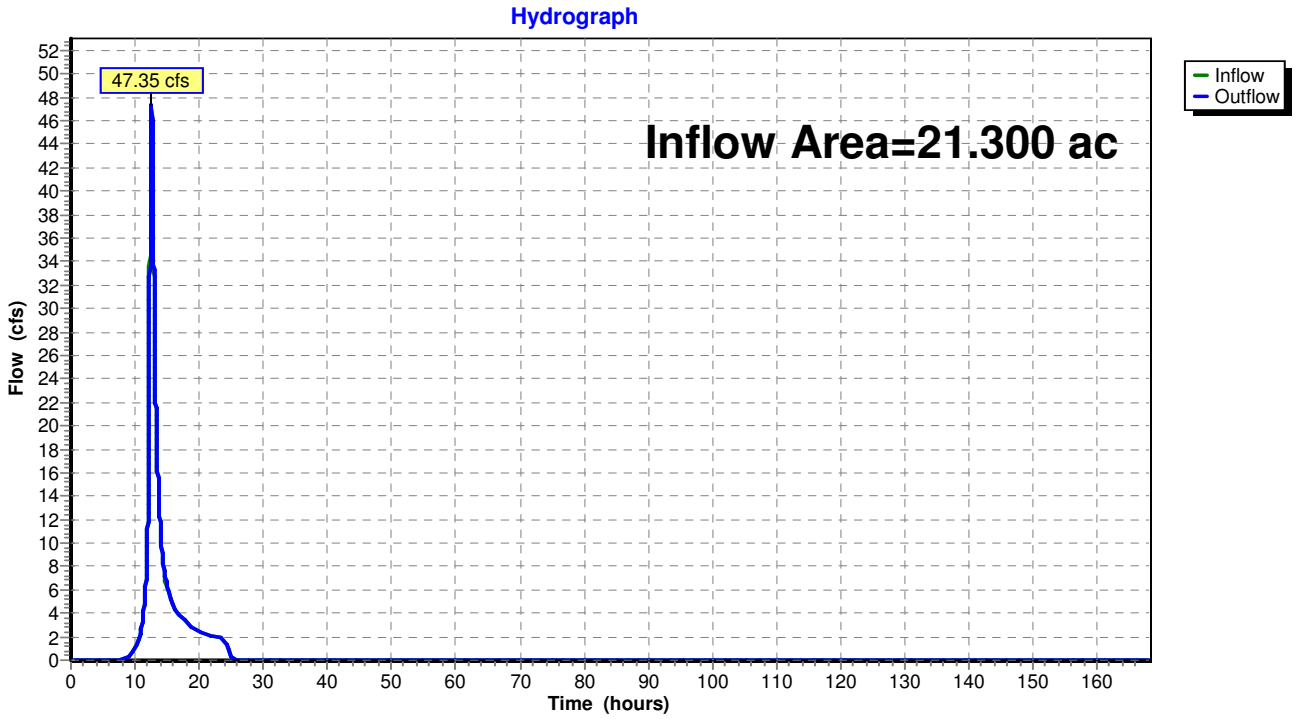


Summary for Reach PRE 3:

Inflow Area = 21.300 ac, 3.29% Impervious, Inflow Depth = 4.53" for 100-yr event
Inflow = 47.35 cfs @ 12.59 hrs, Volume= 8.033 af
Outflow = 47.35 cfs @ 12.60 hrs, Volume= 8.033 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 3:

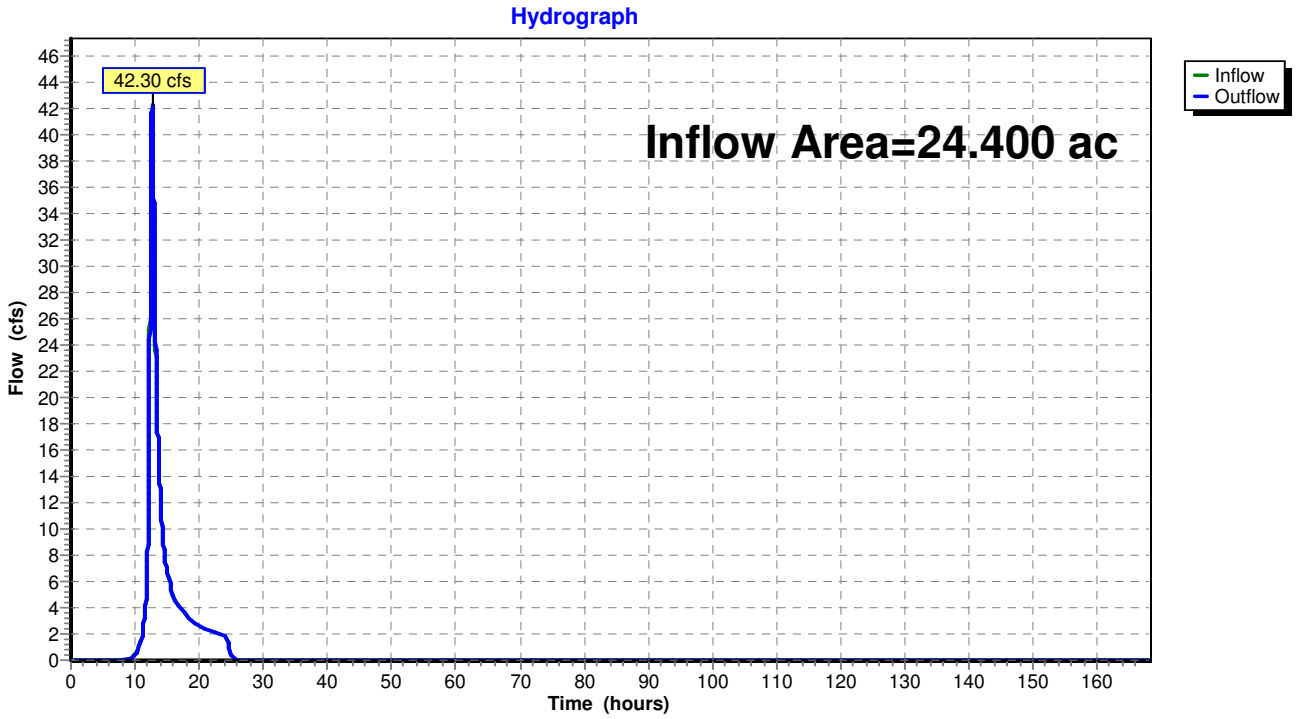


Summary for Reach PRE 4:

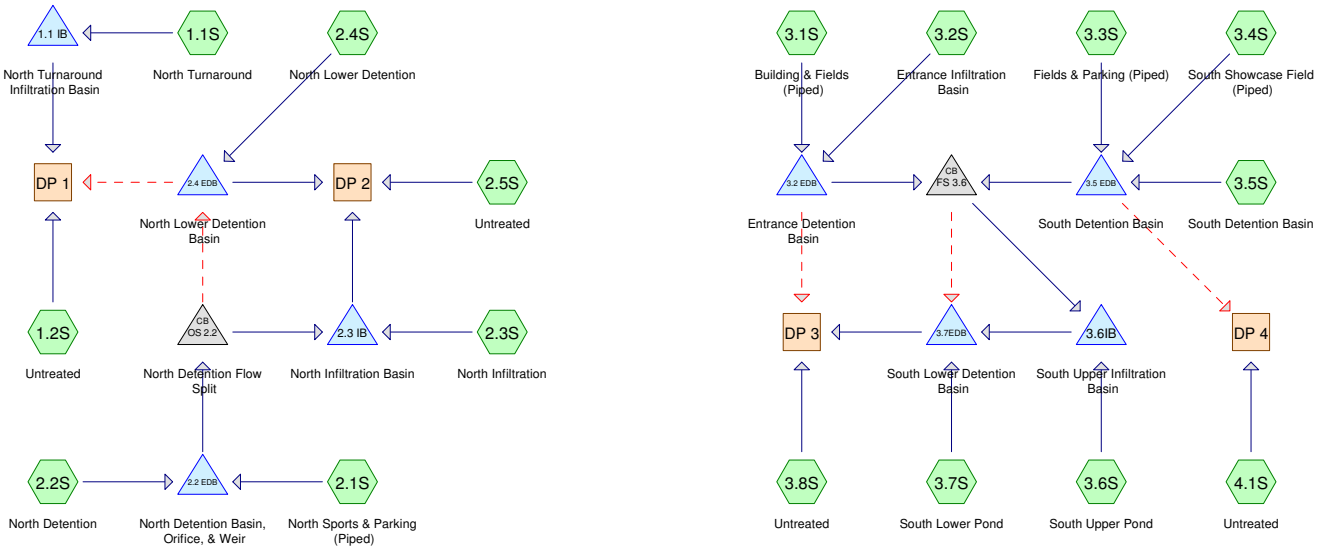
Inflow Area = 24.400 ac, 0.00% Impervious, Inflow Depth = 3.80" for 100-yr event
Inflow = 42.30 cfs @ 12.65 hrs, Volume= 7.729 af
Outflow = 42.30 cfs @ 12.66 hrs, Volume= 7.729 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach PRE 4:



APPENDIX C
Post Development Computer Data



Subcat Reach Pond Link

Routing Diagram for Brewster Yards Post Updated Deisgn Points

Prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., Printed 12/1/2022

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Summary for Subcatchment 1.1S: North Turnaround

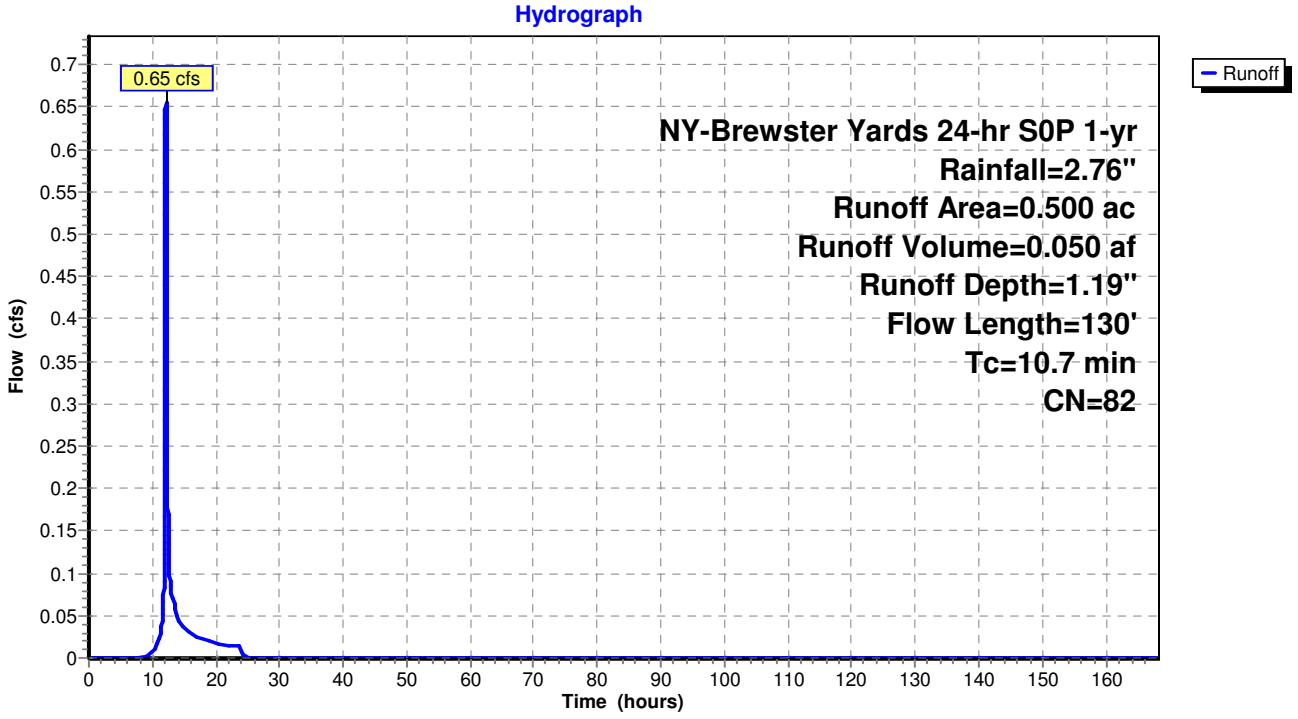
Runoff = 0.65 cfs @ 12.12 hrs, Volume= 0.050 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
0.100	70	Woods, Good, HSG C
0.100	74	>75% Grass cover, Good, HSG C
0.100	87	Dirt roads, HSG C
0.200	89	Gravel roads, HSG C
0.500	82	Weighted Average
0.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	60	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.0	20	0.5000	0.32		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
0.2	50	0.0600	3.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
10.7	130	Total			

Subcatchment 1.1S: North Turnaround



Summary for Subcatchment 1.2S: Untreated

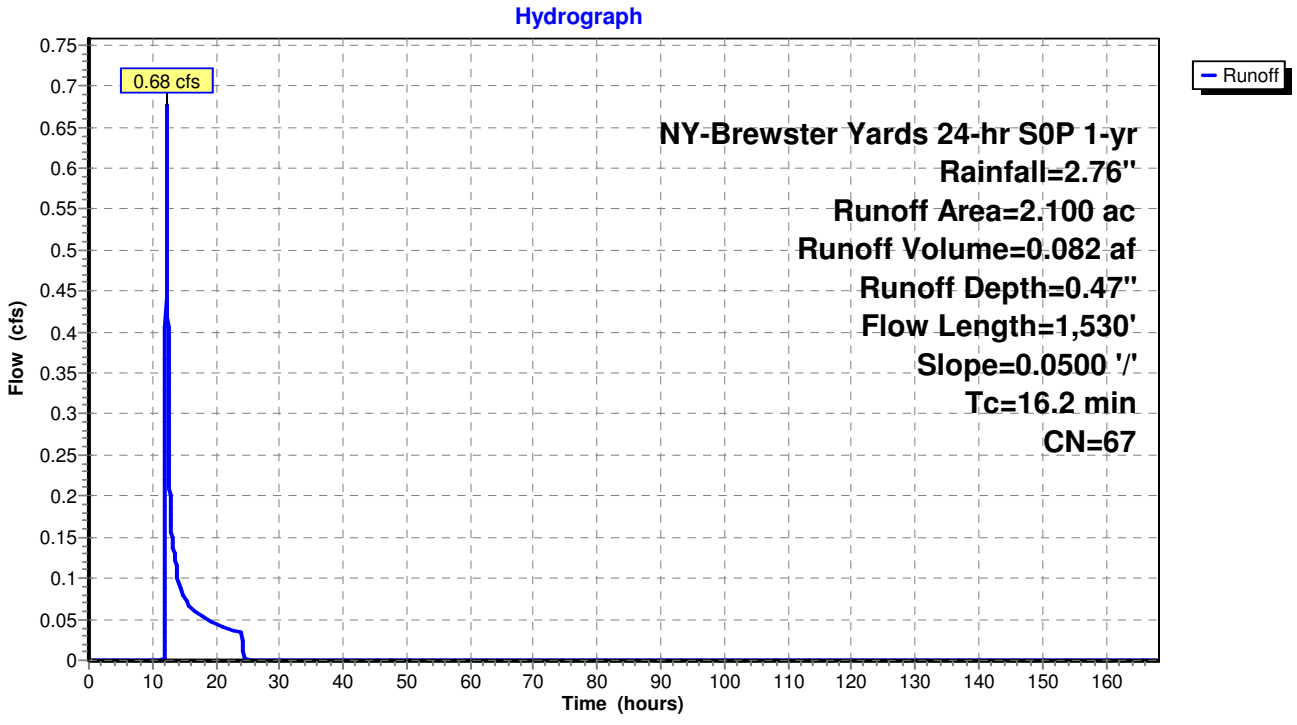
Runoff = 0.68 cfs @ 12.23 hrs, Volume= 0.082 af, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
0.600	55	Woods, Good, HSG B
1.300	70	Woods, Good, HSG C
0.200	87	Dirt roads, HSG C
2.100	67	Weighted Average
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0500	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.8	1,430	0.0500	13.29	132.91	**Channel Flow,** Area= 10.0 sf Perim= 10.0' r= 1.00' n= 0.025 Earth, clean & winding
16.2	1,530	Total			

Subcatchment 1.2S: Untreated



Summary for Subcatchment 2.1S: North Sports & Parking (Piped)

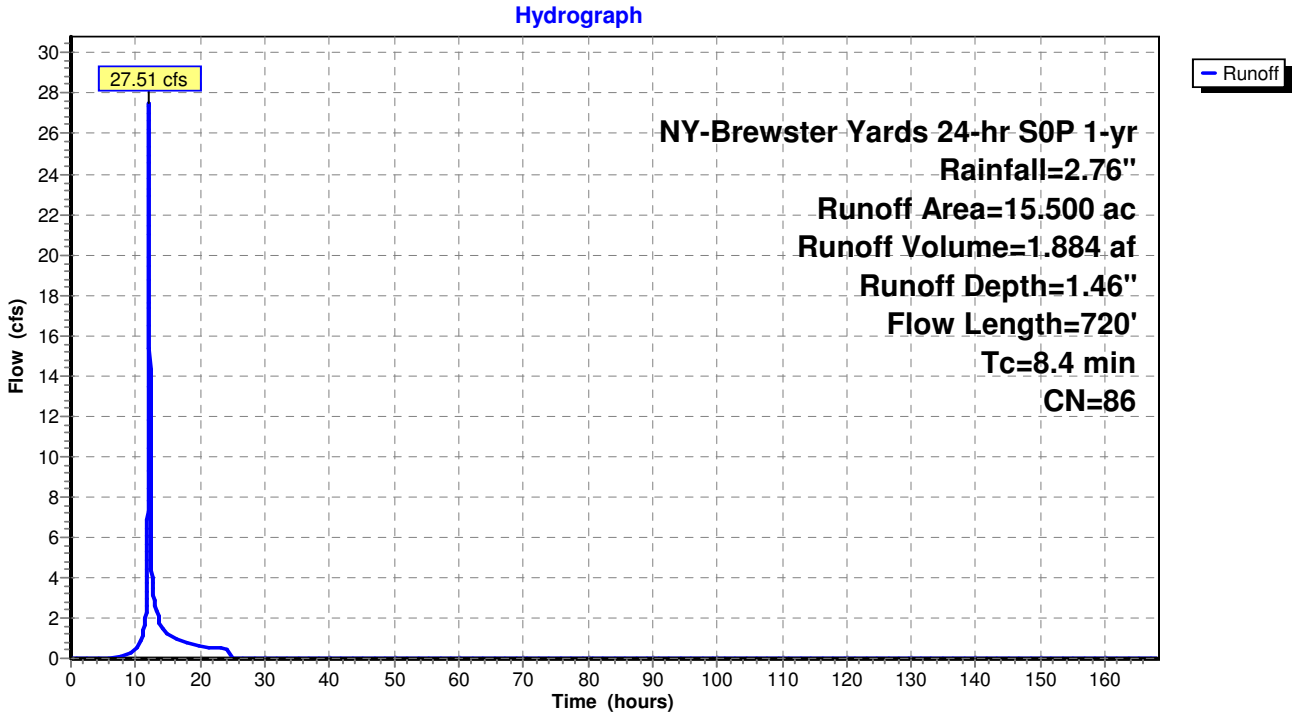
Runoff = 27.51 cfs @ 12.07 hrs, Volume= 1.884 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

	Area (ac)	CN	Description
*	10.700	86	Field Turf
	1.000	61	>75% Grass cover, Good, HSG B
	0.800	74	>75% Grass cover, Good, HSG C
*	3.000	98	Impervious
	15.500	86	Weighted Average
	12.500		80.65% Pervious Area
	3.000		19.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
0.8	160	0.0438	3.14		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	190	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	270	0.0200	10.18	31.99	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
8.4	720	Total			

Subcatchment 2.1S: North Sports & Parking (Piped)



Summary for Subcatchment 2.2S: North Detention

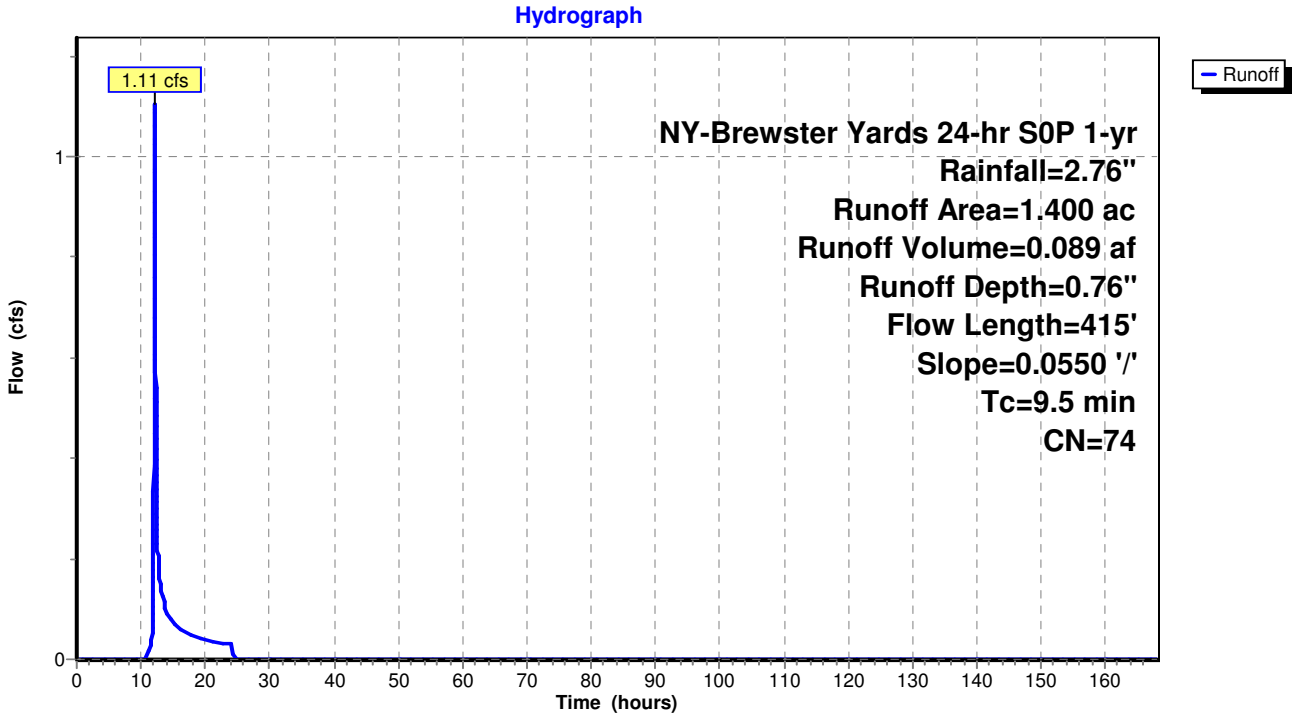
Runoff = 1.11 cfs @ 12.11 hrs, Volume= 0.089 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
1.400	74	>75% Grass cover, Good, HSG C
1.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	100	0.0550	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
3.2	315	0.0550	1.64		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	415	Total			

Subcatchment 2.2S: North Detention



Summary for Subcatchment 2.3S: North Infiltration

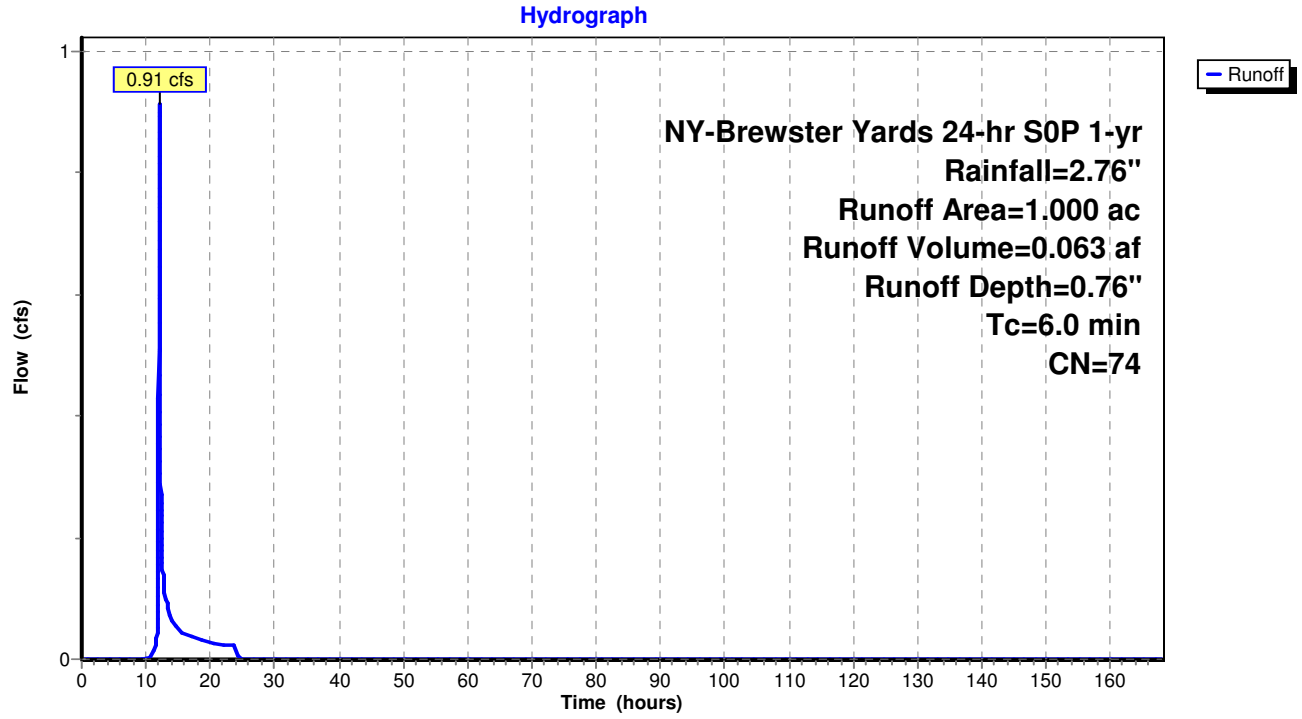
Runoff = 0.91 cfs @ 12.05 hrs, Volume= 0.063 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
1.000	74	>75% Grass cover, Good, HSG C
1.000		100.00% Pervious Area

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

Subcatchment 2.3S: North Infiltration



Summary for Subcatchment 2.4S: North Lower Detention

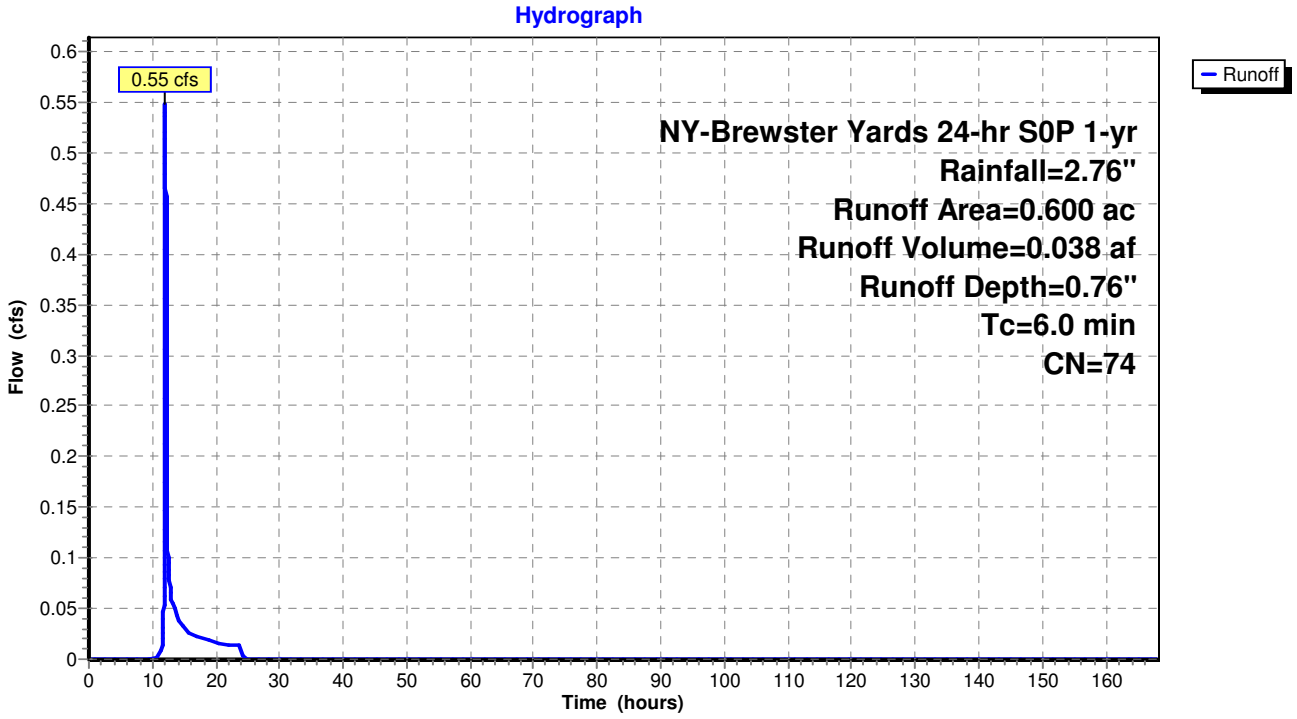
Runoff = 0.55 cfs @ 12.05 hrs, Volume= 0.038 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
0.600	74	>75% Grass cover, Good, HSG C
0.600		100.00% Pervious Area

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

Subcatchment 2.4S: North Lower Detention



Summary for Subcatchment 2.5S: Untreated

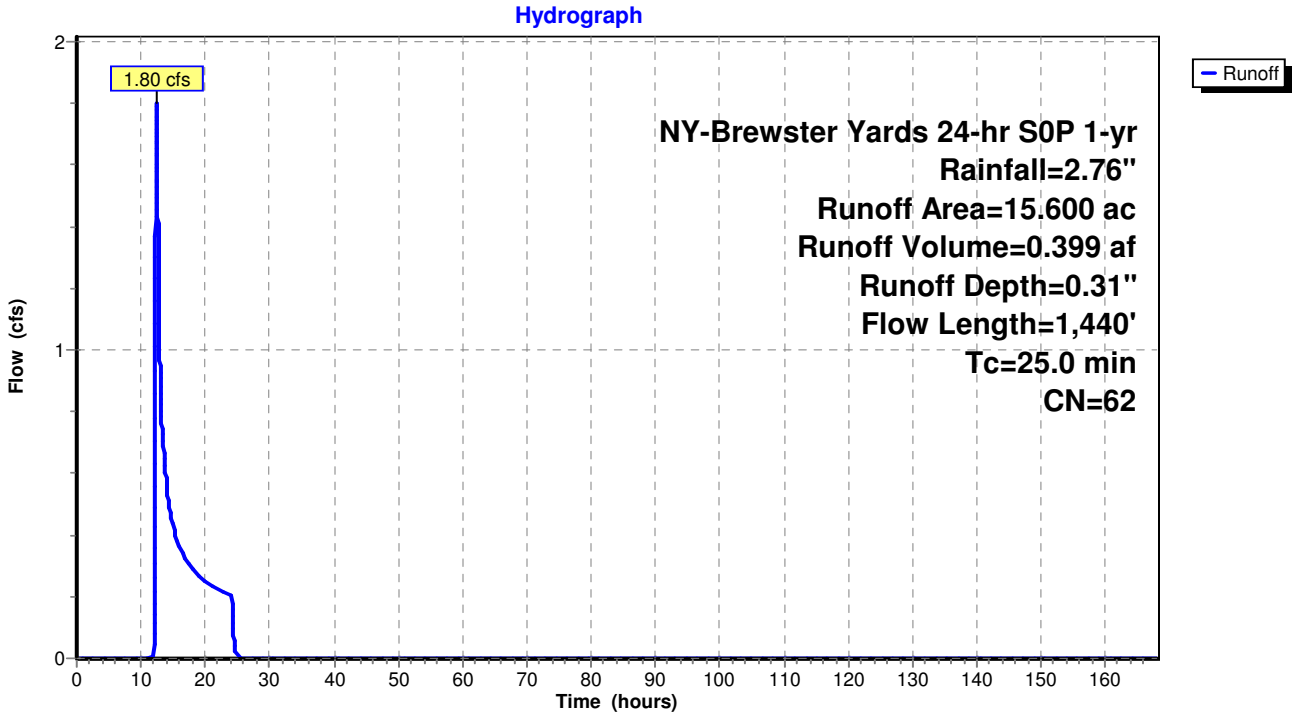
Runoff = 1.80 cfs @ 12.42 hrs, Volume= 0.399 af, Depth= 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
8.900	55	Woods, Good, HSG B
5.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
15.600	62	Weighted Average
15.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
0.5	60	0.1330	1.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	200	0.3000	2.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	150	0.0930	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.0	160	0.2875	2.68		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	350	0.9500	4.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
25.0	1,440	Total			

Subcatchment 2.5S: Untreated



Summary for Subcatchment 3.1S: Building & Fields (Piped)

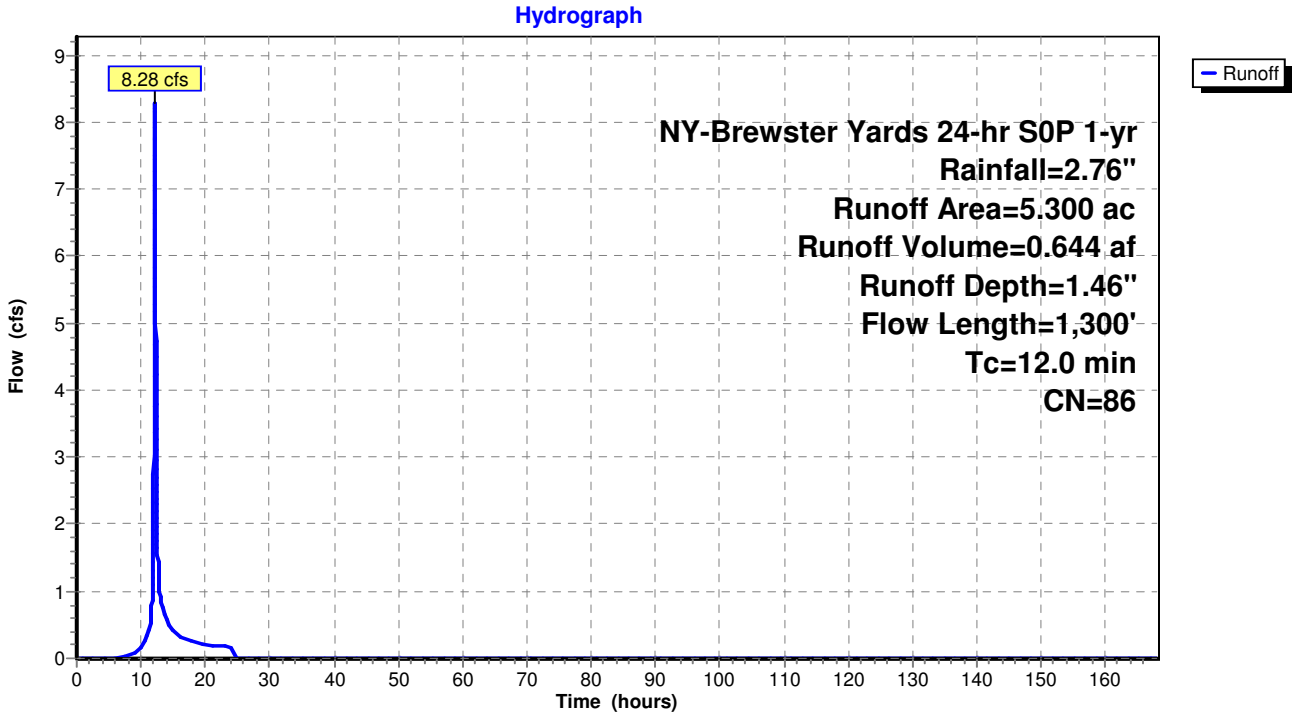
Runoff = 8.28 cfs @ 12.13 hrs, Volume= 0.644 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

	Area (ac)	CN	Description
*	2.700	98	Impervious
*	1.400	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	5.300	86	Weighted Average
	2.600		49.06% Pervious Area
	2.700		50.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0300	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
1.2	150	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.9	250	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	800	0.0412	14.62	45.92	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
12.0	1,300	Total			

Subcatchment 3.1S: Building & Fields (Piped)



Summary for Subcatchment 3.2S: Entrance Infiltration Basin

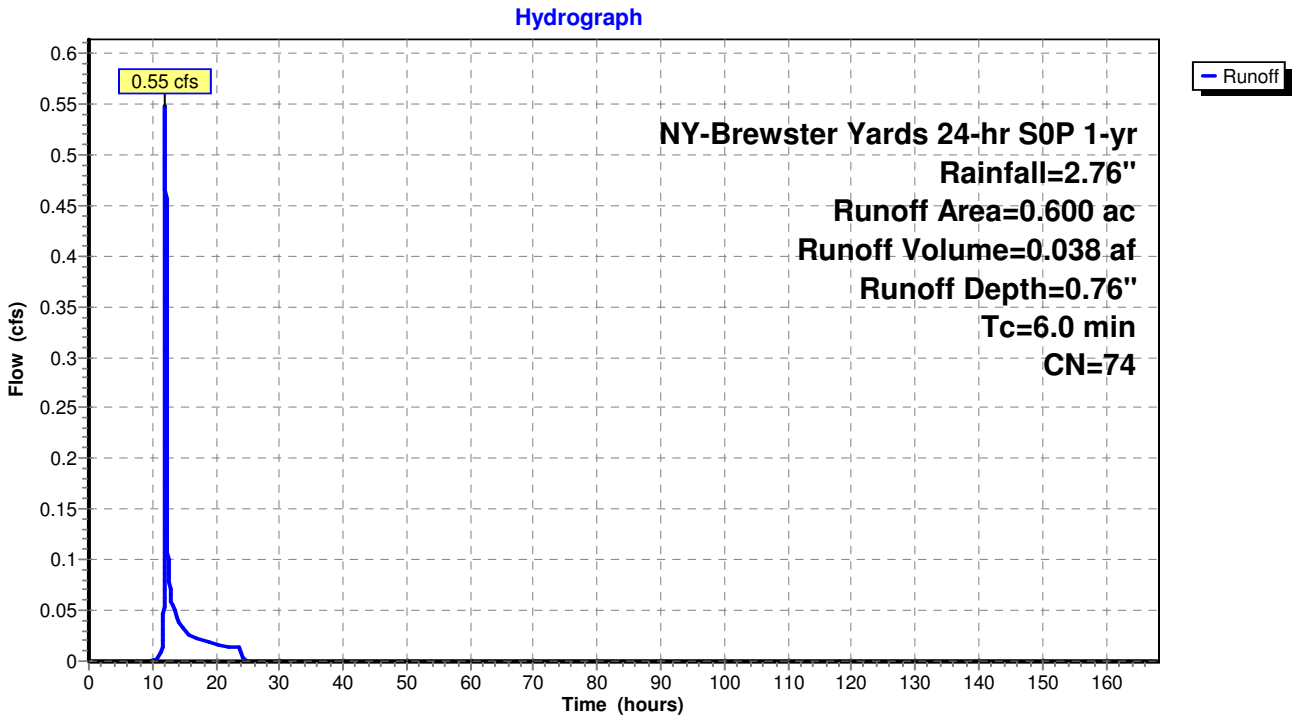
Runoff = 0.55 cfs @ 12.05 hrs, Volume= 0.038 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
0.200	61	>75% Grass cover, Good, HSG B
0.400	80	>75% Grass cover, Good, HSG D
0.600	74	Weighted Average
0.600		100.00% Pervious Area

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

Subcatchment 3.2S: Entrance Infiltration Basin



Summary for Subcatchment 3.3S: Fields & Parking (Piped)

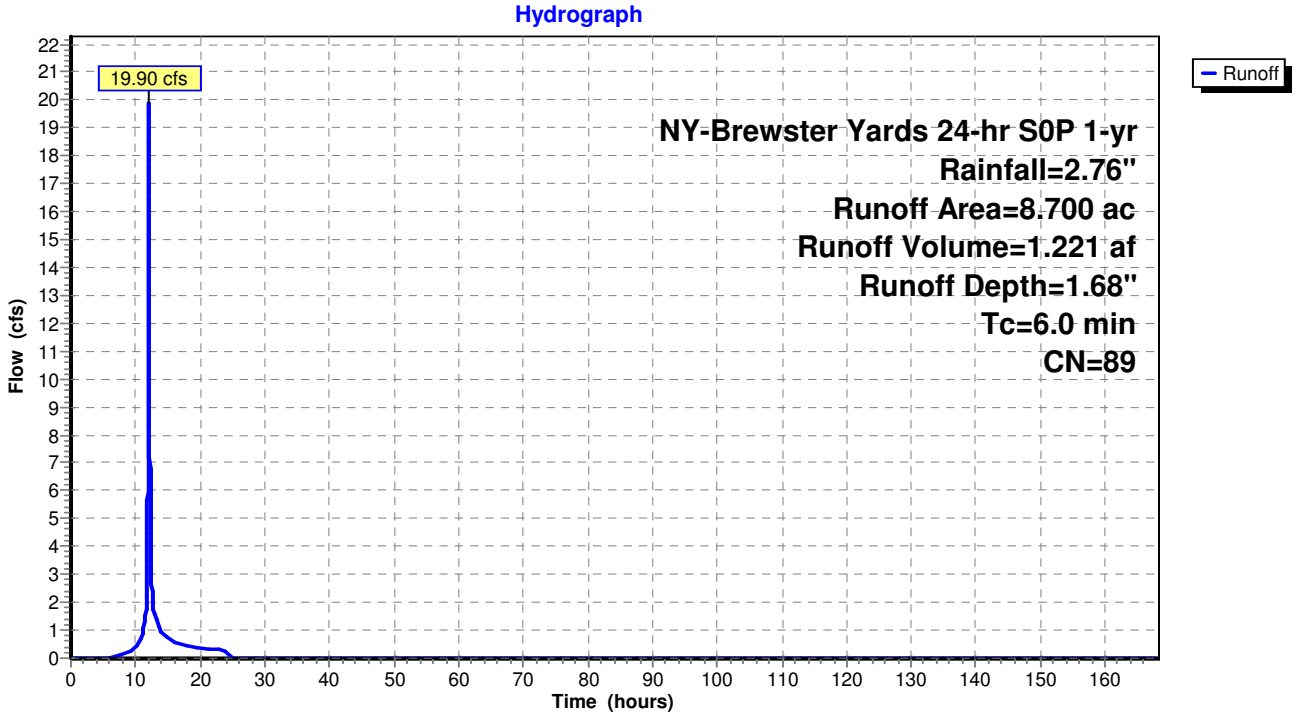
Runoff = 19.90 cfs @ 12.04 hrs, Volume= 1.221 af, Depth= 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

	Area (ac)	CN	Description
*	4.800	98	Impervious
*	2.500	86	Field Turf
	1.400	61	>75% Grass cover, Good, HSG B
	8.700	89	Weighted Average
	3.900		44.83% Pervious Area
	4.800		55.17% Impervious Area

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

Subcatchment 3.3S: Fields & Parking (Piped)



Summary for Subcatchment 3.4S: South Showcase Field (Piped)

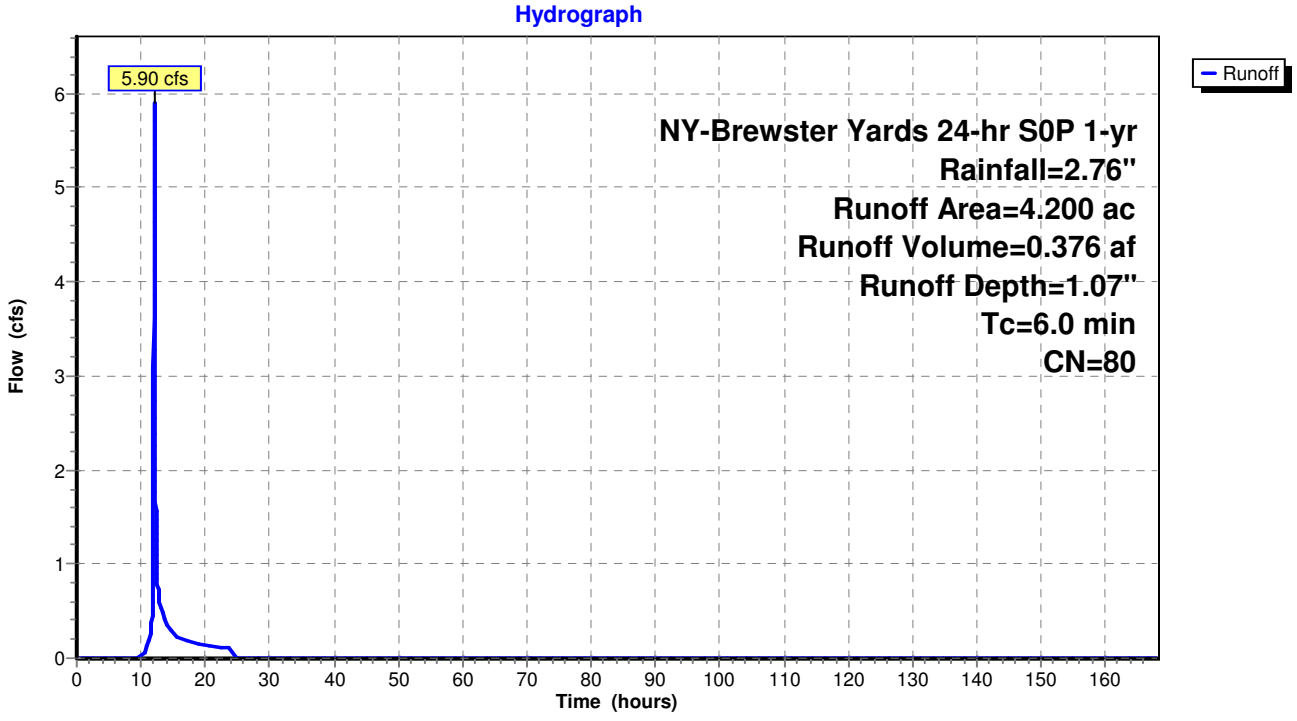
Runoff = 5.90 cfs @ 12.05 hrs, Volume= 0.376 af, Depth= 1.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

	Area (ac)	CN	Description
*	0.400	98	Impervious
*	2.600	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	4.200	80	Weighted Average
	3.800		90.48% Pervious Area
	0.400		9.52% Impervious Area

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

Subcatchment 3.4S: South Showcase Field (Piped)



Summary for Subcatchment 3.5S: South Detention Basin

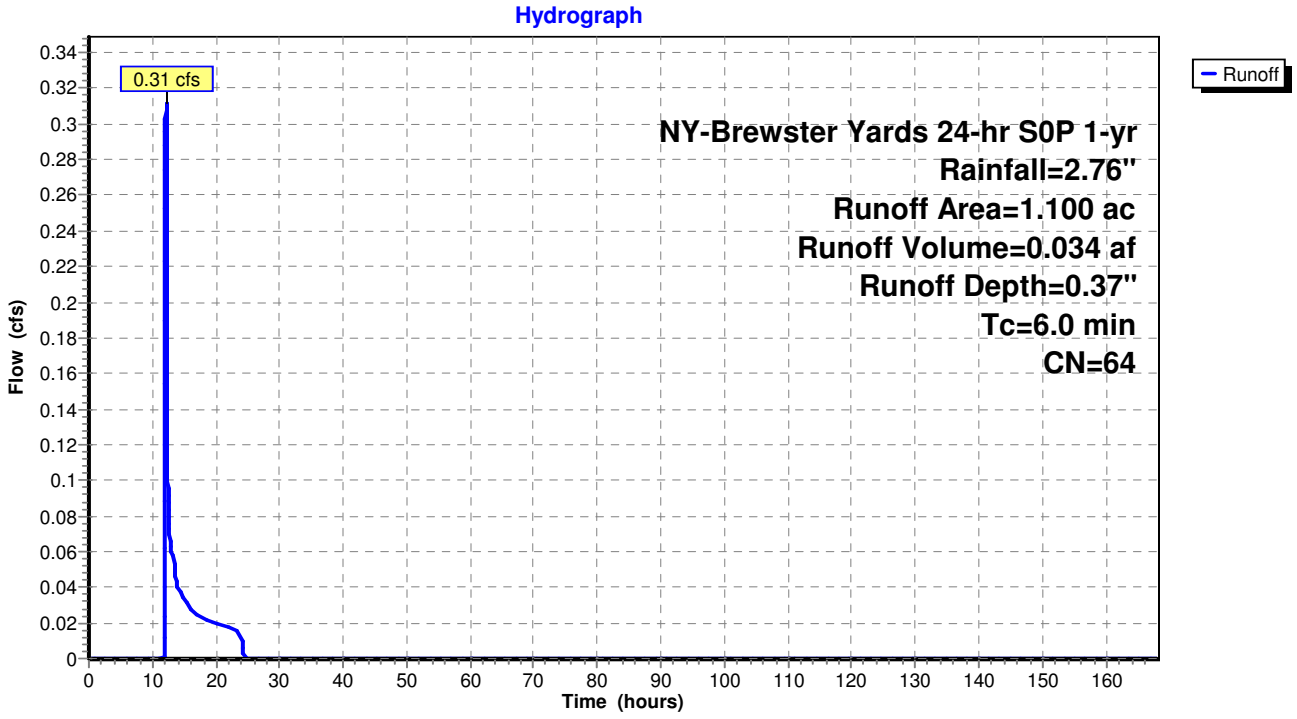
Runoff = 0.31 cfs @ 12.13 hrs, Volume= 0.034 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

	Area (ac)	CN	Description
*	0.100	98	Impervious
	1.000	61	>75% Grass cover, Good, HSG B
	1.100	64	Weighted Average
	1.000		90.91% Pervious Area
	0.100		9.09% Impervious Area

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

Subcatchment 3.5S: South Detention Basin



Summary for Subcatchment 3.6S: South Upper Pond

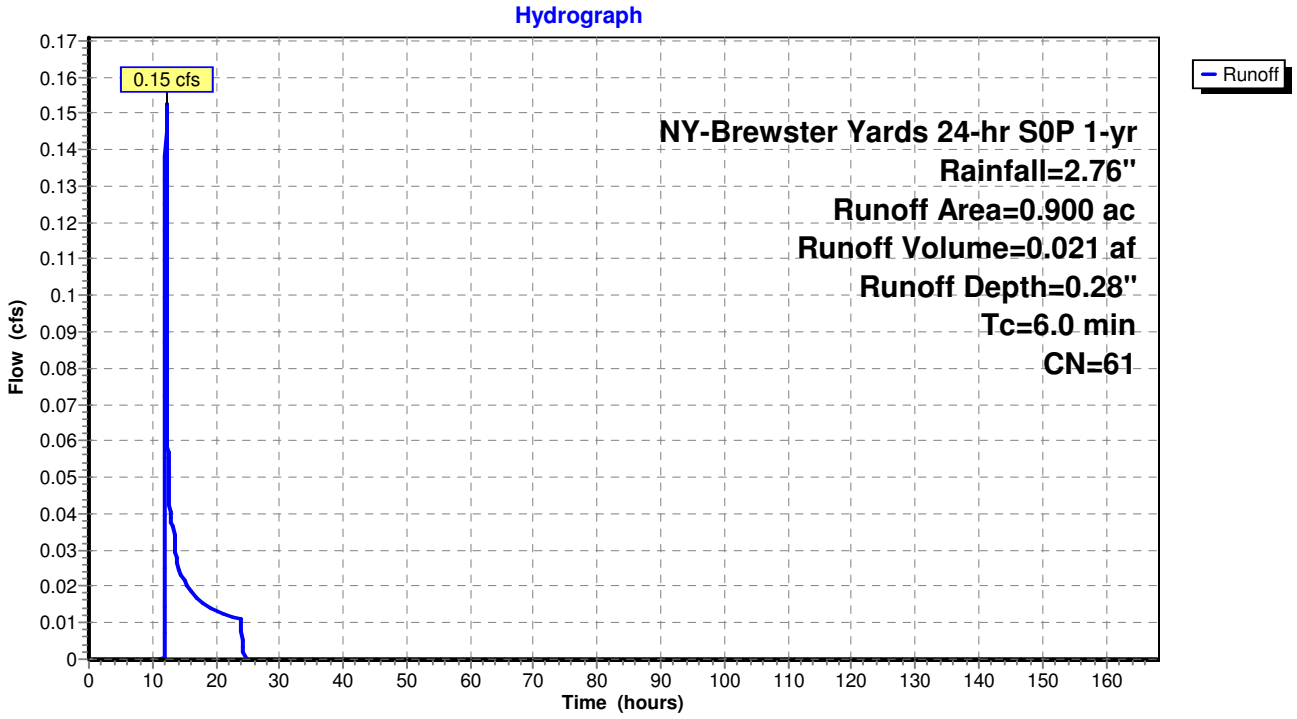
Runoff = 0.15 cfs @ 12.14 hrs, Volume= 0.021 af, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
0.900	61	>75% Grass cover, Good, HSG B
0.900		100.00% Pervious Area

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

Subcatchment 3.6S: South Upper Pond



Summary for Subcatchment 3.7S: South Lower Pond

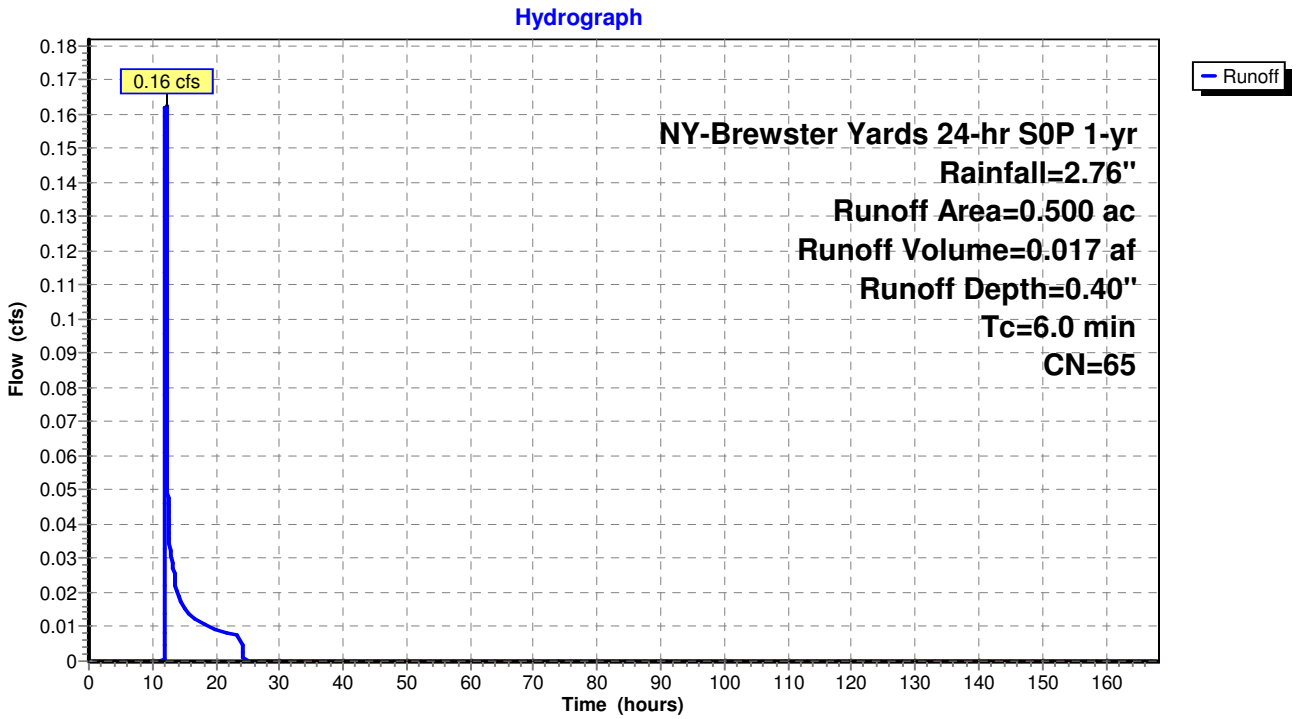
Runoff = 0.16 cfs @ 12.13 hrs, Volume= 0.017 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
0.400	61	>75% Grass cover, Good, HSG B
0.100	80	>75% Grass cover, Good, HSG D
0.500	65	Weighted Average
0.500		100.00% Pervious Area

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

Subcatchment 3.7S: South Lower Pond



Summary for Subcatchment 3.8S: Untreated

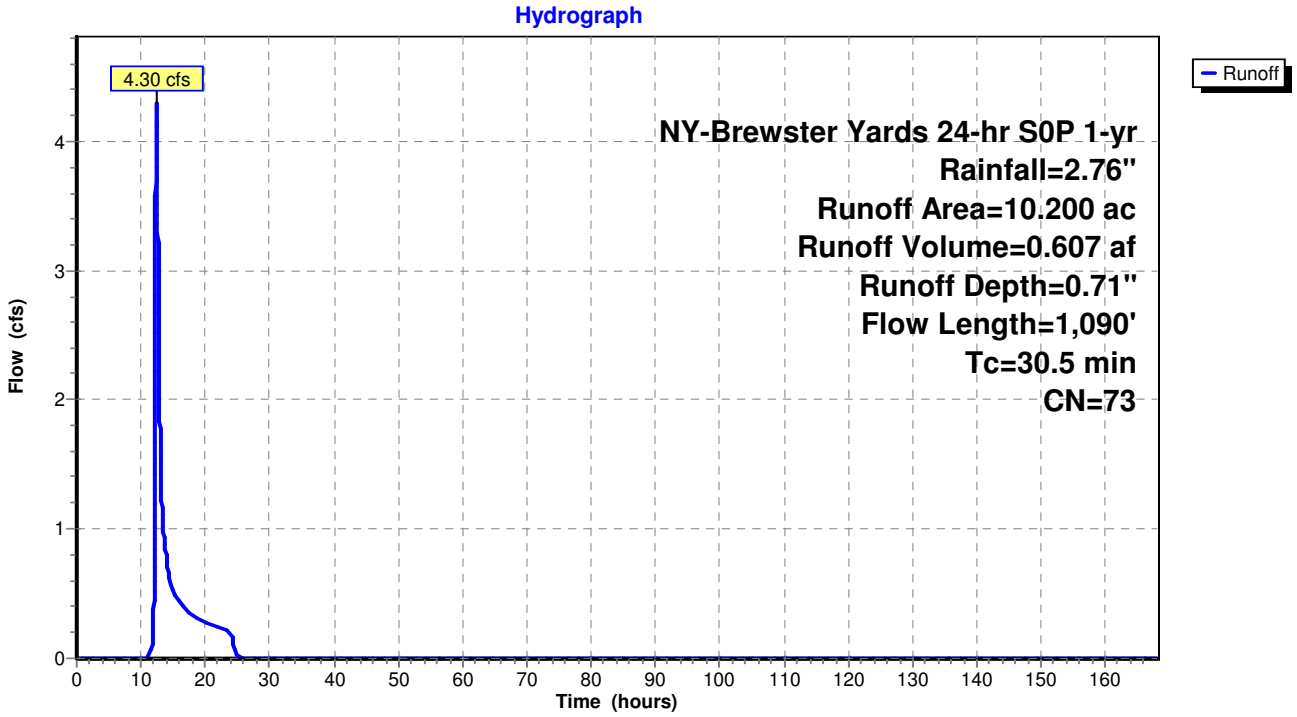
Runoff = 4.30 cfs @ 12.40 hrs, Volume= 0.607 af, Depth= 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
2.200	80	>75% Grass cover, Good, HSG D
3.200	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
3.800	77	Woods, Good, HSG D
0.700	98	Paved parking, HSG D
0.200	98	Water Surface, HSG D
10.200	73	Weighted Average
9.300		91.18% Pervious Area
0.900		8.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	50	0.2000	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
6.7	50	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
15.6	70	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.4	60	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30		8.02		**Lake or Reservoir,** Mean Depth= 2.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
30.5	1,090	Total			

Subcatchment 3.8S: Untreated



Summary for Subcatchment 4.1S: Untreated

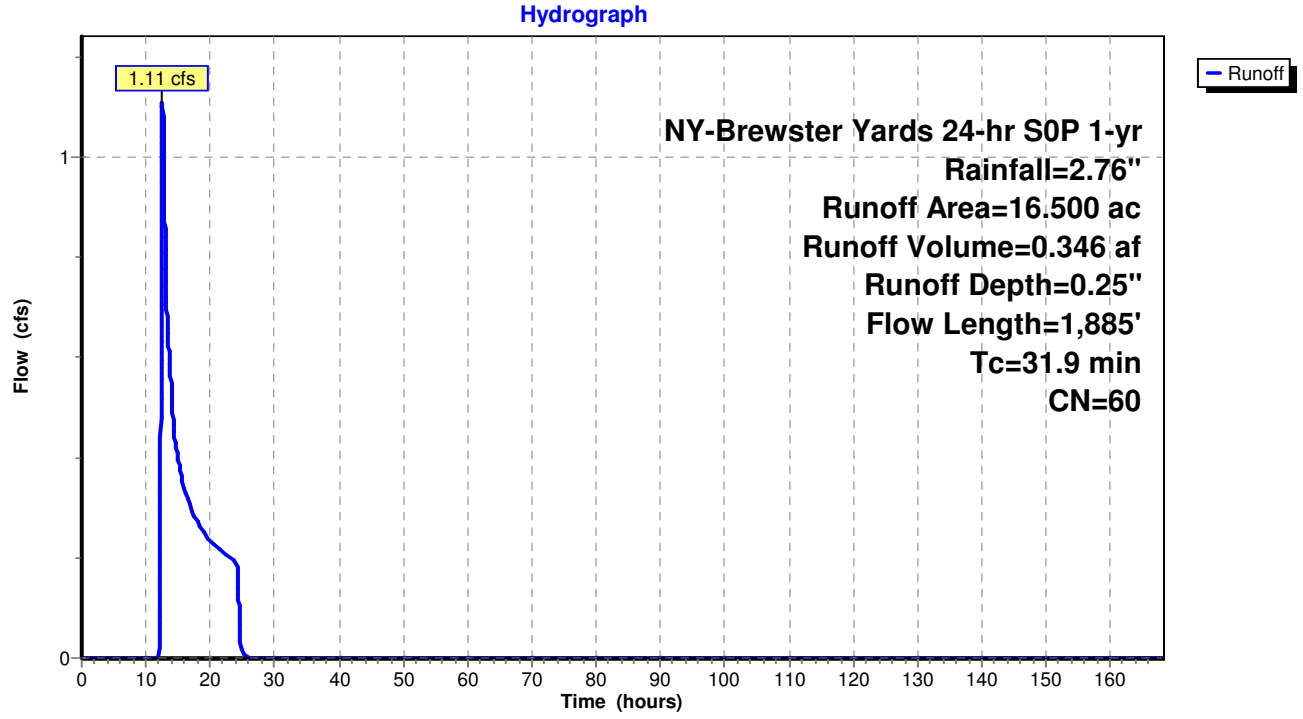
Runoff = 1.11 cfs @ 12.58 hrs, Volume= 0.346 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 1-yr Rainfall=2.76"

Area (ac)	CN	Description
12.900	55	Woods, Good, HSG B
3.500	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
16.500	60	Weighted Average
16.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	100	0.0190	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
7.9	885	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	900	0.0500	5.09	71.20	**Channel Flow,** Area= 14.0 sf Perim= 45.0' r= 0.31' n= 0.030 Earth, grassed & winding
31.9	1,885	Total			

Subcatchment 4.1S: Untreated

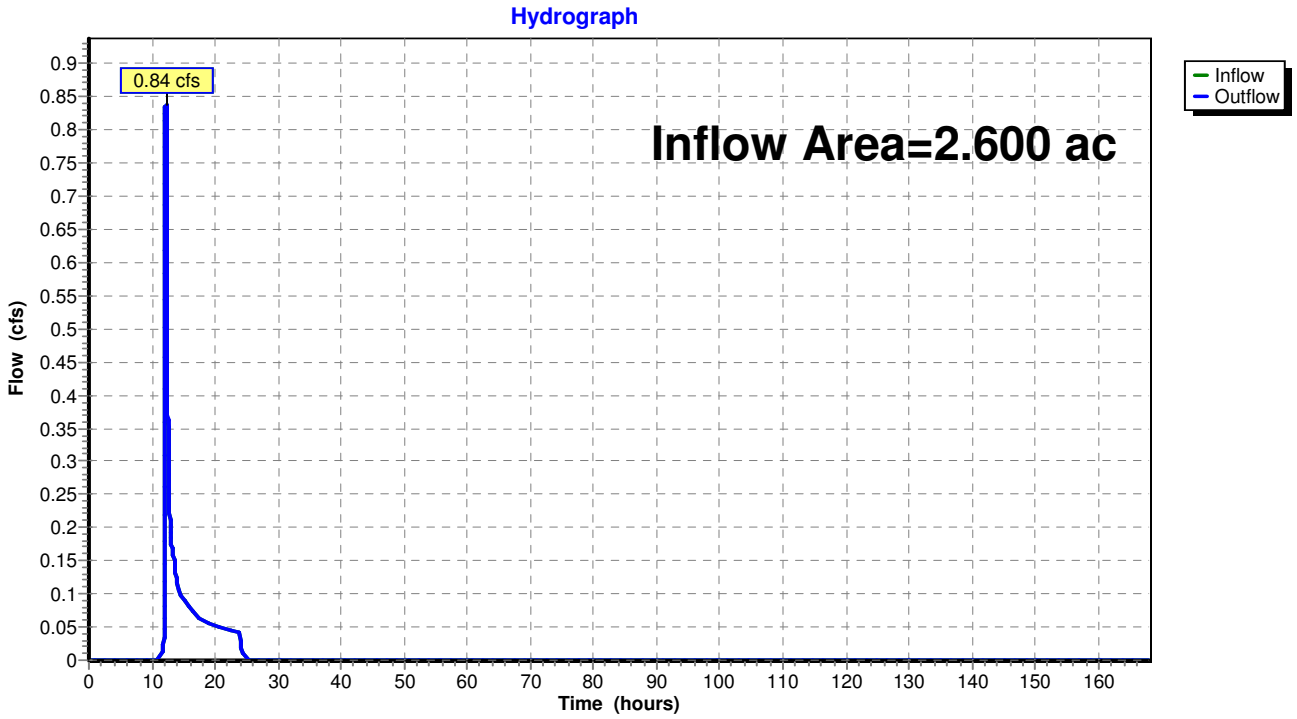


Summary for Reach DP 1:

Inflow Area = 2.600 ac, 0.00% Impervious, Inflow Depth = 0.47" for 1-yr event
Inflow = 0.84 cfs @ 12.20 hrs, Volume= 0.101 af
Outflow = 0.84 cfs @ 12.21 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 1:

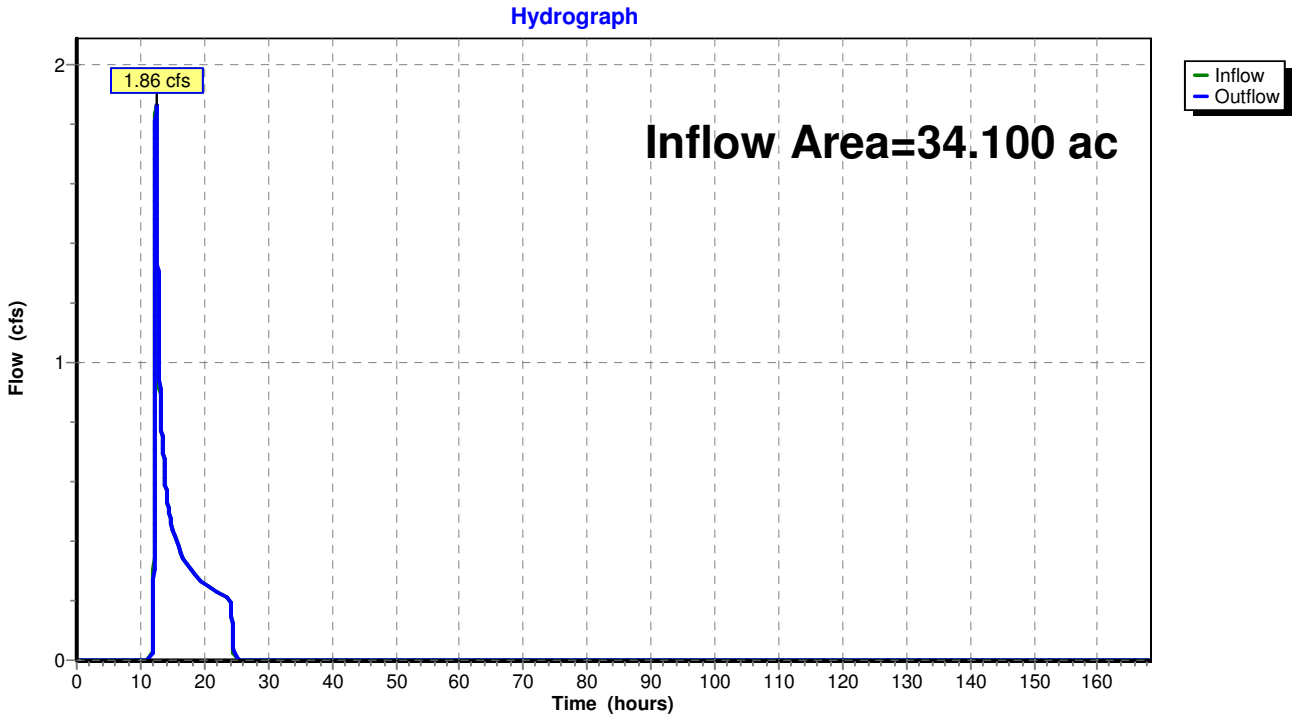


Summary for Reach DP 2:

Inflow Area = 34.100 ac, 8.80% Impervious, Inflow Depth = 0.15" for 1-yr event
Inflow = 1.86 cfs @ 12.41 hrs, Volume= 0.418 af
Outflow = 1.86 cfs @ 12.42 hrs, Volume= 0.418 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 2:

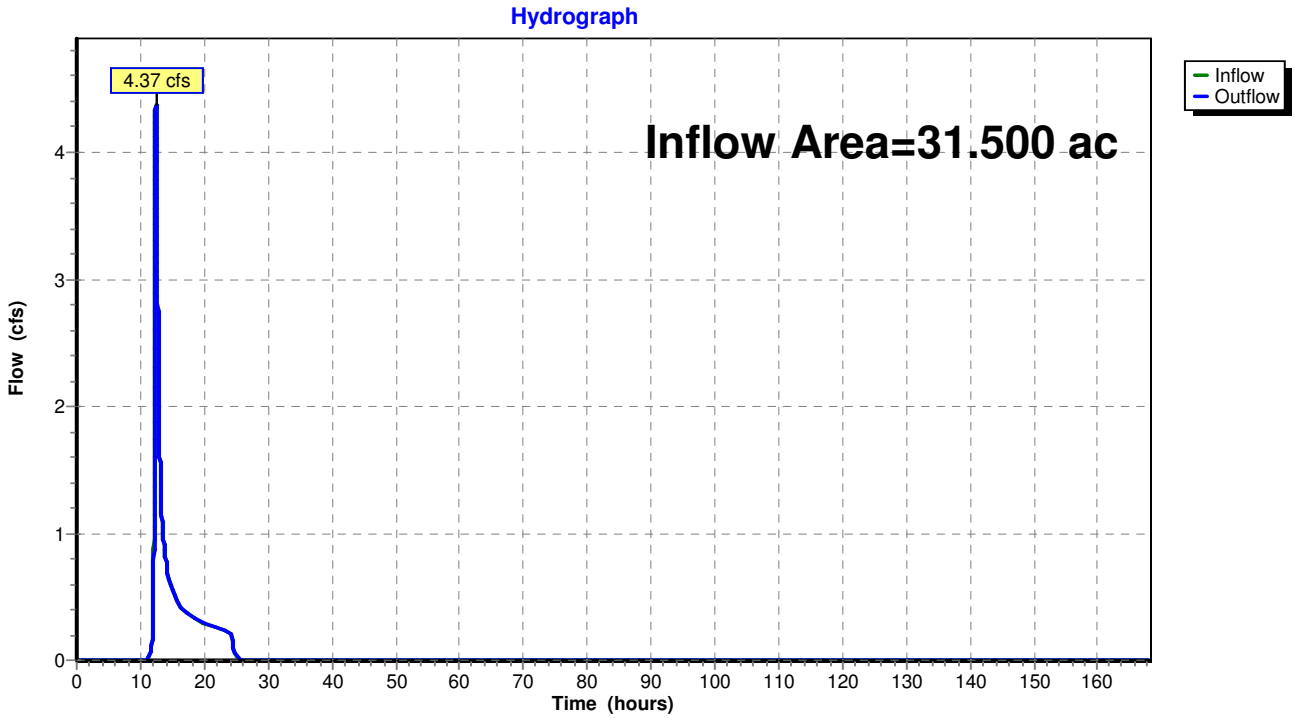


Summary for Reach DP 3:

Inflow Area = 31.500 ac, 28.25% Impervious, Inflow Depth = 0.24" for 1-yr event
Inflow = 4.37 cfs @ 12.40 hrs, Volume= 0.623 af
Outflow = 4.37 cfs @ 12.41 hrs, Volume= 0.623 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 3:

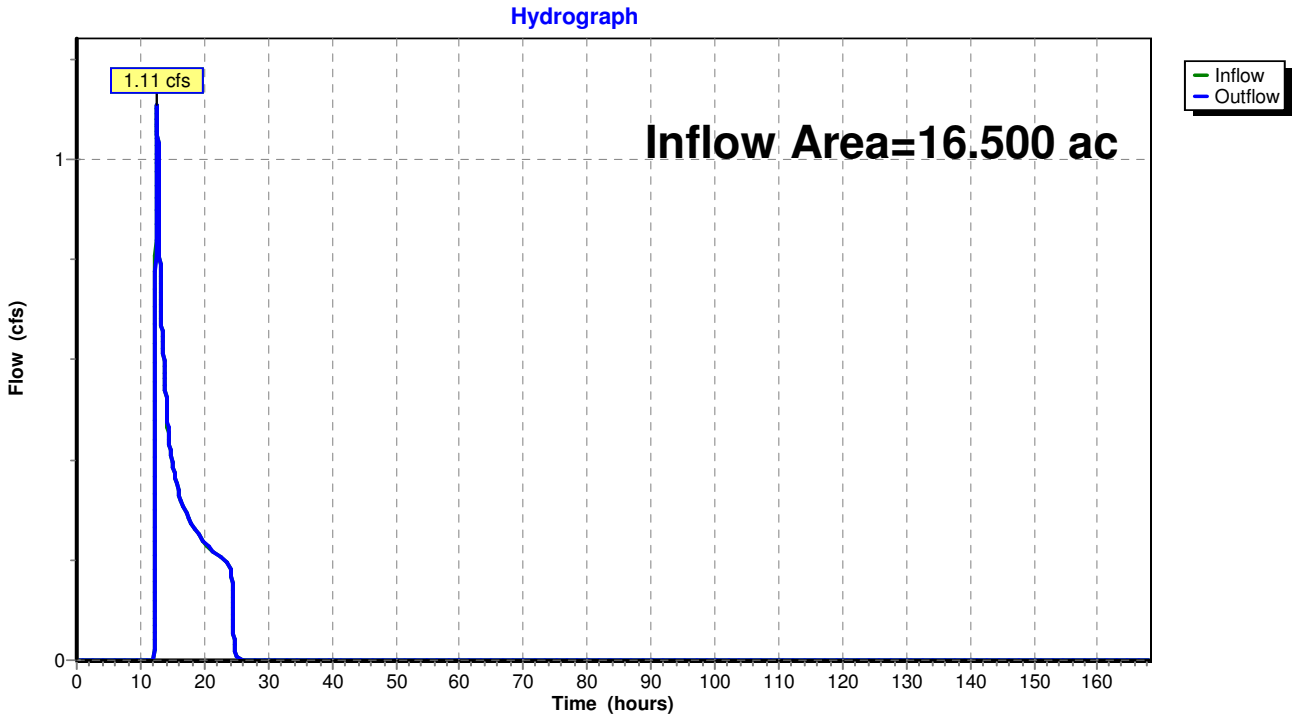


Summary for Reach DP 4:

Inflow Area = 16.500 ac, 0.00% Impervious, Inflow Depth = 0.25" for 1-yr event
Inflow = 1.11 cfs @ 12.58 hrs, Volume= 0.346 af
Outflow = 1.11 cfs @ 12.59 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 4:



Summary for Pond 1.1 IB: North Turnaround Infiltration Basin

Inflow Area = 0.500 ac, 0.00% Impervious, Inflow Depth = 1.19" for 1-yr event
Inflow = 0.65 cfs @ 12.12 hrs, Volume= 0.050 af
Outflow = 0.03 cfs @ 16.19 hrs, Volume= 0.050 af, Atten= 96%, Lag= 244.5 min
Discarded = 0.03 cfs @ 16.19 hrs, Volume= 0.050 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 624.25' @ 16.19 hrs Surf.Area= 1,177 sf Storage= 1,138 cf
Flood Elev= 625.50' Surf.Area= 1,765 sf Storage= 2,979 cf

Plug-Flow detention time= 495.7 min calculated for 0.050 af (100% of inflow)
Center-of-Mass det. time= 495.8 min (1,363.1 - 867.3)

Volume	Invert	Avail.Storage	Storage Description
#1	623.00'	3,920 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

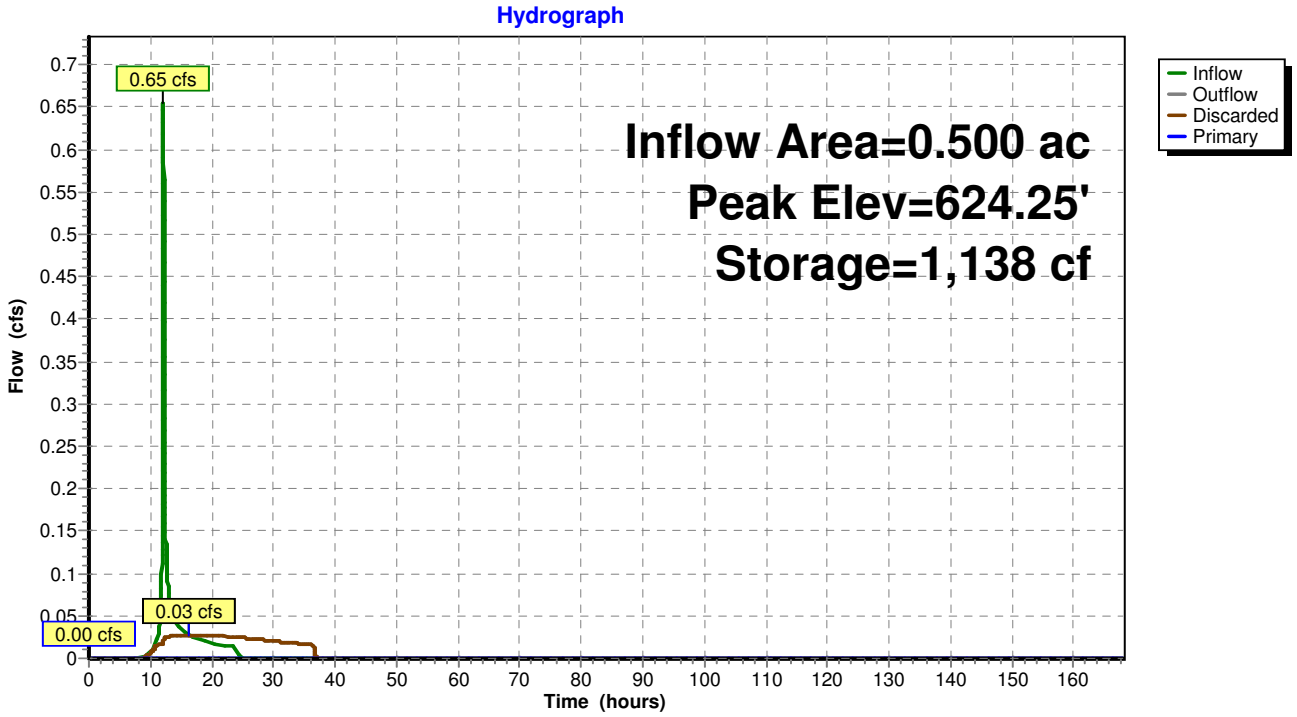
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
623.00	660	0	0
624.00	1,060	860	860
626.00	2,000	3,060	3,920

Device	Routing	Invert	Outlet Devices
#1	Primary	622.00'	**12.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 622.00' / 621.80' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	625.10'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	623.00'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.03 cfs @ 16.19 hrs HW=624.25' (Free Discharge)
↑└**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=623.00' TW=0.00' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.00 cfs of 2.41 cfs potential flow)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1.1 IB: North Turnaround Infiltration Basin



Stage-Area-Storage for Pond 1.1 IB: North Turnaround Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
623.00	660	0
623.05	680	33
623.10	700	68
623.15	720	103
623.20	740	140
623.25	760	178
623.30	780	216
623.35	800	256
623.40	820	296
623.45	840	338
623.50	860	380
623.55	880	423
623.60	900	468
623.65	920	513
623.70	940	560
623.75	960	608
623.80	980	656
623.85	1,000	706
623.90	1,020	756
623.95	1,040	808
624.00	1,060	860
624.05	1,083	914
624.10	1,107	968
624.15	1,130	1,024
624.20	1,154	1,081
624.25	1,178	1,140
624.30	1,201	1,199
624.35	1,225	1,260
624.40	1,248	1,322
624.45	1,272	1,385
624.50	1,295	1,449
624.55	1,318	1,514
624.60	1,342	1,581
624.65	1,365	1,648
624.70	1,389	1,717
624.75	1,413	1,787
624.80	1,436	1,858
624.85	1,460	1,931
624.90	1,483	2,004
624.95	1,507	2,079
625.00	1,530	2,155
625.05	1,553	2,232
625.10	1,577	2,310
625.15	1,600	2,390
625.20	1,624	2,470
625.25	1,648	2,552
625.30	1,671	2,635
625.35	1,695	2,719
625.40	1,718	2,805
625.45	1,742	2,891
625.50	1,765	2,979
625.55	1,788	3,068
625.60	1,812	3,158
625.65	1,835	3,249
625.70	1,859	3,341
625.75	1,883	3,435
625.80	1,906	3,529
625.85	1,930	3,625
625.90	1,953	3,722
625.95	1,977	3,821
626.00	**2,000**	**3,920**

Summary for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 1.40" for 1-yr event
Inflow = 28.54 cfs @ 12.08 hrs, Volume= 1.973 af
Outflow = 0.39 cfs @ 24.08 hrs, Volume= 1.973 af, Atten= 99%, Lag= 720.4 min
Primary = 0.39 cfs @ 24.08 hrs, Volume= 1.973 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 666.75' @ 24.09 hrs Surf.Area= 22,337 sf Storage= 71,803 cf
Flood Elev= 669.50' Surf.Area= 34,100 sf Storage= 147,015 cf

Plug-Flow detention time= 2,488.6 min calculated for 1.973 af (100% of inflow)
Center-of-Mass det. time= 2,488.5 min (3,338.6 - 850.1)

Volume	Invert	Avail.Storage	Storage Description
#1	659.00'	240 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 600 cf Overall x 40.0% Voids
#2	660.00'	164,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		164,340 cf	Total Available Storage

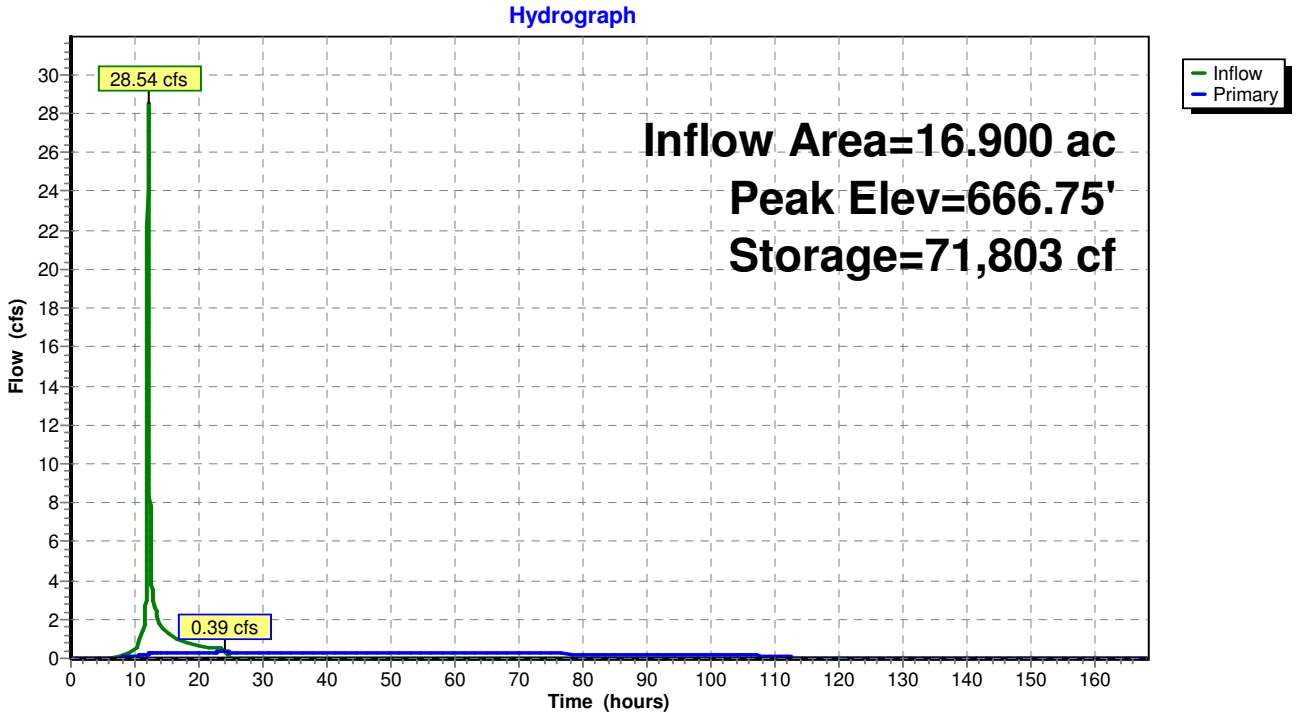
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
659.00	600	0	0
660.00	600	600	600

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	1,900	0	0
662.00	6,000	7,900	7,900
664.00	11,800	17,800	25,700
666.00	18,800	30,600	56,300
668.00	26,600	45,400	101,700
670.00	35,800	62,400	164,100

Device	Routing	Invert	Outlet Devices
#1	Primary	659.00'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	666.70'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.39 cfs @ 24.08 hrs HW=666.75' TW=660.87' (Dynamic Tailwater)
↑—**1=Orifice/Grate** (Orifice Controls 0.25 cfs @ 11.68 fps)
└—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.64 fps)

Pond 2.2 EDB: North Detention Basin, Orifice, & Weir



Stage-Area-Storage for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Elevation (feet)	Storage (cubic-feet)
659.00	0
659.15	36
659.30	72
659.45	108
659.60	144
659.75	180
659.90	216
660.05	338
660.20	661
660.35	1,031
660.50	1,446
660.65	1,908
660.80	2,416
660.95	2,970
661.10	3,570
661.25	4,217
661.40	4,909
661.55	5,648
661.70	6,432
661.85	7,263
662.00	8,140
662.15	9,073
662.30	10,070
662.45	11,134
662.60	12,262
662.75	13,456
662.90	14,714
663.05	16,039
663.20	17,428
663.35	18,883
663.50	20,403
663.65	21,988
663.80	23,638
663.95	25,354
664.10	27,138
664.25	28,999
664.40	30,940
664.55	32,959
664.70	35,058
664.85	37,234
665.00	39,490
665.15	41,824
665.30	44,237
665.45	46,729
665.60	49,300
665.75	51,949
665.90	54,677
666.05	57,485
666.20	60,378
666.35	63,359
666.50	66,428
666.65	69,584
666.80	72,828
666.95	76,160
667.10	79,580
667.25	83,087
667.40	86,682
667.55	90,365
667.70	94,136
667.85	97,994
668.00	101,940
668.15	105,982
668.30	110,127
668.45	114,376
668.60	118,728
668.75	123,184
668.90	127,743
669.05	132,406
669.20	137,172
669.35	142,042
669.50	147,015
669.65	152,092
669.80	157,272
669.95	**162,556**

Summary for Pond 2.3 IB: North Infiltration Basin

Inflow Area = 17.900 ac, 16.76% Impervious, Inflow Depth = 1.37" for 1-yr event
Inflow = 1.12 cfs @ 12.05 hrs, Volume= 2.036 af
Outflow = 0.19 cfs @ 94.58 hrs, Volume= 2.036 af, Atten= 83%, Lag= 4,951.7 min
Discarded = 0.19 cfs @ 94.58 hrs, Volume= 2.036 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 655.77' @ 94.58 hrs Surf.Area= 16,079 sf Storage= 25,593 cf
Flood Elev= 659.20' Surf.Area= 22,700 sf Storage= 92,000 cf

Plug-Flow detention time= 1,561.4 min calculated for 2.036 af (100% of inflow)
Center-of-Mass det. time= 1,561.5 min (4,824.7 - 3,263.3)

Volume	Invert	Avail.Storage	Storage Description
#1	654.00'	110,800 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

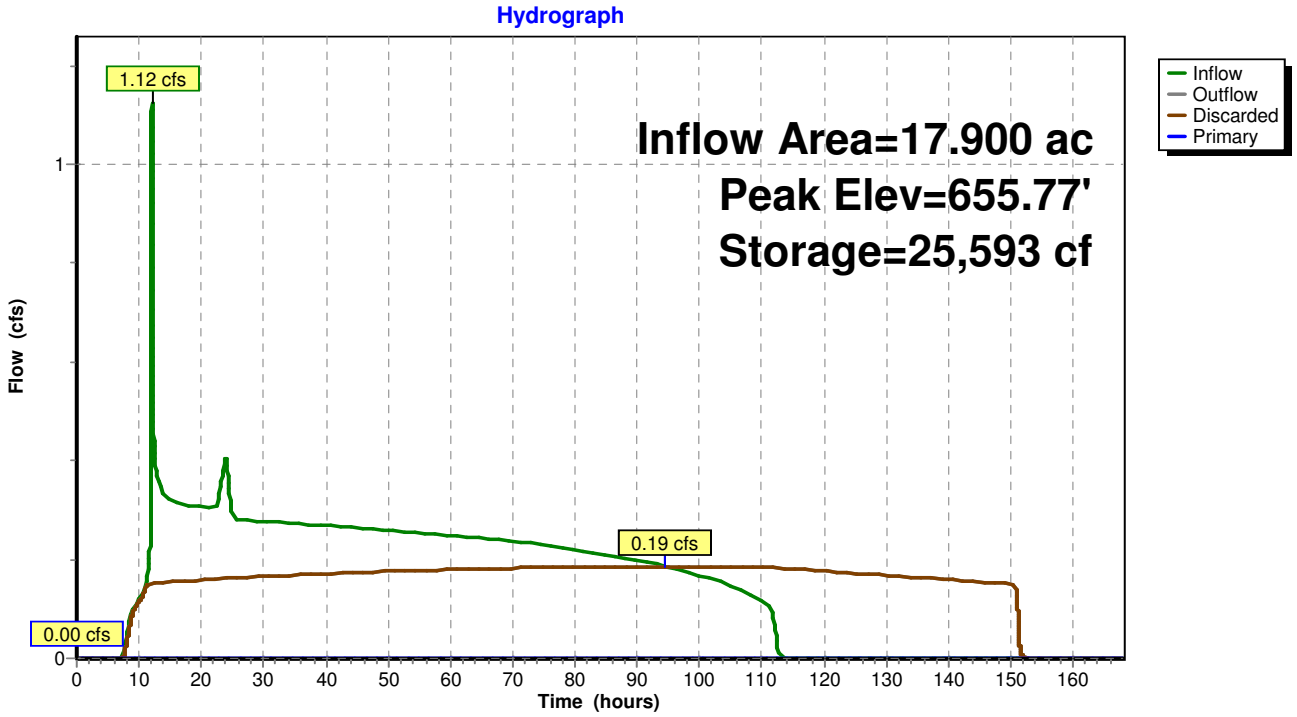
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
654.00	12,900	0	0
656.00	16,500	29,400	29,400
658.00	20,300	36,800	66,200
660.00	24,300	44,600	110,800

Device	Routing	Invert	Outlet Devices
#1	Primary	653.00'	**6.0" Round Culvert** L= 220.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 653.00' / 641.00' S= 0.0545 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	659.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	654.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.19 cfs @ 94.58 hrs HW=655.77' (Free Discharge)
↑└**3=Exfiltration** (Exfiltration Controls 0.19 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=654.00' TW=0.00' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.00 cfs of 0.82 cfs potential flow)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2.3 IB: North Infiltration Basin



Stage-Area-Storage for Pond 2.3 IB: North Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
654.00	12,900	0
654.10	13,080	1,299
654.20	13,260	2,616
654.30	13,440	3,951
654.40	13,620	5,304
654.50	13,800	6,675
654.60	13,980	8,064
654.70	14,160	9,471
654.80	14,340	10,896
654.90	14,520	12,339
655.00	14,700	13,800
655.10	14,880	15,279
655.20	15,060	16,776
655.30	15,240	18,291
655.40	15,420	19,824
655.50	15,600	21,375
655.60	15,780	22,944
655.70	15,960	24,531
655.80	16,140	26,136
655.90	16,320	27,759
656.00	16,500	29,400
656.10	16,690	31,060
656.20	16,880	32,738
656.30	17,070	34,435
656.40	17,260	36,152
656.50	17,450	37,888
656.60	17,640	39,642
656.70	17,830	41,416
656.80	18,020	43,208
656.90	18,210	45,019
657.00	18,400	46,850
657.10	18,590	48,700
657.20	18,780	50,568
657.30	18,970	52,455
657.40	19,160	54,362
657.50	19,350	56,288
657.60	19,540	58,232
657.70	19,730	60,196
657.80	19,920	62,178
657.90	20,110	64,179
658.00	20,300	66,200
658.10	20,500	68,240
658.20	20,700	70,300
658.30	20,900	72,380
658.40	21,100	74,480
658.50	21,300	76,600
658.60	21,500	78,740
658.70	21,700	80,900
658.80	21,900	83,080
658.90	22,100	85,280
659.00	22,300	87,500
659.10	22,500	89,740
659.20	22,700	92,000
659.30	22,900	94,280
659.40	23,100	96,580
659.50	23,300	98,900
659.60	23,500	101,240
659.70	23,700	103,600
659.80	23,900	105,980
659.90	24,100	108,380
660.00	**24,300**	**110,800**

Summary for Pond 2.4 EDB: North Lower Detention Basin

Inflow Area = 0.600 ac, 0.00% Impervious, Inflow Depth = 0.76" for 1-yr event
Inflow = 0.55 cfs @ 12.05 hrs, Volume= 0.038 af
Outflow = 0.51 cfs @ 12.09 hrs, Volume= 0.038 af, Atten= 7%, Lag= 2.3 min
Primary = 0.25 cfs @ 12.09 hrs, Volume= 0.019 af
Secondary = 0.25 cfs @ 12.09 hrs, Volume= 0.019 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Starting Elev= 594.00' Surf.Area= 0 sf Storage= 0 cf
Peak Elev= 651.32' @ 12.09 hrs Surf.Area= 800 sf Storage= 102 cf
Flood Elev= 659.50' Surf.Area= 17,950 sf Storage= 90,758 cf

Plug-Flow detention time= 11.0 min calculated for 0.038 af (100% of inflow)
Center-of-Mass det. time= 10.9 min (907.3 - 896.4)

Volume	Invert	Avail.Storage	Storage Description
#1	651.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	652.00'	99,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		99,520 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
651.00	800	0	0
652.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
652.00	7,500	0	0
654.00	9,800	17,300	17,300
656.00	12,200	22,000	39,300
658.00	14,900	27,100	66,400
660.00	17,900	32,800	99,200

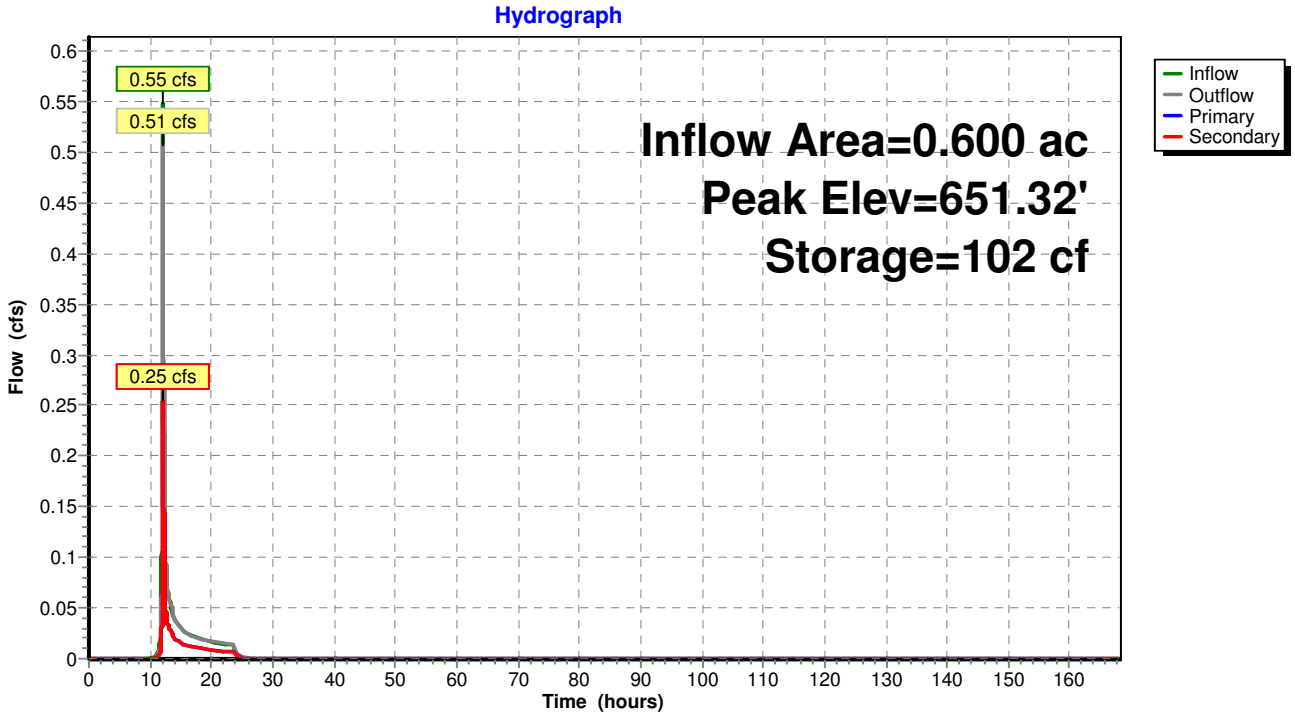
Device	Routing	Invert	Outlet Devices
#1	Primary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	656.80'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	651.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#5	Device 4	656.40'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

#6 Device 4 651.00' **6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.25 cfs @ 12.09 hrs HW=651.32' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.25 cfs of 0.62 cfs potential flow)
  ├─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.25 cfs @ 1.92 fps)

Secondary OutFlow Max=0.25 cfs @ 12.09 hrs HW=651.32' TW=0.00' (Dynamic Tailwater)
└─**4=Culvert** (Passes 0.25 cfs of 0.62 cfs potential flow)
  ├─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**6=Orifice/Grate** (Orifice Controls 0.25 cfs @ 1.92 fps)

Pond 2.4 EDB: North Lower Detention Basin



Stage-Area-Storage for Pond 2.4 EDB: North Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
651.00	0
651.10	32
651.20	64
651.30	96
651.40	128
651.50	160
651.60	192
651.70	224
651.80	256
651.90	288
652.00	320
652.10	1,076
652.20	1,843
652.30	2,622
652.40	3,412
652.50	4,214
652.60	5,027
652.70	5,852
652.80	6,688
652.90	7,536
653.00	8,395
653.10	9,266
653.20	10,148
653.30	11,042
653.40	11,947
653.50	12,864
653.60	13,792
653.70	14,732
653.80	15,683
653.90	16,646
654.00	17,620
654.10	18,606
654.20	19,604
654.30	20,614
654.40	21,636
654.50	22,670
654.60	23,716
654.70	24,774
654.80	25,844
654.90	26,926
655.00	28,020
655.10	29,126
655.20	30,244
655.30	31,374
655.40	32,516
655.50	33,670
655.60	34,836
655.70	36,014
655.80	37,204
655.90	38,406
656.00	39,620
656.10	40,847
656.20	42,087
656.30	43,341
656.40	44,608
656.50	45,889
656.60	47,183
656.70	48,491
656.80	49,812
656.90	51,147
657.00	52,495
657.10	53,857
657.20	55,232
657.30	56,621
657.40	58,023
657.50	59,439
657.60	60,868
657.70	62,311
657.80	63,767
657.90	65,237
658.00	66,720
658.10	68,218
658.20	69,730
658.30	71,257
658.40	72,800
658.50	74,358
658.60	75,930
658.70	77,518
658.80	79,120
658.90	80,737
659.00	82,370
659.10	84,018
659.20	85,680
659.30	87,357
659.40	89,050
659.50	90,758
659.60	92,480
659.70	94,218
659.80	95,970
659.90	97,737
660.00	**99,520**

Summary for Pond 3.2 EDB: Entrance Detention Basin

Inflow Area = 5.900 ac, 45.76% Impervious, Inflow Depth = 1.39" for 1-yr event
Inflow = 8.73 cfs @ 12.13 hrs, Volume= 0.682 af
Outflow = 0.55 cfs @ 14.17 hrs, Volume= 0.682 af, Atten= 94%, Lag= 122.6 min
Primary = 0.55 cfs @ 14.17 hrs, Volume= 0.682 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 668.59' @ 14.17 hrs Surf.Area= 5,564 sf Storage= 13,487 cf
Flood Elev= 673.50' Surf.Area= 13,525 sf Storage= 57,264 cf

Plug-Flow detention time= 270.3 min calculated for 0.682 af (100% of inflow)
Center-of-Mass det. time= 270.3 min (1,124.0 - 853.6)

Volume	Invert	Avail.Storage	Storage Description
#1	663.00'	120 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 300 cf Overall x 40.0% Voids
#2	664.00'	64,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		64,120 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
663.00	300	0	0
664.00	300	300	300

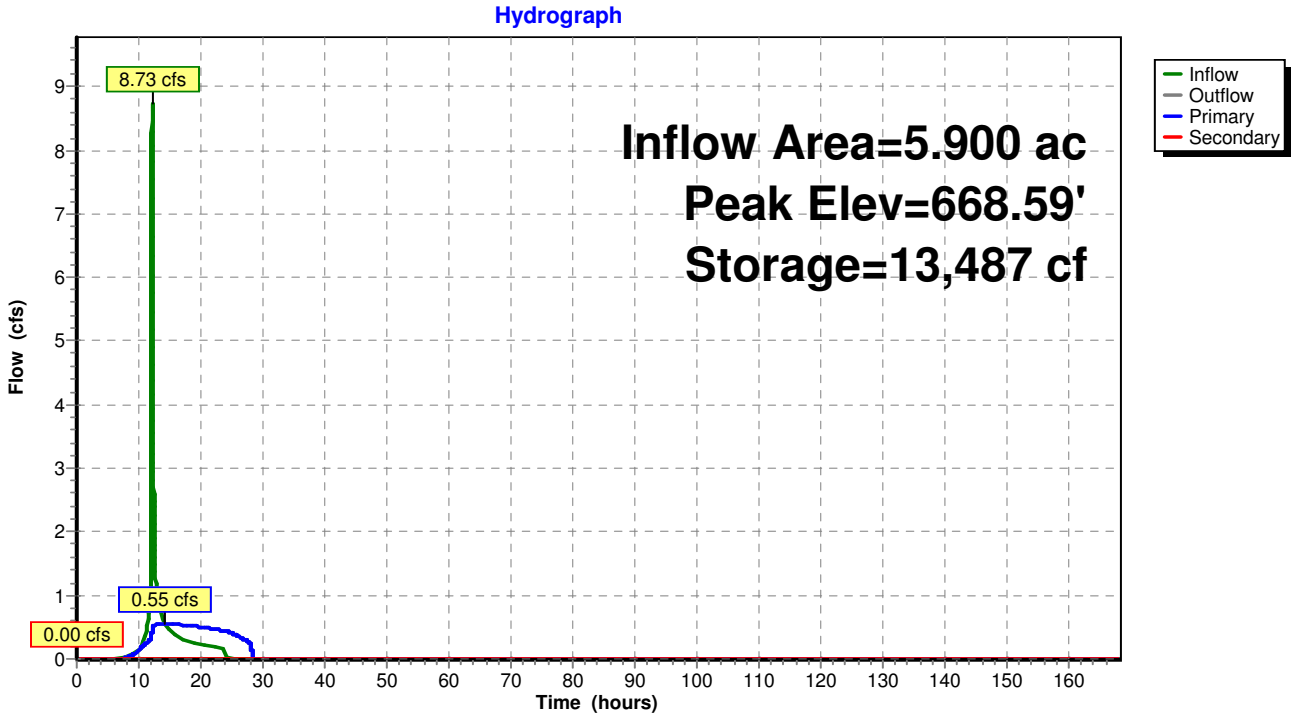
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
664.00	1,000	0	0
666.00	2,500	3,500	3,500
668.00	4,500	7,000	10,500
670.00	7,100	11,600	22,100
672.00	10,300	17,400	39,500
674.00	14,200	24,500	64,000

Device	Routing	Invert	Outlet Devices
#1	Primary	663.00'	**18.0" Round Culvert** L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 663.00' / 656.00' S= 0.0437 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	663.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	672.90'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	671.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.55 cfs @ 14.17 hrs HW=668.59' TW=616.99' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.55 cfs of 18.71 cfs potential flow)
  └─**2=Orifice/Grate** (Orifice Controls 0.55 cfs @ 11.25 fps)
  └─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=663.00' TW=0.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.2 EDB: Entrance Detention Basin



Stage-Area-Storage for Pond 3.2 EDB: Entrance Detention Basin

Elevation (feet)	Storage (cubic-feet)
663.00	0
663.15	18
663.30	36
663.45	54
663.60	72
663.75	90
663.90	108
664.05	171
664.20	335
664.35	516
664.50	714
664.65	928
664.80	1,160
664.95	1,408
665.10	1,674
665.25	1,956
665.40	2,255
665.55	2,571
665.70	2,904
665.85	3,253
666.00	3,620
666.15	4,006
666.30	4,415
666.45	4,846
666.60	5,300
666.75	5,776
666.90	6,275
667.05	6,796
667.20	7,340
667.35	7,906
667.50	8,495
667.65	9,106
667.80	9,740
667.95	10,396
668.10	11,077
668.25	11,786
668.40	12,524
668.55	13,292
668.70	14,089
668.85	14,915
669.00	15,770
669.15	16,655
669.30	17,568
669.45	18,512
669.60	19,484
669.75	20,486
669.90	21,516
670.05	22,577
670.20	23,672
670.35	24,803
670.50	25,970
670.65	27,173
670.80	28,412
670.95	29,687
671.10	30,998
671.25	32,345
671.40	33,728
671.55	35,147
671.70	36,602
671.85	38,093
672.00	39,620
672.15	41,187
672.30	42,798
672.45	44,452
672.60	46,151
672.75	47,893
672.90	49,680
673.05	51,510
673.20	53,384
673.35	55,302
673.50	57,264
673.65	59,269
673.80	61,319
673.95	**63,412**

Summary for Pond 3.5 EDB: South Detention Basin

Inflow Area = 14.000 ac, 37.86% Impervious, Inflow Depth = 1.40" for 1-yr event
Inflow = 26.05 cfs @ 12.04 hrs, Volume= 1.630 af
Outflow = 0.63 cfs @ 18.02 hrs, Volume= 1.630 af, Atten= 98%, Lag= 358.5 min
Primary = 0.63 cfs @ 18.02 hrs, Volume= 1.630 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 627.33' @ 18.02 hrs Surf.Area= 11,230 sf Storage= 43,145 cf
Flood Elev= 633.50' Surf.Area= 20,300 sf Storage= 134,470 cf

Plug-Flow detention time= 778.7 min calculated for 1.630 af (100% of inflow)
Center-of-Mass det. time= 778.5 min (1,621.2 - 842.7)

Volume	Invert	Avail.Storage	Storage Description
#1	620.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	621.00'	144,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		144,420 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
620.00	800	0	0
621.00	800	800	800

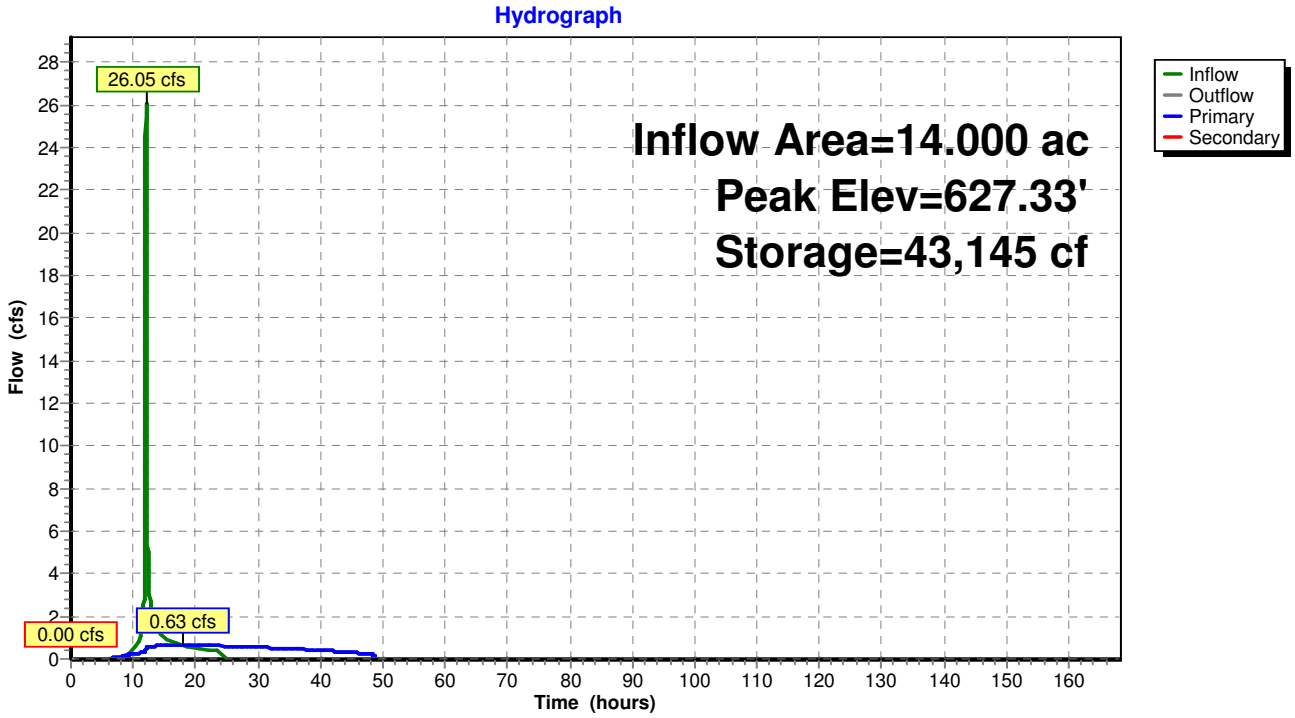
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
621.00	3,000	0	0
622.00	4,600	3,800	3,800
624.00	6,500	11,100	14,900
626.00	8,700	15,200	30,100
628.00	11,300	20,000	50,100
630.00	14,100	25,400	75,500
632.00	17,100	31,200	106,700
634.00	20,300	37,400	144,100

Device	Routing	Invert	Outlet Devices
#1	Primary	620.00'	**24.0" Round Culvert** L= 480.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 620.00' / 615.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	630.40'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	620.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	632.00'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.63 cfs @ 18.02 hrs HW=627.33' TW=616.96' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.63 cfs of 29.34 cfs potential flow)
  └**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
  └**3=Orifice/Grate** (Orifice Controls 0.63 cfs @ 12.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=620.00' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.5 EDB: South Detention Basin



Stage-Area-Storage for Pond 3.5 EDB: South Detention Basin

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
620.00	0	627.80	48,186
620.15	48	627.95	49,857
620.30	96	628.10	51,557
620.45	144	628.25	53,289
620.60	192	628.40	55,052
620.75	240	628.55	56,847
620.90	288	628.70	58,673
621.05	472	628.85	60,531
621.20	952	629.00	62,420
621.35	1,468	629.15	64,341
621.50	2,020	629.30	66,293
621.65	2,608	629.45	68,277
621.80	3,232	629.60	70,292
621.95	3,892	629.75	72,339
622.10	4,585	629.90	74,417
622.25	5,300	630.05	76,527
622.40	6,036	630.20	78,670
622.55	6,794	630.35	80,847
622.70	7,573	630.50	83,058
622.85	8,373	630.65	85,302
623.00	9,195	630.80	87,580
623.15	10,038	630.95	89,892
623.30	10,903	631.10	92,238
623.45	11,789	631.25	94,617
623.60	12,696	631.40	97,030
623.75	13,625	631.55	99,477
623.90	14,575	631.70	101,958
624.05	15,546	631.85	104,472
624.20	16,542	632.00	107,020
624.35	17,562	632.15	109,603
624.50	18,608	632.30	112,222
624.65	19,677	632.45	114,877
624.80	20,772	632.60	117,568
624.95	21,891	632.75	120,295
625.10	23,036	632.90	123,058
625.25	24,204	633.05	125,857
625.40	25,398	633.20	128,692
625.55	26,616	633.35	131,563
625.70	27,860	633.50	134,470
625.85	29,127	633.65	137,413
626.00	30,420	633.80	140,392
626.15	31,740	633.95	**143,407**
626.30	33,088		
626.45	34,467		
626.60	35,874		
626.75	37,311		
626.90	38,776		
627.05	40,272		
627.20	41,796		
627.35	43,350		
627.50	44,933		
627.65	46,545		

Summary for Pond 3.6lB: South Upper Infiltration Basin

Inflow Area = 20.800 ac, 38.46% Impervious, Inflow Depth = 1.35" for 1-yr event
Inflow = 1.20 cfs @ 14.85 hrs, Volume= 2.334 af
Outflow = 1.17 cfs @ 18.70 hrs, Volume= 2.334 af, Atten= 3%, Lag= 230.9 min
Discarded = 1.17 cfs @ 18.70 hrs, Volume= 2.334 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 609.11' @ 18.70 hrs Surf.Area= 6,735 sf Storage= 750 cf
Flood Elev= 617.50' Surf.Area= 18,675 sf Storage= 104,556 cf

Plug-Flow detention time= 4.5 min calculated for 2.334 af (100% of inflow)
Center-of-Mass det. time= 4.5 min (1,475.1 - 1,470.6)

Volume	Invert	Avail.Storage	Storage Description
#1	609.00'	114,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

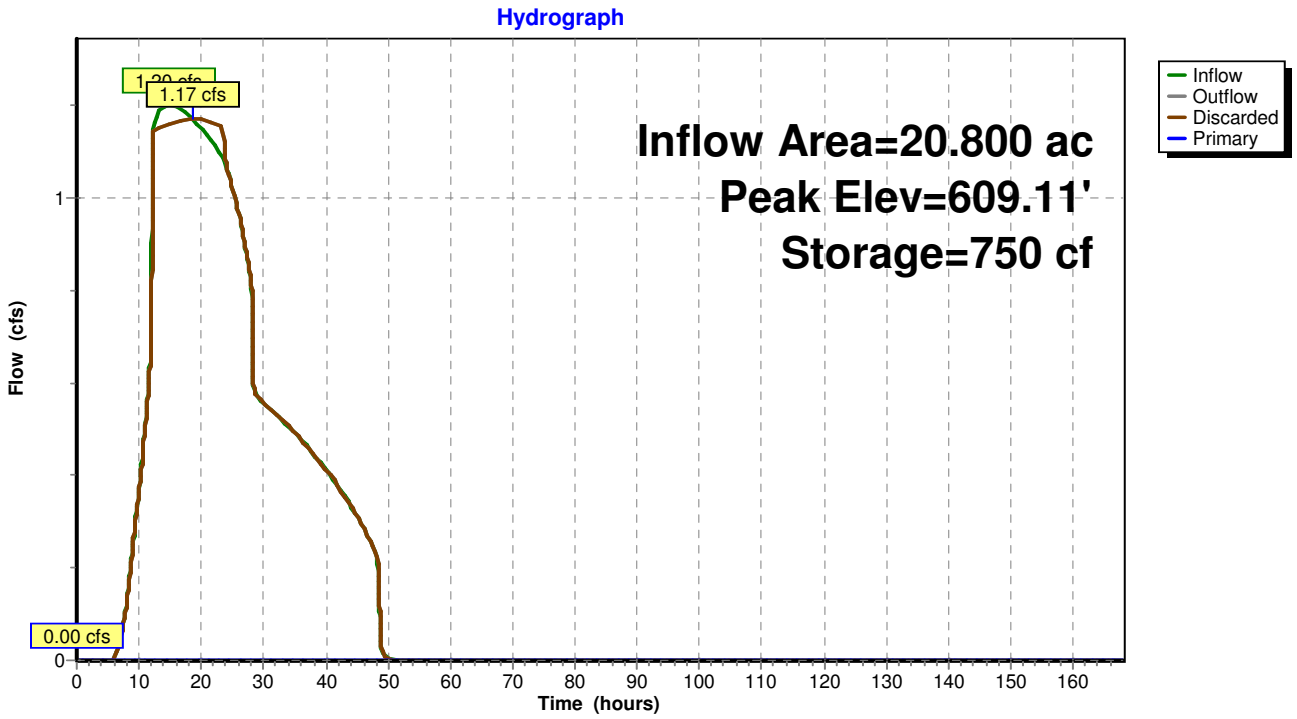
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
609.00	6,600	0	0
610.00	7,800	7,200	7,200
612.00	10,400	18,200	25,400
614.00	13,200	23,600	49,000
616.00	16,200	29,400	78,400
618.00	19,500	35,700	114,100

Device	Routing	Invert	Outlet Devices
#1	Primary	608.00'	**12.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 608.00' / 594.00' S= 0.1750 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	617.40'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	609.00'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=1.17 cfs @ 18.70 hrs HW=609.11' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.17 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=609.00' TW=593.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 2.67 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.6IB: South Upper Infiltration Basin



Stage-Area-Storage for Pond 3.6IB: South Upper Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
609.00	6,600	0
609.10	6,720	666
609.20	6,840	1,344
609.30	6,960	2,034
609.40	7,080	2,736
609.50	7,200	3,450
609.60	7,320	4,176
609.70	7,440	4,914
609.80	7,560	5,664
609.90	7,680	6,426
610.00	7,800	7,200
610.10	7,930	7,987
610.20	8,060	8,786
610.30	8,190	9,598
610.40	8,320	10,424
610.50	8,450	11,263
610.60	8,580	12,114
610.70	8,710	12,979
610.80	8,840	13,856
610.90	8,970	14,746
611.00	9,100	15,650
611.10	9,230	16,567
611.20	9,360	17,496
611.30	9,490	18,438
611.40	9,620	19,394
611.50	9,750	20,363
611.60	9,880	21,344
611.70	10,010	22,339
611.80	10,140	23,346
611.90	10,270	24,366
612.00	10,400	25,400
612.10	10,540	26,447
612.20	10,680	27,508
612.30	10,820	28,583
612.40	10,960	29,672
612.50	11,100	30,775
612.60	11,240	31,892
612.70	11,380	33,023
612.80	11,520	34,168
612.90	11,660	35,327
613.00	11,800	36,500
613.10	11,940	37,687
613.20	12,080	38,888
613.30	12,220	40,103
613.40	12,360	41,332
613.50	12,500	42,575
613.60	12,640	43,832
613.70	12,780	45,103
613.80	12,920	46,388
613.90	13,060	47,687
614.00	13,200	49,000
614.10	13,350	50,328
614.20	13,500	51,670
614.30	13,650	53,027
614.40	13,800	54,400
614.50	13,950	55,788
614.60	14,100	57,190
614.70	14,250	58,608
614.80	14,400	60,040
614.90	14,550	61,487
615.00	14,700	62,950
615.10	14,850	64,428
615.20	15,000	65,920
615.30	15,150	67,427
615.40	15,300	68,950
615.50	15,450	70,488
615.60	15,600	72,040
615.70	15,750	73,608
615.80	15,900	75,190
615.90	16,050	76,787
616.00	16,200	78,400
616.10	16,365	80,028
616.20	16,530	81,673
616.30	16,695	83,334
616.40	16,860	85,012
616.50	17,025	86,706
616.60	17,190	88,417
616.70	17,355	90,144
616.80	17,520	91,888
616.90	17,685	93,648
617.00	17,850	95,425
617.10	18,015	97,218
617.20	18,180	99,028
617.30	18,345	100,854
617.40	18,510	102,697
617.50	18,675	104,556
617.60	18,840	106,432
617.70	19,005	108,324
617.80	19,170	110,233
617.90	19,335	112,158
618.00	**19,500**	**114,100**

Summary for Pond 3.7EDB: South Lower Detention Basin

Inflow Area = 21.300 ac, 37.56% Impervious, Inflow Depth = 0.01" for 1-yr event
Inflow = 0.16 cfs @ 12.13 hrs, Volume= 0.017 af
Outflow = 0.09 cfs @ 12.26 hrs, Volume= 0.017 af, Atten= 46%, Lag= 7.8 min
Primary = 0.09 cfs @ 12.26 hrs, Volume= 0.017 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 593.26' @ 12.26 hrs Surf.Area= 800 sf Storage= 83 cf
Flood Elev= 605.50' Surf.Area= 16,125 sf Storage= 100,089 cf

Plug-Flow detention time= 32.2 min calculated for 0.017 af (100% of inflow)
Center-of-Mass det. time= 32.1 min (974.6 - 942.5)

Volume	Invert	Avail.Storage	Storage Description
#1	593.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	594.00'	107,600 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		107,920 cf	Total Available Storage

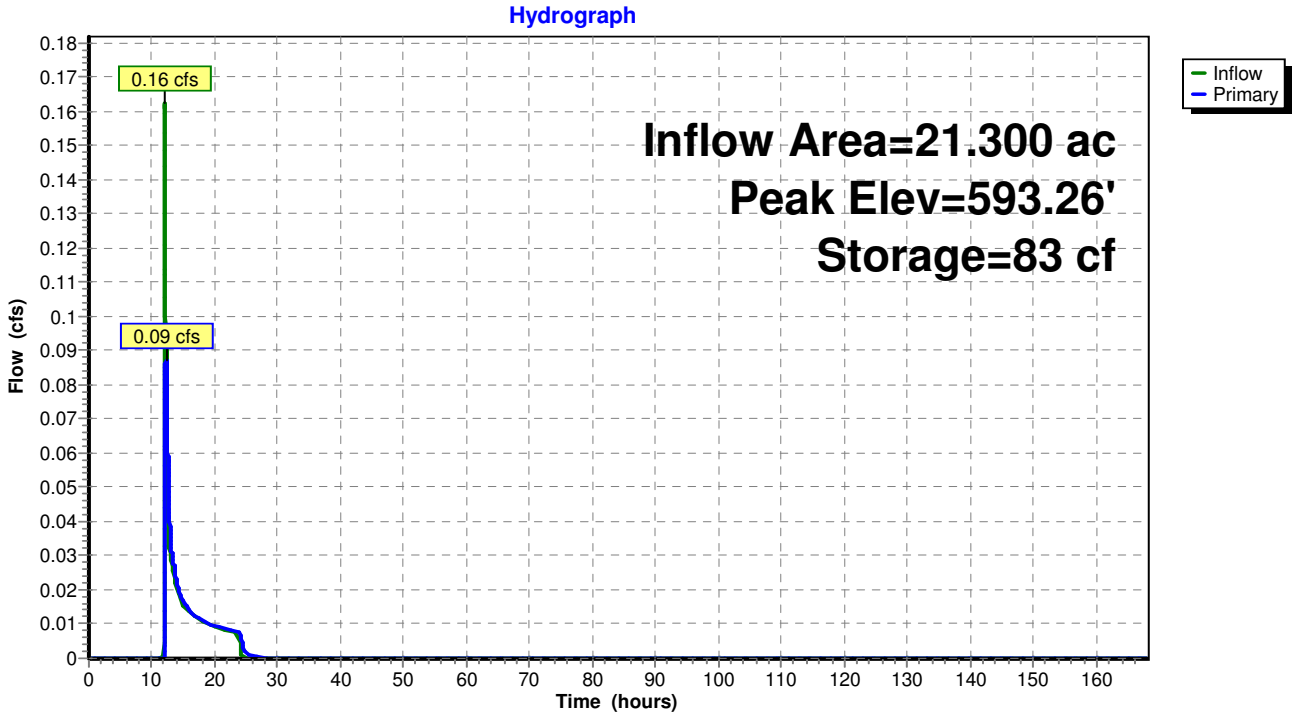
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
593.00	800	0	0
594.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	3,200	0	0
596.00	4,800	8,000	8,000
598.00	6,600	11,400	19,400
600.00	8,600	15,200	34,600
602.00	10,900	19,500	54,100
604.00	13,300	24,200	78,300
606.00	16,000	29,300	107,600

Device	Routing	Invert	Outlet Devices
#1	Primary	593.00'	**24.0" Round Culvert** L= 85.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 593.00' / 590.00' S= 0.0353 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	593.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	603.10'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.09 cfs @ 12.26 hrs HW=593.26' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.09 cfs of 0.42 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.09 cfs @ 1.77 fps)
  └─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.7EDB: South Lower Detention Basin



Stage-Area-Storage for Pond 3.7EDB: South Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
593.00	0
593.15	48
593.30	96
593.45	144
593.60	192
593.75	240
593.90	288
594.05	481
594.20	976
594.35	1,489
594.50	2,020
594.65	2,569
594.80	3,136
594.95	3,721
595.10	4,324
595.25	4,945
595.40	5,584
595.55	6,241
595.70	6,916
595.85	7,609
596.00	8,320
596.15	9,050
596.30	9,800
596.45	10,571
596.60	11,362
596.75	12,173
596.90	13,004
597.05	13,856
597.20	14,728
597.35	15,620
597.50	16,533
597.65	17,465
597.80	18,418
597.95	19,391
598.10	20,385
598.25	21,401
598.40	22,440
598.55	23,501
598.70	24,585
598.85	25,691
599.00	26,820
599.15	27,971
599.30	29,145
599.45	30,341
599.60	31,560
599.75	32,801
599.90	34,065
600.05	35,351
600.20	36,663
600.35	38,000
600.50	39,364
600.65	40,753
600.80	42,168
600.95	43,609
601.10	45,076
601.25	46,568
601.40	48,087
601.55	49,631
601.70	51,202
601.85	52,798
602.00	54,420
602.15	56,068
602.30	57,744
602.45	59,447
602.60	61,176
602.75	62,933
602.90	64,716
603.05	66,526
603.20	68,364
603.35	70,229
603.50	72,120
603.65	74,038
603.80	75,984
603.95	77,957
604.10	79,957
604.25	81,987
604.40	84,048
604.55	86,139
604.70	88,261
604.85	90,413
605.00	92,595
605.15	94,808
605.30	97,051
605.45	99,324
605.60	101,628
605.75	103,962
605.90	**106,327**

Summary for Pond FS 3.6:

Inflow Area = 19.900 ac, 40.20% Impervious, Inflow Depth = 1.39" for 1-yr event
Inflow = 1.18 cfs @ 15.30 hrs, Volume= 2.313 af
Outflow = 1.18 cfs @ 15.31 hrs, Volume= 2.313 af, Atten= 0%, Lag= 0.6 min
Primary = 1.18 cfs @ 15.31 hrs, Volume= 2.313 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

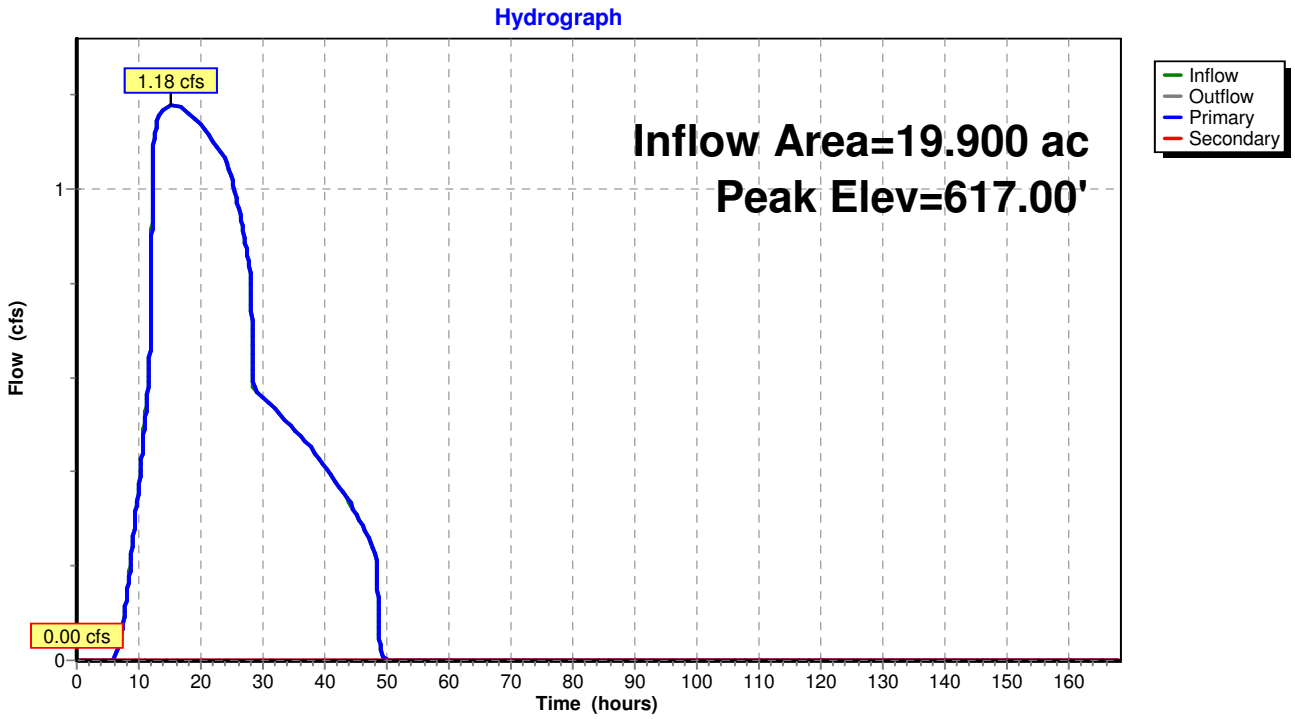
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 617.00' @ 15.31 hrs
Flood Elev= 629.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	615.20'	**6.0" Round Culvert** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 609.00' S= 0.0517 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 3	617.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	615.20'	**30.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 610.80' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.18 cfs @ 15.31 hrs HW=617.00' TW=609.08' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.18 cfs @ 6.00 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=615.20' TW=593.00' (Dynamic Tailwater)
└**3=Culvert** (Controls 0.00 cfs)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond FS 3.6:


Hydrograph
1.18 cfs
0.00 cfs
Inflow Area=19.900 ac
Peak Elev=617.00'
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
1
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

Stage-Area-Storage for Pond FS 3.6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
615.20	**0**	623.00	0
615.35	0	623.15	0
615.50	0	623.30	0
615.65	0	623.45	0
615.80	0	623.60	0
615.95	0	623.75	0
616.10	0	623.90	0
616.25	0	624.05	0
616.40	0	624.20	0
616.55	0	624.35	0
616.70	0	624.50	0
616.85	0	624.65	0
617.00	0	624.80	0
617.15	0	624.95	0
617.30	0	625.10	0
617.45	0	625.25	0
617.60	0	625.40	0
617.75	0	625.55	0
617.90	0	625.70	0
618.05	0	625.85	0
618.20	0	626.00	0
618.35	0	626.15	0
618.50	0	626.30	0
618.65	0	626.45	0
618.80	0	626.60	0
618.95	0	626.75	0
619.10	0	626.90	0
619.25	0	627.05	0
619.40	0	627.20	0
619.55	0	627.35	0
619.70	0	627.50	0
619.85	0	627.65	0
620.00	0	627.80	0
620.15	0	627.95	0
620.30	0	628.10	0
620.45	0	628.25	0
620.60	0	628.40	0
620.75	0	628.55	0
620.90	0	628.70	0
621.05	0	628.85	0
621.20	0	629.00	0
621.35	0	629.15	0
621.50	0	629.30	0
621.65	0	629.45	0
621.80	0		
621.95	0		
622.10	0		
622.25	0		
622.40	0		
622.55	0		
622.70	0		
622.85	0		

Summary for Pond OS 2.2: North Detention Flow Split

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 1.40" for 1-yr event
Inflow = 0.39 cfs @ 24.08 hrs, Volume= 1.973 af
Outflow = 0.39 cfs @ 24.09 hrs, Volume= 1.973 af, Atten= 0%, Lag= 0.6 min
Primary = 0.39 cfs @ 24.09 hrs, Volume= 1.973 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

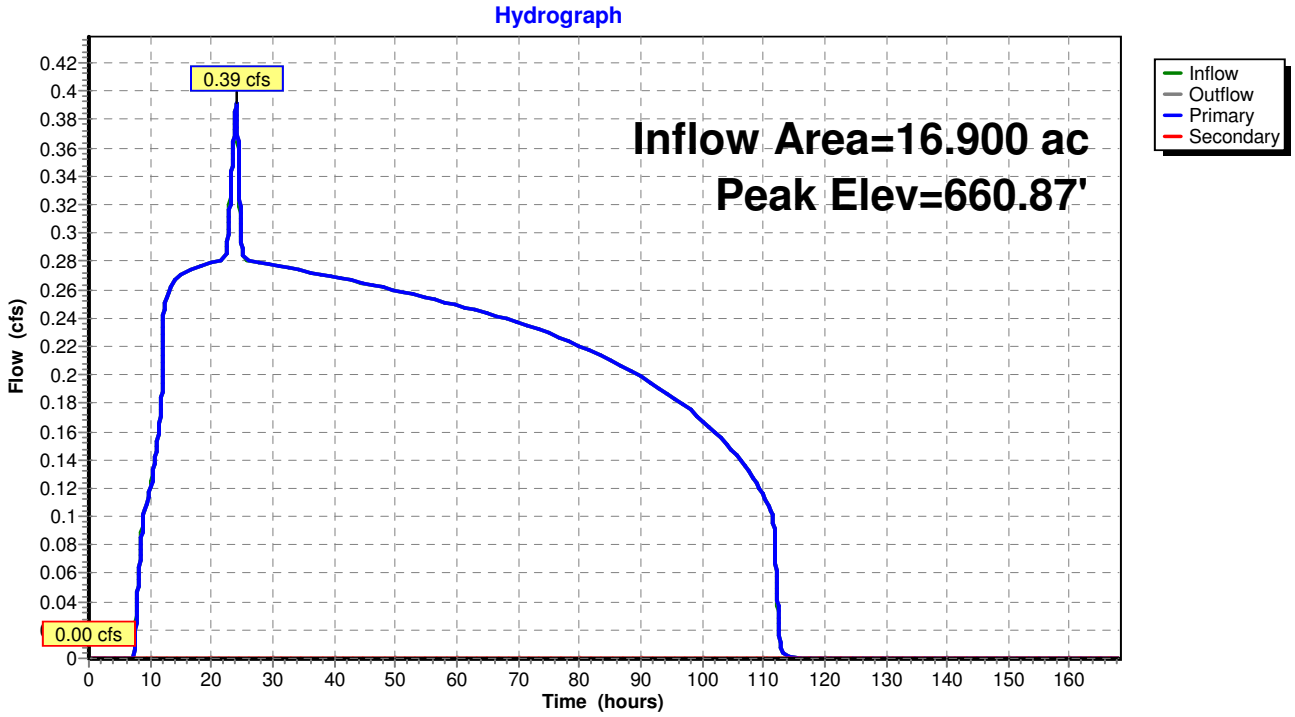
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 660.87' @ 24.09 hrs
Flood Elev= 669.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	658.00'	**6.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 658.00' / 656.00' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	658.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Secondary	660.90'	**36.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 660.90' / 656.00' S= 0.0612 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=0.39 cfs @ 24.09 hrs HW=660.87' TW=654.62' (Dynamic Tailwater)
↑**1=Culvert** (Passes 0.39 cfs of 0.90 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 0.39 cfs @ 7.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=658.00' TW=651.00' (Dynamic Tailwater)
↑**3=Culvert** (Controls 0.00 cfs)

Pond OS 2.2: North Detention Flow Split



Stage-Area-Storage for Pond OS 2.2: North Detention Flow Split

Elevation (feet)	Storage (cubic-feet)
658.00	**0**
658.15	0
658.30	0
658.45	0
658.60	0
658.75	0
658.90	0
659.05	0
659.20	0
659.35	0
659.50	0
659.65	0
659.80	0
659.95	0
660.10	0
660.25	0
660.40	0
660.55	0
660.70	0
660.85	0
661.00	0
661.15	0
661.30	0
661.45	0
661.60	0
661.75	0
661.90	0
662.05	0
662.20	0
662.35	0
662.50	0
662.65	0
662.80	0
662.95	0
663.10	0
663.25	0
663.40	0
663.55	0
663.70	0
663.85	0
664.00	0
664.15	0
664.30	0
664.45	0
664.60	0
664.75	0
664.90	0
665.05	0
665.20	0
665.35	0
665.50	0
665.65	0
665.80	0
665.95	0
666.10	0
666.25	0
666.40	0
666.55	0
666.70	0
666.85	0
667.00	0
667.15	0
667.30	0
667.45	0
667.60	0
667.75	0
667.90	0
668.05	0
668.20	0
668.35	0
668.50	0
668.65	0
668.80	0
668.95	0

Summary for Subcatchment 1.1S: North Turnaround

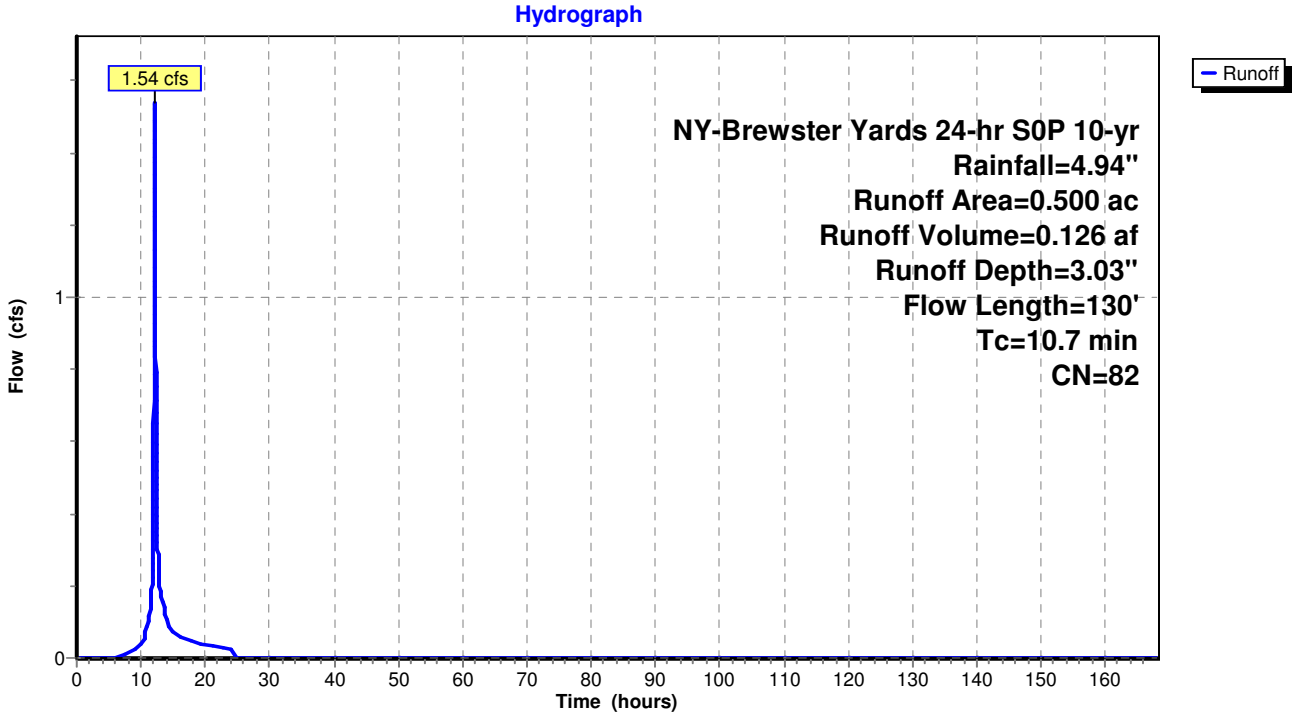
Runoff = 1.54 cfs @ 12.11 hrs, Volume= 0.126 af, Depth= 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
0.100	70	Woods, Good, HSG C
0.100	74	>75% Grass cover, Good, HSG C
0.100	87	Dirt roads, HSG C
0.200	89	Gravel roads, HSG C
0.500	82	Weighted Average
0.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	60	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.0	20	0.5000	0.32		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
0.2	50	0.0600	3.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
10.7	130	Total			

Subcatchment 1.1S: North Turnaround



Summary for Subcatchment 1.2S: Untreated

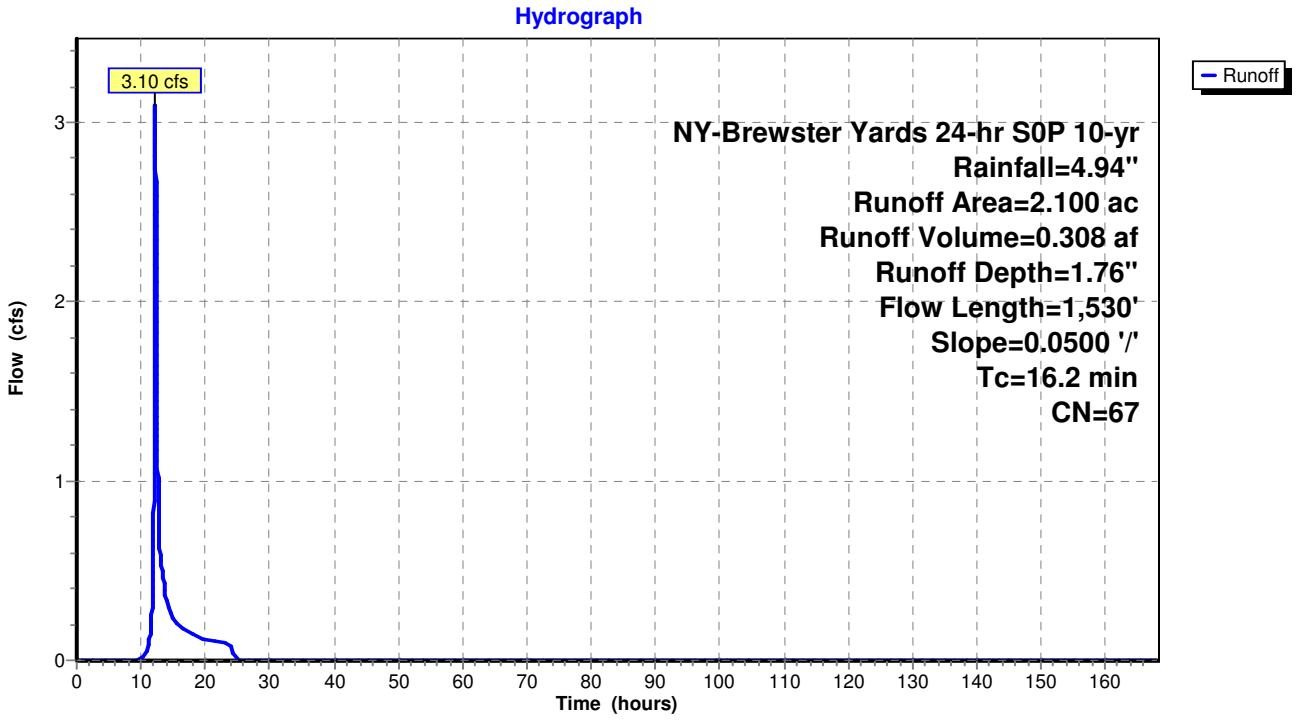
Runoff = 3.10 cfs @ 12.20 hrs, Volume= 0.308 af, Depth= 1.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
0.600	55	Woods, Good, HSG B
1.300	70	Woods, Good, HSG C
0.200	87	Dirt roads, HSG C
2.100	67	Weighted Average
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0500	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.8	1,430	0.0500	13.29	132.91	**Channel Flow,** Area= 10.0 sf Perim= 10.0' r= 1.00' n= 0.025 Earth, clean & winding
16.2	1,530	Total			

Subcatchment 1.2S: Untreated



Summary for Subcatchment 2.1S: North Sports & Parking (Piped)

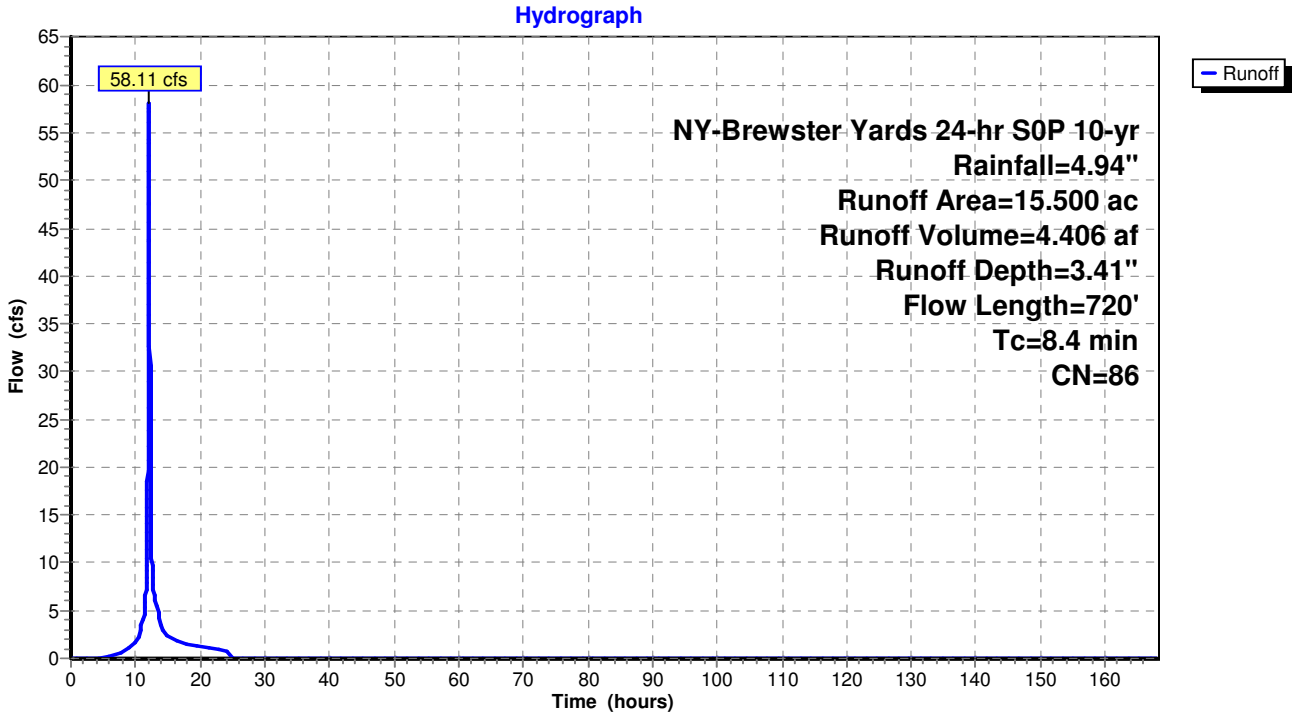
Runoff = 58.11 cfs @ 12.07 hrs, Volume= 4.406 af, Depth= 3.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

	Area (ac)	CN	Description
*	10.700	86	Field Turf
	1.000	61	>75% Grass cover, Good, HSG B
	0.800	74	>75% Grass cover, Good, HSG C
*	3.000	98	Impervious
	15.500	86	Weighted Average
	12.500		80.65% Pervious Area
	3.000		19.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
0.8	160	0.0438	3.14		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	190	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	270	0.0200	10.18	31.99	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
8.4	720	Total			

Subcatchment 2.1S: North Sports & Parking (Piped)



Summary for Subcatchment 2.2S: North Detention

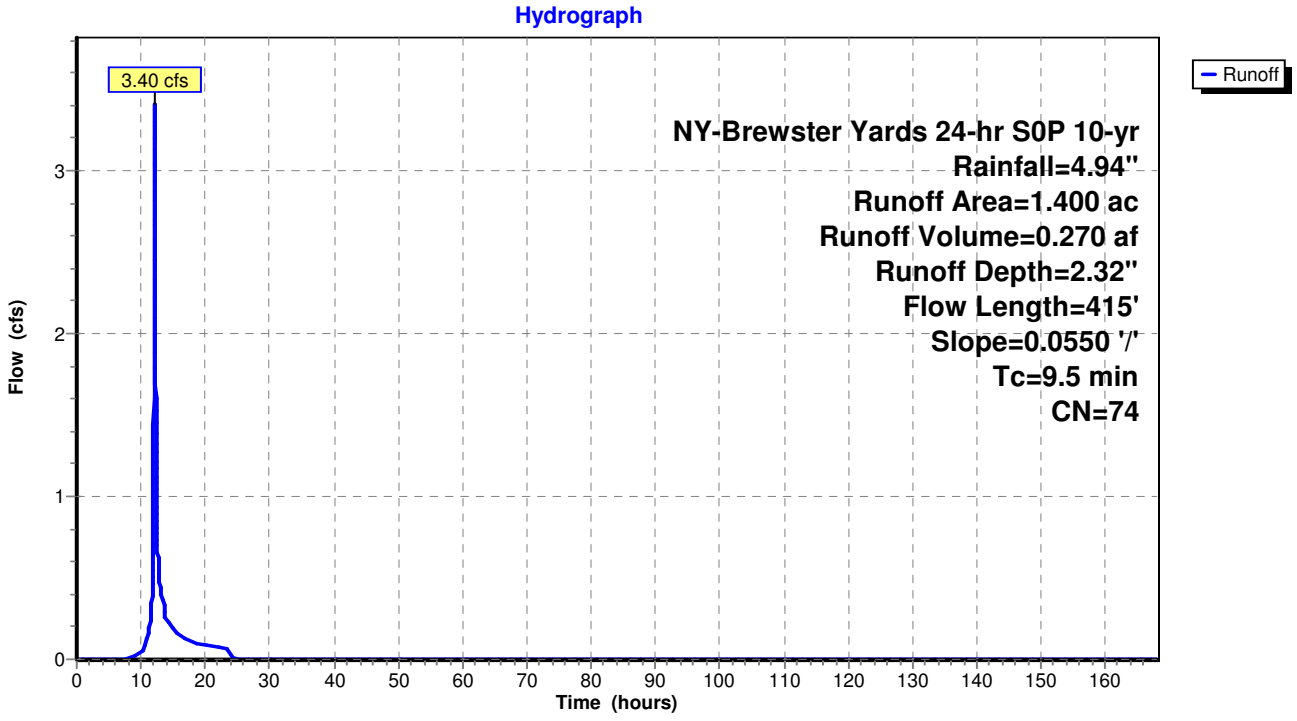
Runoff = 3.40 cfs @ 12.09 hrs, Volume= 0.270 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
1.400	74	>75% Grass cover, Good, HSG C
1.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	100	0.0550	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
3.2	315	0.0550	1.64		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	415	Total			

Subcatchment 2.2S: North Detention



Summary for Subcatchment 2.3S: North Infiltration

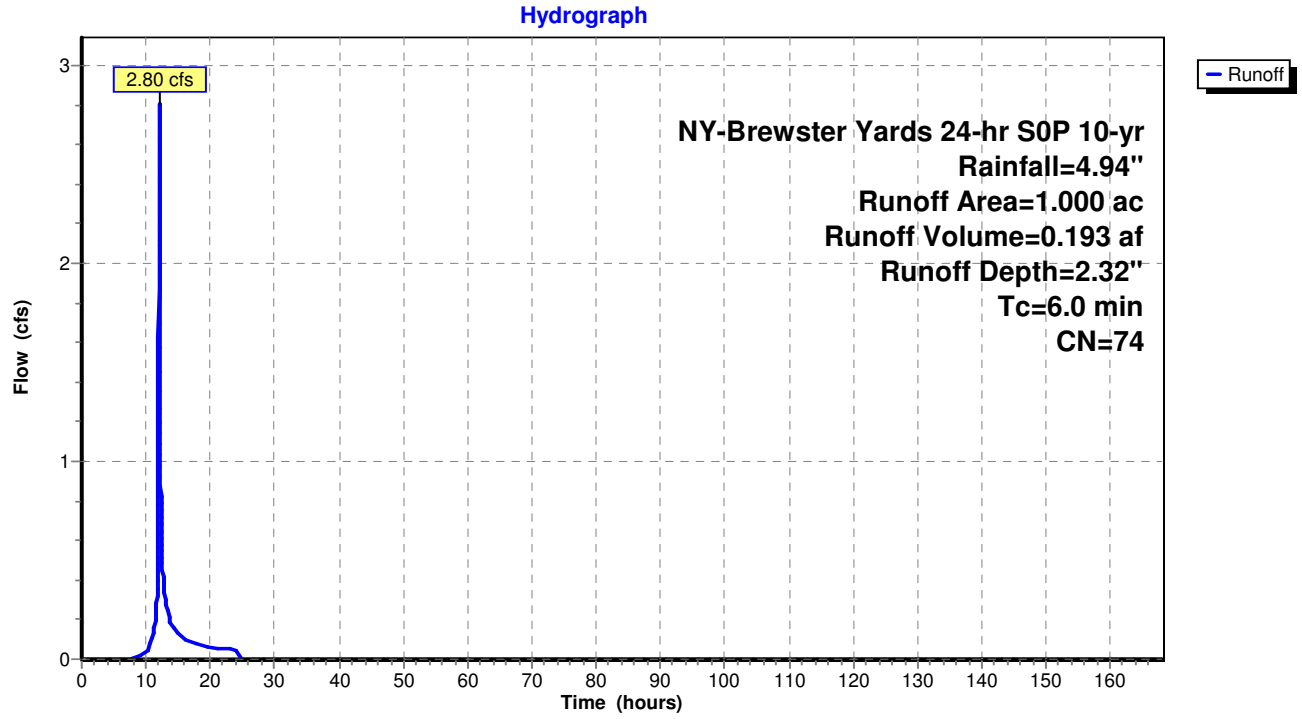
Runoff = 2.80 cfs @ 12.04 hrs, Volume= 0.193 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
1.000	74	>75% Grass cover, Good, HSG C
1.000		100.00% Pervious Area

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

Subcatchment 2.3S: North Infiltration



Summary for Subcatchment 2.4S: North Lower Detention

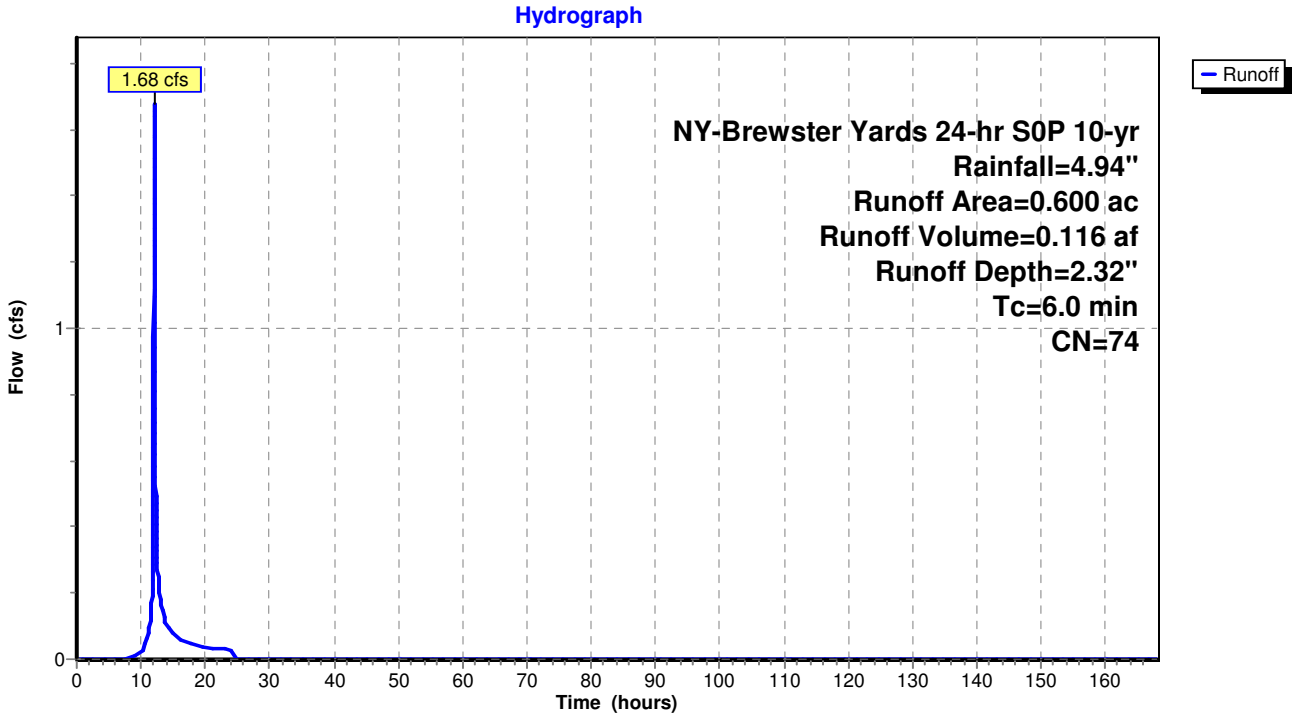
Runoff = 1.68 cfs @ 12.04 hrs, Volume= 0.116 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
0.600	74	>75% Grass cover, Good, HSG C
0.600		100.00% Pervious Area

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

Subcatchment 2.4S: North Lower Detention



Summary for Subcatchment 2.5S: Untreated

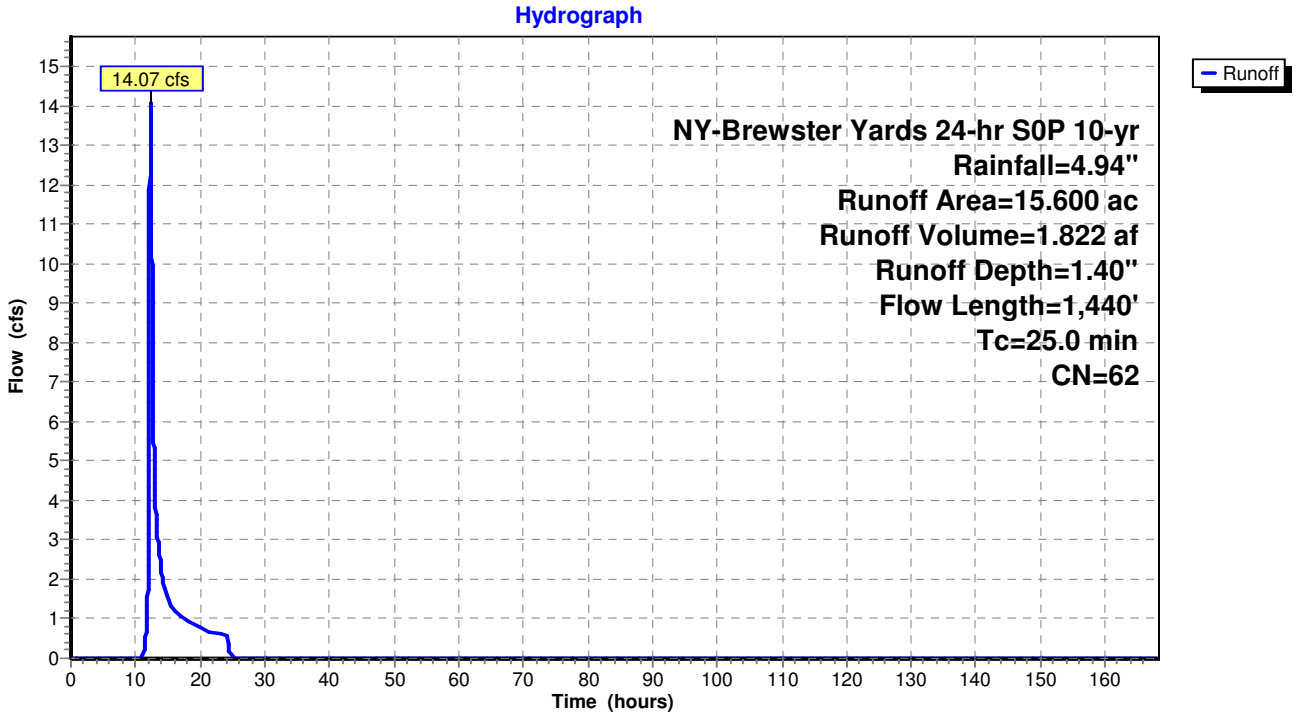
Runoff = 14.07 cfs @ 12.33 hrs, Volume= 1.822 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
8.900	55	Woods, Good, HSG B
5.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
15.600	62	Weighted Average
15.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
0.5	60	0.1330	1.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	200	0.3000	2.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	150	0.0930	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.0	160	0.2875	2.68		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	350	0.9500	4.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
25.0	1,440	Total			

Subcatchment 2.5S: Untreated



Summary for Subcatchment 3.1S: Building & Fields (Piped)

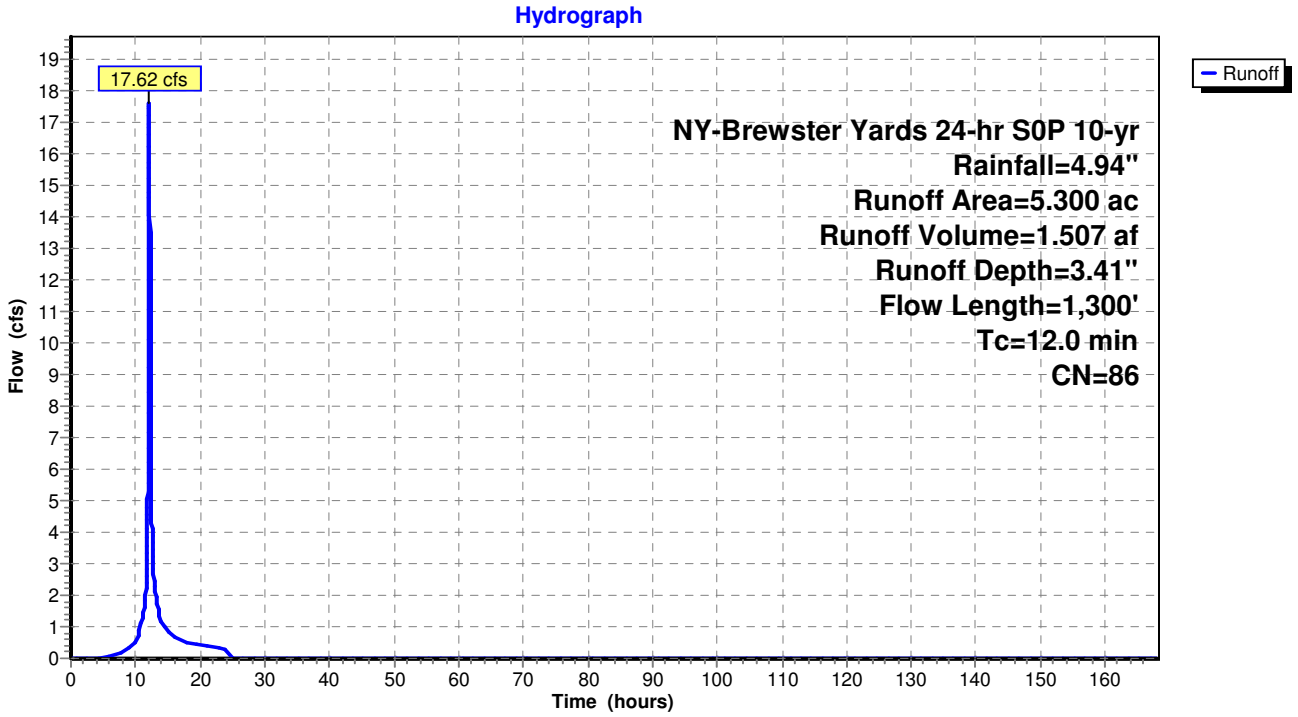
Runoff = 17.62 cfs @ 12.12 hrs, Volume= 1.507 af, Depth= 3.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

	Area (ac)	CN	Description
*	2.700	98	Impervious
*	1.400	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	5.300	86	Weighted Average
	2.600		49.06% Pervious Area
	2.700		50.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0300	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
1.2	150	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.9	250	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	800	0.0412	14.62	45.92	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
12.0	1,300	Total			

Subcatchment 3.1S: Building & Fields (Piped)



Summary for Subcatchment 3.2S: Entrance Infiltration Basin

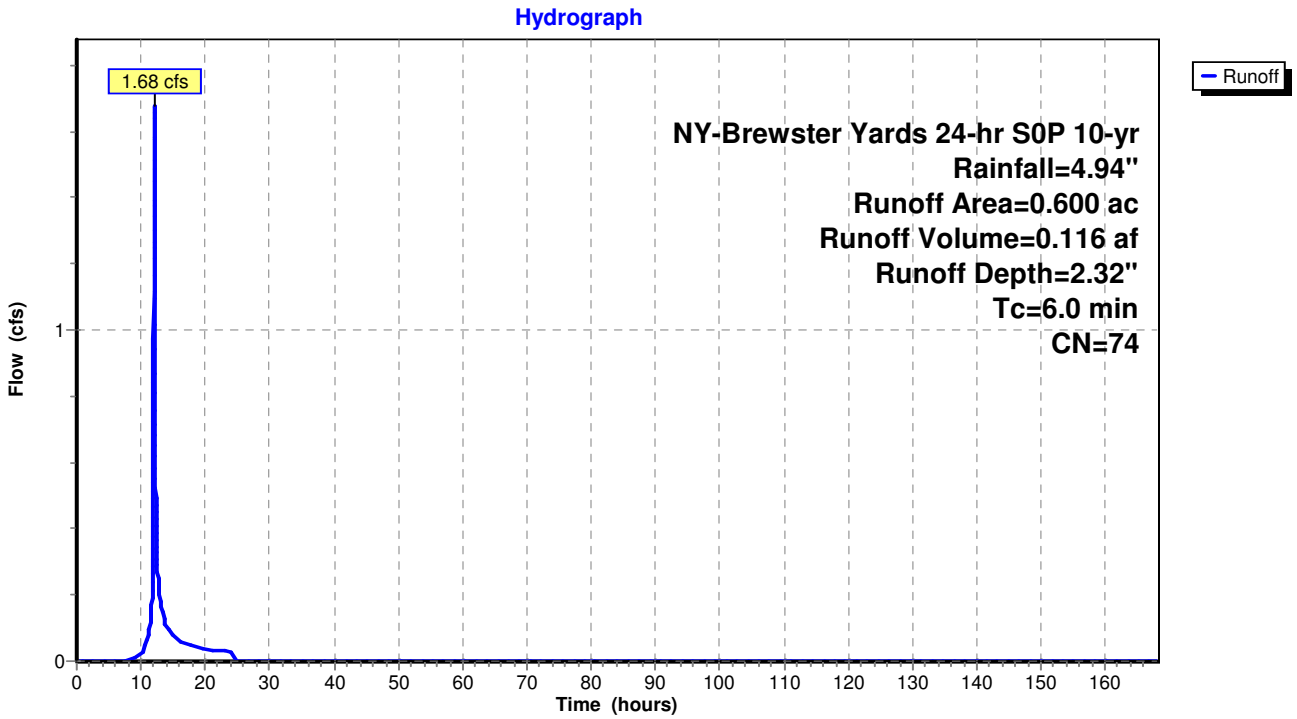
Runoff = 1.68 cfs @ 12.04 hrs, Volume= 0.116 af, Depth= 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
0.200	61	>75% Grass cover, Good, HSG B
0.400	80	>75% Grass cover, Good, HSG D
0.600	74	Weighted Average
0.600		100.00% Pervious Area

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

Subcatchment 3.2S: Entrance Infiltration Basin



Summary for Subcatchment 3.3S: Fields & Parking (Piped)

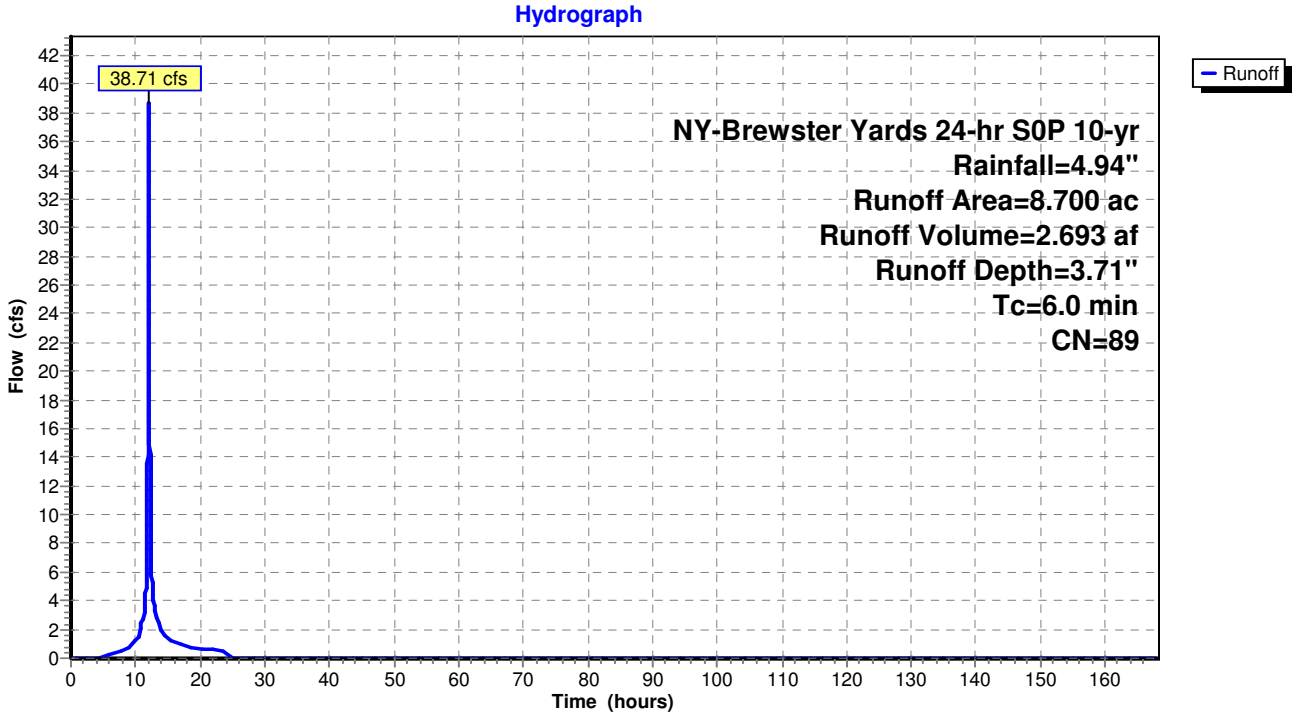
Runoff = 38.71 cfs @ 12.04 hrs, Volume= 2.693 af, Depth= 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

	Area (ac)	CN	Description
*	4.800	98	Impervious
*	2.500	86	Field Turf
	1.400	61	>75% Grass cover, Good, HSG B
	8.700	89	Weighted Average
	3.900		44.83% Pervious Area
	4.800		55.17% Impervious Area

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

Subcatchment 3.3S: Fields & Parking (Piped)



Summary for Subcatchment 3.4S: South Showcase Field (Piped)

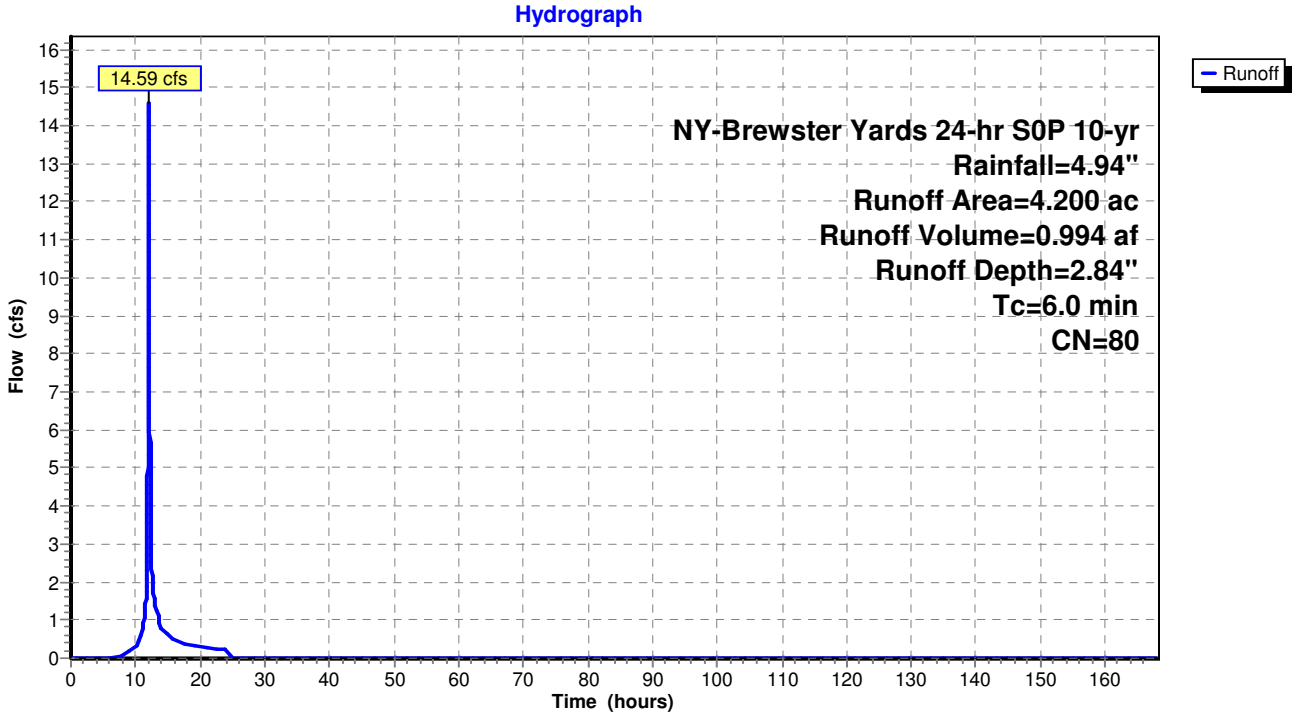
Runoff = 14.59 cfs @ 12.04 hrs, Volume= 0.994 af, Depth= 2.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

	Area (ac)	CN	Description
*	0.400	98	Impervious
*	2.600	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	4.200	80	Weighted Average
	3.800		90.48% Pervious Area
	0.400		9.52% Impervious Area

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

Subcatchment 3.4S: South Showcase Field (Piped)



Summary for Subcatchment 3.5S: South Detention Basin

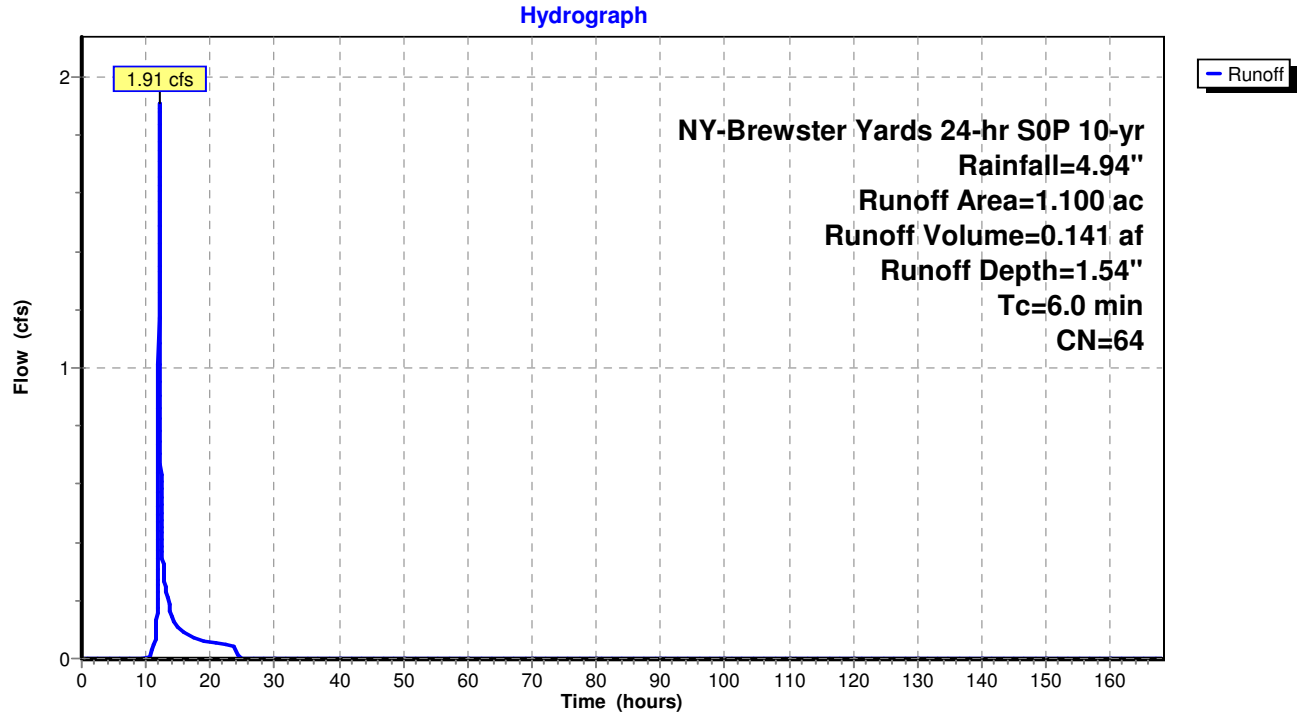
Runoff = 1.91 cfs @ 12.05 hrs, Volume= 0.141 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

	Area (ac)	CN	Description
*	0.100	98	Impervious
	1.000	61	>75% Grass cover, Good, HSG B
	1.100	64	Weighted Average
	1.000		90.91% Pervious Area
	0.100		9.09% Impervious Area

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

Subcatchment 3.5S: South Detention Basin



Summary for Subcatchment 3.6S: South Upper Pond

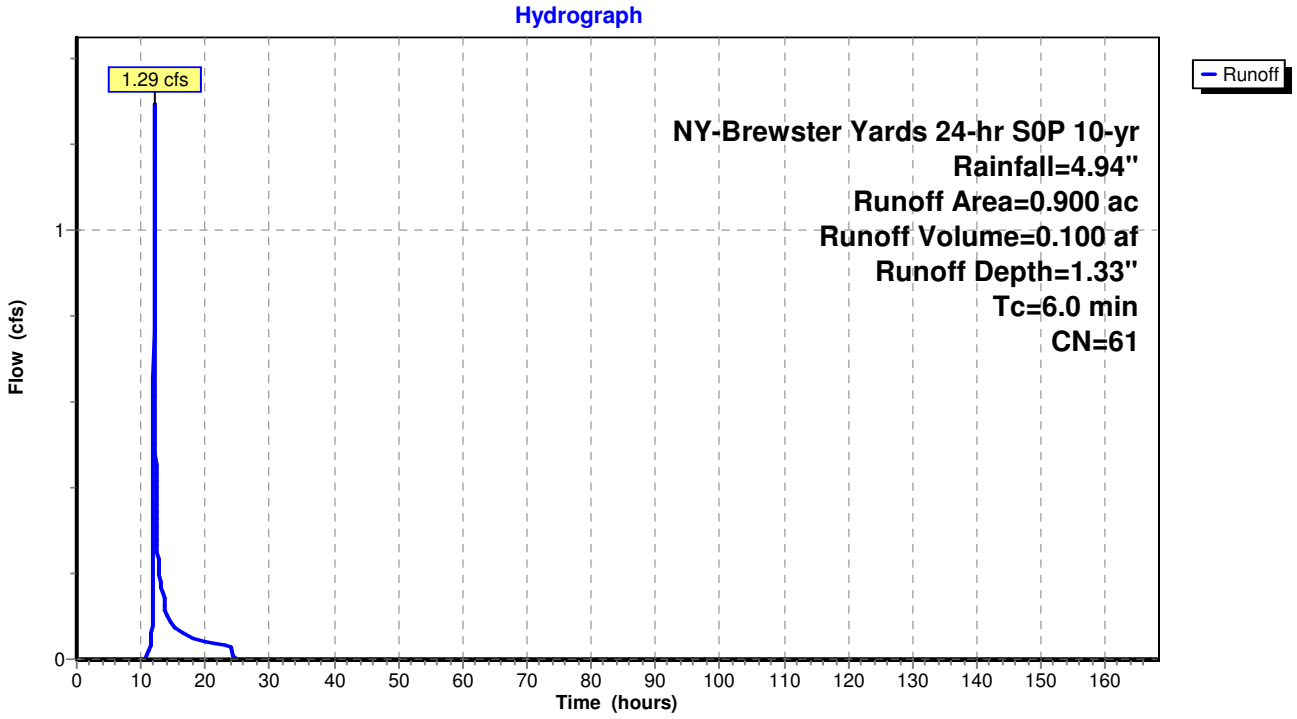
Runoff = 1.29 cfs @ 12.05 hrs, Volume= 0.100 af, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
0.900	61	>75% Grass cover, Good, HSG B
0.900		100.00% Pervious Area

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

Subcatchment 3.6S: South Upper Pond



Summary for Subcatchment 3.7S: South Lower Pond

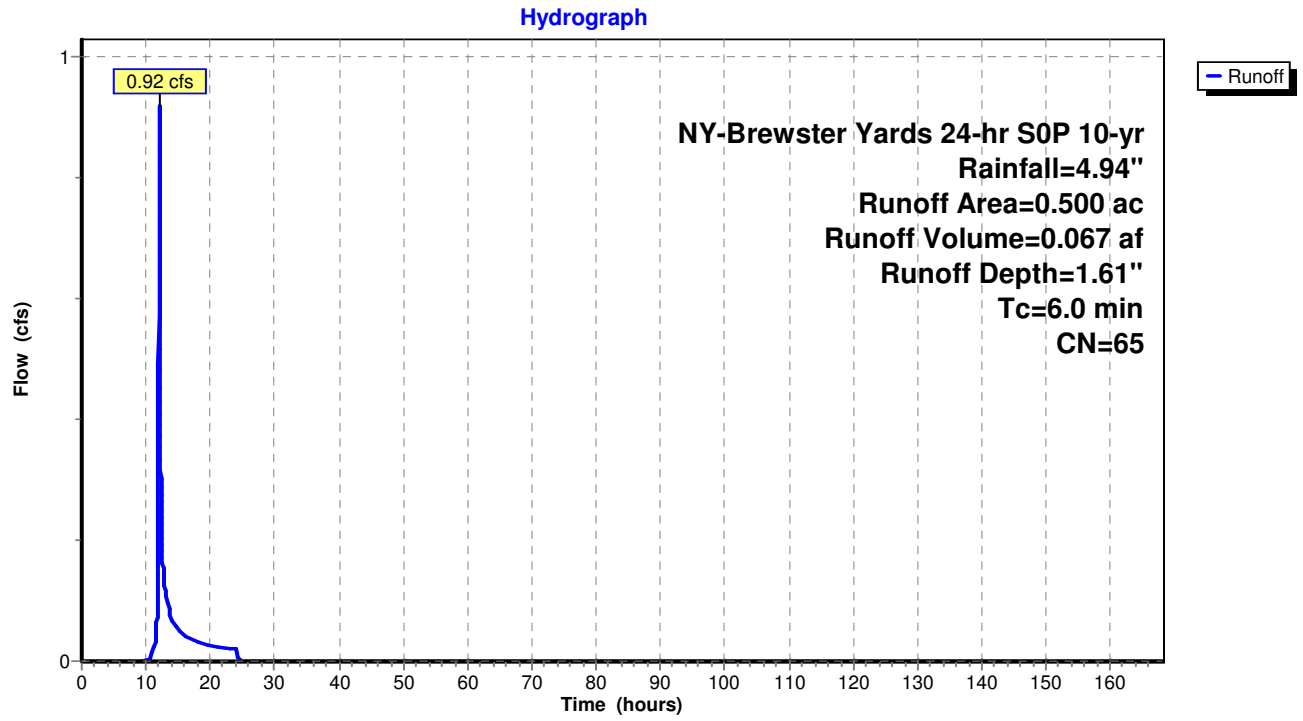
Runoff = 0.92 cfs @ 12.05 hrs, Volume= 0.067 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
0.400	61	>75% Grass cover, Good, HSG B
0.100	80	>75% Grass cover, Good, HSG D
0.500	65	Weighted Average
0.500		100.00% Pervious Area

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

Subcatchment 3.7S: South Lower Pond



Summary for Subcatchment 3.8S: Untreated

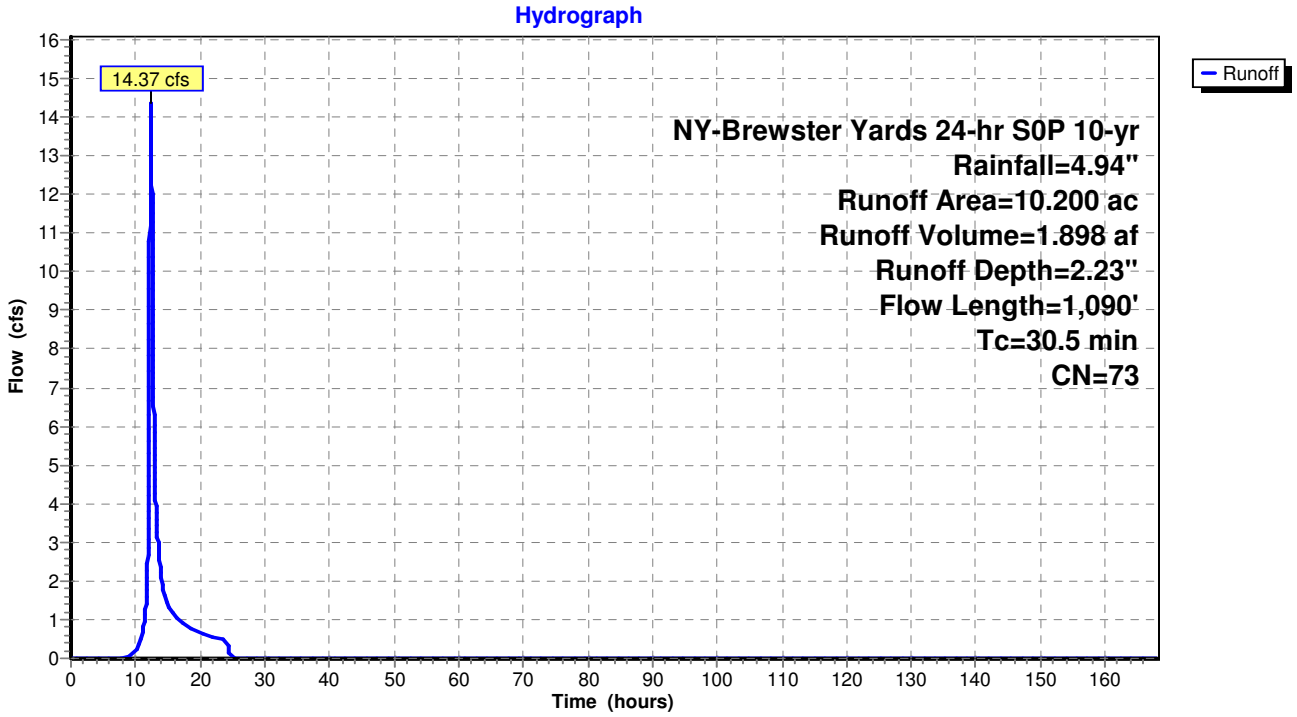
Runoff = 14.37 cfs @ 12.37 hrs, Volume= 1.898 af, Depth= 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
2.200	80	>75% Grass cover, Good, HSG D
3.200	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
3.800	77	Woods, Good, HSG D
0.700	98	Paved parking, HSG D
0.200	98	Water Surface, HSG D
10.200	73	Weighted Average
9.300		91.18% Pervious Area
0.900		8.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	50	0.2000	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
6.7	50	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
15.6	70	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.4	60	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30		8.02		**Lake or Reservoir,** Mean Depth= 2.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
30.5	1,090	Total			

Subcatchment 3.8S: Untreated



Summary for Subcatchment 4.1S: Untreated

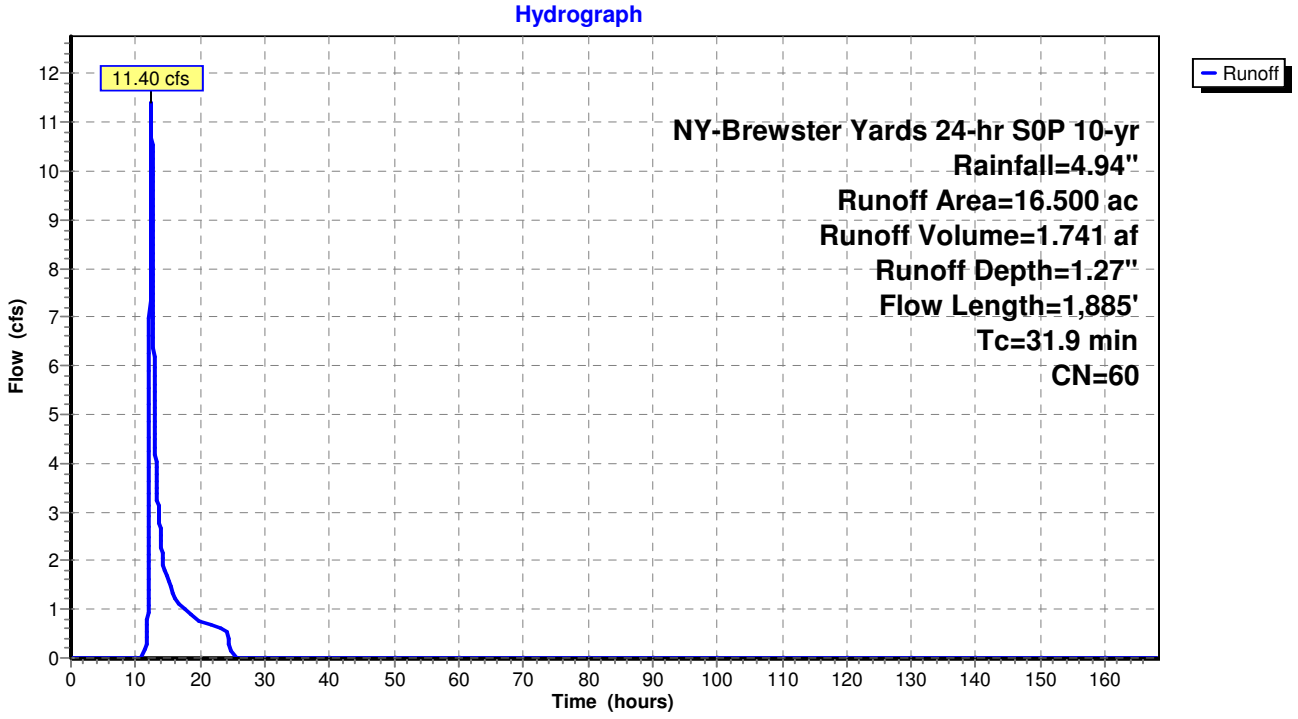
Runoff = 11.40 cfs @ 12.44 hrs, Volume= 1.741 af, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 10-yr Rainfall=4.94"

Area (ac)	CN	Description
12.900	55	Woods, Good, HSG B
3.500	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
16.500	60	Weighted Average
16.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	100	0.0190	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
7.9	885	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	900	0.0500	5.09	71.20	**Channel Flow,** Area= 14.0 sf Perim= 45.0' r= 0.31' n= 0.030 Earth, grassed & winding
31.9	1,885	Total			

Subcatchment 4.1S: Untreated

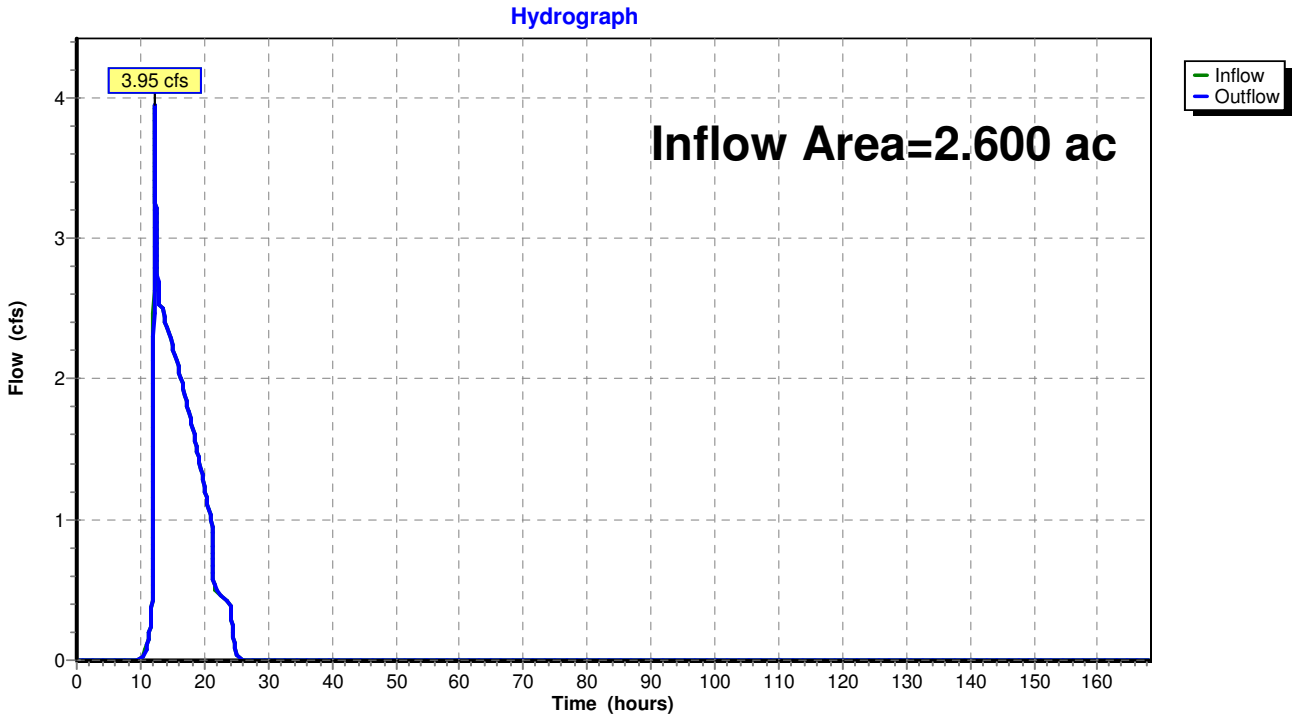


Summary for Reach DP 1:

Inflow Area = 2.600 ac, 0.00% Impervious, Inflow Depth = 7.56" for 10-yr event
Inflow = 3.95 cfs @ 12.22 hrs, Volume= 1.637 af
Outflow = 3.95 cfs @ 12.23 hrs, Volume= 1.637 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 1:

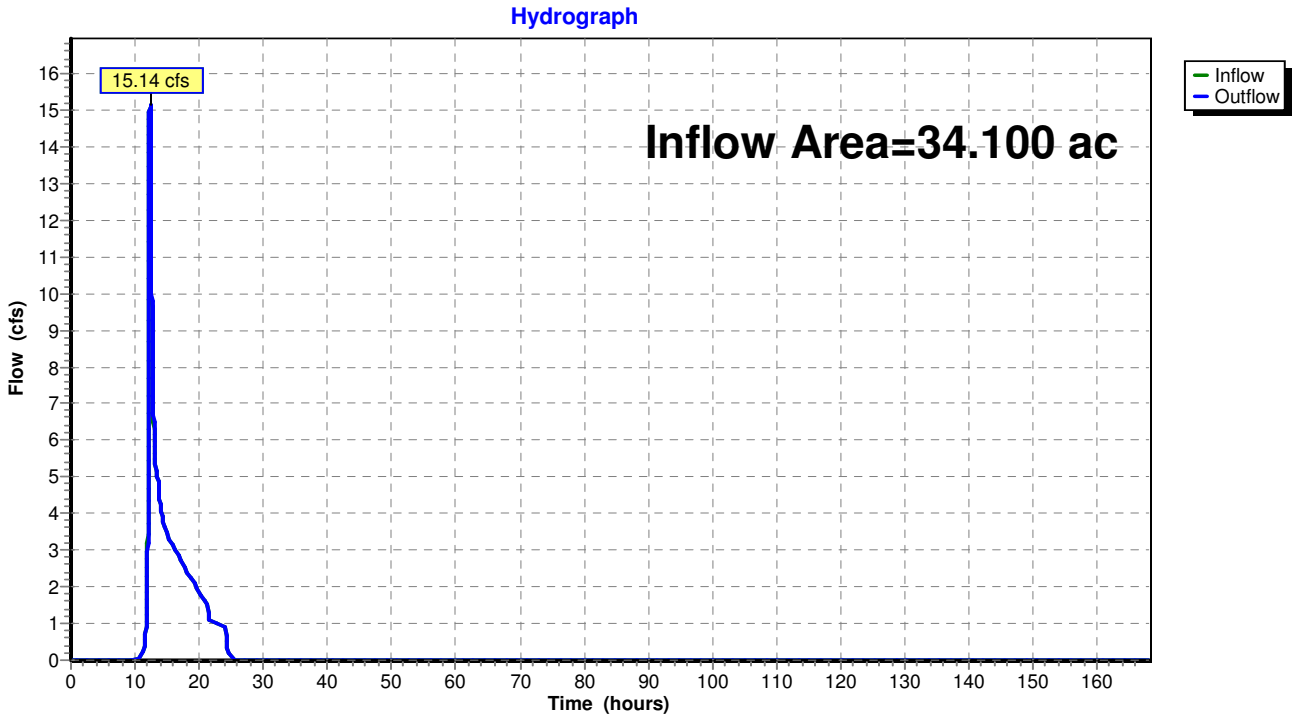


Summary for Reach DP 2:

Inflow Area = 34.100 ac, 8.80% Impervious, Inflow Depth = 1.10" for 10-yr event
Inflow = 15.14 cfs @ 12.33 hrs, Volume= 3.119 af
Outflow = 15.14 cfs @ 12.34 hrs, Volume= 3.119 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 2:

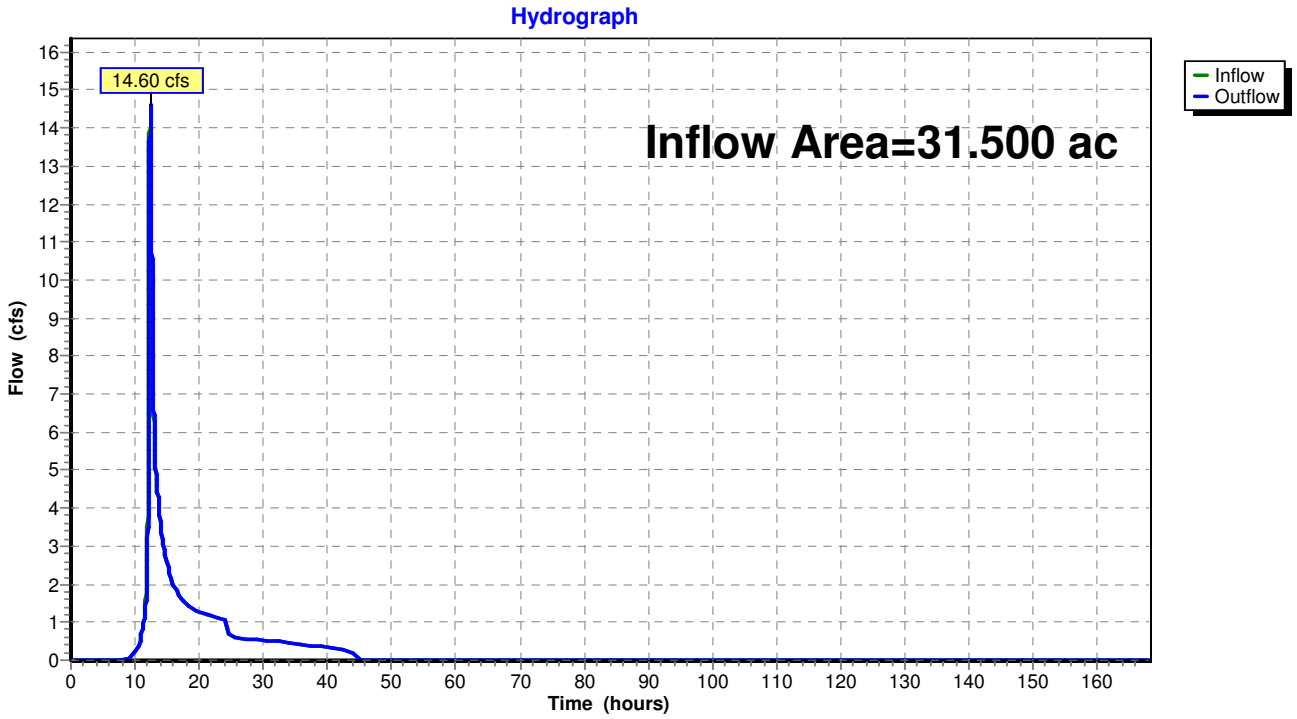


Summary for Reach DP 3:

Inflow Area = 31.500 ac, 28.25% Impervious, Inflow Depth = 1.29" for 10-yr event
Inflow = 14.60 cfs @ 12.37 hrs, Volume= 3.397 af
Outflow = 14.60 cfs @ 12.38 hrs, Volume= 3.397 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 3:

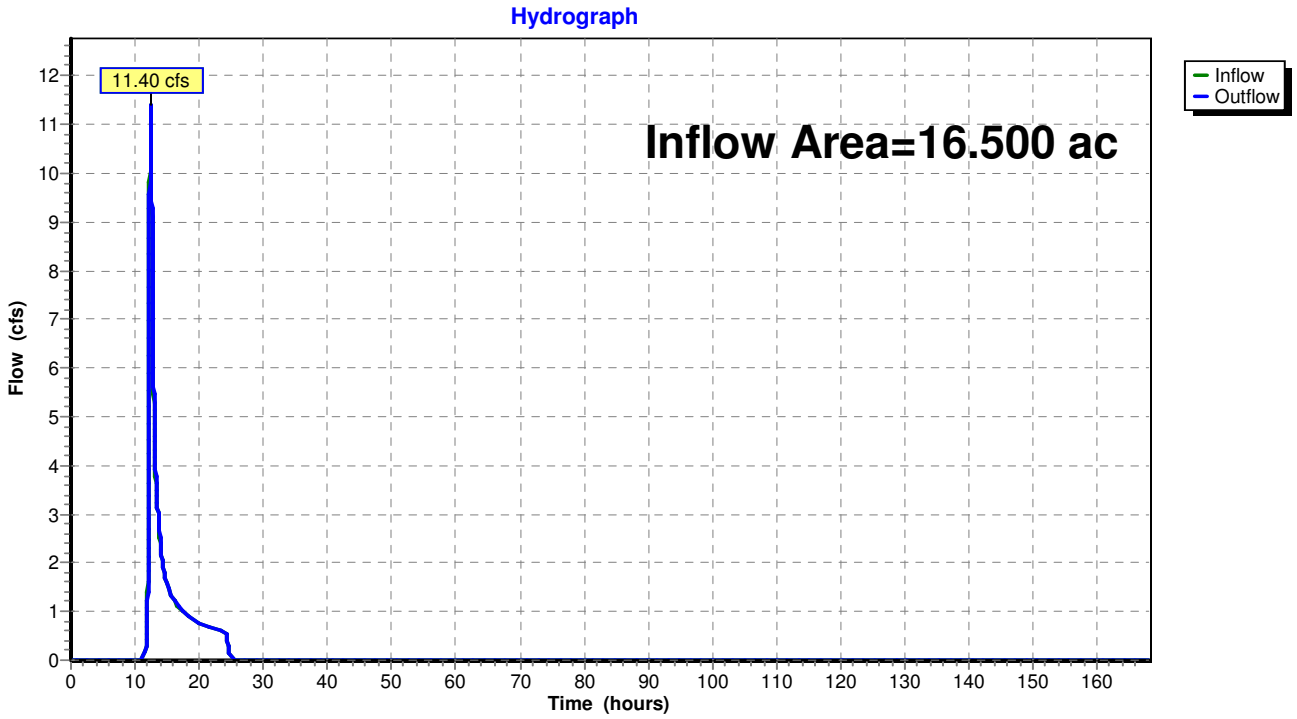


Summary for Reach DP 4:

Inflow Area = 16.500 ac, 0.00% Impervious, Inflow Depth = 1.27" for 10-yr event
Inflow = 11.40 cfs @ 12.44 hrs, Volume= 1.741 af
Outflow = 11.40 cfs @ 12.45 hrs, Volume= 1.741 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 4:



Summary for Pond 1.1 IB: North Turnaround Infiltration Basin

Inflow Area = 0.500 ac, 0.00% Impervious, Inflow Depth = 3.03" for 10-yr event
Inflow = 1.54 cfs @ 12.11 hrs, Volume= 0.126 af
Outflow = 0.38 cfs @ 12.49 hrs, Volume= 0.126 af, Atten= 75%, Lag= 22.6 min
Discarded = 0.04 cfs @ 12.49 hrs, Volume= 0.094 af
Primary = 0.34 cfs @ 12.49 hrs, Volume= 0.032 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 625.16' @ 12.49 hrs Surf.Area= 1,606 sf Storage= 2,408 cf
Flood Elev= 625.50' Surf.Area= 1,765 sf Storage= 2,979 cf

Plug-Flow detention time= 570.1 min calculated for 0.126 af (100% of inflow)
Center-of-Mass det. time= 570.1 min (1,402.2 - 832.1)

Volume	Invert	Avail.Storage	Storage Description
#1	623.00'	3,920 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

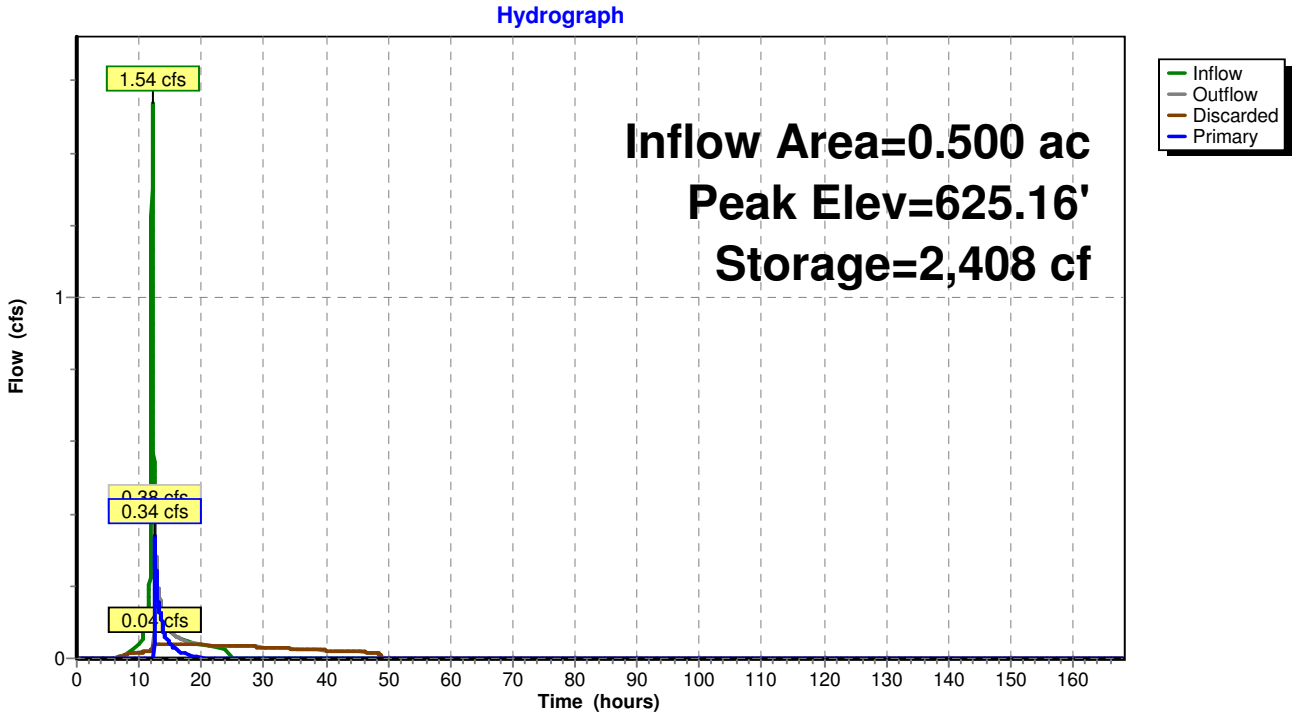
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
623.00	660	0	0
624.00	1,060	860	860
626.00	2,000	3,060	3,920

Device	Routing	Invert	Outlet Devices
#1	Primary	622.00'	**12.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 622.00' / 621.80' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	625.10'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	623.00'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.04 cfs @ 12.49 hrs HW=625.16' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.34 cfs @ 12.49 hrs HW=625.16' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 0.34 cfs of 6.17 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.34 cfs @ 0.69 fps)

Pond 1.1 IB: North Turnaround Infiltration Basin



Stage-Area-Storage for Pond 1.1 IB: North Turnaround Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
623.00	660	0
623.05	680	33
623.10	700	68
623.15	720	103
623.20	740	140
623.25	760	178
623.30	780	216
623.35	800	256
623.40	820	296
623.45	840	338
623.50	860	380
623.55	880	423
623.60	900	468
623.65	920	513
623.70	940	560
623.75	960	608
623.80	980	656
623.85	1,000	706
623.90	1,020	756
623.95	1,040	808
624.00	1,060	860
624.05	1,083	914
624.10	1,107	968
624.15	1,130	1,024
624.20	1,154	1,081
624.25	1,178	1,140
624.30	1,201	1,199
624.35	1,225	1,260
624.40	1,248	1,322
624.45	1,272	1,385
624.50	1,295	1,449
624.55	1,318	1,514
624.60	1,342	1,581
624.65	1,365	1,648
624.70	1,389	1,717
624.75	1,413	1,787
624.80	1,436	1,858
624.85	1,460	1,931
624.90	1,483	2,004
624.95	1,507	2,079
625.00	1,530	2,155
625.05	1,553	2,232
625.10	1,577	2,310
625.15	1,600	2,390
625.20	1,624	2,470
625.25	1,648	2,552
625.30	1,671	2,635
625.35	1,695	2,719
625.40	1,718	2,805
625.45	1,742	2,891
625.50	1,765	2,979
625.55	1,788	3,068
625.60	1,812	3,158
625.65	1,835	3,249
625.70	1,859	3,341
625.75	1,883	3,435
625.80	1,906	3,529
625.85	1,930	3,625
625.90	1,953	3,722
625.95	1,977	3,821
626.00	**2,000**	**3,920**

Summary for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 3.32" for 10-yr event
Inflow = 61.42 cfs @ 12.07 hrs, Volume= 4.676 af
Outflow = 14.00 cfs @ 12.42 hrs, Volume= 4.676 af, Atten= 77%, Lag= 21.1 min
Primary = 14.00 cfs @ 12.42 hrs, Volume= 4.676 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 667.72' @ 12.42 hrs Surf.Area= 26,124 sf Storage= 94,746 cf
Flood Elev= 669.50' Surf.Area= 34,100 sf Storage= 147,015 cf

Plug-Flow detention time= 1,142.9 min calculated for 4.676 af (100% of inflow)
Center-of-Mass det. time= 1,143.1 min (1,961.4 - 818.3)

Volume	Invert	Avail.Storage	Storage Description
#1	659.00'	240 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 600 cf Overall x 40.0% Voids
#2	660.00'	164,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		164,340 cf	Total Available Storage

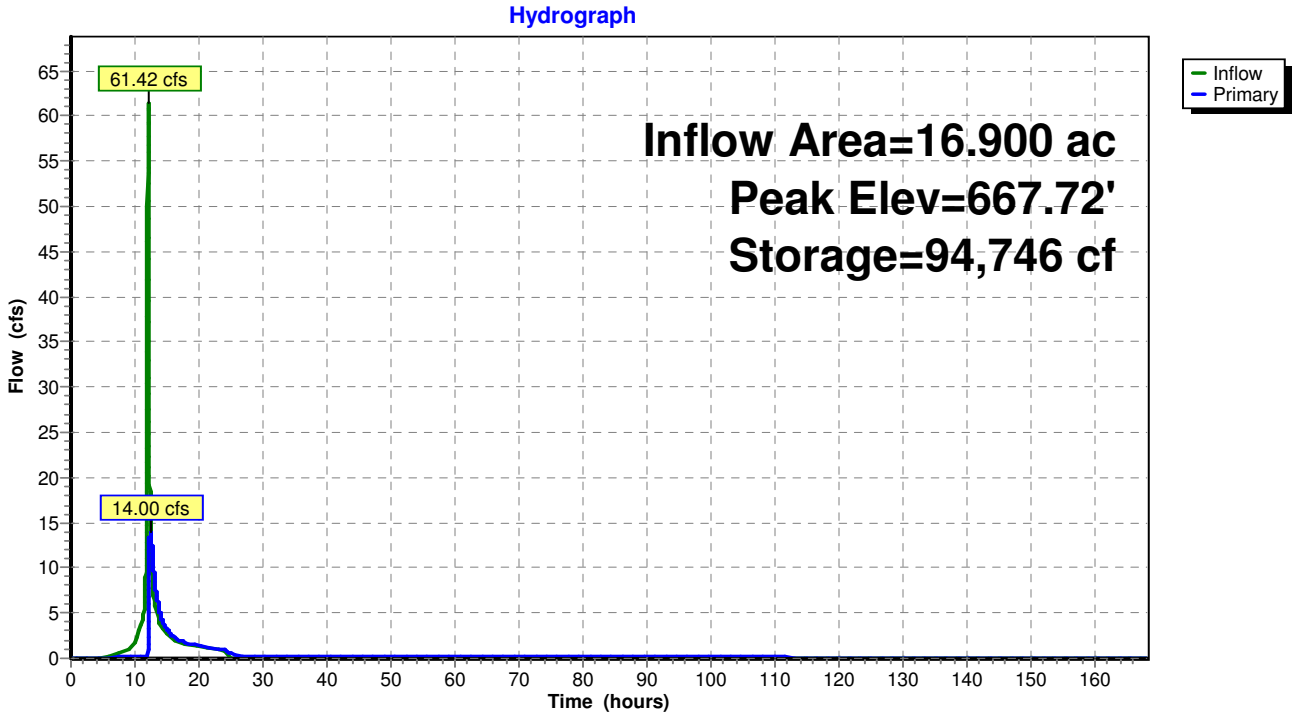
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
659.00	600	0	0
660.00	600	600	600

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	1,900	0	0
662.00	6,000	7,900	7,900
664.00	11,800	17,800	25,700
666.00	18,800	30,600	56,300
668.00	26,600	45,400	101,700
670.00	35,800	62,400	164,100

Device	Routing	Invert	Outlet Devices
#1	Primary	659.00'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	666.70'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=14.00 cfs @ 12.42 hrs HW=667.72' TW=662.33' (Dynamic Tailwater)
↑—**1=Orifice/Grate** (Orifice Controls 0.24 cfs @ 11.18 fps)
└—**2=Broad-Crested Rectangular Weir** (Weir Controls 13.76 cfs @ 3.36 fps)

Pond 2.2 EDB: North Detention Basin, Orifice, & Weir



Stage-Area-Storage for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Elevation (feet)	Storage (cubic-feet)
659.00	0
659.15	36
659.30	72
659.45	108
659.60	144
659.75	180
659.90	216
660.05	338
660.20	661
660.35	1,031
660.50	1,446
660.65	1,908
660.80	2,416
660.95	2,970
661.10	3,570
661.25	4,217
661.40	4,909
661.55	5,648
661.70	6,432
661.85	7,263
662.00	8,140
662.15	9,073
662.30	10,070
662.45	11,134
662.60	12,262
662.75	13,456
662.90	14,714
663.05	16,039
663.20	17,428
663.35	18,883
663.50	20,403
663.65	21,988
663.80	23,638
663.95	25,354
664.10	27,138
664.25	28,999
664.40	30,940
664.55	32,959
664.70	35,058
664.85	37,234
665.00	39,490
665.15	41,824
665.30	44,237
665.45	46,729
665.60	49,300
665.75	51,949
665.90	54,677
666.05	57,485
666.20	60,378
666.35	63,359
666.50	66,428
666.65	69,584
666.80	72,828
666.95	76,160
667.10	79,580
667.25	83,087
667.40	86,682
667.55	90,365
667.70	94,136
667.85	97,994
668.00	101,940
668.15	105,982
668.30	110,127
668.45	114,376
668.60	118,728
668.75	123,184
668.90	127,743
669.05	132,406
669.20	137,172
669.35	142,042
669.50	147,015
669.65	152,092
669.80	157,272
669.95	**162,556**

Summary for Pond 2.3 IB: North Infiltration Basin

Inflow Area = 17.900 ac, 16.76% Impervious, Inflow Depth = 1.60" for 10-yr event
Inflow = 3.07 cfs @ 12.04 hrs, Volume= 2.391 af
Outflow = 0.20 cfs @ 91.28 hrs, Volume= 2.391 af, Atten= 94%, Lag= 4,754.1 min
Discarded = 0.20 cfs @ 91.28 hrs, Volume= 2.391 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 656.32' @ 91.28 hrs Surf.Area= 17,115 sf Storage= 34,842 cf
Flood Elev= 659.20' Surf.Area= 22,700 sf Storage= 92,000 cf

Plug-Flow detention time= 2,130.2 min calculated for 2.391 af (100% of inflow)
Center-of-Mass det. time= 2,130.2 min (5,092.8 - 2,962.5)

Volume	Invert	Avail.Storage	Storage Description
#1	654.00'	110,800 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

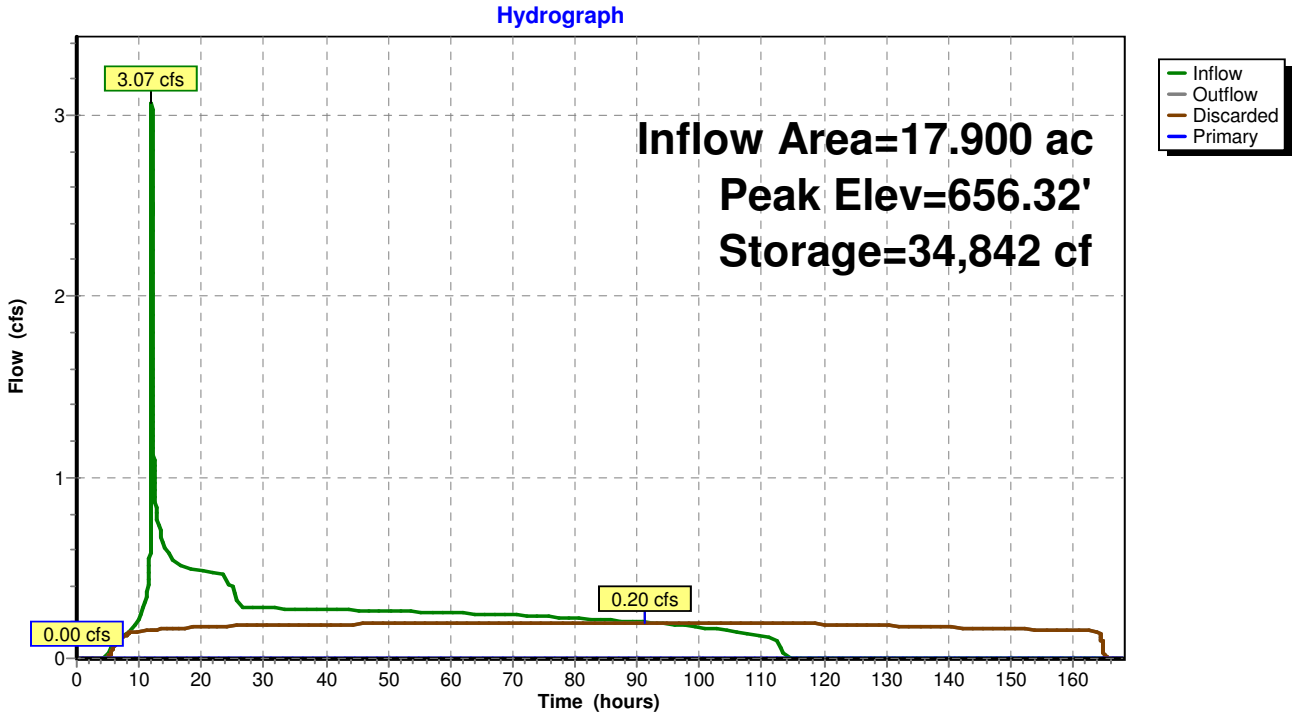
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
654.00	12,900	0	0
656.00	16,500	29,400	29,400
658.00	20,300	36,800	66,200
660.00	24,300	44,600	110,800

Device	Routing	Invert	Outlet Devices
#1	Primary	653.00'	**6.0" Round Culvert** L= 220.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 653.00' / 641.00' S= 0.0545 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	659.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	654.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.20 cfs @ 91.28 hrs HW=656.32' (Free Discharge)
↑└**3=Exfiltration** (Exfiltration Controls 0.20 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=654.00' TW=0.00' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.00 cfs of 0.82 cfs potential flow)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2.3 IB: North Infiltration Basin



Stage-Area-Storage for Pond 2.3 IB: North Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
654.00	12,900	0
654.10	13,080	1,299
654.20	13,260	2,616
654.30	13,440	3,951
654.40	13,620	5,304
654.50	13,800	6,675
654.60	13,980	8,064
654.70	14,160	9,471
654.80	14,340	10,896
654.90	14,520	12,339
655.00	14,700	13,800
655.10	14,880	15,279
655.20	15,060	16,776
655.30	15,240	18,291
655.40	15,420	19,824
655.50	15,600	21,375
655.60	15,780	22,944
655.70	15,960	24,531
655.80	16,140	26,136
655.90	16,320	27,759
656.00	16,500	29,400
656.10	16,690	31,060
656.20	16,880	32,738
656.30	17,070	34,435
656.40	17,260	36,152
656.50	17,450	37,888
656.60	17,640	39,642
656.70	17,830	41,416
656.80	18,020	43,208
656.90	18,210	45,019
657.00	18,400	46,850
657.10	18,590	48,700
657.20	18,780	50,568
657.30	18,970	52,455
657.40	19,160	54,362
657.50	19,350	56,288
657.60	19,540	58,232
657.70	19,730	60,196
657.80	19,920	62,178
657.90	20,110	64,179
658.00	20,300	66,200
658.10	20,500	68,240
658.20	20,700	70,300
658.30	20,900	72,380
658.40	21,100	74,480
658.50	21,300	76,600
658.60	21,500	78,740
658.70	21,700	80,900
658.80	21,900	83,080
658.90	22,100	85,280
659.00	22,300	87,500
659.10	22,500	89,740
659.20	22,700	92,000
659.30	22,900	94,280
659.40	23,100	96,580
659.50	23,300	98,900
659.60	23,500	101,240
659.70	23,700	103,600
659.80	23,900	105,980
659.90	24,100	108,380
660.00	**24,300**	**110,800**

Summary for Pond 2.4 EDB: North Lower Detention Basin

Inflow Area = 0.600 ac, 0.00% Impervious, Inflow Depth = 51.88" for 10-yr event
Inflow = 13.86 cfs @ 12.43 hrs, Volume= 2.594 af
Outflow = 3.98 cfs @ 14.21 hrs, Volume= 2.594 af, Atten= 71%, Lag= 106.7 min
Primary = 1.99 cfs @ 14.21 hrs, Volume= 1.297 af
Secondary = 1.99 cfs @ 14.21 hrs, Volume= 1.297 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Starting Elev= 594.00' Surf.Area= 0 sf Storage= 0 cf
Peak Elev= 655.67' @ 14.21 hrs Surf.Area= 12,606 sf Storage= 35,679 cf
Flood Elev= 659.50' Surf.Area= 17,950 sf Storage= 90,758 cf

Plug-Flow detention time= 96.4 min calculated for 2.594 af (100% of inflow)
Center-of-Mass det. time= 96.1 min (1,003.6 - 907.5)

Volume	Invert	Avail.Storage	Storage Description
#1	651.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	652.00'	99,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		99,520 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
651.00	800	0	0
652.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
652.00	7,500	0	0
654.00	9,800	17,300	17,300
656.00	12,200	22,000	39,300
658.00	14,900	27,100	66,400
660.00	17,900	32,800	99,200

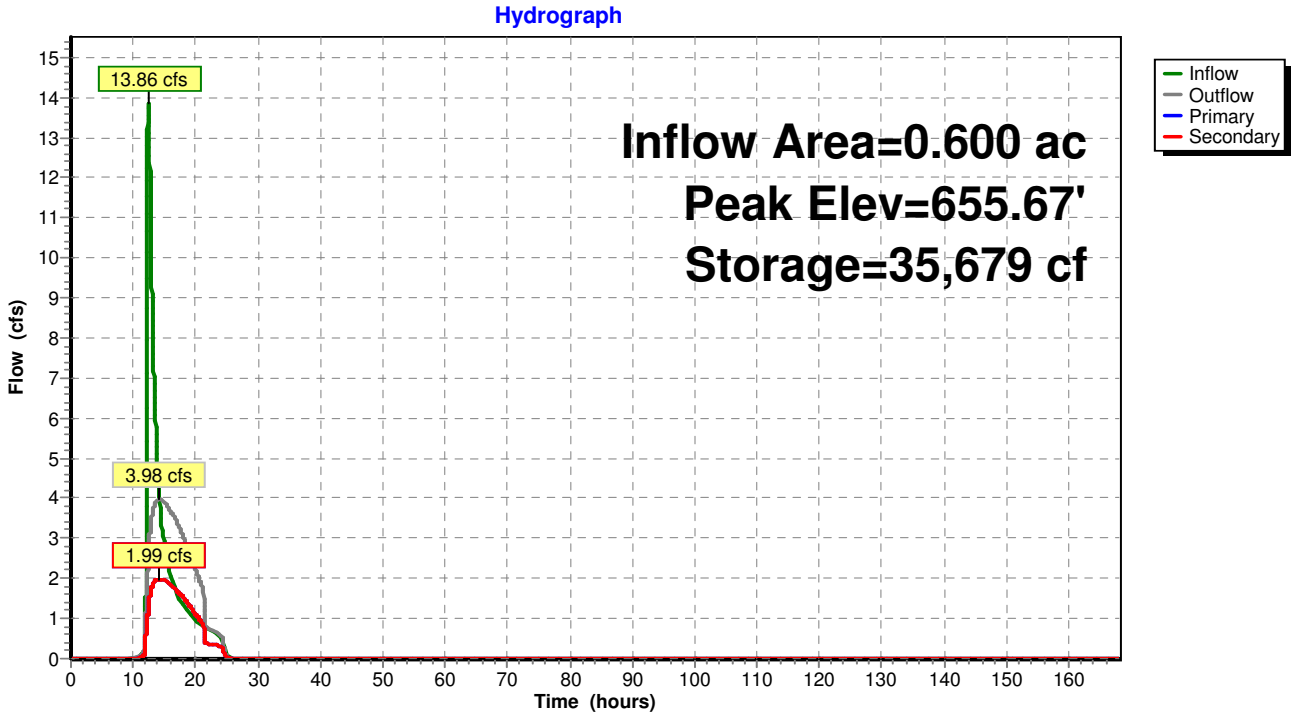
Device	Routing	Invert	Outlet Devices
#1	Primary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	656.80'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	651.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#5	Device 4	656.40'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

#6 Device 4 651.00' **6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.99 cfs @ 14.21 hrs HW=655.67' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.99 cfs of 28.99 cfs potential flow)
  ├─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 1.99 cfs @ 10.12 fps)

Secondary OutFlow Max=1.99 cfs @ 14.21 hrs HW=655.67' TW=0.00' (Dynamic Tailwater)
└─**4=Culvert** (Passes 1.99 cfs of 28.99 cfs potential flow)
  ├─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**6=Orifice/Grate** (Orifice Controls 1.99 cfs @ 10.12 fps)

Pond 2.4 EDB: North Lower Detention Basin



Stage-Area-Storage for Pond 2.4 EDB: North Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
651.00	0
651.10	32
651.20	64
651.30	96
651.40	128
651.50	160
651.60	192
651.70	224
651.80	256
651.90	288
652.00	320
652.10	1,076
652.20	1,843
652.30	2,622
652.40	3,412
652.50	4,214
652.60	5,027
652.70	5,852
652.80	6,688
652.90	7,536
653.00	8,395
653.10	9,266
653.20	10,148
653.30	11,042
653.40	11,947
653.50	12,864
653.60	13,792
653.70	14,732
653.80	15,683
653.90	16,646
654.00	17,620
654.10	18,606
654.20	19,604
654.30	20,614
654.40	21,636
654.50	22,670
654.60	23,716
654.70	24,774
654.80	25,844
654.90	26,926
655.00	28,020
655.10	29,126
655.20	30,244
655.30	31,374
655.40	32,516
655.50	33,670
655.60	34,836
655.70	36,014
655.80	37,204
655.90	38,406
656.00	39,620
656.10	40,847
656.20	42,087
656.30	43,341
656.40	44,608
656.50	45,889
656.60	47,183
656.70	48,491
656.80	49,812
656.90	51,147
657.00	52,495
657.10	53,857
657.20	55,232
657.30	56,621
657.40	58,023
657.50	59,439
657.60	60,868
657.70	62,311
657.80	63,767
657.90	65,237
658.00	66,720
658.10	68,218
658.20	69,730
658.30	71,257
658.40	72,800
658.50	74,358
658.60	75,930
658.70	77,518
658.80	79,120
658.90	80,737
659.00	82,370
659.10	84,018
659.20	85,680
659.30	87,357
659.40	89,050
659.50	90,758
659.60	92,480
659.70	94,218
659.80	95,970
659.90	97,737
660.00	**99,520**

Summary for Pond 3.2 EDB: Entrance Detention Basin

Inflow Area = 5.900 ac, 45.76% Impervious, Inflow Depth = 3.30" for 10-yr event
Inflow = 18.91 cfs @ 12.12 hrs, Volume= 1.622 af
Outflow = 1.67 cfs @ 13.62 hrs, Volume= 1.622 af, Atten= 91%, Lag= 90.0 min
Primary = 0.69 cfs @ 13.62 hrs, Volume= 1.416 af
Secondary = 0.98 cfs @ 13.62 hrs, Volume= 0.207 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 671.68' @ 13.62 hrs Surf.Area= 10,083 sf Storage= 36,378 cf
Flood Elev= 673.50' Surf.Area= 13,525 sf Storage= 57,264 cf

Plug-Flow detention time= 483.1 min calculated for 1.622 af (100% of inflow)
Center-of-Mass det. time= 482.9 min (1,304.6 - 821.7)

Volume	Invert	Avail.Storage	Storage Description
#1	663.00'	120 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 300 cf Overall x 40.0% Voids
#2	664.00'	64,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		64,120 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
663.00	300	0	0
664.00	300	300	300

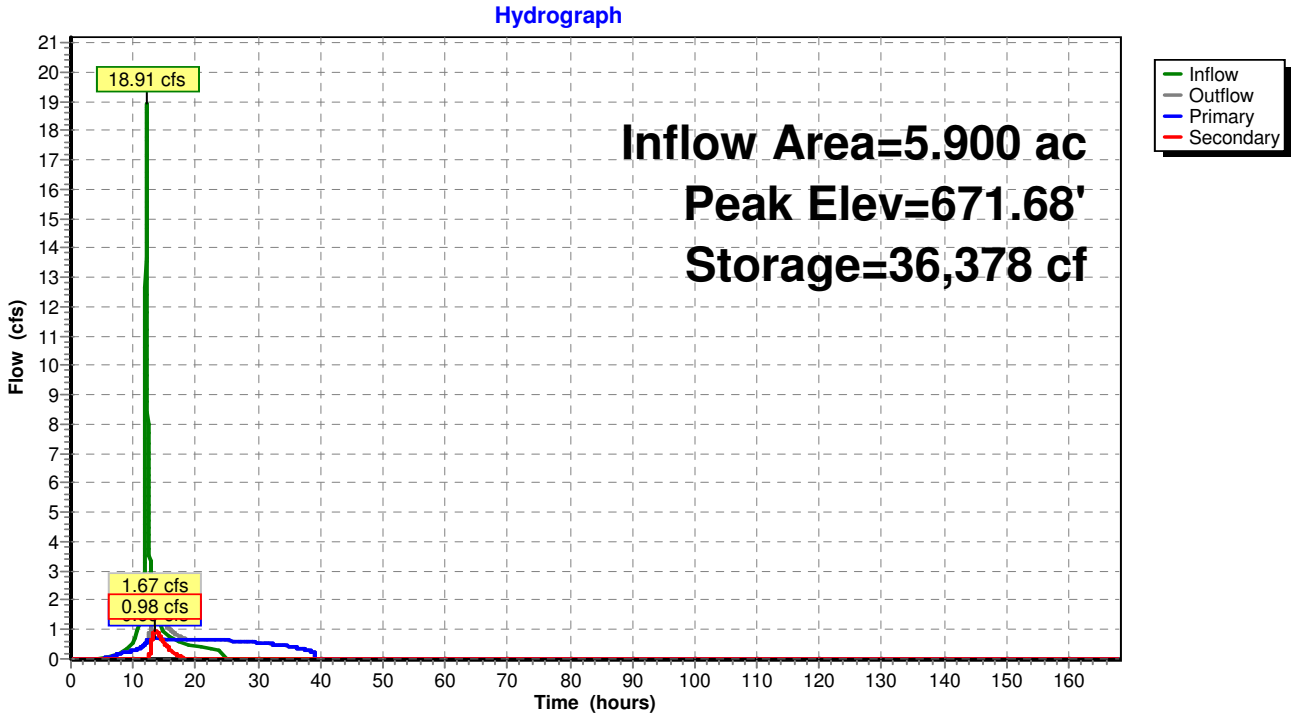
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
664.00	1,000	0	0
666.00	2,500	3,500	3,500
668.00	4,500	7,000	10,500
670.00	7,100	11,600	22,100
672.00	10,300	17,400	39,500
674.00	14,200	24,500	64,000

Device	Routing	Invert	Outlet Devices
#1	Primary	663.00'	**18.0" Round Culvert** L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 663.00' / 656.00' S= 0.0437 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	663.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	672.90'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	671.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.69 cfs @ 13.62 hrs HW=671.68' TW=617.55' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.69 cfs of 23.96 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.69 cfs @ 14.08 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.98 cfs @ 13.62 hrs HW=671.68' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 0.98 cfs @ 2.06 fps)

Pond 3.2 EDB: Entrance Detention Basin



Stage-Area-Storage for Pond 3.2 EDB: Entrance Detention Basin

Elevation (feet)	Storage (cubic-feet)
663.00	0
663.15	18
663.30	36
663.45	54
663.60	72
663.75	90
663.90	108
664.05	171
664.20	335
664.35	516
664.50	714
664.65	928
664.80	1,160
664.95	1,408
665.10	1,674
665.25	1,956
665.40	2,255
665.55	2,571
665.70	2,904
665.85	3,253
666.00	3,620
666.15	4,006
666.30	4,415
666.45	4,846
666.60	5,300
666.75	5,776
666.90	6,275
667.05	6,796
667.20	7,340
667.35	7,906
667.50	8,495
667.65	9,106
667.80	9,740
667.95	10,396
668.10	11,077
668.25	11,786
668.40	12,524
668.55	13,292
668.70	14,089
668.85	14,915
669.00	15,770
669.15	16,655
669.30	17,568
669.45	18,512
669.60	19,484
669.75	20,486
669.90	21,516
670.05	22,577
670.20	23,672
670.35	24,803
670.50	25,970
670.65	27,173
670.80	28,412
670.95	29,687
671.10	30,998
671.25	32,345
671.40	33,728
671.55	35,147
671.70	36,602
671.85	38,093
672.00	39,620
672.15	41,187
672.30	42,798
672.45	44,452
672.60	46,151
672.75	47,893
672.90	49,680
673.05	51,510
673.20	53,384
673.35	55,302
673.50	57,264
673.65	59,269
673.80	61,319
673.95	**63,412**

Summary for Pond 3.5 EDB: South Detention Basin

Inflow Area = 14.000 ac, 37.86% Impervious, Inflow Depth = 3.28" for 10-yr event
Inflow = 55.19 cfs @ 12.04 hrs, Volume= 3.829 af
Outflow = 5.86 cfs @ 12.80 hrs, Volume= 3.829 af, Atten= 89%, Lag= 45.8 min
Primary = 5.86 cfs @ 12.80 hrs, Volume= 3.829 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 630.76' @ 12.80 hrs Surf.Area= 16,046 sf Storage= 87,026 cf
Flood Elev= 633.50' Surf.Area= 20,300 sf Storage= 134,470 cf

Plug-Flow detention time= 886.9 min calculated for 3.829 af (100% of inflow)
Center-of-Mass det. time= 886.8 min (1,700.1 - 813.3)

Volume	Invert	Avail.Storage	Storage Description
#1	620.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	621.00'	144,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		144,420 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
620.00	800	0	0
621.00	800	800	800

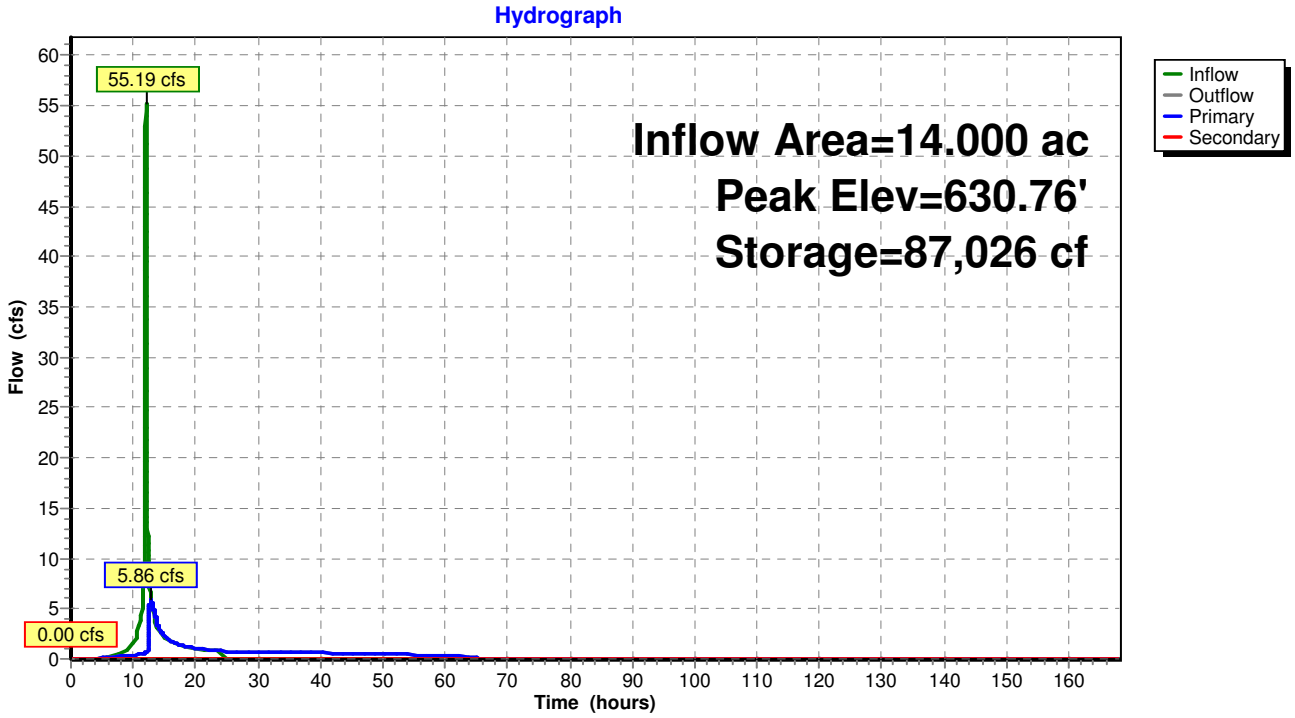
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
621.00	3,000	0	0
622.00	4,600	3,800	3,800
624.00	6,500	11,100	14,900
626.00	8,700	15,200	30,100
628.00	11,300	20,000	50,100
630.00	14,100	25,400	75,500
632.00	17,100	31,200	106,700
634.00	20,300	37,400	144,100

Device	Routing	Invert	Outlet Devices
#1	Primary	620.00'	**24.0" Round Culvert** L= 480.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 620.00' / 615.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	630.40'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	620.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	632.00'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.86 cfs @ 12.80 hrs HW=630.76' TW=617.66' (Dynamic Tailwater)
└─**1=Culvert** (Passes 5.86 cfs of 33.36 cfs potential flow)
  ├─**2=Broad-Crested Rectangular Weir** (Weir Controls 5.09 cfs @ 1.75 fps)
  └─**3=Orifice/Grate** (Orifice Controls 0.77 cfs @ 15.71 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=620.00' TW=0.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.5 EDB: South Detention Basin



Stage-Area-Storage for Pond 3.5 EDB: South Detention Basin

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
620.00	0	627.80	48,186
620.15	48	627.95	49,857
620.30	96	628.10	51,557
620.45	144	628.25	53,289
620.60	192	628.40	55,052
620.75	240	628.55	56,847
620.90	288	628.70	58,673
621.05	472	628.85	60,531
621.20	952	629.00	62,420
621.35	1,468	629.15	64,341
621.50	2,020	629.30	66,293
621.65	2,608	629.45	68,277
621.80	3,232	629.60	70,292
621.95	3,892	629.75	72,339
622.10	4,585	629.90	74,417
622.25	5,300	630.05	76,527
622.40	6,036	630.20	78,670
622.55	6,794	630.35	80,847
622.70	7,573	630.50	83,058
622.85	8,373	630.65	85,302
623.00	9,195	630.80	87,580
623.15	10,038	630.95	89,892
623.30	10,903	631.10	92,238
623.45	11,789	631.25	94,617
623.60	12,696	631.40	97,030
623.75	13,625	631.55	99,477
623.90	14,575	631.70	101,958
624.05	15,546	631.85	104,472
624.20	16,542	632.00	107,020
624.35	17,562	632.15	109,603
624.50	18,608	632.30	112,222
624.65	19,677	632.45	114,877
624.80	20,772	632.60	117,568
624.95	21,891	632.75	120,295
625.10	23,036	632.90	123,058
625.25	24,204	633.05	125,857
625.40	25,398	633.20	128,692
625.55	26,616	633.35	131,563
625.70	27,860	633.50	134,470
625.85	29,127	633.65	137,413
626.00	30,420	633.80	140,392
626.15	31,740	633.95	**143,407**
626.30	33,088		
626.45	34,467		
626.60	35,874		
626.75	37,311		
626.90	38,776		
627.05	40,272		
627.20	41,796		
627.35	43,350		
627.50	44,933		
627.65	46,545		

Summary for Pond 3.6lB: South Upper Infiltration Basin

Inflow Area = 20.800 ac, 38.46% Impervious, Inflow Depth = 2.38" for 10-yr event
Inflow = 2.49 cfs @ 12.06 hrs, Volume= 4.120 af
Outflow = 1.29 cfs @ 21.28 hrs, Volume= 4.120 af, Atten= 48%, Lag= 553.2 min
Discarded = 1.29 cfs @ 21.28 hrs, Volume= 4.120 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 609.69' @ 21.28 hrs Surf.Area= 7,429 sf Storage= 4,846 cf
Flood Elev= 617.50' Surf.Area= 18,675 sf Storage= 104,556 cf

Plug-Flow detention time= 33.7 min calculated for 4.120 af (100% of inflow)
Center-of-Mass det. time= 33.7 min (1,821.9 - 1,788.2)

Volume	Invert	Avail.Storage	Storage Description
#1	609.00'	114,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

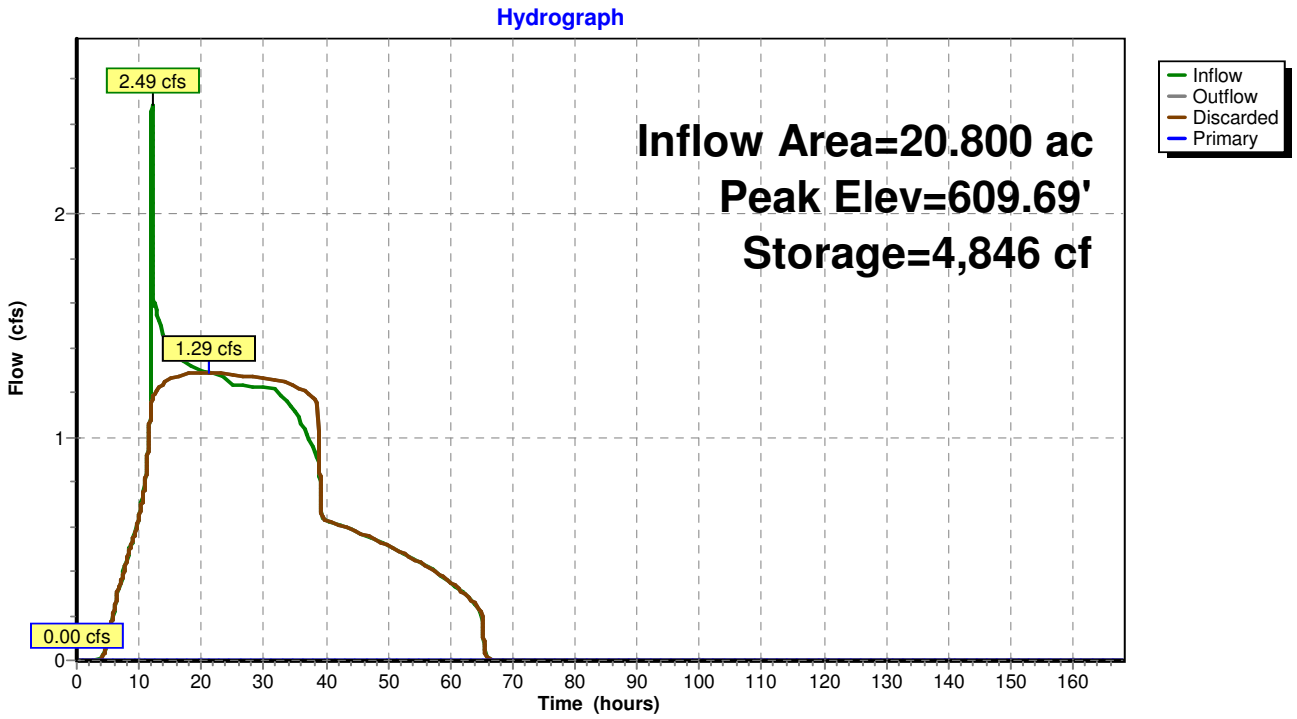
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
609.00	6,600	0	0
610.00	7,800	7,200	7,200
612.00	10,400	18,200	25,400
614.00	13,200	23,600	49,000
616.00	16,200	29,400	78,400
618.00	19,500	35,700	114,100

Device	Routing	Invert	Outlet Devices
#1	Primary	608.00'	**12.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 608.00' / 594.00' S= 0.1750 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	617.40'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	609.00'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=1.29 cfs @ 21.28 hrs HW=609.69' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.29 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=609.00' TW=593.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 2.67 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.6IB: South Upper Infiltration Basin



Stage-Area-Storage for Pond 3.6IB: South Upper Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
609.00	6,600	0
609.10	6,720	666
609.20	6,840	1,344
609.30	6,960	2,034
609.40	7,080	2,736
609.50	7,200	3,450
609.60	7,320	4,176
609.70	7,440	4,914
609.80	7,560	5,664
609.90	7,680	6,426
610.00	7,800	7,200
610.10	7,930	7,987
610.20	8,060	8,786
610.30	8,190	9,598
610.40	8,320	10,424
610.50	8,450	11,263
610.60	8,580	12,114
610.70	8,710	12,979
610.80	8,840	13,856
610.90	8,970	14,746
611.00	9,100	15,650
611.10	9,230	16,567
611.20	9,360	17,496
611.30	9,490	18,438
611.40	9,620	19,394
611.50	9,750	20,363
611.60	9,880	21,344
611.70	10,010	22,339
611.80	10,140	23,346
611.90	10,270	24,366
612.00	10,400	25,400
612.10	10,540	26,447
612.20	10,680	27,508
612.30	10,820	28,583
612.40	10,960	29,672
612.50	11,100	30,775
612.60	11,240	31,892
612.70	11,380	33,023
612.80	11,520	34,168
612.90	11,660	35,327
613.00	11,800	36,500
613.10	11,940	37,687
613.20	12,080	38,888
613.30	12,220	40,103
613.40	12,360	41,332
613.50	12,500	42,575
613.60	12,640	43,832
613.70	12,780	45,103
613.80	12,920	46,388
613.90	13,060	47,687
614.00	13,200	49,000
614.10	13,350	50,328
614.20	13,500	51,670
614.30	13,650	53,027
614.40	13,800	54,400
614.50	13,950	55,788
614.60	14,100	57,190
614.70	14,250	58,608
614.80	14,400	60,040
614.90	14,550	61,487
615.00	14,700	62,950
615.10	14,850	64,428
615.20	15,000	65,920
615.30	15,150	67,427
615.40	15,300	68,950
615.50	15,450	70,488
615.60	15,600	72,040
615.70	15,750	73,608
615.80	15,900	75,190
615.90	16,050	76,787
616.00	16,200	78,400
616.10	16,365	80,028
616.20	16,530	81,673
616.30	16,695	83,334
616.40	16,860	85,012
616.50	17,025	86,706
616.60	17,190	88,417
616.70	17,355	90,144
616.80	17,520	91,888
616.90	17,685	93,648
617.00	17,850	95,425
617.10	18,015	97,218
617.20	18,180	99,028
617.30	18,345	100,854
617.40	18,510	102,697
617.50	18,675	104,556
617.60	18,840	106,432
617.70	19,005	108,324
617.80	19,170	110,233
617.90	19,335	112,158
618.00	**19,500**	**114,100**

Summary for Pond 3.7EDB: South Lower Detention Basin

Inflow Area = 21.300 ac, 37.56% Impervious, Inflow Depth = 0.73" for 10-yr event
Inflow = 5.31 cfs @ 12.81 hrs, Volume= 1.292 af
Outflow = 0.61 cfs @ 19.00 hrs, Volume= 1.292 af, Atten= 89%, Lag= 371.4 min
Primary = 0.61 cfs @ 19.00 hrs, Volume= 1.292 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 599.78' @ 19.00 hrs Surf.Area= 9,176 sf Storage= 33,020 cf
Flood Elev= 605.50' Surf.Area= 16,125 sf Storage= 100,089 cf

Plug-Flow detention time= 636.5 min calculated for 1.292 af (100% of inflow)
Center-of-Mass det. time= 636.3 min (1,588.8 - 952.4)

Volume	Invert	Avail.Storage	Storage Description
#1	593.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	594.00'	107,600 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		107,920 cf	Total Available Storage

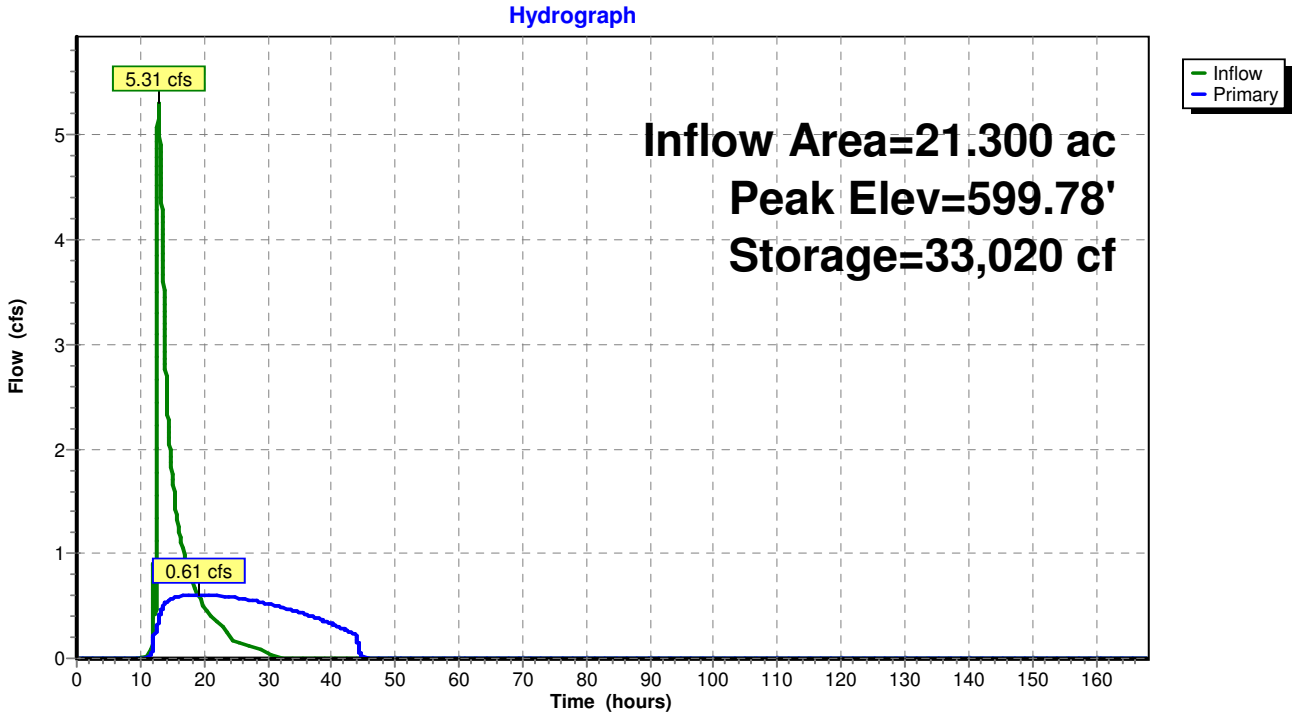
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
593.00	800	0	0
594.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	3,200	0	0
596.00	4,800	8,000	8,000
598.00	6,600	11,400	19,400
600.00	8,600	15,200	34,600
602.00	10,900	19,500	54,100
604.00	13,300	24,200	78,300
606.00	16,000	29,300	107,600

Device	Routing	Invert	Outlet Devices
#1	Primary	593.00'	**24.0" Round Culvert** L= 85.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 593.00' / 590.00' S= 0.0353 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	593.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	603.10'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.61 cfs @ 19.00 hrs HW=599.78' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.61 cfs of 36.35 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.61 cfs @ 12.42 fps)
  └─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.7EDB: South Lower Detention Basin



Stage-Area-Storage for Pond 3.7EDB: South Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
593.00	0
593.15	48
593.30	96
593.45	144
593.60	192
593.75	240
593.90	288
594.05	481
594.20	976
594.35	1,489
594.50	2,020
594.65	2,569
594.80	3,136
594.95	3,721
595.10	4,324
595.25	4,945
595.40	5,584
595.55	6,241
595.70	6,916
595.85	7,609
596.00	8,320
596.15	9,050
596.30	9,800
596.45	10,571
596.60	11,362
596.75	12,173
596.90	13,004
597.05	13,856
597.20	14,728
597.35	15,620
597.50	16,533
597.65	17,465
597.80	18,418
597.95	19,391
598.10	20,385
598.25	21,401
598.40	22,440
598.55	23,501
598.70	24,585
598.85	25,691
599.00	26,820
599.15	27,971
599.30	29,145
599.45	30,341
599.60	31,560
599.75	32,801
599.90	34,065
600.05	35,351
600.20	36,663
600.35	38,000
600.50	39,364
600.65	40,753
600.80	42,168
600.95	43,609
601.10	45,076
601.25	46,568
601.40	48,087
601.55	49,631
601.70	51,202
601.85	52,798
602.00	54,420
602.15	56,068
602.30	57,744
602.45	59,447
602.60	61,176
602.75	62,933
602.90	64,716
603.05	66,526
603.20	68,364
603.35	70,229
603.50	72,120
603.65	74,038
603.80	75,984
603.95	77,957
604.10	79,957
604.25	81,987
604.40	84,048
604.55	86,139
604.70	88,261
604.85	90,413
605.00	92,595
605.15	94,808
605.30	97,051
605.45	99,324
605.60	101,628
605.75	103,962
605.90	**106,327**

Summary for Pond FS 3.6:

Inflow Area = 19.900 ac, 40.20% Impervious, Inflow Depth = 3.16" for 10-yr event
Inflow = 6.54 cfs @ 12.81 hrs, Volume= 5.244 af
Outflow = 6.54 cfs @ 12.82 hrs, Volume= 5.244 af, Atten= 0%, Lag= 0.6 min
Primary = 1.36 cfs @ 12.82 hrs, Volume= 4.020 af
Secondary = 5.18 cfs @ 12.82 hrs, Volume= 1.225 af

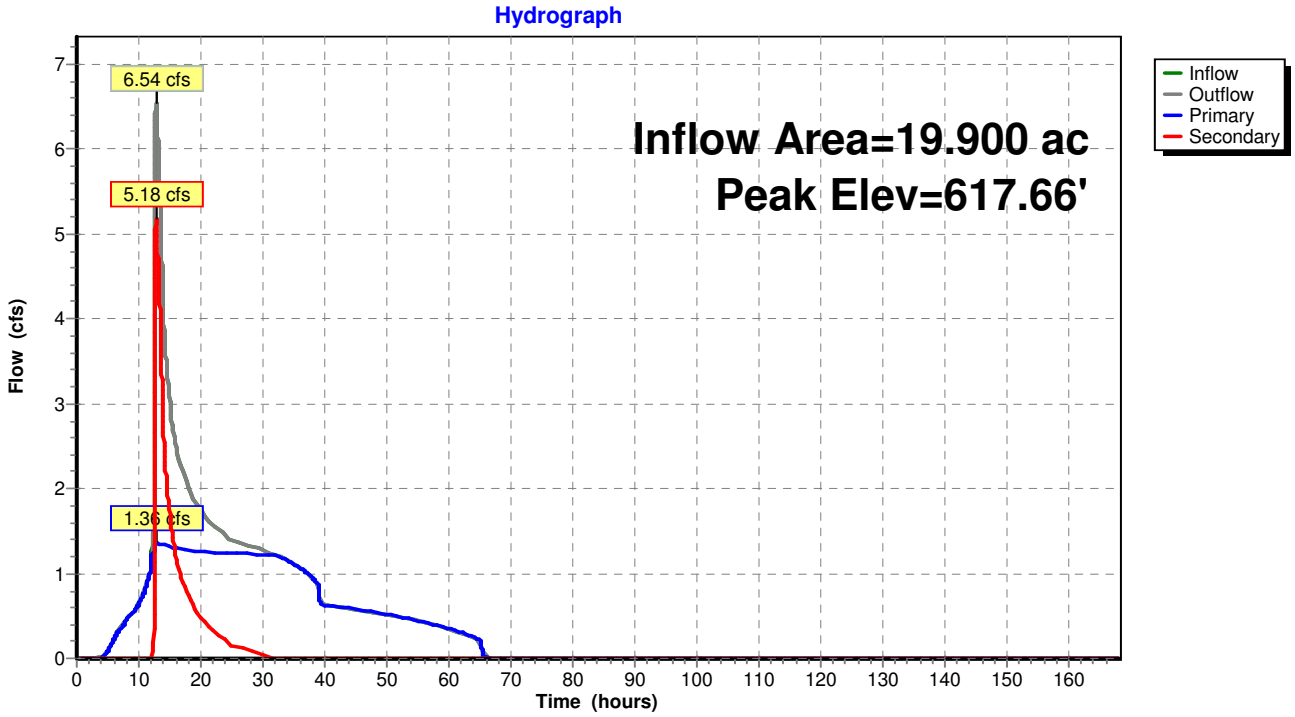
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 617.66' @ 12.82 hrs
Flood Elev= 629.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	615.20'	**6.0" Round Culvert** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 609.00' S= 0.0517 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 3	617.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	615.20'	**30.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 610.80' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.36 cfs @ 12.82 hrs HW=617.66' TW=609.31' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.36 cfs @ 6.92 fps)

Secondary OutFlow Max=5.18 cfs @ 12.82 hrs HW=617.66' TW=595.43' (Dynamic Tailwater)
└**3=Culvert** (Passes 5.18 cfs of 26.16 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 5.18 cfs @ 2.29 fps)

Pond FS 3.6:


Hydrograph
Inflow Area=19.900 ac
Peak Elev=617.66'
6.54 cfs
5.18 cfs
1.36 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
1
2
3
4
5
6
7
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160

Stage-Area-Storage for Pond FS 3.6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
615.20	**0**	623.00	0
615.35	0	623.15	0
615.50	0	623.30	0
615.65	0	623.45	0
615.80	0	623.60	0
615.95	0	623.75	0
616.10	0	623.90	0
616.25	0	624.05	0
616.40	0	624.20	0
616.55	0	624.35	0
616.70	0	624.50	0
616.85	0	624.65	0
617.00	0	624.80	0
617.15	0	624.95	0
617.30	0	625.10	0
617.45	0	625.25	0
617.60	0	625.40	0
617.75	0	625.55	0
617.90	0	625.70	0
618.05	0	625.85	0
618.20	0	626.00	0
618.35	0	626.15	0
618.50	0	626.30	0
618.65	0	626.45	0
618.80	0	626.60	0
618.95	0	626.75	0
619.10	0	626.90	0
619.25	0	627.05	0
619.40	0	627.20	0
619.55	0	627.35	0
619.70	0	627.50	0
619.85	0	627.65	0
620.00	0	627.80	0
620.15	0	627.95	0
620.30	0	628.10	0
620.45	0	628.25	0
620.60	0	628.40	0
620.75	0	628.55	0
620.90	0	628.70	0
621.05	0	628.85	0
621.20	0	629.00	0
621.35	0	629.15	0
621.50	0	629.30	0
621.65	0	629.45	0
621.80	0		
621.95	0		
622.10	0		
622.25	0		
622.40	0		
622.55	0		
622.70	0		
622.85	0		

Summary for Pond OS 2.2: North Detention Flow Split

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 3.32" for 10-yr event
Inflow = 14.00 cfs @ 12.42 hrs, Volume= 4.676 af
Outflow = 14.00 cfs @ 12.43 hrs, Volume= 4.676 af, Atten= 0%, Lag= 0.6 min
Primary = 0.48 cfs @ 12.43 hrs, Volume= 2.198 af
Secondary = 13.52 cfs @ 12.43 hrs, Volume= 2.478 af

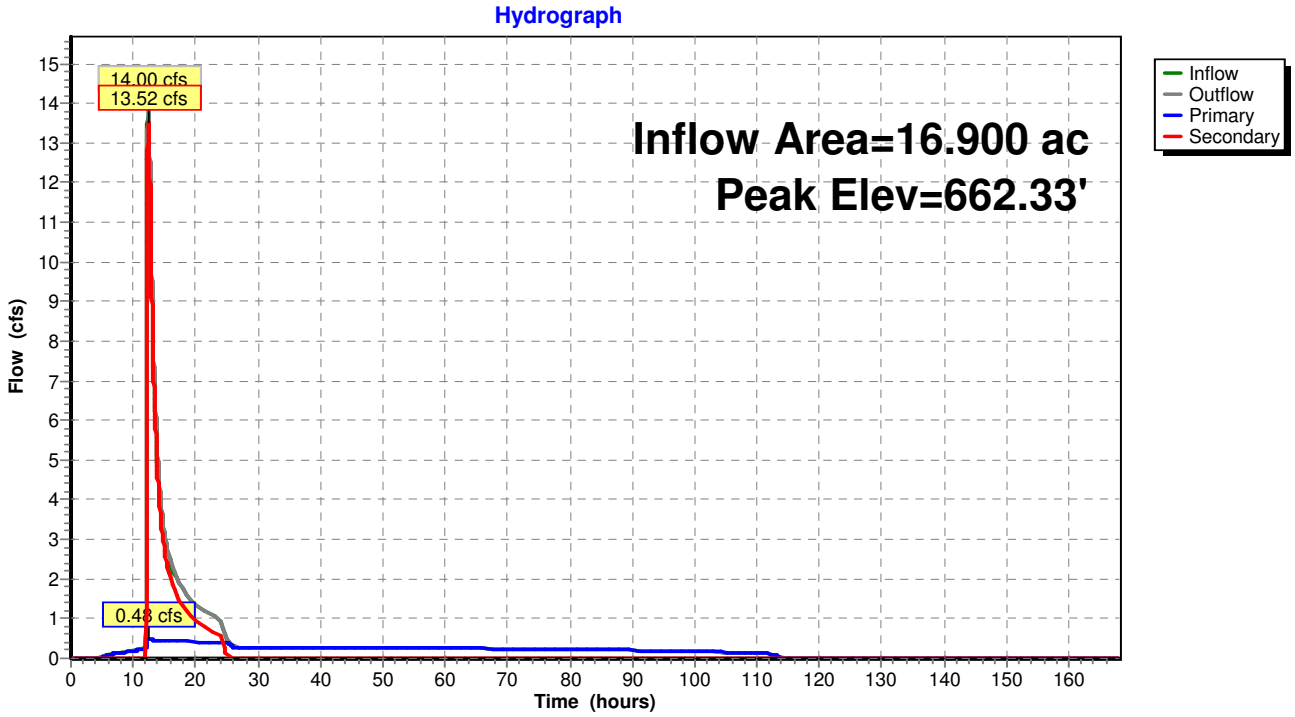
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 662.33' @ 12.43 hrs
Flood Elev= 669.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	658.00'	**6.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 658.00' / 656.00' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	658.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Secondary	660.90'	**36.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 660.90' / 656.00' S= 0.0612 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=0.48 cfs @ 12.43 hrs HW=662.33' TW=654.37' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 0.48 cfs of 1.04 cfs potential flow)
↑—**2=Orifice/Grate** (Orifice Controls 0.48 cfs @ 9.87 fps)

Secondary OutFlow Max=13.52 cfs @ 12.43 hrs HW=662.33' TW=653.04' (Dynamic Tailwater)
↑—**3=Culvert** (Inlet Controls 13.52 cfs @ 4.07 fps)

Pond OS 2.2: North Detention Flow Split



Stage-Area-Storage for Pond OS 2.2: North Detention Flow Split

Elevation (feet)	Storage (cubic-feet)
658.00	**0**
658.15	0
658.30	0
658.45	0
658.60	0
658.75	0
658.90	0
659.05	0
659.20	0
659.35	0
659.50	0
659.65	0
659.80	0
659.95	0
660.10	0
660.25	0
660.40	0
660.55	0
660.70	0
660.85	0
661.00	0
661.15	0
661.30	0
661.45	0
661.60	0
661.75	0
661.90	0
662.05	0
662.20	0
662.35	0
662.50	0
662.65	0
662.80	0
662.95	0
663.10	0
663.25	0
663.40	0
663.55	0
663.70	0
663.85	0
664.00	0
664.15	0
664.30	0
664.45	0
664.60	0
664.75	0
664.90	0
665.05	0
665.20	0
665.35	0
665.50	0
665.65	0
665.80	0
665.95	0
666.10	0
666.25	0
666.40	0
666.55	0
666.70	0
666.85	0
667.00	0
667.15	0
667.30	0
667.45	0
667.60	0
667.75	0
667.90	0
668.05	0
668.20	0
668.35	0
668.50	0
668.65	0
668.80	0
668.95	0

Summary for Subcatchment 1.1S: North Turnaround

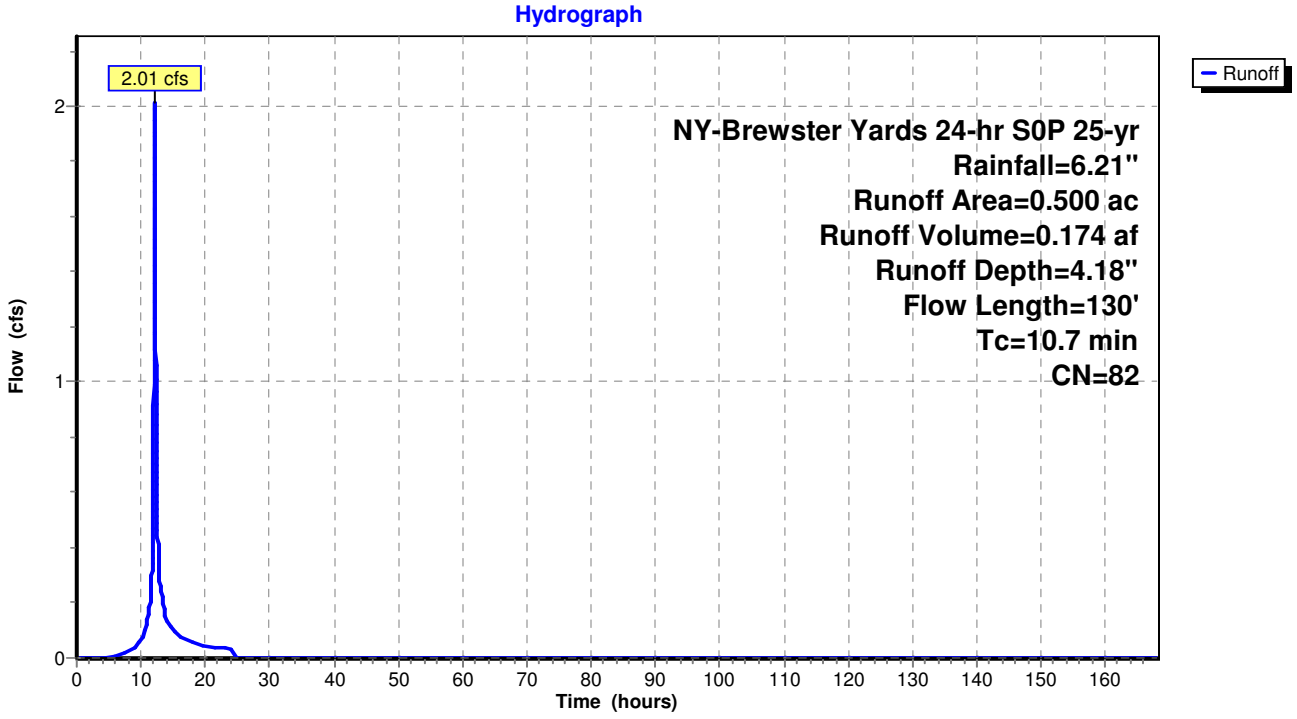
Runoff = 2.01 cfs @ 12.11 hrs, Volume= 0.174 af, Depth= 4.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
0.100	70	Woods, Good, HSG C
0.100	74	>75% Grass cover, Good, HSG C
0.100	87	Dirt roads, HSG C
0.200	89	Gravel roads, HSG C
0.500	82	Weighted Average
0.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	60	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.0	20	0.5000	0.32		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
0.2	50	0.0600	3.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
10.7	130	Total			

Subcatchment 1.1S: North Turnaround



Summary for Subcatchment 1.2S: Untreated

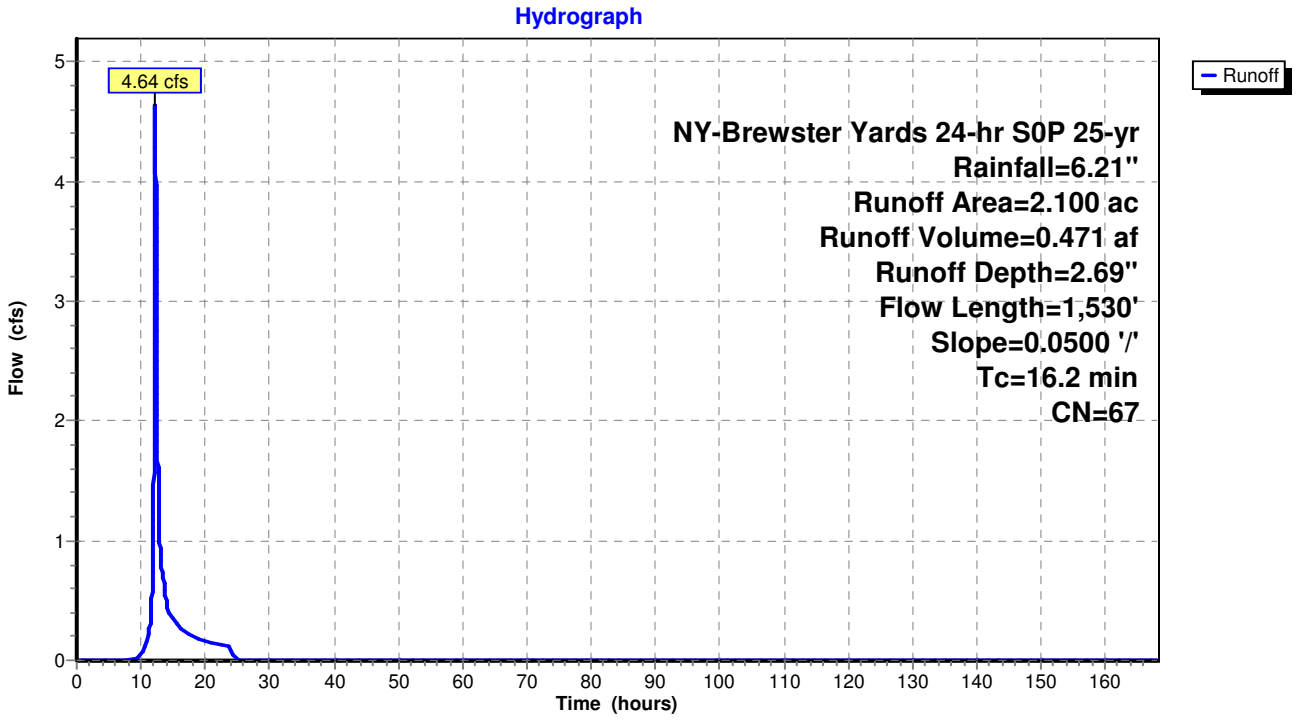
Runoff = 4.64 cfs @ 12.20 hrs, Volume= 0.471 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
0.600	55	Woods, Good, HSG B
1.300	70	Woods, Good, HSG C
0.200	87	Dirt roads, HSG C
2.100	67	Weighted Average
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0500	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.8	1,430	0.0500	13.29	132.91	**Channel Flow,** Area= 10.0 sf Perim= 10.0' r= 1.00' n= 0.025 Earth, clean & winding
16.2	1,530	Total			

Subcatchment 1.2S: Untreated



Summary for Subcatchment 2.1S: North Sports & Parking (Piped)

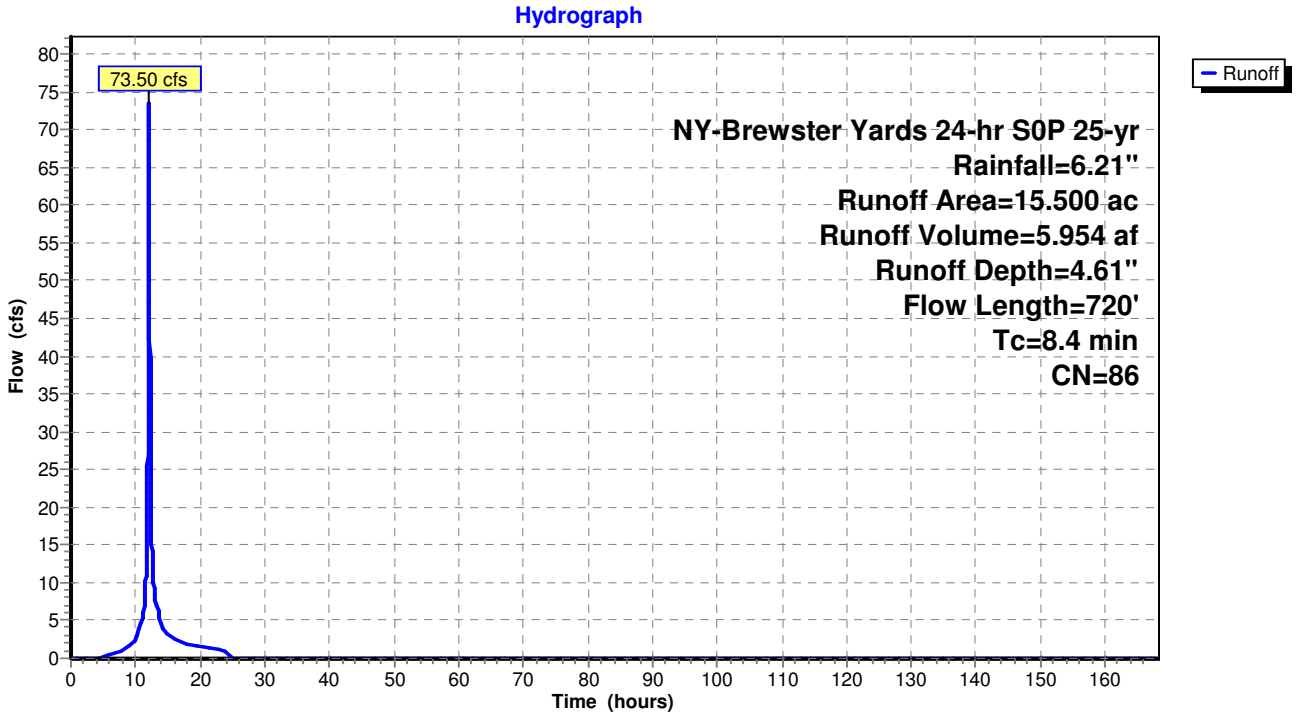
Runoff = 73.50 cfs @ 12.07 hrs, Volume= 5.954 af, Depth= 4.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

	Area (ac)	CN	Description
*	10.700	86	Field Turf
	1.000	61	>75% Grass cover, Good, HSG B
	0.800	74	>75% Grass cover, Good, HSG C
*	3.000	98	Impervious
	15.500	86	Weighted Average
	12.500		80.65% Pervious Area
	3.000		19.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
0.8	160	0.0438	3.14		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	190	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	270	0.0200	10.18	31.99	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
8.4	720	Total			

Subcatchment 2.1S: North Sports & Parking (Piped)



Summary for Subcatchment 2.2S: North Detention

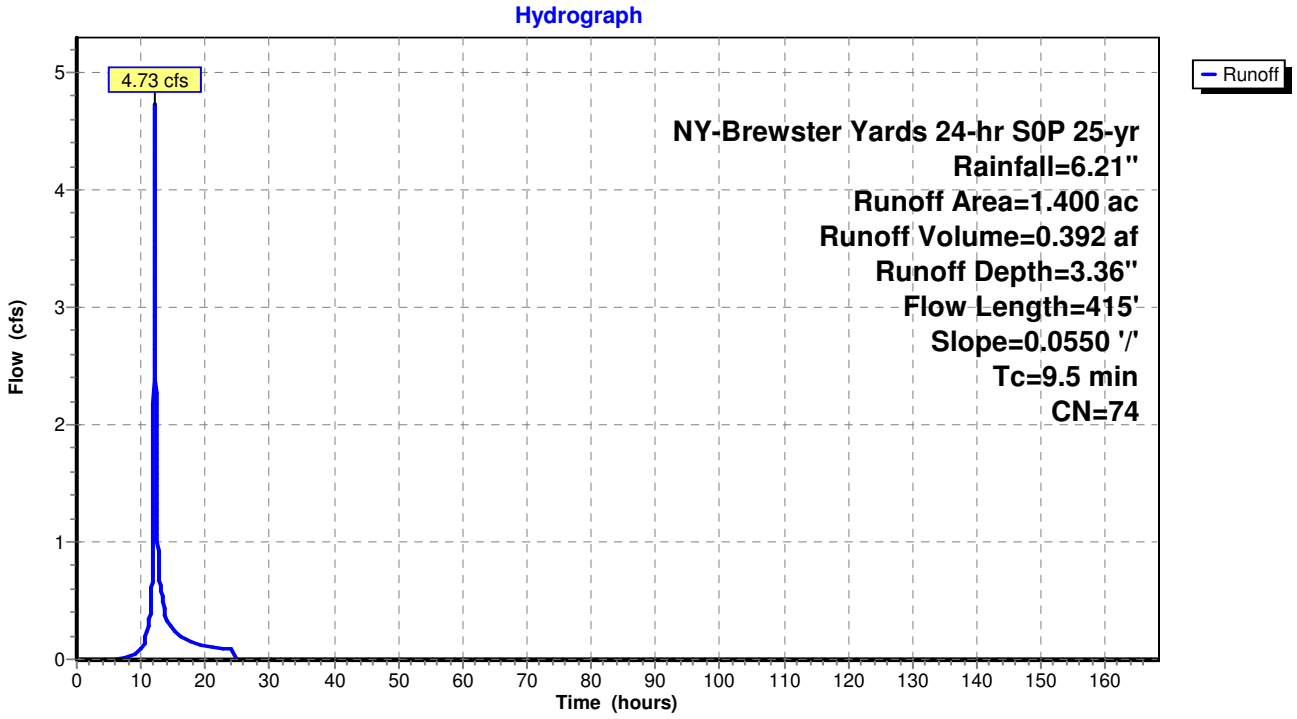
Runoff = 4.73 cfs @ 12.09 hrs, Volume= 0.392 af, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
1.400	74	>75% Grass cover, Good, HSG C
1.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	100	0.0550	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
3.2	315	0.0550	1.64		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	415	Total			

Subcatchment 2.2S: North Detention



Summary for Subcatchment 2.3S: North Infiltration

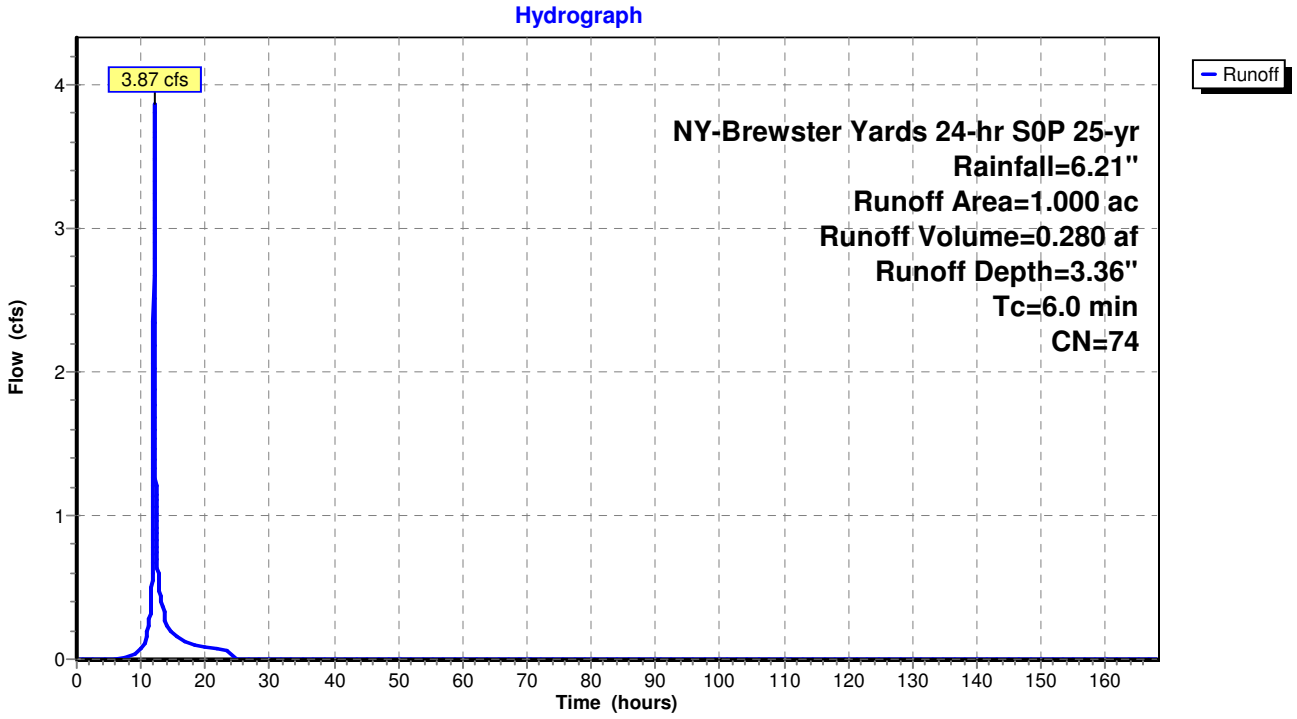
Runoff = 3.87 cfs @ 12.04 hrs, Volume= 0.280 af, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
1.000	74	>75% Grass cover, Good, HSG C
1.000		100.00% Pervious Area

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

Subcatchment 2.3S: North Infiltration



Summary for Subcatchment 2.4S: North Lower Detention

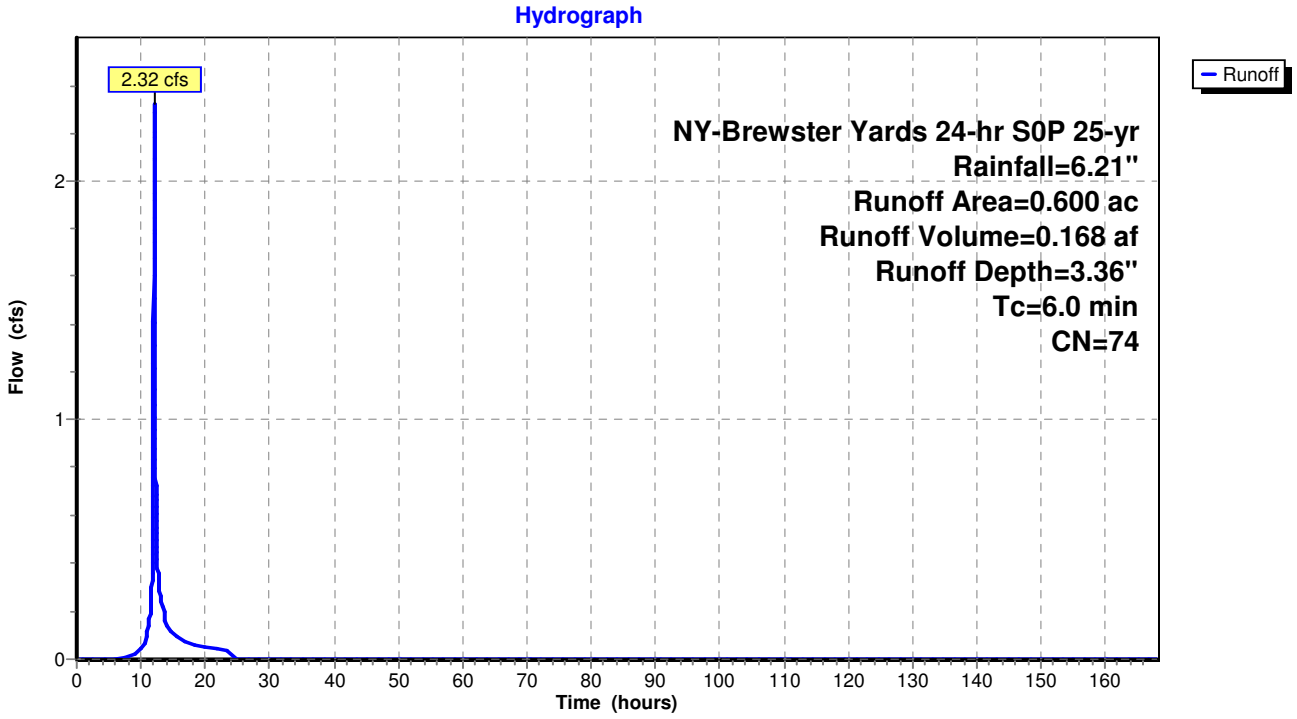
Runoff = 2.32 cfs @ 12.04 hrs, Volume= 0.168 af, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
0.600	74	>75% Grass cover, Good, HSG C
0.600		100.00% Pervious Area

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

Subcatchment 2.4S: North Lower Detention



Summary for Subcatchment 2.5S: Untreated

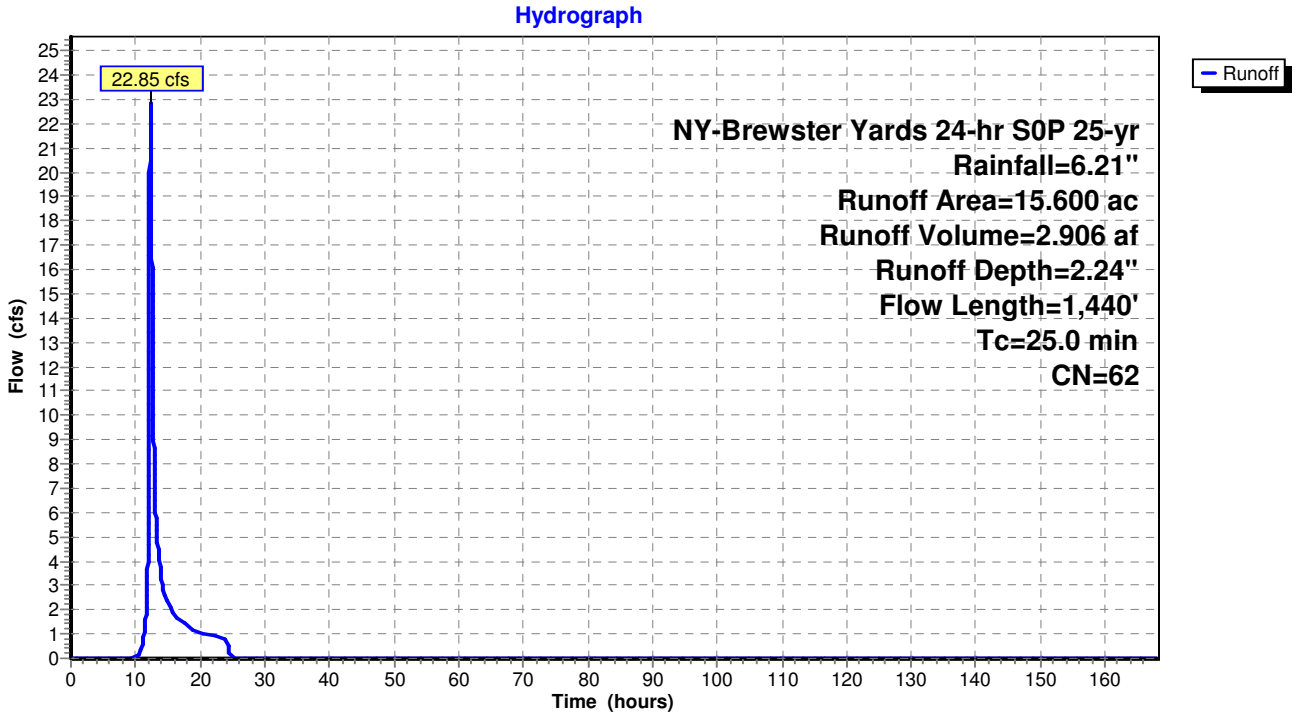
Runoff = 22.85 cfs @ 12.31 hrs, Volume= 2.906 af, Depth= 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
8.900	55	Woods, Good, HSG B
5.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
15.600	62	Weighted Average
15.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
0.5	60	0.1330	1.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	200	0.3000	2.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	150	0.0930	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.0	160	0.2875	2.68		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	350	0.9500	4.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
25.0	1,440	Total			

Subcatchment 2.5S: Untreated



Summary for Subcatchment 3.1S: Building & Fields (Piped)

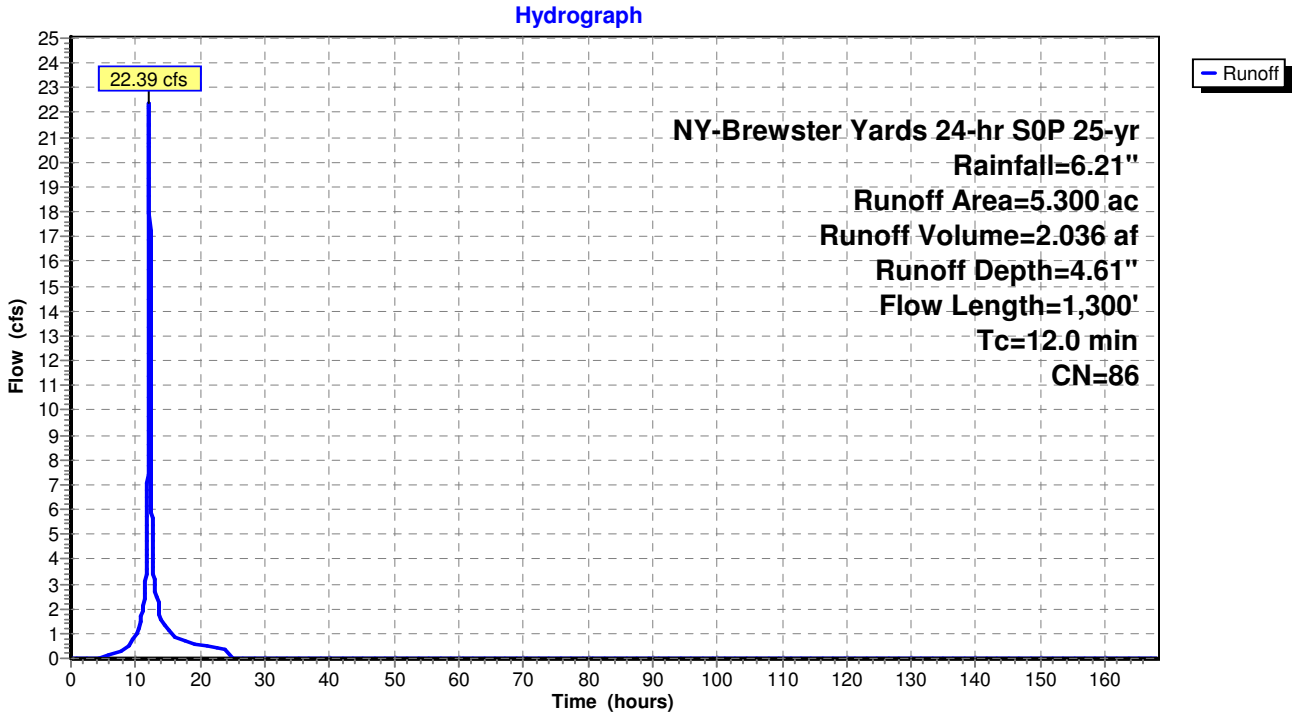
Runoff = 22.39 cfs @ 12.12 hrs, Volume= 2.036 af, Depth= 4.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

	Area (ac)	CN	Description
*	2.700	98	Impervious
*	1.400	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	5.300	86	Weighted Average
	2.600		49.06% Pervious Area
	2.700		50.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0300	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
1.2	150	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.9	250	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	800	0.0412	14.62	45.92	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
12.0	1,300	Total			

Subcatchment 3.1S: Building & Fields (Piped)



Summary for Subcatchment 3.2S: Entrance Infiltration Basin

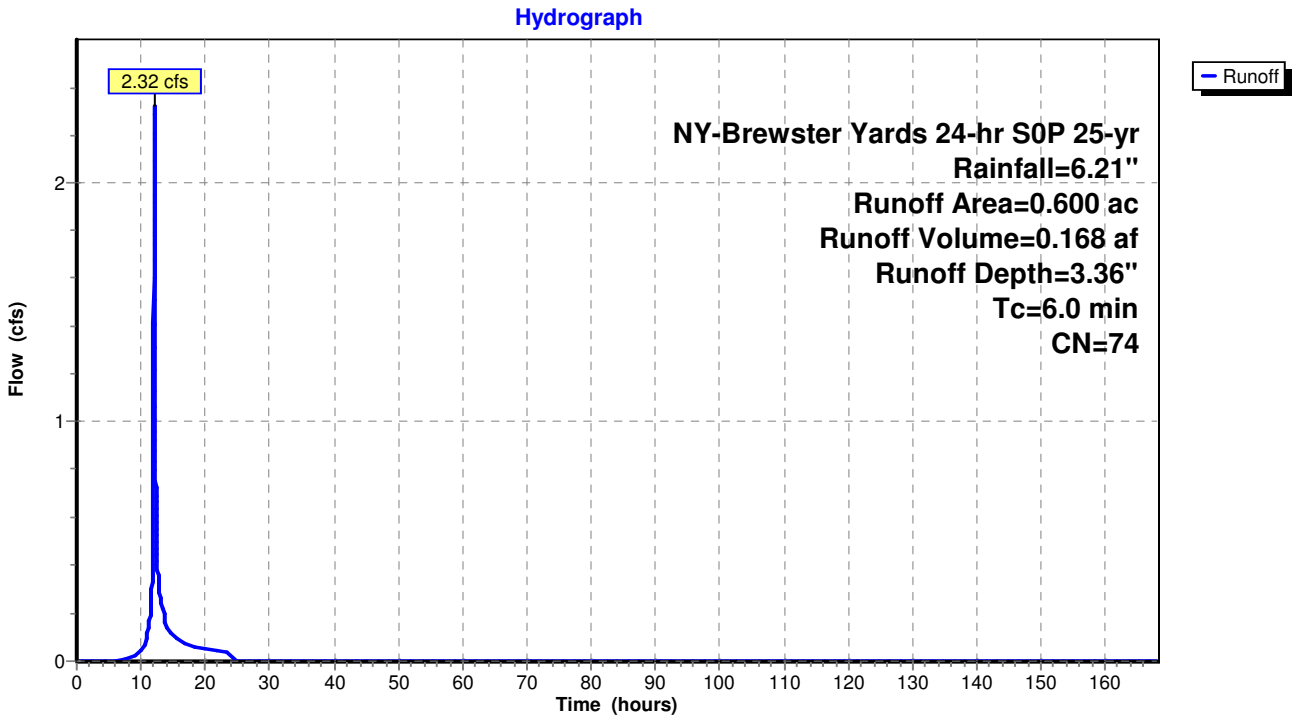
Runoff = 2.32 cfs @ 12.04 hrs, Volume= 0.168 af, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
0.200	61	>75% Grass cover, Good, HSG B
0.400	80	>75% Grass cover, Good, HSG D
0.600	74	Weighted Average
0.600		100.00% Pervious Area

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

Subcatchment 3.2S: Entrance Infiltration Basin



Summary for Subcatchment 3.3S: Fields & Parking (Piped)

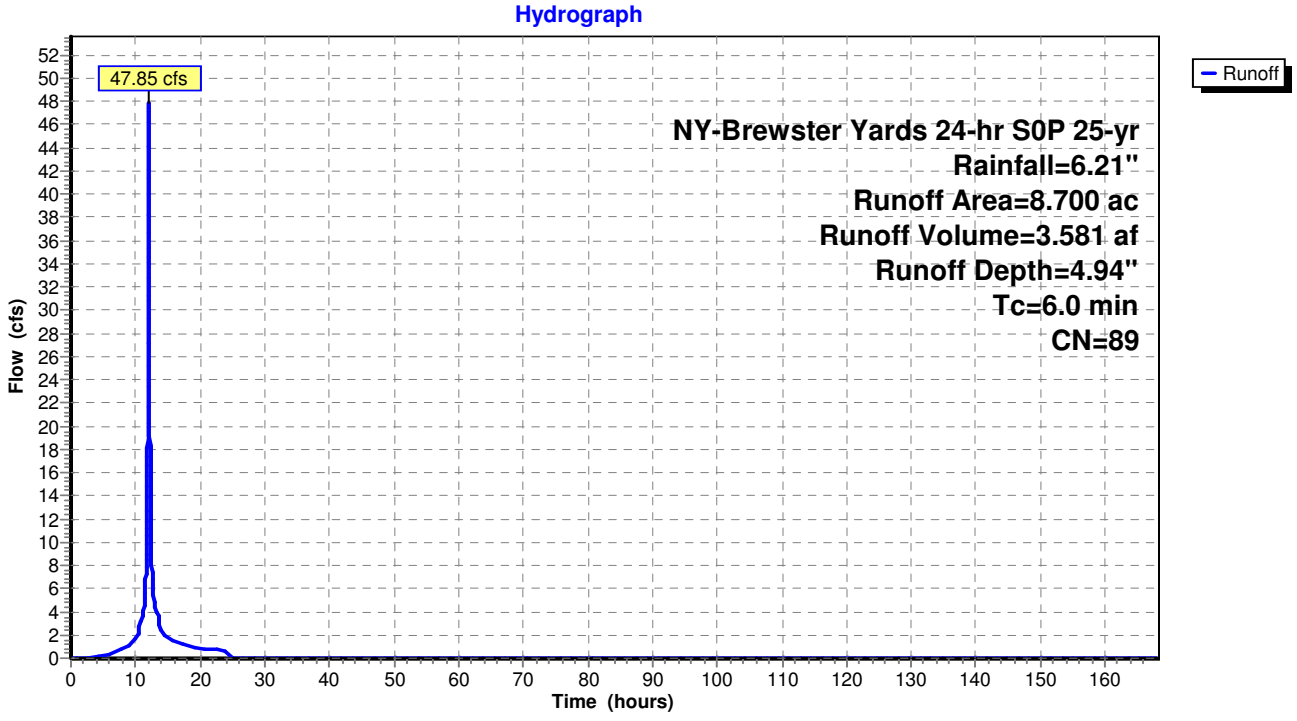
Runoff = 47.85 cfs @ 12.04 hrs, Volume= 3.581 af, Depth= 4.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

	Area (ac)	CN	Description
*	4.800	98	Impervious
*	2.500	86	Field Turf
	1.400	61	>75% Grass cover, Good, HSG B
	8.700	89	Weighted Average
	3.900		44.83% Pervious Area
	4.800		55.17% Impervious Area

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

Subcatchment 3.3S: Fields & Parking (Piped)



Summary for Subcatchment 3.4S: South Showcase Field (Piped)

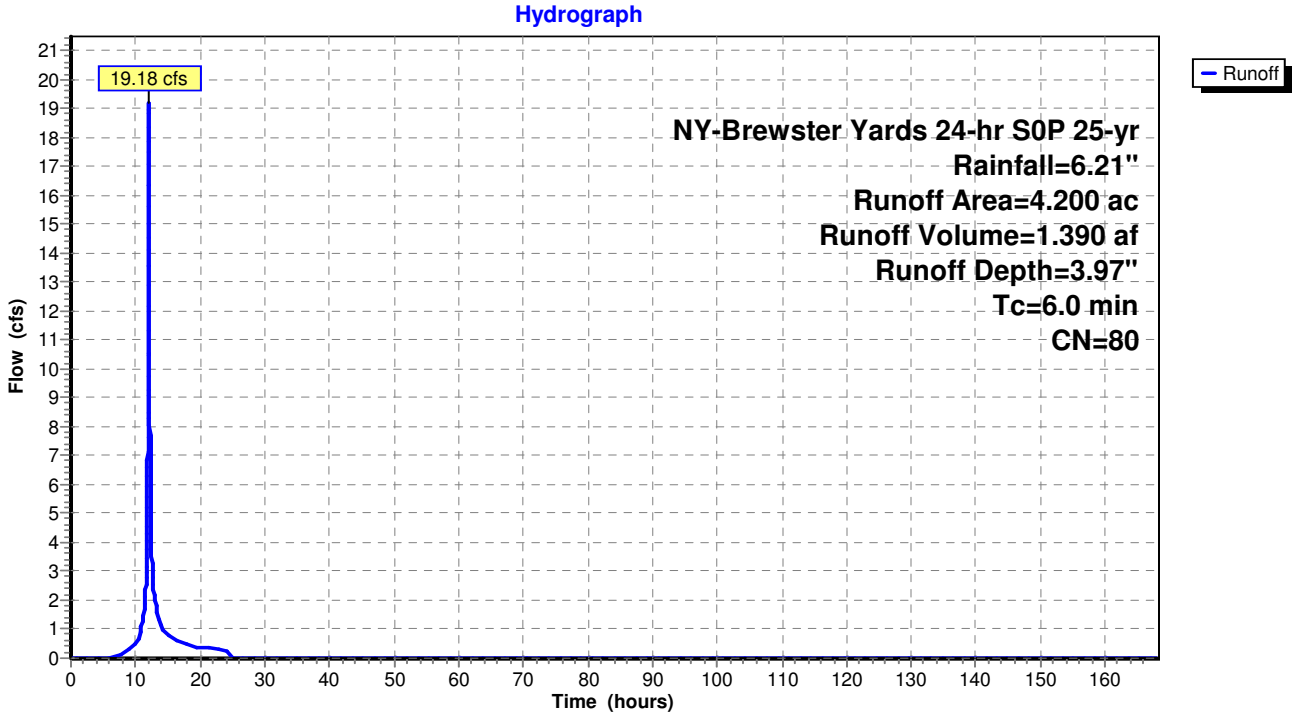
Runoff = 19.18 cfs @ 12.04 hrs, Volume= 1.390 af, Depth= 3.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

	Area (ac)	CN	Description
*	0.400	98	Impervious
*	2.600	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	4.200	80	Weighted Average
	3.800		90.48% Pervious Area
	0.400		9.52% Impervious Area

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

Subcatchment 3.4S: South Showcase Field (Piped)



Summary for Subcatchment 3.5S: South Detention Basin

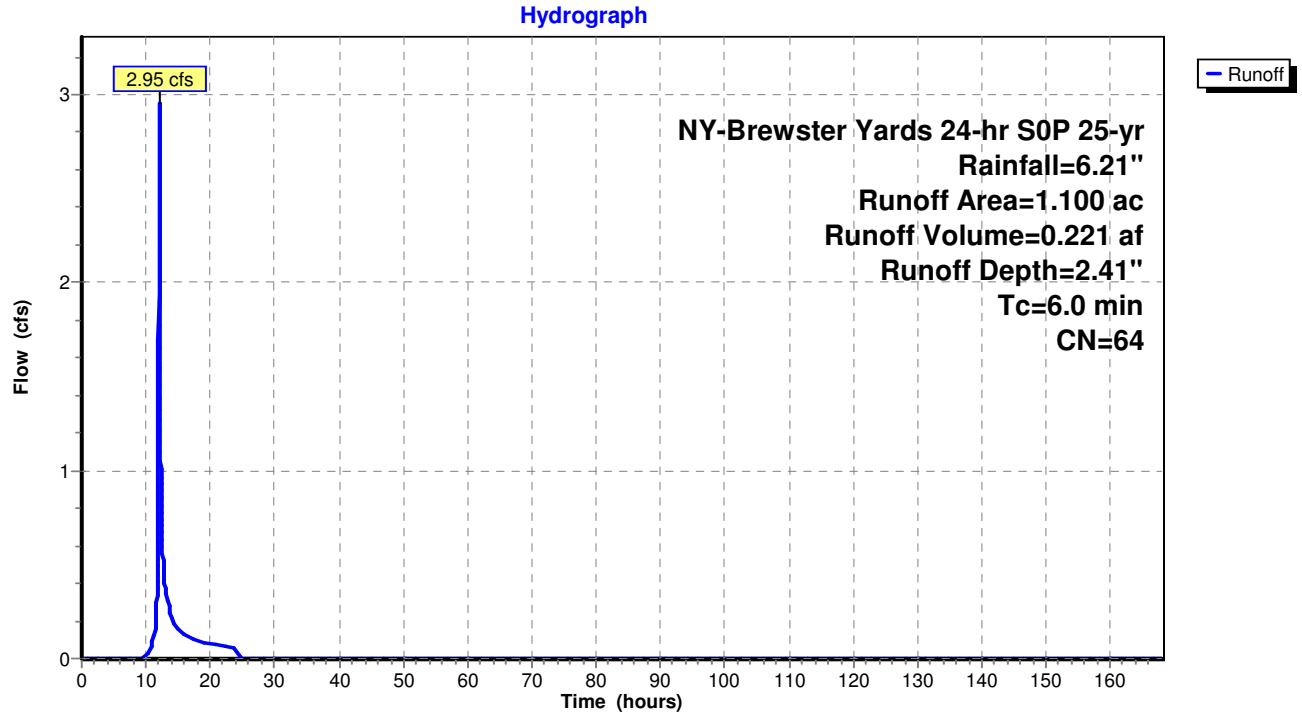
Runoff = 2.95 cfs @ 12.05 hrs, Volume= 0.221 af, Depth= 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

	Area (ac)	CN	Description
*	0.100	98	Impervious
	1.000	61	>75% Grass cover, Good, HSG B
	1.100	64	Weighted Average
	1.000		90.91% Pervious Area
	0.100		9.09% Impervious Area

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

Subcatchment 3.5S: South Detention Basin



Summary for Subcatchment 3.6S: South Upper Pond

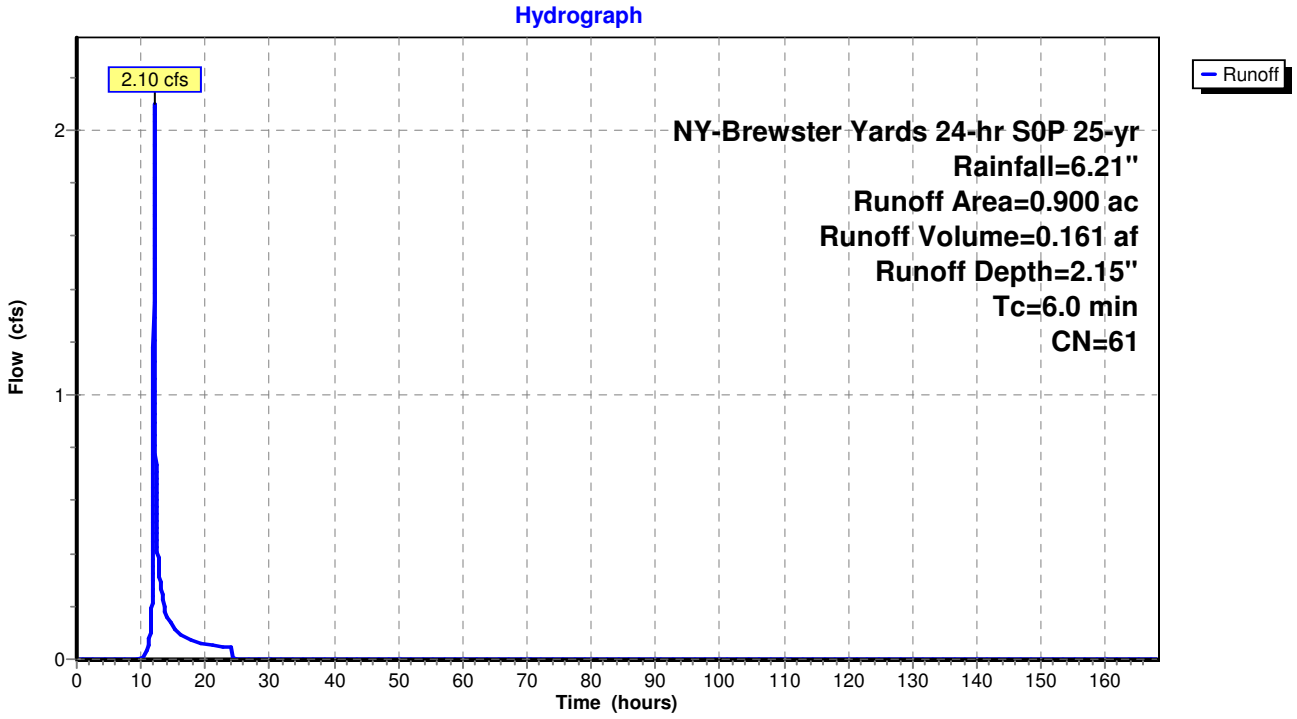
Runoff = 2.10 cfs @ 12.05 hrs, Volume= 0.161 af, Depth= 2.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
0.900	61	>75% Grass cover, Good, HSG B
0.900		100.00% Pervious Area

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

Subcatchment 3.6S: South Upper Pond



Summary for Subcatchment 3.7S: South Lower Pond

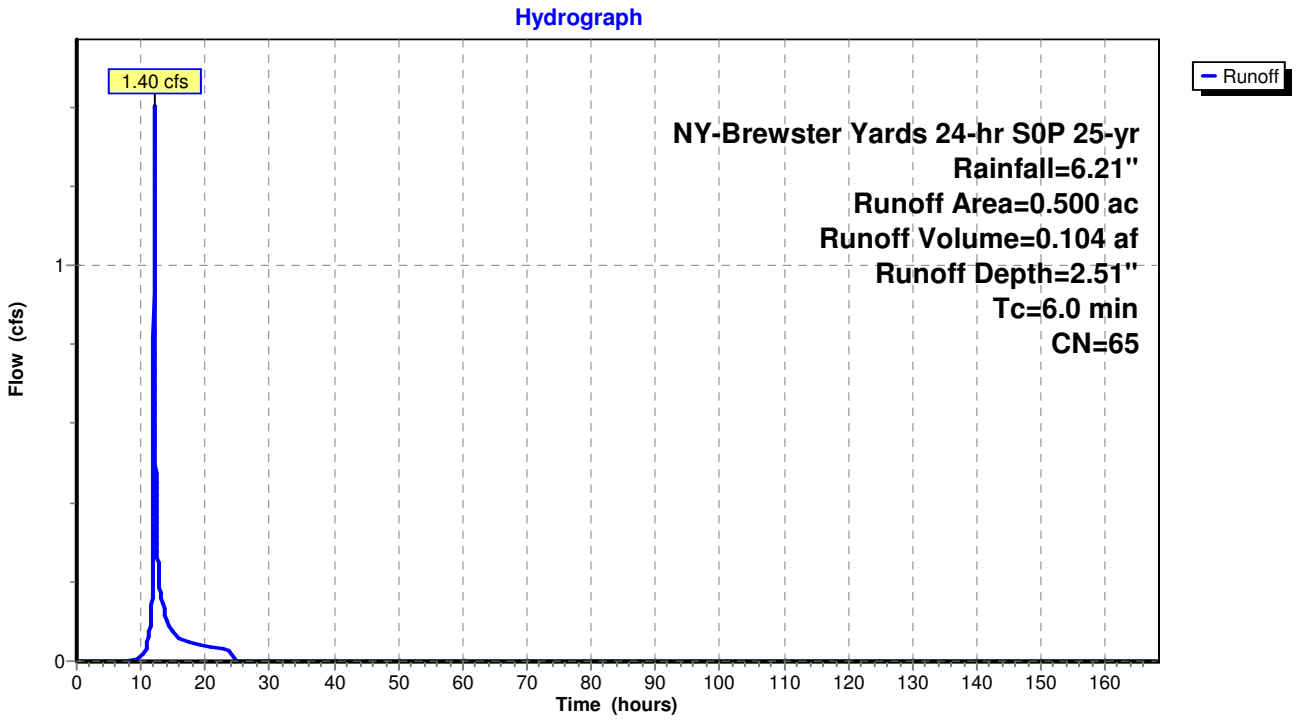
Runoff = 1.40 cfs @ 12.05 hrs, Volume= 0.104 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
0.400	61	>75% Grass cover, Good, HSG B
0.100	80	>75% Grass cover, Good, HSG D
0.500	65	Weighted Average
0.500		100.00% Pervious Area

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

Subcatchment 3.7S: South Lower Pond



Summary for Subcatchment 3.8S: Untreated

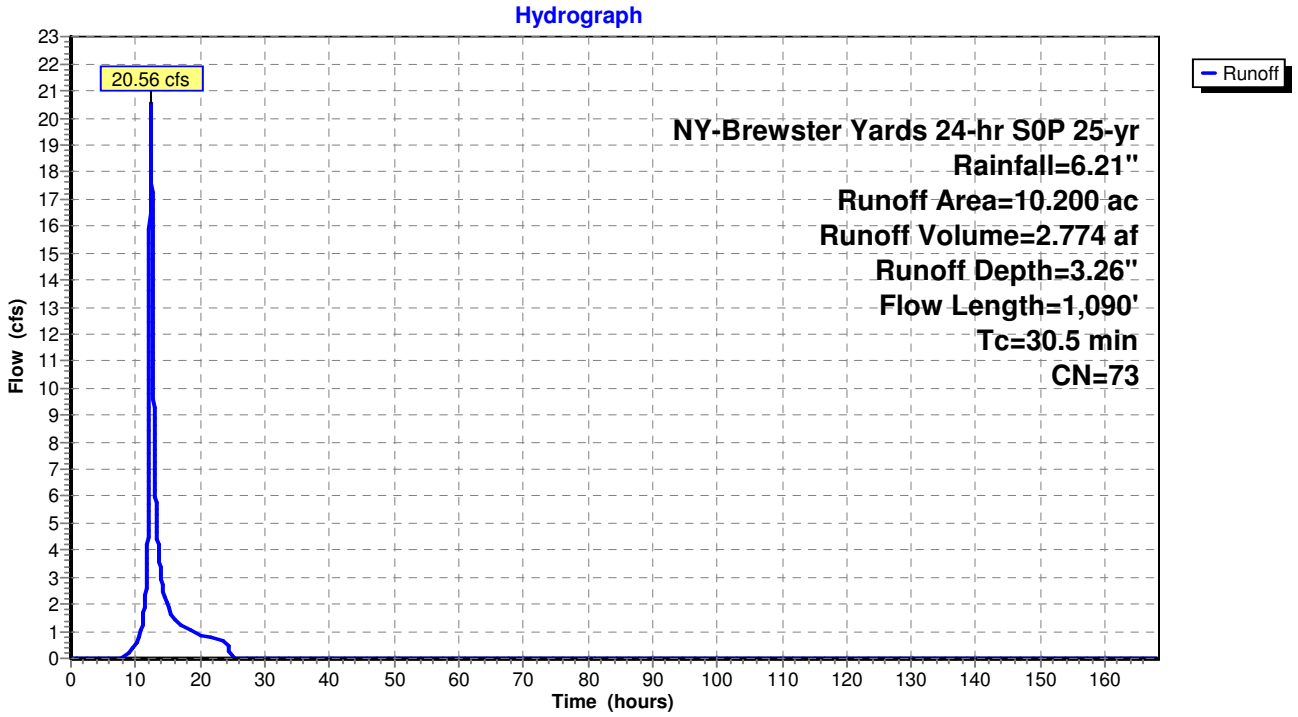
Runoff = 20.56 cfs @ 12.37 hrs, Volume= 2.774 af, Depth= 3.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
2.200	80	>75% Grass cover, Good, HSG D
3.200	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
3.800	77	Woods, Good, HSG D
0.700	98	Paved parking, HSG D
0.200	98	Water Surface, HSG D
10.200	73	Weighted Average
9.300		91.18% Pervious Area
0.900		8.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	50	0.2000	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
6.7	50	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
15.6	70	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.4	60	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30		8.02		**Lake or Reservoir,** Mean Depth= 2.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
30.5	1,090	Total			

Subcatchment 3.8S: Untreated



Summary for Subcatchment 4.1S: Untreated

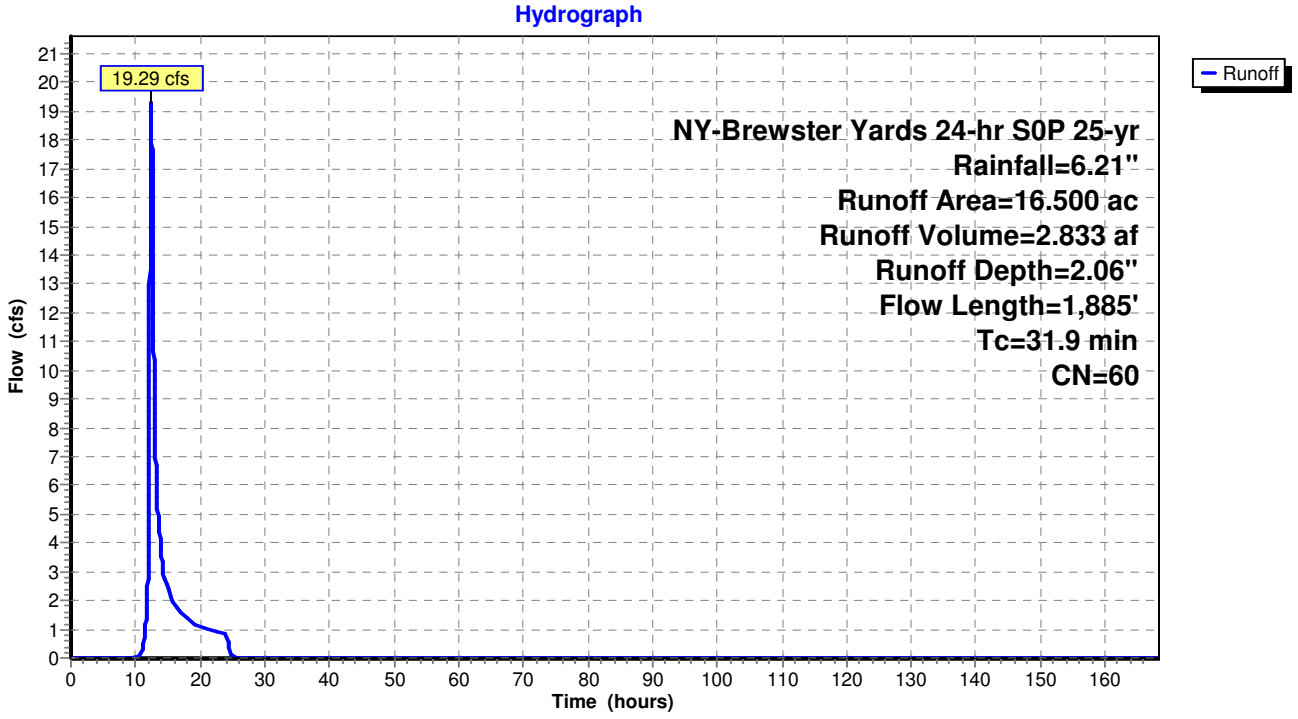
Runoff = 19.29 cfs @ 12.44 hrs, Volume= 2.833 af, Depth= 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 25-yr Rainfall=6.21"

Area (ac)	CN	Description
12.900	55	Woods, Good, HSG B
3.500	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
16.500	60	Weighted Average
16.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	100	0.0190	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
7.9	885	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	900	0.0500	5.09	71.20	**Channel Flow,** Area= 14.0 sf Perim= 45.0' r= 0.31' n= 0.030 Earth, grassed & winding
31.9	1,885	Total			

Subcatchment 4.1S: Untreated

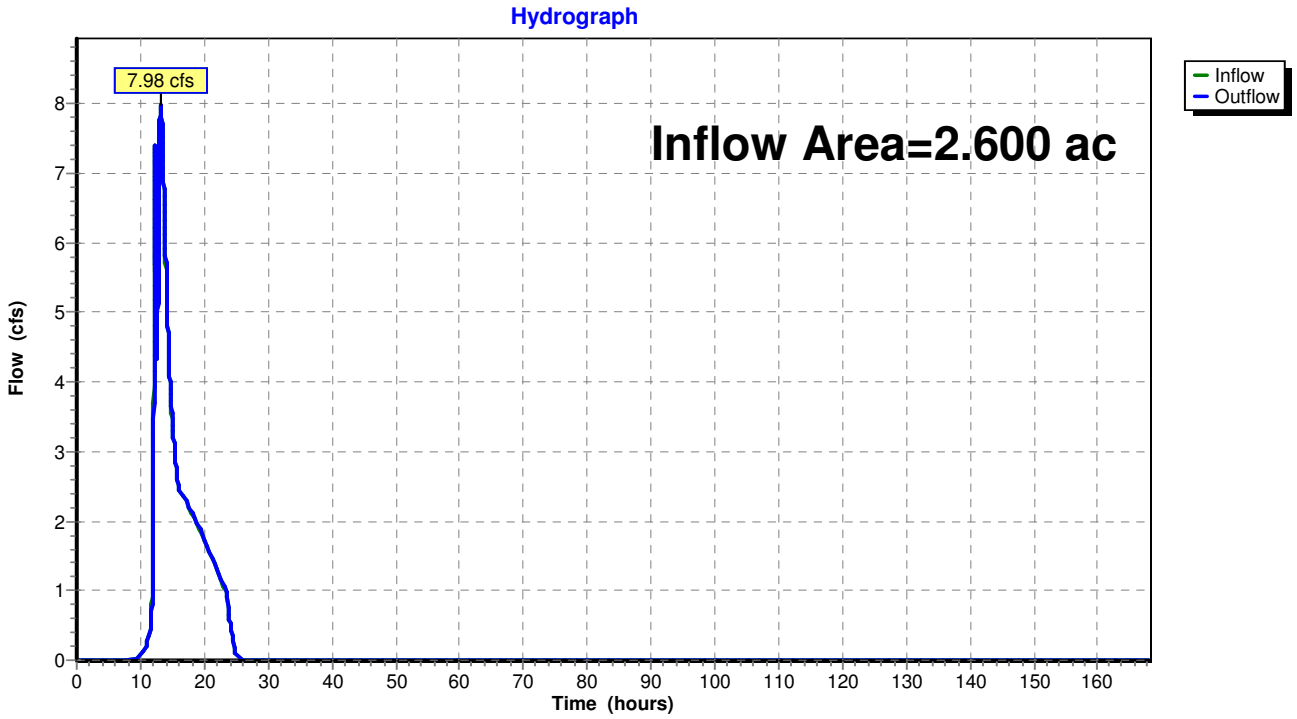


Summary for Reach DP 1:

Inflow Area = 2.600 ac, 0.00% Impervious, Inflow Depth = 13.18" for 25-yr event
Inflow = 7.98 cfs @ 13.12 hrs, Volume= 2.855 af
Outflow = 7.98 cfs @ 13.13 hrs, Volume= 2.855 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 1:

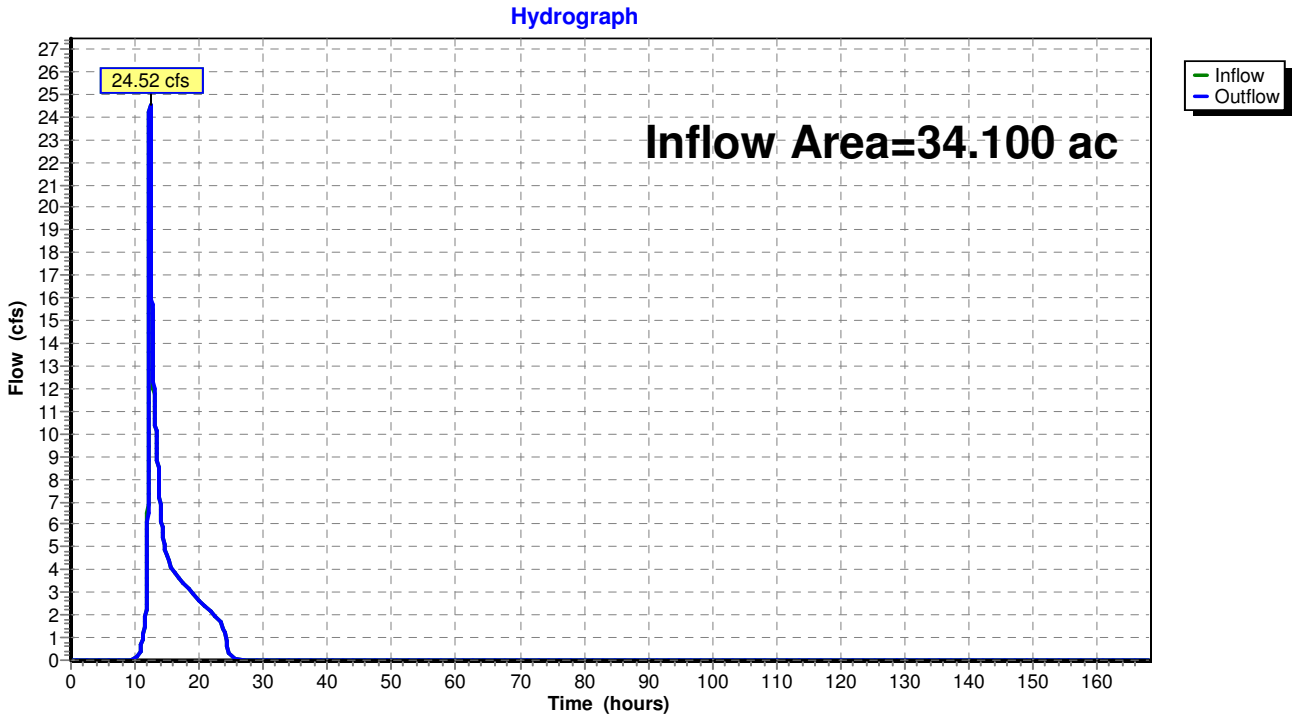


Summary for Reach DP 2:

Inflow Area = 34.100 ac, 8.80% Impervious, Inflow Depth = 1.72" for 25-yr event
Inflow = 24.52 cfs @ 12.33 hrs, Volume= 4.878 af
Outflow = 24.52 cfs @ 12.34 hrs, Volume= 4.878 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 2:

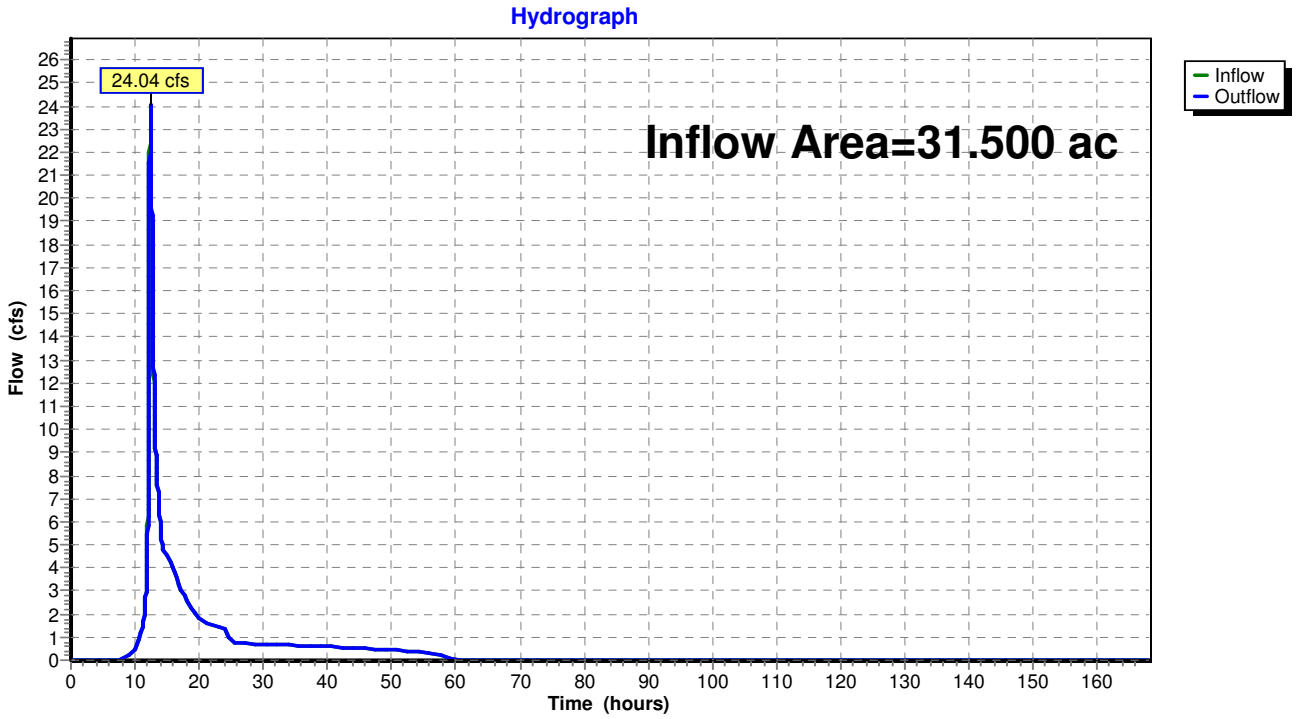


Summary for Reach DP 3:

Inflow Area = 31.500 ac, 28.25% Impervious, Inflow Depth = 2.32" for 25-yr event
Inflow = 24.04 cfs @ 12.41 hrs, Volume= 6.101 af
Outflow = 24.04 cfs @ 12.42 hrs, Volume= 6.101 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 3:

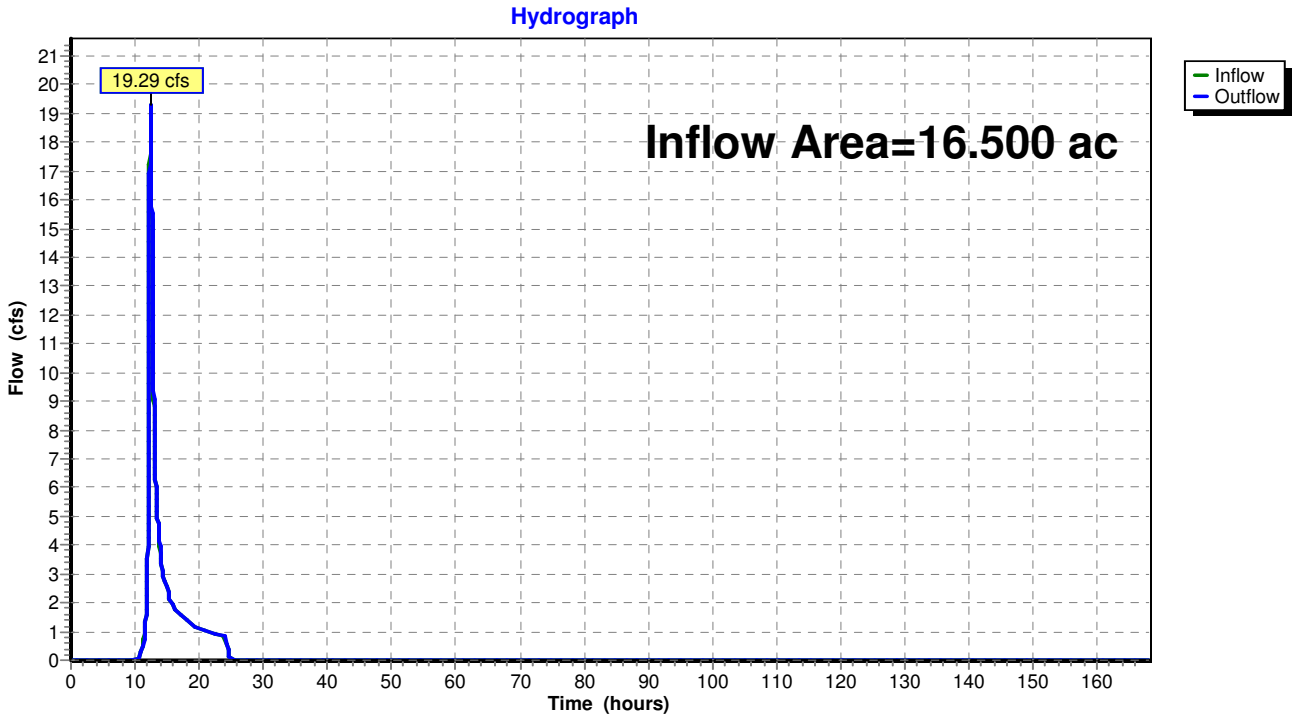


Summary for Reach DP 4:

Inflow Area = 16.500 ac, 0.00% Impervious, Inflow Depth = 2.06" for 25-yr event
Inflow = 19.29 cfs @ 12.44 hrs, Volume= 2.833 af
Outflow = 19.29 cfs @ 12.45 hrs, Volume= 2.833 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 4:



Summary for Pond 1.1 IB: North Turnaround Infiltration Basin

Inflow Area = 0.500 ac, 0.00% Impervious, Inflow Depth = 4.18" for 25-yr event
Inflow = 2.01 cfs @ 12.11 hrs, Volume= 0.174 af
Outflow = 1.51 cfs @ 12.22 hrs, Volume= 0.174 af, Atten= 25%, Lag= 6.9 min
Discarded = 0.04 cfs @ 12.22 hrs, Volume= 0.098 af
Primary = 1.47 cfs @ 12.22 hrs, Volume= 0.076 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 625.26' @ 12.22 hrs Surf.Area= 1,653 sf Storage= 2,573 cf
Flood Elev= 625.50' Surf.Area= 1,765 sf Storage= 2,979 cf

Plug-Flow detention time= 431.5 min calculated for 0.174 af (100% of inflow)
Center-of-Mass det. time= 431.5 min (1,251.7 - 820.2)

Volume	Invert	Avail.Storage	Storage Description
#1	623.00'	3,920 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

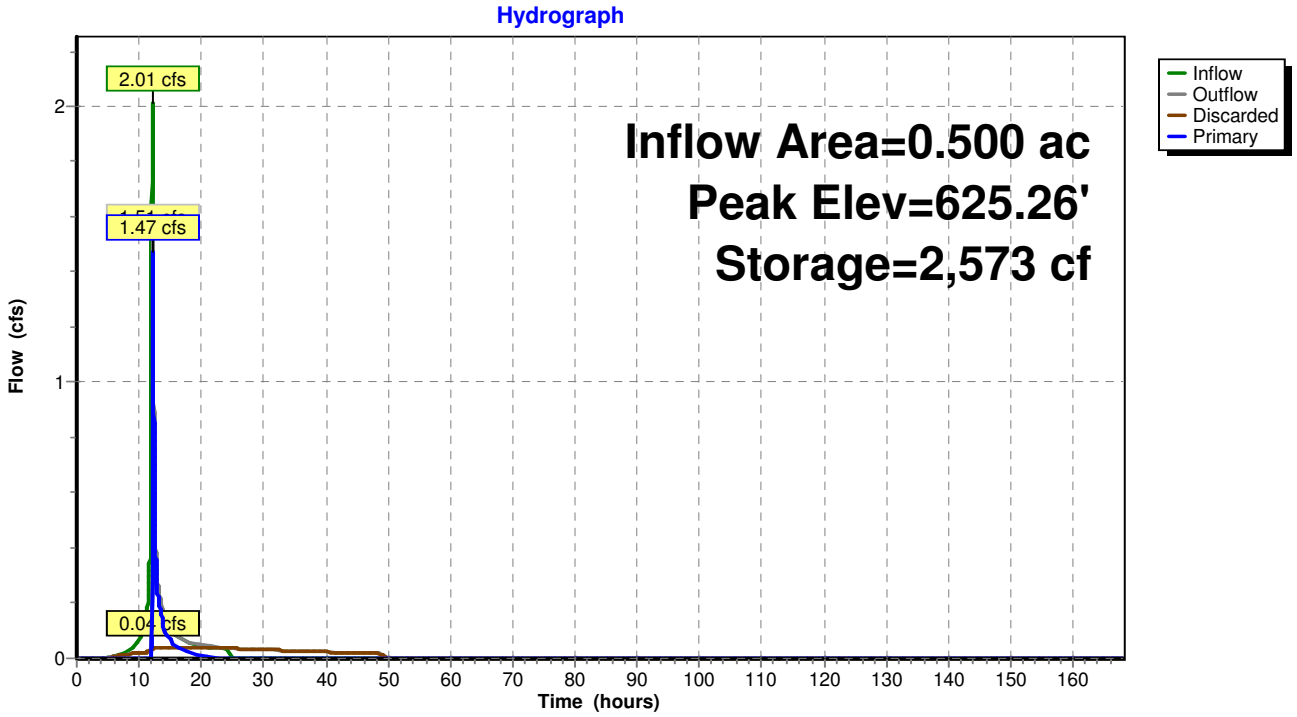
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
623.00	660	0	0
624.00	1,060	860	860
626.00	2,000	3,060	3,920

Device	Routing	Invert	Outlet Devices
#1	Primary	622.00'	**12.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 622.00' / 621.80' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	625.10'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	623.00'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.04 cfs @ 12.22 hrs HW=625.26' (Free Discharge)
↑**3=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=1.47 cfs @ 12.22 hrs HW=625.26' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Passes 1.47 cfs of 6.29 cfs potential flow)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 1.47 cfs @ 1.13 fps)

Pond 1.1 IB: North Turnaround Infiltration Basin



Stage-Area-Storage for Pond 1.1 IB: North Turnaround Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
623.00	660	0
623.05	680	33
623.10	700	68
623.15	720	103
623.20	740	140
623.25	760	178
623.30	780	216
623.35	800	256
623.40	820	296
623.45	840	338
623.50	860	380
623.55	880	423
623.60	900	468
623.65	920	513
623.70	940	560
623.75	960	608
623.80	980	656
623.85	1,000	706
623.90	1,020	756
623.95	1,040	808
624.00	1,060	860
624.05	1,083	914
624.10	1,107	968
624.15	1,130	1,024
624.20	1,154	1,081
624.25	1,178	1,140
624.30	1,201	1,199
624.35	1,225	1,260
624.40	1,248	1,322
624.45	1,272	1,385
624.50	1,295	1,449
624.55	1,318	1,514
624.60	1,342	1,581
624.65	1,365	1,648
624.70	1,389	1,717
624.75	1,413	1,787
624.80	1,436	1,858
624.85	1,460	1,931
624.90	1,483	2,004
624.95	1,507	2,079
625.00	1,530	2,155
625.05	1,553	2,232
625.10	1,577	2,310
625.15	1,600	2,390
625.20	1,624	2,470
625.25	1,648	2,552
625.30	1,671	2,635
625.35	1,695	2,719
625.40	1,718	2,805
625.45	1,742	2,891
625.50	1,765	2,979
625.55	1,788	3,068
625.60	1,812	3,158
625.65	1,835	3,249
625.70	1,859	3,341
625.75	1,883	3,435
625.80	1,906	3,529
625.85	1,930	3,625
625.90	1,953	3,722
625.95	1,977	3,821
626.00	**2,000**	**3,920**

Summary for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 4.51" for 25-yr event
Inflow = 78.13 cfs @ 12.07 hrs, Volume= 6.346 af
Outflow = 31.89 cfs @ 12.29 hrs, Volume= 6.346 af, Atten= 59%, Lag= 13.2 min
Primary = 31.89 cfs @ 12.29 hrs, Volume= 6.346 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 668.48' @ 12.29 hrs Surf.Area= 29,428 sf Storage= 115,363 cf
Flood Elev= 669.50' Surf.Area= 34,100 sf Storage= 147,015 cf

Plug-Flow detention time= 860.6 min calculated for 6.346 af (100% of inflow)
Center-of-Mass det. time= 860.5 min (1,668.0 - 807.5)

Volume	Invert	Avail.Storage	Storage Description
#1	659.00'	240 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 600 cf Overall x 40.0% Voids
#2	660.00'	164,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		164,340 cf	Total Available Storage

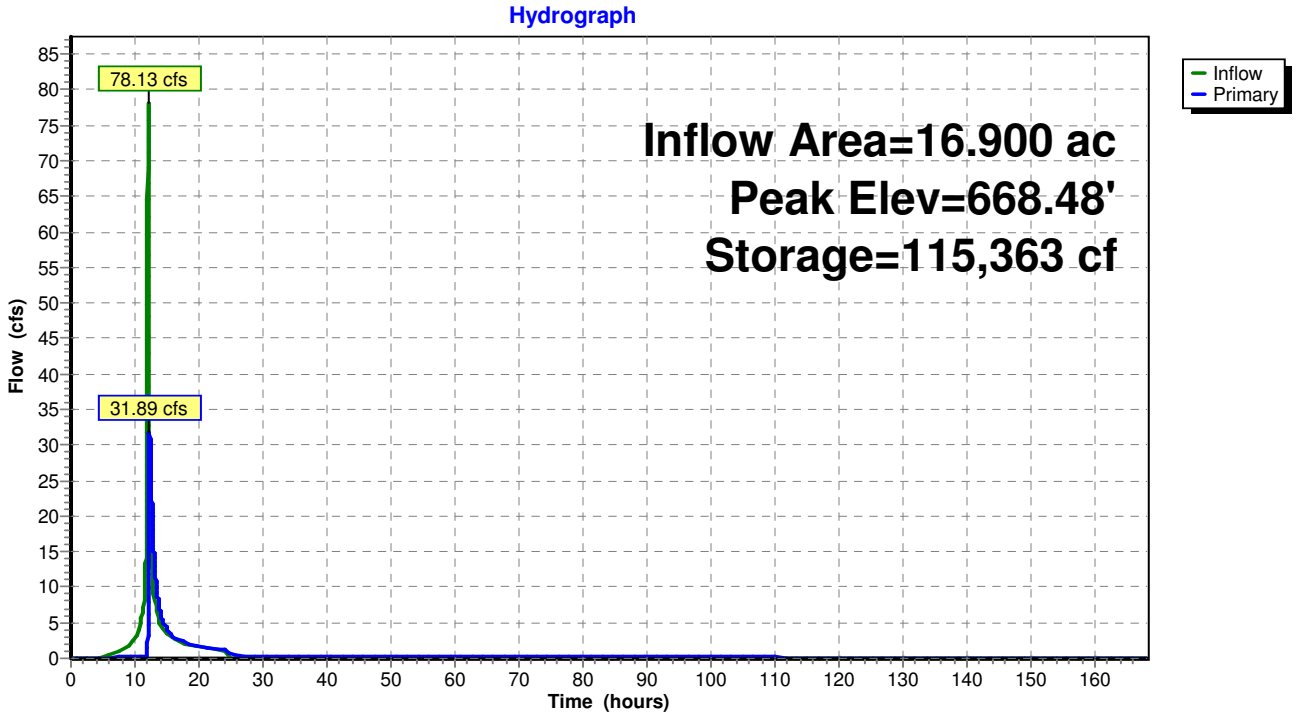
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
659.00	600	0	0
660.00	600	600	600

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	1,900	0	0
662.00	6,000	7,900	7,900
664.00	11,800	17,800	25,700
666.00	18,800	30,600	56,300
668.00	26,600	45,400	101,700
670.00	35,800	62,400	164,100

Device	Routing	Invert	Outlet Devices
#1	Primary	659.00'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	666.70'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=31.89 cfs @ 12.29 hrs HW=668.48' TW=663.27' (Dynamic Tailwater)
↑
└─**1=Orifice/Grate** (Orifice Controls 0.24 cfs @ 11.00 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 31.65 cfs @ 4.43 fps)

Pond 2.2 EDB: North Detention Basin, Orifice, & Weir



Stage-Area-Storage for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Elevation (feet)	Storage (cubic-feet)
659.00	0
659.15	36
659.30	72
659.45	108
659.60	144
659.75	180
659.90	216
660.05	338
660.20	661
660.35	1,031
660.50	1,446
660.65	1,908
660.80	2,416
660.95	2,970
661.10	3,570
661.25	4,217
661.40	4,909
661.55	5,648
661.70	6,432
661.85	7,263
662.00	8,140
662.15	9,073
662.30	10,070
662.45	11,134
662.60	12,262
662.75	13,456
662.90	14,714
663.05	16,039
663.20	17,428
663.35	18,883
663.50	20,403
663.65	21,988
663.80	23,638
663.95	25,354
664.10	27,138
664.25	28,999
664.40	30,940
664.55	32,959
664.70	35,058
664.85	37,234
665.00	39,490
665.15	41,824
665.30	44,237
665.45	46,729
665.60	49,300
665.75	51,949
665.90	54,677
666.05	57,485
666.20	60,378
666.35	63,359
666.50	66,428
666.65	69,584
666.80	72,828
666.95	76,160
667.10	79,580
667.25	83,087
667.40	86,682
667.55	90,365
667.70	94,136
667.85	97,994
668.00	101,940
668.15	105,982
668.30	110,127
668.45	114,376
668.60	118,728
668.75	123,184
668.90	127,743
669.05	132,406
669.20	137,172
669.35	142,042
669.50	147,015
669.65	152,092
669.80	157,272
669.95	**162,556**

Summary for Pond 2.3 IB: North Infiltration Basin

Inflow Area = 17.900 ac, 16.76% Impervious, Inflow Depth = 1.69" for 25-yr event
Inflow = 4.31 cfs @ 12.04 hrs, Volume= 2.514 af
Outflow = 0.20 cfs @ 89.76 hrs, Volume= 2.499 af, Atten= 95%, Lag= 4,663.0 min
Discarded = 0.20 cfs @ 89.76 hrs, Volume= 2.499 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 656.51' @ 89.76 hrs Surf.Area= 17,477 sf Storage= 38,135 cf
Flood Elev= 659.20' Surf.Area= 22,700 sf Storage= 92,000 cf

Plug-Flow detention time= 2,305.4 min calculated for 2.499 af (99% of inflow)
Center-of-Mass det. time= 2,283.4 min (5,148.0 - 2,864.6)

Volume	Invert	Avail.Storage	Storage Description
#1	654.00'	110,800 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

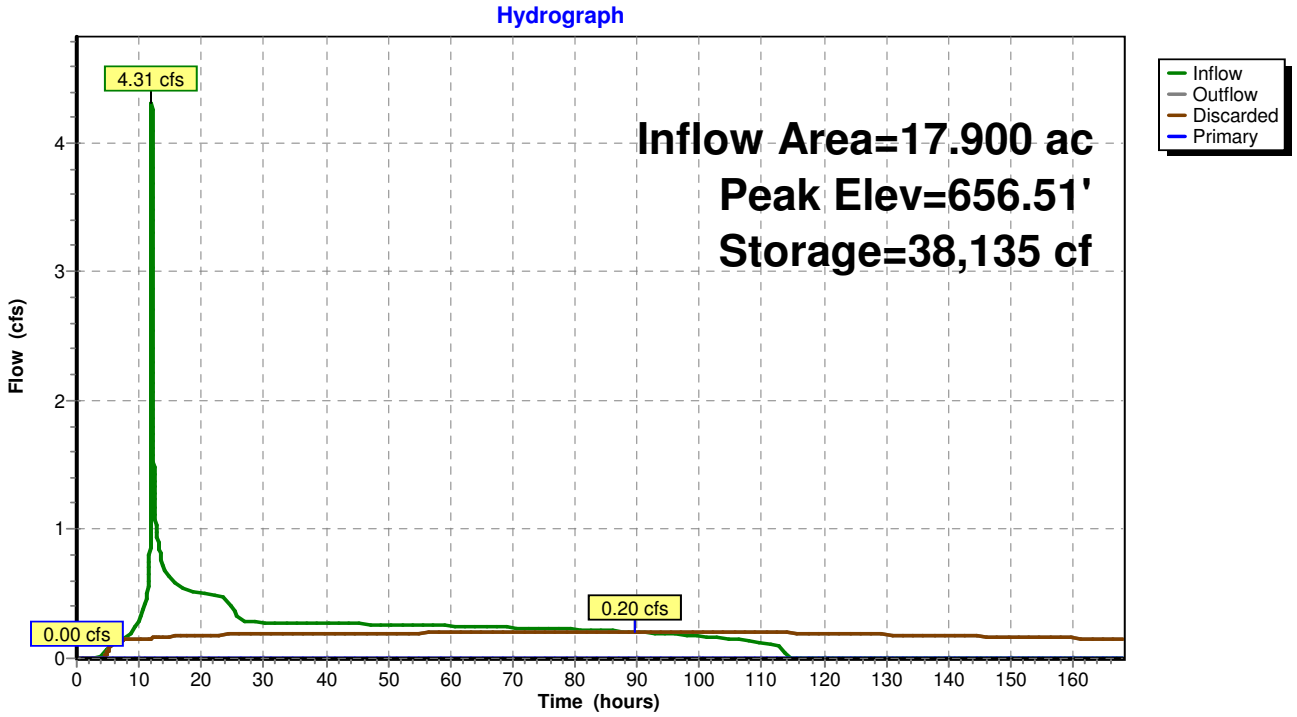
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
654.00	12,900	0	0
656.00	16,500	29,400	29,400
658.00	20,300	36,800	66,200
660.00	24,300	44,600	110,800

Device	Routing	Invert	Outlet Devices
#1	Primary	653.00'	**6.0" Round Culvert** L= 220.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 653.00' / 641.00' S= 0.0545 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	659.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	654.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.20 cfs @ 89.76 hrs HW=656.51' (Free Discharge)
↑└**3=Exfiltration** (Exfiltration Controls 0.20 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=654.00' TW=0.00' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.00 cfs of 0.82 cfs potential flow)
↑└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2.3 IB: North Infiltration Basin



Stage-Area-Storage for Pond 2.3 IB: North Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
654.00	12,900	0
654.10	13,080	1,299
654.20	13,260	2,616
654.30	13,440	3,951
654.40	13,620	5,304
654.50	13,800	6,675
654.60	13,980	8,064
654.70	14,160	9,471
654.80	14,340	10,896
654.90	14,520	12,339
655.00	14,700	13,800
655.10	14,880	15,279
655.20	15,060	16,776
655.30	15,240	18,291
655.40	15,420	19,824
655.50	15,600	21,375
655.60	15,780	22,944
655.70	15,960	24,531
655.80	16,140	26,136
655.90	16,320	27,759
656.00	16,500	29,400
656.10	16,690	31,060
656.20	16,880	32,738
656.30	17,070	34,435
656.40	17,260	36,152
656.50	17,450	37,888
656.60	17,640	39,642
656.70	17,830	41,416
656.80	18,020	43,208
656.90	18,210	45,019
657.00	18,400	46,850
657.10	18,590	48,700
657.20	18,780	50,568
657.30	18,970	52,455
657.40	19,160	54,362
657.50	19,350	56,288
657.60	19,540	58,232
657.70	19,730	60,196
657.80	19,920	62,178
657.90	20,110	64,179
658.00	20,300	66,200
658.10	20,500	68,240
658.20	20,700	70,300
658.30	20,900	72,380
658.40	21,100	74,480
658.50	21,300	76,600
658.60	21,500	78,740
658.70	21,700	80,900
658.80	21,900	83,080
658.90	22,100	85,280
659.00	22,300	87,500
659.10	22,500	89,740
659.20	22,700	92,000
659.30	22,900	94,280
659.40	23,100	96,580
659.50	23,300	98,900
659.60	23,500	101,240
659.70	23,700	103,600
659.80	23,900	105,980
659.90	24,100	108,380
660.00	**24,300**	**110,800**

Summary for Pond 2.4 EDB: North Lower Detention Basin

Inflow Area = 0.600 ac, 0.00% Impervious, Inflow Depth = 85.61" for 25-yr event
Inflow = 32.05 cfs @ 12.30 hrs, Volume= 4.281 af
Outflow = 11.93 cfs @ 13.16 hrs, Volume= 4.281 af, Atten= 63%, Lag= 51.8 min
Primary = 4.95 cfs @ 13.16 hrs, Volume= 1.973 af
Secondary = 6.99 cfs @ 13.16 hrs, Volume= 2.308 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Starting Elev= 594.00' Surf.Area= 0 sf Storage= 0 cf
Peak Elev= 657.64' @ 13.16 hrs Surf.Area= 15,217 sf Storage= 61,480 cf
Flood Elev= 659.50' Surf.Area= 17,950 sf Storage= 90,758 cf

Plug-Flow detention time= 111.9 min calculated for 4.281 af (100% of inflow)
Center-of-Mass det. time= 111.6 min (991.0 - 879.3)

Volume	Invert	Avail.Storage	Storage Description
#1	651.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	652.00'	99,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		99,520 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
651.00	800	0	0
652.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
652.00	7,500	0	0
654.00	9,800	17,300	17,300
656.00	12,200	22,000	39,300
658.00	14,900	27,100	66,400
660.00	17,900	32,800	99,200

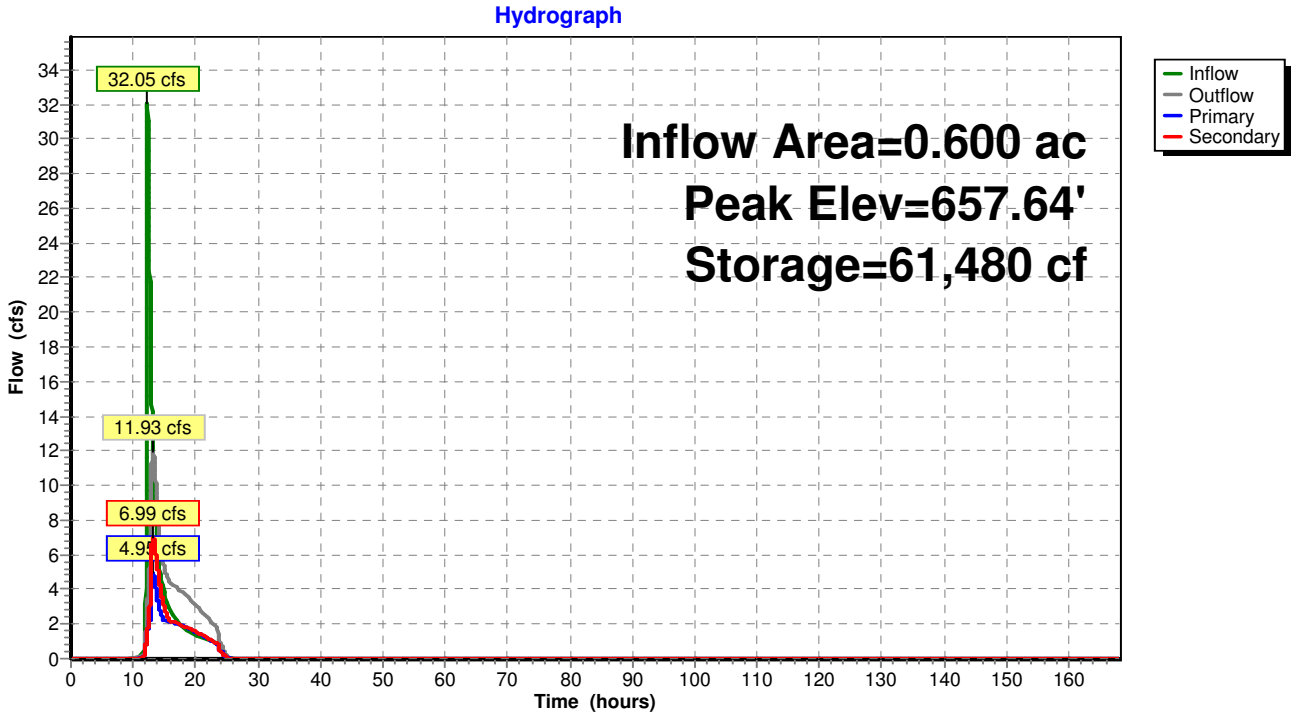
Device	Routing	Invert	Outlet Devices
#1	Primary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	656.80'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	651.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#5	Device 4	656.40'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

#6 Device 4 651.00' **6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.95 cfs @ 13.16 hrs HW=657.64' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 4.95 cfs of 33.28 cfs potential flow)
  ├─**2=Broad-Crested Rectangular Weir** (Weir Controls 2.56 cfs @ 3.03 fps)
  └─**3=Orifice/Grate** (Orifice Controls 2.39 cfs @ 12.17 fps)

Secondary OutFlow Max=6.99 cfs @ 13.16 hrs HW=657.64' TW=0.00' (Dynamic Tailwater)
└─**4=Culvert** (Passes 6.99 cfs of 33.28 cfs potential flow)
  ├─**5=Broad-Crested Rectangular Weir** (Weir Controls 4.60 cfs @ 3.70 fps)
  └─**6=Orifice/Grate** (Orifice Controls 2.39 cfs @ 12.17 fps)

Pond 2.4 EDB: North Lower Detention Basin



Stage-Area-Storage for Pond 2.4 EDB: North Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
651.00	0
651.10	32
651.20	64
651.30	96
651.40	128
651.50	160
651.60	192
651.70	224
651.80	256
651.90	288
652.00	320
652.10	1,076
652.20	1,843
652.30	2,622
652.40	3,412
652.50	4,214
652.60	5,027
652.70	5,852
652.80	6,688
652.90	7,536
653.00	8,395
653.10	9,266
653.20	10,148
653.30	11,042
653.40	11,947
653.50	12,864
653.60	13,792
653.70	14,732
653.80	15,683
653.90	16,646
654.00	17,620
654.10	18,606
654.20	19,604
654.30	20,614
654.40	21,636
654.50	22,670
654.60	23,716
654.70	24,774
654.80	25,844
654.90	26,926
655.00	28,020
655.10	29,126
655.20	30,244
655.30	31,374
655.40	32,516
655.50	33,670
655.60	34,836
655.70	36,014
655.80	37,204
655.90	38,406
656.00	39,620
656.10	40,847
656.20	42,087
656.30	43,341
656.40	44,608
656.50	45,889
656.60	47,183
656.70	48,491
656.80	49,812
656.90	51,147
657.00	52,495
657.10	53,857
657.20	55,232
657.30	56,621
657.40	58,023
657.50	59,439
657.60	60,868
657.70	62,311
657.80	63,767
657.90	65,237
658.00	66,720
658.10	68,218
658.20	69,730
658.30	71,257
658.40	72,800
658.50	74,358
658.60	75,930
658.70	77,518
658.80	79,120
658.90	80,737
659.00	82,370
659.10	84,018
659.20	85,680
659.30	87,357
659.40	89,050
659.50	90,758
659.60	92,480
659.70	94,218
659.80	95,970
659.90	97,737
660.00	**99,520**

Summary for Pond 3.2 EDB: Entrance Detention Basin

Inflow Area = 5.900 ac, 45.76% Impervious, Inflow Depth = 4.48" for 25-yr event
Inflow = 24.17 cfs @ 12.12 hrs, Volume= 2.204 af
Outflow = 4.71 cfs @ 12.67 hrs, Volume= 2.204 af, Atten= 81%, Lag= 33.0 min
Primary = 0.72 cfs @ 12.67 hrs, Volume= 1.522 af
Secondary = 3.99 cfs @ 12.67 hrs, Volume= 0.682 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 672.33' @ 12.67 hrs Surf.Area= 11,245 sf Storage= 43,132 cf
Flood Elev= 673.50' Surf.Area= 13,525 sf Storage= 57,264 cf

Plug-Flow detention time= 396.6 min calculated for 2.204 af (100% of inflow)
Center-of-Mass det. time= 396.6 min (1,207.4 - 810.8)

Volume	Invert	Avail.Storage	Storage Description
#1	663.00'	120 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 300 cf Overall x 40.0% Voids
#2	664.00'	64,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		64,120 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
663.00	300	0	0
664.00	300	300	300

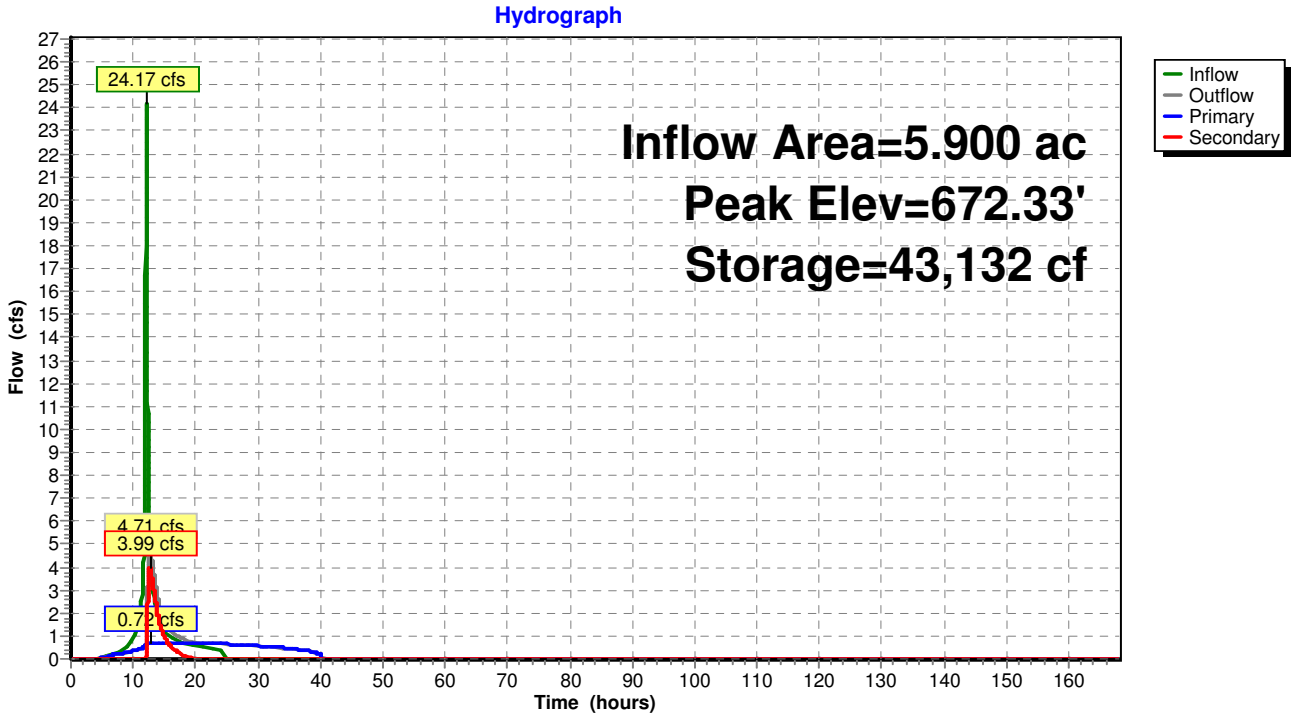
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
664.00	1,000	0	0
666.00	2,500	3,500	3,500
668.00	4,500	7,000	10,500
670.00	7,100	11,600	22,100
672.00	10,300	17,400	39,500
674.00	14,200	24,500	64,000

Device	Routing	Invert	Outlet Devices
#1	Primary	663.00'	**18.0" Round Culvert** L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 663.00' / 656.00' S= 0.0437 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	663.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	672.90'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	671.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.72 cfs @ 12.67 hrs HW=672.33' TW=618.01' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.72 cfs of 24.92 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.72 cfs @ 14.61 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=3.99 cfs @ 12.67 hrs HW=672.33' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 3.99 cfs @ 3.53 fps)

Pond 3.2 EDB: Entrance Detention Basin



Stage-Area-Storage for Pond 3.2 EDB: Entrance Detention Basin

Elevation (feet)	Storage (cubic-feet)
663.00	0
663.15	18
663.30	36
663.45	54
663.60	72
663.75	90
663.90	108
664.05	171
664.20	335
664.35	516
664.50	714
664.65	928
664.80	1,160
664.95	1,408
665.10	1,674
665.25	1,956
665.40	2,255
665.55	2,571
665.70	2,904
665.85	3,253
666.00	3,620
666.15	4,006
666.30	4,415
666.45	4,846
666.60	5,300
666.75	5,776
666.90	6,275
667.05	6,796
667.20	7,340
667.35	7,906
667.50	8,495
667.65	9,106
667.80	9,740
667.95	10,396
668.10	11,077
668.25	11,786
668.40	12,524
668.55	13,292
668.70	14,089
668.85	14,915
669.00	15,770
669.15	16,655
669.30	17,568
669.45	18,512
669.60	19,484
669.75	20,486
669.90	21,516
670.05	22,577
670.20	23,672
670.35	24,803
670.50	25,970
670.65	27,173
670.80	28,412
670.95	29,687
671.10	30,998
671.25	32,345
671.40	33,728
671.55	35,147
671.70	36,602
671.85	38,093
672.00	39,620
672.15	41,187
672.30	42,798
672.45	44,452
672.60	46,151
672.75	47,893
672.90	49,680
673.05	51,510
673.20	53,384
673.35	55,302
673.50	57,264
673.65	59,269
673.80	61,319
673.95	**63,412**

Summary for Pond 3.5 EDB: South Detention Basin

Inflow Area = 14.000 ac, 37.86% Impervious, Inflow Depth = 4.45" for 25-yr event
Inflow = 69.97 cfs @ 12.04 hrs, Volume= 5.192 af
Outflow = 25.82 cfs @ 12.25 hrs, Volume= 5.192 af, Atten= 63%, Lag= 12.4 min
Primary = 25.82 cfs @ 12.25 hrs, Volume= 5.192 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 631.36' @ 12.25 hrs Surf.Area= 16,943 sf Storage= 96,414 cf
Flood Elev= 633.50' Surf.Area= 20,300 sf Storage= 134,470 cf

Plug-Flow detention time= 669.0 min calculated for 5.192 af (100% of inflow)
Center-of-Mass det. time= 669.1 min (1,472.3 - 803.2)

Volume	Invert	Avail.Storage	Storage Description
#1	620.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	621.00'	144,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		144,420 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
620.00	800	0	0
621.00	800	800	800

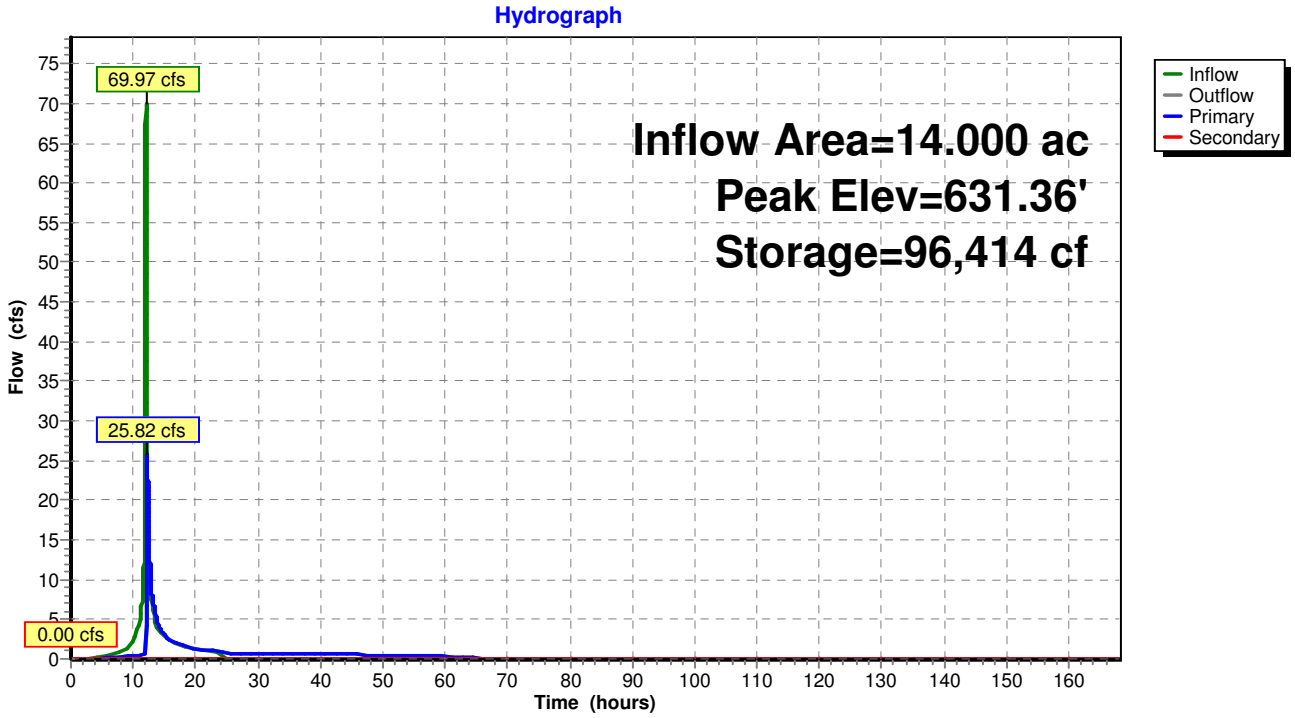
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
621.00	3,000	0	0
622.00	4,600	3,800	3,800
624.00	6,500	11,100	14,900
626.00	8,700	15,200	30,100
628.00	11,300	20,000	50,100
630.00	14,100	25,400	75,500
632.00	17,100	31,200	106,700
634.00	20,300	37,400	144,100

Device	Routing	Invert	Outlet Devices
#1	Primary	620.00'	**24.0" Round Culvert** L= 480.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 620.00' / 615.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	630.40'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	620.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	632.00'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=25.81 cfs @ 12.25 hrs HW=631.36' TW=618.62' (Dynamic Tailwater)
└─**1=Culvert** (Passes 25.81 cfs of 32.89 cfs potential flow)
  ├─**2=Broad-Crested Rectangular Weir** (Weir Controls 25.02 cfs @ 3.25 fps)
  └─**3=Orifice/Grate** (Orifice Controls 0.79 cfs @ 16.14 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=620.00' TW=0.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.5 EDB: South Detention Basin



Stage-Area-Storage for Pond 3.5 EDB: South Detention Basin

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
620.00	0	627.80	48,186
620.15	48	627.95	49,857
620.30	96	628.10	51,557
620.45	144	628.25	53,289
620.60	192	628.40	55,052
620.75	240	628.55	56,847
620.90	288	628.70	58,673
621.05	472	628.85	60,531
621.20	952	629.00	62,420
621.35	1,468	629.15	64,341
621.50	2,020	629.30	66,293
621.65	2,608	629.45	68,277
621.80	3,232	629.60	70,292
621.95	3,892	629.75	72,339
622.10	4,585	629.90	74,417
622.25	5,300	630.05	76,527
622.40	6,036	630.20	78,670
622.55	6,794	630.35	80,847
622.70	7,573	630.50	83,058
622.85	8,373	630.65	85,302
623.00	9,195	630.80	87,580
623.15	10,038	630.95	89,892
623.30	10,903	631.10	92,238
623.45	11,789	631.25	94,617
623.60	12,696	631.40	97,030
623.75	13,625	631.55	99,477
623.90	14,575	631.70	101,958
624.05	15,546	631.85	104,472
624.20	16,542	632.00	107,020
624.35	17,562	632.15	109,603
624.50	18,608	632.30	112,222
624.65	19,677	632.45	114,877
624.80	20,772	632.60	117,568
624.95	21,891	632.75	120,295
625.10	23,036	632.90	123,058
625.25	24,204	633.05	125,857
625.40	25,398	633.20	128,692
625.55	26,616	633.35	131,563
625.70	27,860	633.50	134,470
625.85	29,127	633.65	137,413
626.00	30,420	633.80	140,392
626.15	31,740	633.95	**143,407**
626.30	33,088		
626.45	34,467		
626.60	35,874		
626.75	37,311		
626.90	38,776		
627.05	40,272		
627.20	41,796		
627.35	43,350		
627.50	44,933		
627.65	46,545		

Summary for Pond 3.6lB: South Upper Infiltration Basin

Inflow Area = 20.800 ac, 38.46% Impervious, Inflow Depth = 2.50" for 25-yr event
Inflow = 3.33 cfs @ 12.05 hrs, Volume= 4.334 af
Outflow = 1.33 cfs @ 19.85 hrs, Volume= 4.334 af, Atten= 60%, Lag= 468.2 min
Discarded = 1.33 cfs @ 19.85 hrs, Volume= 4.334 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 609.90' @ 19.85 hrs Surf.Area= 7,680 sf Storage= 6,426 cf
Flood Elev= 617.50' Surf.Area= 18,675 sf Storage= 104,556 cf

Plug-Flow detention time= 42.7 min calculated for 4.334 af (100% of inflow)
Center-of-Mass det. time= 42.7 min (1,798.2 - 1,755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	609.00'	114,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

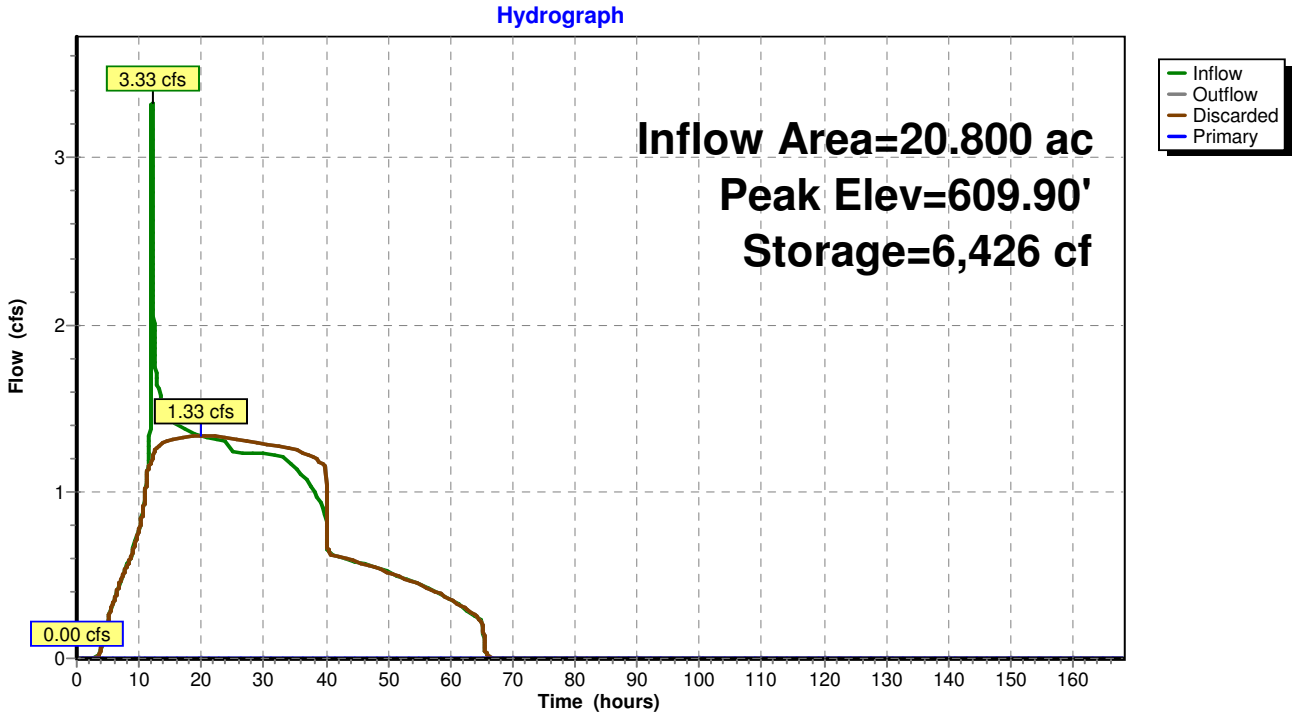
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
609.00	6,600	0	0
610.00	7,800	7,200	7,200
612.00	10,400	18,200	25,400
614.00	13,200	23,600	49,000
616.00	16,200	29,400	78,400
618.00	19,500	35,700	114,100

Device	Routing	Invert	Outlet Devices
#1	Primary	608.00'	**12.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 608.00' / 594.00' S= 0.1750 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	617.40'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	609.00'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=1.33 cfs @ 19.85 hrs HW=609.90' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.33 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=609.00' TW=593.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 2.67 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.6IB: South Upper Infiltration Basin



Stage-Area-Storage for Pond 3.6IB: South Upper Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
609.00	6,600	0
609.10	6,720	666
609.20	6,840	1,344
609.30	6,960	2,034
609.40	7,080	2,736
609.50	7,200	3,450
609.60	7,320	4,176
609.70	7,440	4,914
609.80	7,560	5,664
609.90	7,680	6,426
610.00	7,800	7,200
610.10	7,930	7,987
610.20	8,060	8,786
610.30	8,190	9,598
610.40	8,320	10,424
610.50	8,450	11,263
610.60	8,580	12,114
610.70	8,710	12,979
610.80	8,840	13,856
610.90	8,970	14,746
611.00	9,100	15,650
611.10	9,230	16,567
611.20	9,360	17,496
611.30	9,490	18,438
611.40	9,620	19,394
611.50	9,750	20,363
611.60	9,880	21,344
611.70	10,010	22,339
611.80	10,140	23,346
611.90	10,270	24,366
612.00	10,400	25,400
612.10	10,540	26,447
612.20	10,680	27,508
612.30	10,820	28,583
612.40	10,960	29,672
612.50	11,100	30,775
612.60	11,240	31,892
612.70	11,380	33,023
612.80	11,520	34,168
612.90	11,660	35,327
613.00	11,800	36,500
613.10	11,940	37,687
613.20	12,080	38,888
613.30	12,220	40,103
613.40	12,360	41,332
613.50	12,500	42,575
613.60	12,640	43,832
613.70	12,780	45,103
613.80	12,920	46,388
613.90	13,060	47,687
614.00	13,200	49,000
614.10	13,350	50,328
614.20	13,500	51,670
614.30	13,650	53,027
614.40	13,800	54,400
614.50	13,950	55,788
614.60	14,100	57,190
614.70	14,250	58,608
614.80	14,400	60,040
614.90	14,550	61,487
615.00	14,700	62,950
615.10	14,850	64,428
615.20	15,000	65,920
615.30	15,150	67,427
615.40	15,300	68,950
615.50	15,450	70,488
615.60	15,600	72,040
615.70	15,750	73,608
615.80	15,900	75,190
615.90	16,050	76,787
616.00	16,200	78,400
616.10	16,365	80,028
616.20	16,530	81,673
616.30	16,695	83,334
616.40	16,860	85,012
616.50	17,025	86,706
616.60	17,190	88,417
616.70	17,355	90,144
616.80	17,520	91,888
616.90	17,685	93,648
617.00	17,850	95,425
617.10	18,015	97,218
617.20	18,180	99,028
617.30	18,345	100,854
617.40	18,510	102,697
617.50	18,675	104,556
617.60	18,840	106,432
617.70	19,005	108,324
617.80	19,170	110,233
617.90	19,335	112,158
618.00	**19,500**	**114,100**

Summary for Pond 3.7EDB: South Lower Detention Basin

Inflow Area = 21.300 ac, 37.56% Impervious, Inflow Depth = 1.49" for 25-yr event
Inflow = 25.63 cfs @ 12.25 hrs, Volume= 2.645 af
Outflow = 1.98 cfs @ 15.60 hrs, Volume= 2.645 af, Atten= 92%, Lag= 200.4 min
Primary = 1.98 cfs @ 15.60 hrs, Volume= 2.645 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 603.45' @ 15.60 hrs Surf.Area= 13,445 sf Storage= 71,538 cf
Flood Elev= 605.50' Surf.Area= 16,125 sf Storage= 100,089 cf

Plug-Flow detention time= 927.3 min calculated for 2.645 af (100% of inflow)
Center-of-Mass det. time= 927.4 min (1,819.6 - 892.2)

Volume	Invert	Avail.Storage	Storage Description
#1	593.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	594.00'	107,600 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		107,920 cf	Total Available Storage

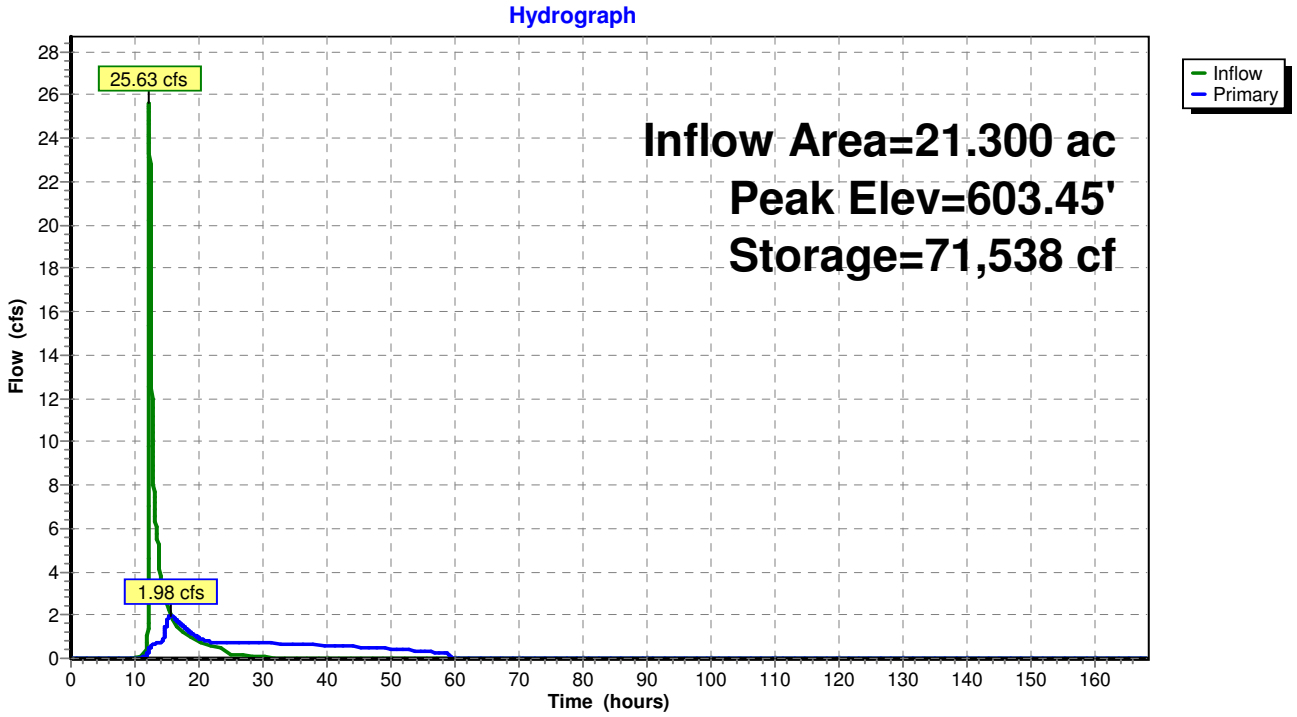
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
593.00	800	0	0
594.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	3,200	0	0
596.00	4,800	8,000	8,000
598.00	6,600	11,400	19,400
600.00	8,600	15,200	34,600
602.00	10,900	19,500	54,100
604.00	13,300	24,200	78,300
606.00	16,000	29,300	107,600

Device	Routing	Invert	Outlet Devices
#1	Primary	593.00'	**24.0" Round Culvert** L= 85.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 593.00' / 590.00' S= 0.0353 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	593.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	603.10'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.98 cfs @ 15.60 hrs HW=603.45' TW=0.00' (Dynamic Tailwater)
↑└─**1=Culvert** (Passes 1.98 cfs of 46.51 cfs potential flow)
↑ ├─**2=Orifice/Grate** (Orifice Controls 0.76 cfs @ 15.47 fps)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 1.22 cfs @ 1.72 fps)

Pond 3.7EDB: South Lower Detention Basin



Stage-Area-Storage for Pond 3.7EDB: South Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
593.00	0
593.15	48
593.30	96
593.45	144
593.60	192
593.75	240
593.90	288
594.05	481
594.20	976
594.35	1,489
594.50	2,020
594.65	2,569
594.80	3,136
594.95	3,721
595.10	4,324
595.25	4,945
595.40	5,584
595.55	6,241
595.70	6,916
595.85	7,609
596.00	8,320
596.15	9,050
596.30	9,800
596.45	10,571
596.60	11,362
596.75	12,173
596.90	13,004
597.05	13,856
597.20	14,728
597.35	15,620
597.50	16,533
597.65	17,465
597.80	18,418
597.95	19,391
598.10	20,385
598.25	21,401
598.40	22,440
598.55	23,501
598.70	24,585
598.85	25,691
599.00	26,820
599.15	27,971
599.30	29,145
599.45	30,341
599.60	31,560
599.75	32,801
599.90	34,065
600.05	35,351
600.20	36,663
600.35	38,000
600.50	39,364
600.65	40,753
600.80	42,168
600.95	43,609
601.10	45,076
601.25	46,568
601.40	48,087
601.55	49,631
601.70	51,202
601.85	52,798
602.00	54,420
602.15	56,068
602.30	57,744
602.45	59,447
602.60	61,176
602.75	62,933
602.90	64,716
603.05	66,526
603.20	68,364
603.35	70,229
603.50	72,120
603.65	74,038
603.80	75,984
603.95	77,957
604.10	79,957
604.25	81,987
604.40	84,048
604.55	86,139
604.70	88,261
604.85	90,413
605.00	92,595
605.15	94,808
605.30	97,051
605.45	99,324
605.60	101,628
605.75	103,962
605.90	**106,327**

Summary for Pond FS 3.6:

Inflow Area = 19.900 ac, 40.20% Impervious, Inflow Depth = 4.05" for 25-yr event
Inflow = 26.51 cfs @ 12.25 hrs, Volume= 6.714 af
Outflow = 26.51 cfs @ 12.26 hrs, Volume= 6.714 af, Atten= 0%, Lag= 0.6 min
Primary = 1.44 cfs @ 12.26 hrs, Volume= 4.173 af
Secondary = 25.07 cfs @ 12.26 hrs, Volume= 2.541 af

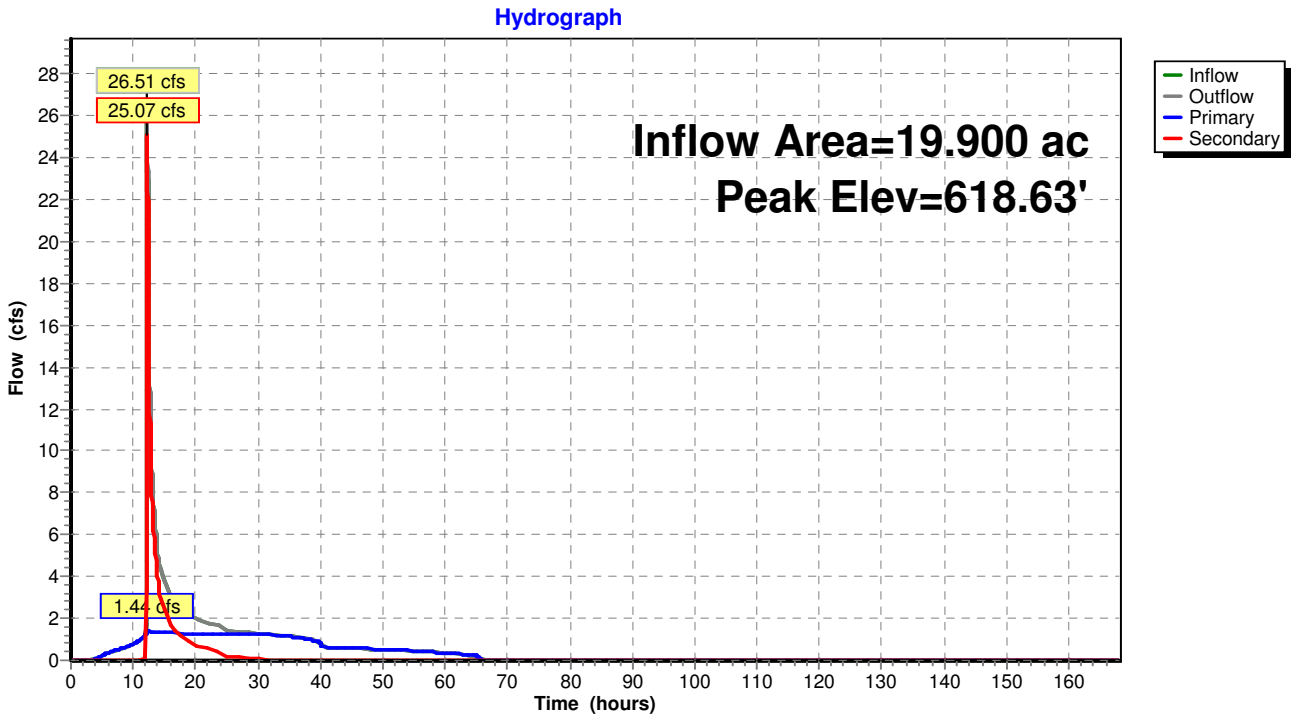
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 618.63' @ 12.26 hrs
Flood Elev= 629.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	615.20'	**6.0" Round Culvert** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 609.00' S= 0.0517 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 3	617.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	615.20'	**30.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 610.80' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.44 cfs @ 12.26 hrs HW=618.63' TW=609.35' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.44 cfs @ 7.31 fps)

Secondary OutFlow Max=25.06 cfs @ 12.26 hrs HW=618.63' TW=596.30' (Dynamic Tailwater)
└**3=Culvert** (Passes 25.06 cfs of 34.87 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 25.06 cfs @ 4.10 fps)

Pond FS 3.6:


Hydrograph
Inflow Area=19.900 ac
Peak Elev=618.63'
26.51 cfs
25.07 cfs
1.44 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160

Stage-Area-Storage for Pond FS 3.6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
615.20	**0**	623.00	0
615.35	0	623.15	0
615.50	0	623.30	0
615.65	0	623.45	0
615.80	0	623.60	0
615.95	0	623.75	0
616.10	0	623.90	0
616.25	0	624.05	0
616.40	0	624.20	0
616.55	0	624.35	0
616.70	0	624.50	0
616.85	0	624.65	0
617.00	0	624.80	0
617.15	0	624.95	0
617.30	0	625.10	0
617.45	0	625.25	0
617.60	0	625.40	0
617.75	0	625.55	0
617.90	0	625.70	0
618.05	0	625.85	0
618.20	0	626.00	0
618.35	0	626.15	0
618.50	0	626.30	0
618.65	0	626.45	0
618.80	0	626.60	0
618.95	0	626.75	0
619.10	0	626.90	0
619.25	0	627.05	0
619.40	0	627.20	0
619.55	0	627.35	0
619.70	0	627.50	0
619.85	0	627.65	0
620.00	0	627.80	0
620.15	0	627.95	0
620.30	0	628.10	0
620.45	0	628.25	0
620.60	0	628.40	0
620.75	0	628.55	0
620.90	0	628.70	0
621.05	0	628.85	0
621.20	0	629.00	0
621.35	0	629.15	0
621.50	0	629.30	0
621.65	0	629.45	0
621.80	0		
621.95	0		
622.10	0		
622.25	0		
622.40	0		
622.55	0		
622.70	0		
622.85	0		

Summary for Pond OS 2.2: North Detention Flow Split

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 4.51" for 25-yr event
Inflow = 31.89 cfs @ 12.29 hrs, Volume= 6.346 af
Outflow = 31.89 cfs @ 12.30 hrs, Volume= 6.346 af, Atten= 0%, Lag= 0.6 min
Primary = 0.54 cfs @ 12.30 hrs, Volume= 2.233 af
Secondary = 31.36 cfs @ 12.30 hrs, Volume= 4.113 af

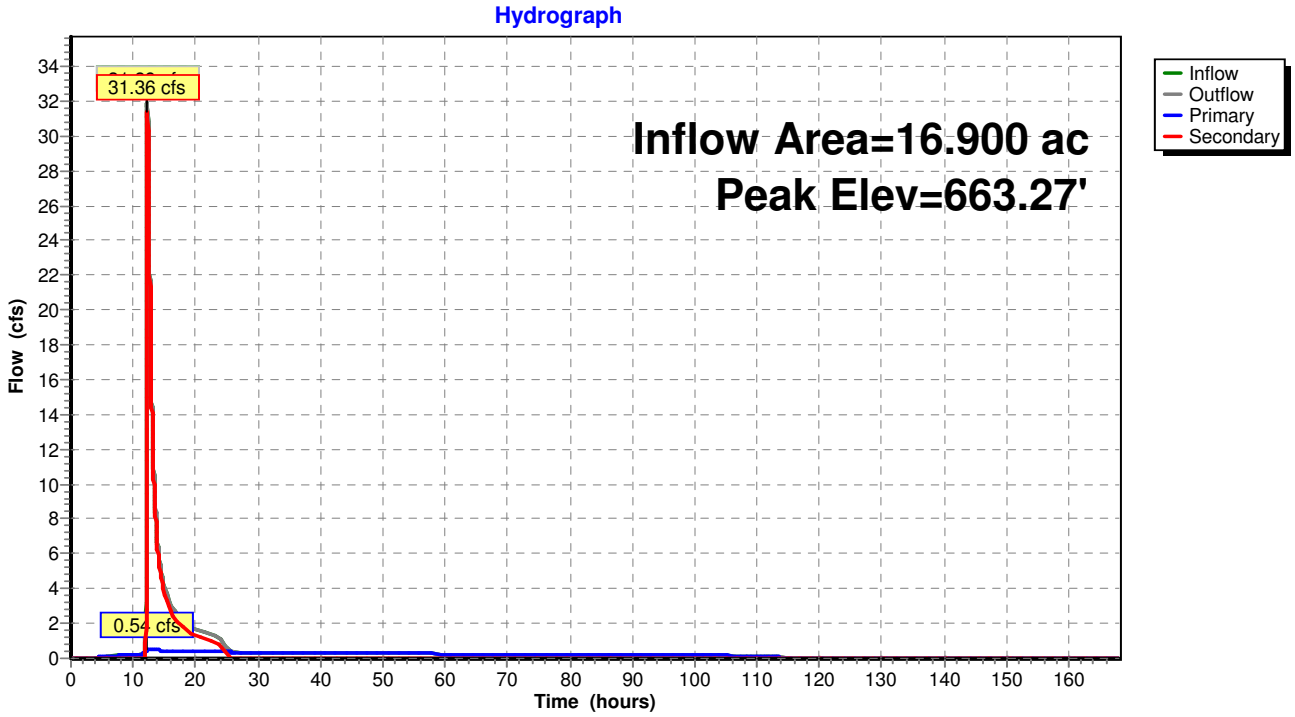
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 663.27' @ 12.30 hrs
Flood Elev= 669.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	658.00'	**6.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 658.00' / 656.00' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	658.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Secondary	660.90'	**36.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 660.90' / 656.00' S= 0.0612 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=0.54 cfs @ 12.30 hrs HW=663.27' TW=654.52' (Dynamic Tailwater)
↑**1=Culvert** (Passes 0.54 cfs of 1.12 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 0.54 cfs @ 10.92 fps)

Secondary OutFlow Max=31.35 cfs @ 12.30 hrs HW=663.27' TW=654.17' (Dynamic Tailwater)
↑**3=Culvert** (Inlet Controls 31.35 cfs @ 5.24 fps)

Pond OS 2.2: North Detention Flow Split



Stage-Area-Storage for Pond OS 2.2: North Detention Flow Split

Elevation (feet)	Storage (cubic-feet)
658.00	**0**
658.15	0
658.30	0
658.45	0
658.60	0
658.75	0
658.90	0
659.05	0
659.20	0
659.35	0
659.50	0
659.65	0
659.80	0
659.95	0
660.10	0
660.25	0
660.40	0
660.55	0
660.70	0
660.85	0
661.00	0
661.15	0
661.30	0
661.45	0
661.60	0
661.75	0
661.90	0
662.05	0
662.20	0
662.35	0
662.50	0
662.65	0
662.80	0
662.95	0
663.10	0
663.25	0
663.40	0
663.55	0
663.70	0
663.85	0
664.00	0
664.15	0
664.30	0
664.45	0
664.60	0
664.75	0
664.90	0
665.05	0
665.20	0
665.35	0
665.50	0
665.65	0
665.80	0
665.95	0
666.10	0
666.25	0
666.40	0
666.55	0
666.70	0
666.85	0
667.00	0
667.15	0
667.30	0
667.45	0
667.60	0
667.75	0
667.90	0
668.05	0
668.20	0
668.35	0
668.50	0
668.65	0
668.80	0
668.95	0

Summary for Subcatchment 1.1S: North Turnaround

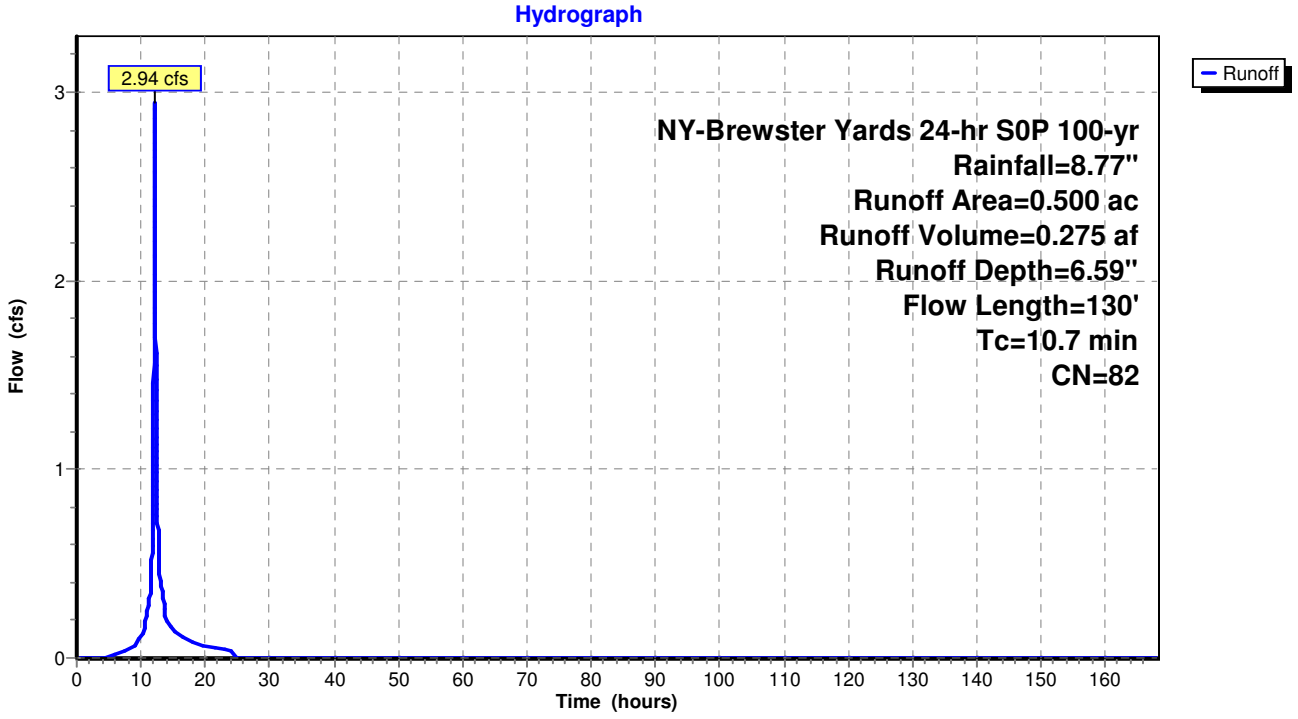
Runoff = 2.94 cfs @ 12.11 hrs, Volume= 0.275 af, Depth= 6.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
0.100	70	Woods, Good, HSG C
0.100	74	>75% Grass cover, Good, HSG C
0.100	87	Dirt roads, HSG C
0.200	89	Gravel roads, HSG C
0.500	82	Weighted Average
0.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	60	0.0500	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.0	20	0.5000	0.32		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
0.2	50	0.0600	3.67		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
10.7	130	Total			

Subcatchment 1.1S: North Turnaround



Summary for Subcatchment 1.2S: Untreated

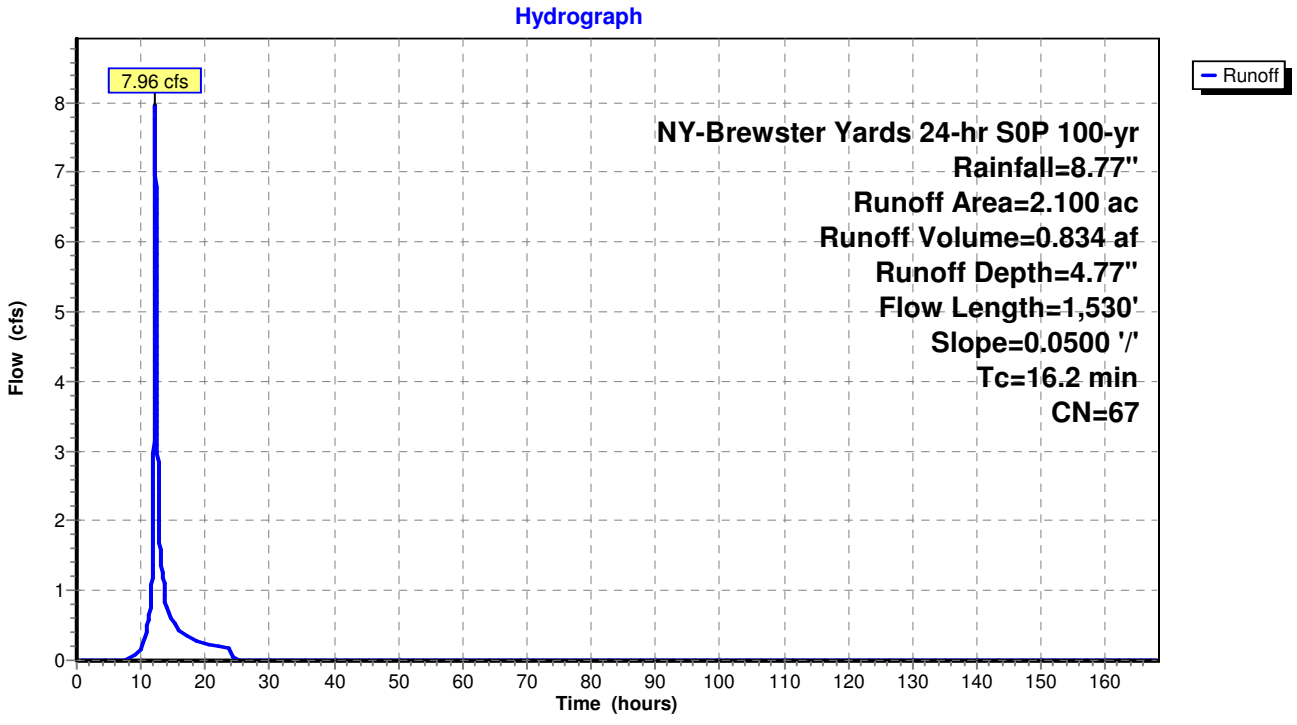
Runoff = 7.96 cfs @ 12.19 hrs, Volume= 0.834 af, Depth= 4.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
0.600	55	Woods, Good, HSG B
1.300	70	Woods, Good, HSG C
0.200	87	Dirt roads, HSG C
2.100	67	Weighted Average
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0500	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.8	1,430	0.0500	13.29	132.91	**Channel Flow,** Area= 10.0 sf Perim= 10.0' r= 1.00' n= 0.025 Earth, clean & winding
16.2	1,530	Total			

Subcatchment 1.2S: Untreated



Summary for Subcatchment 2.1S: North Sports & Parking (Piped)

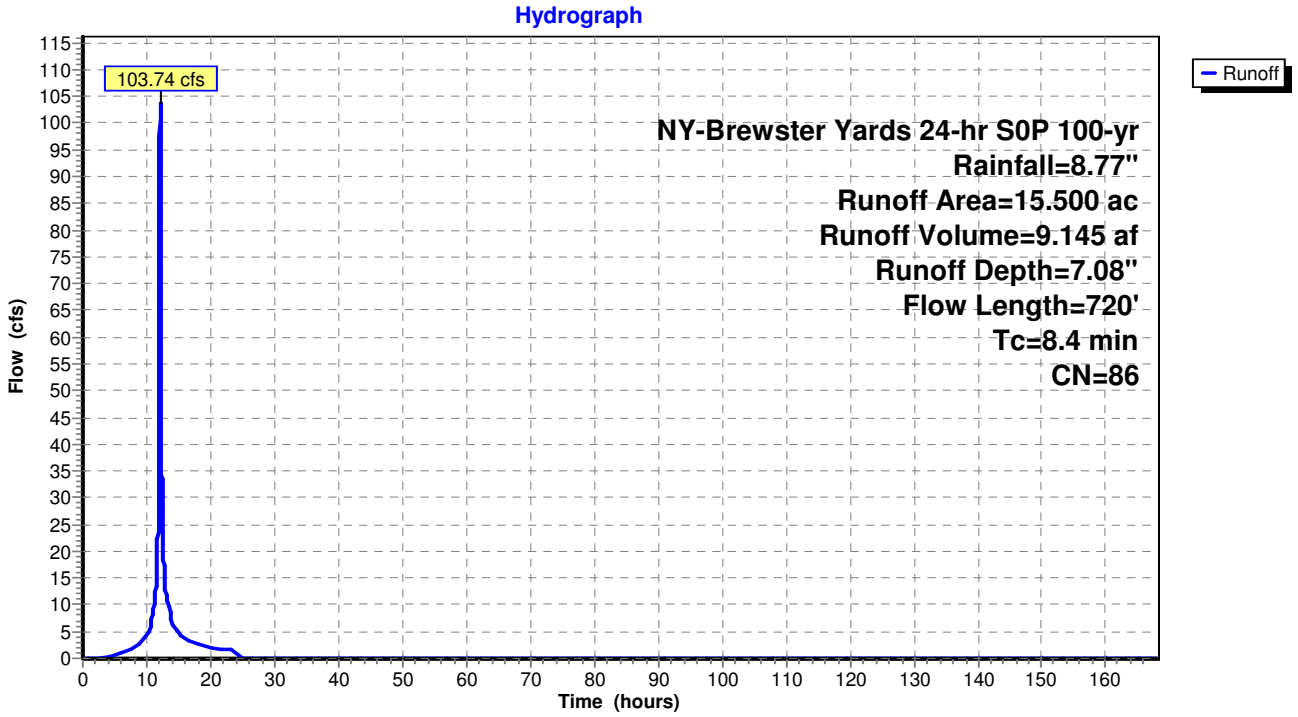
Runoff = 103.74 cfs @ 12.07 hrs, Volume= 9.145 af, Depth= 7.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

	Area (ac)	CN	Description
*	10.700	86	Field Turf
	1.000	61	>75% Grass cover, Good, HSG B
	0.800	74	>75% Grass cover, Good, HSG C
*	3.000	98	Impervious
	15.500	86	Weighted Average
	12.500		80.65% Pervious Area
	3.000		19.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
0.8	160	0.0438	3.14		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	190	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	270	0.0200	10.18	31.99	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
8.4	720	Total			

Subcatchment 2.1S: North Sports & Parking (Piped)



Summary for Subcatchment 2.2S: North Detention

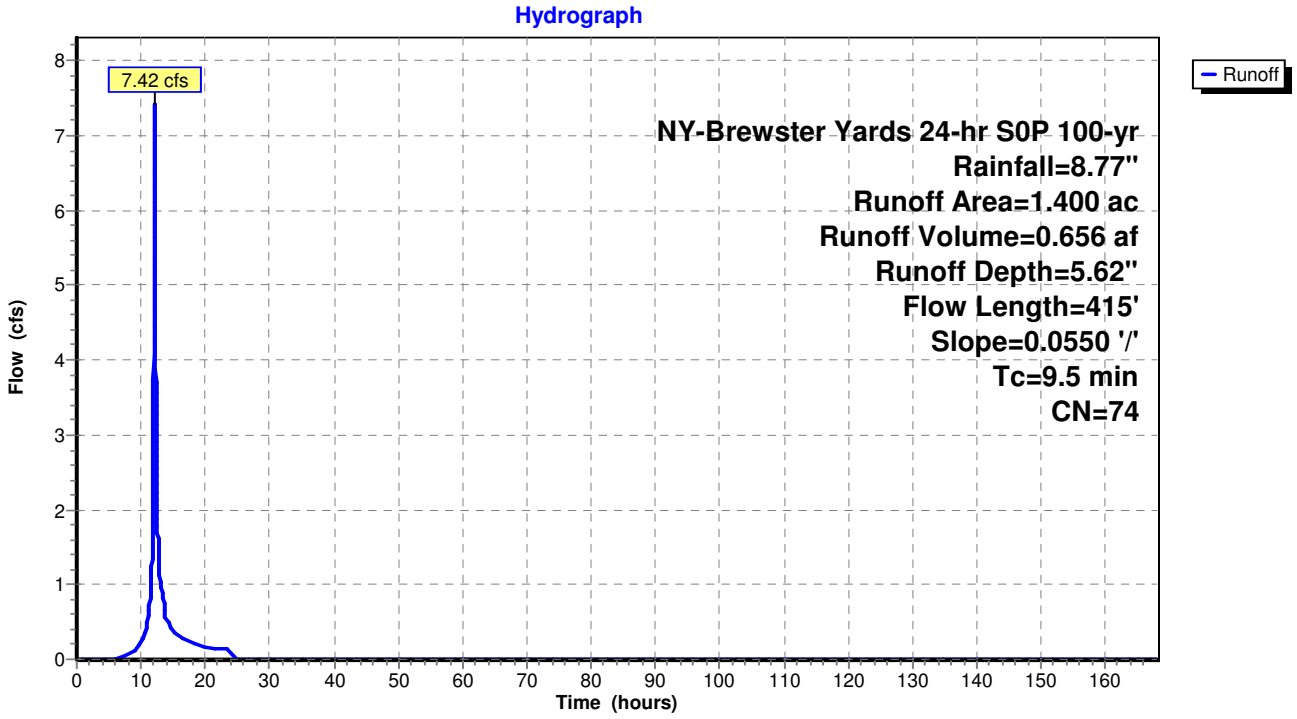
Runoff = 7.42 cfs @ 12.09 hrs, Volume= 0.656 af, Depth= 5.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
1.400	74	>75% Grass cover, Good, HSG C
1.400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	100	0.0550	0.26		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
3.2	315	0.0550	1.64		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	415	Total			

Subcatchment 2.2S: North Detention



Summary for Subcatchment 2.3S: North Infiltration

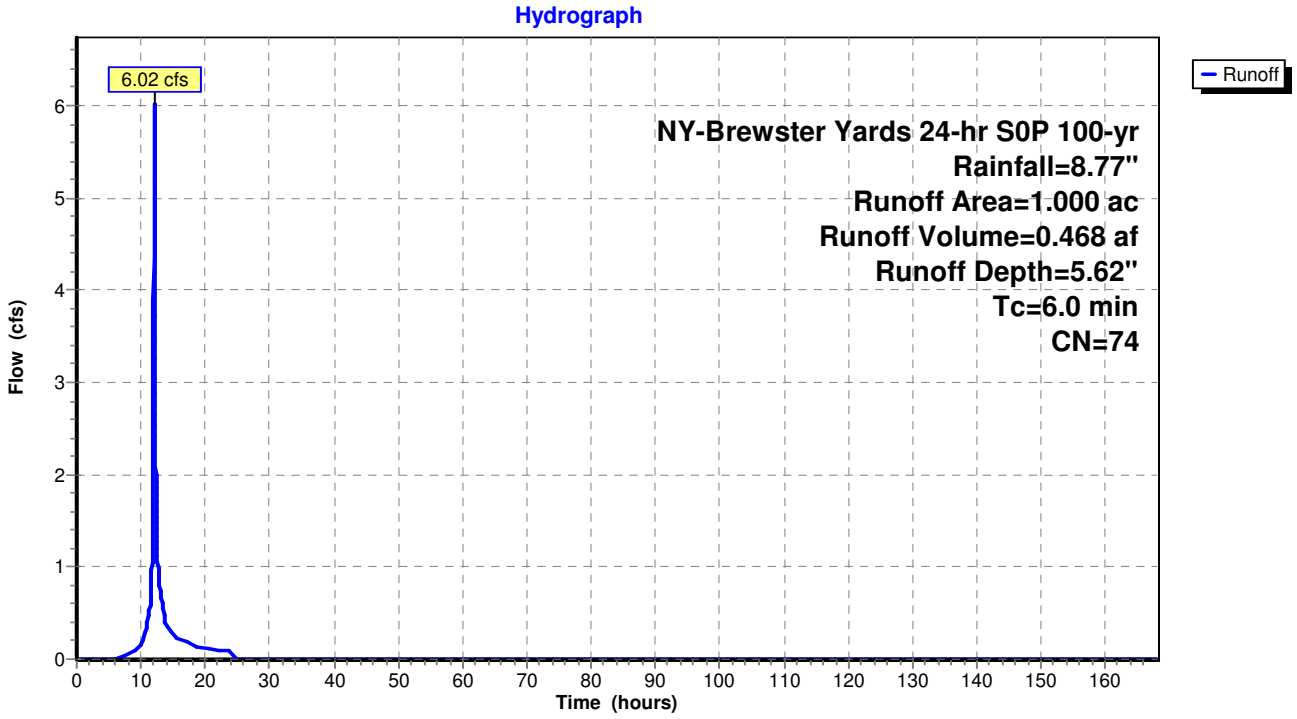
Runoff = 6.02 cfs @ 12.04 hrs, Volume= 0.468 af, Depth= 5.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
1.000	74	>75% Grass cover, Good, HSG C
1.000		100.00% Pervious Area

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

Subcatchment 2.3S: North Infiltration



Summary for Subcatchment 2.4S: North Lower Detention

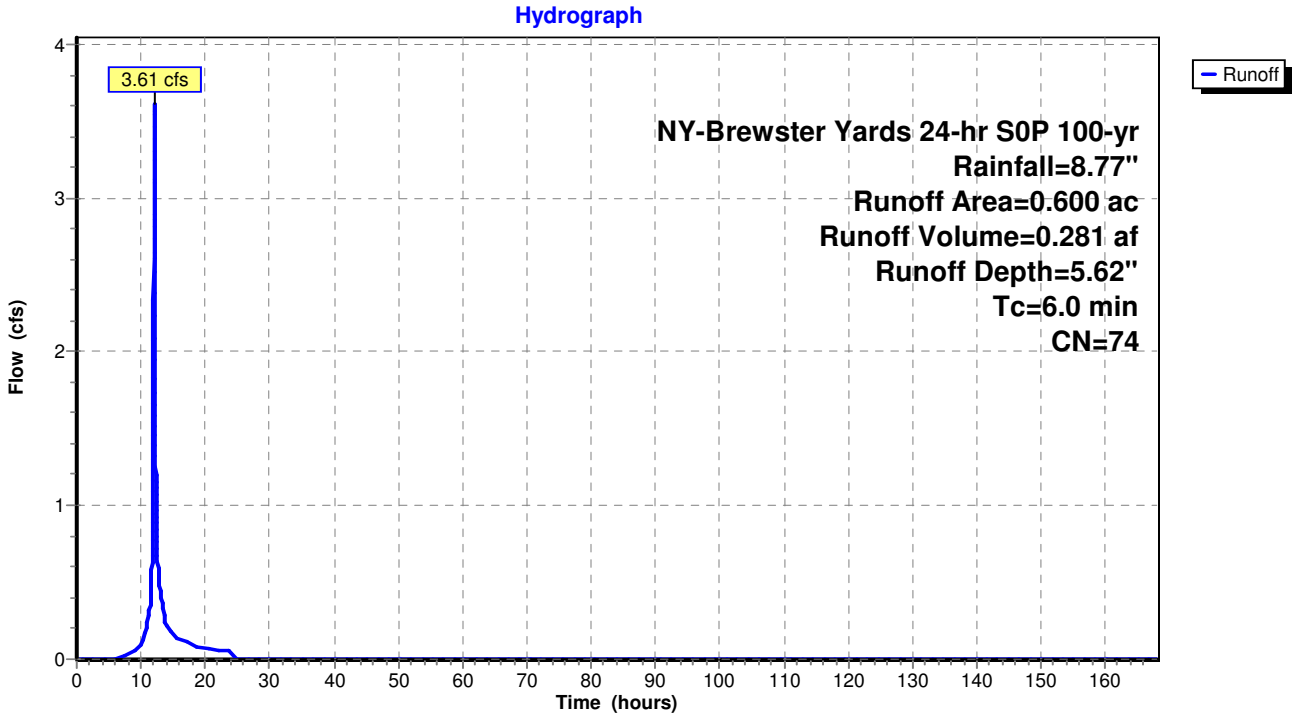
Runoff = 3.61 cfs @ 12.04 hrs, Volume= 0.281 af, Depth= 5.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
0.600	74	>75% Grass cover, Good, HSG C
0.600		100.00% Pervious Area

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

Subcatchment 2.4S: North Lower Detention



Summary for Subcatchment 2.5S: Untreated

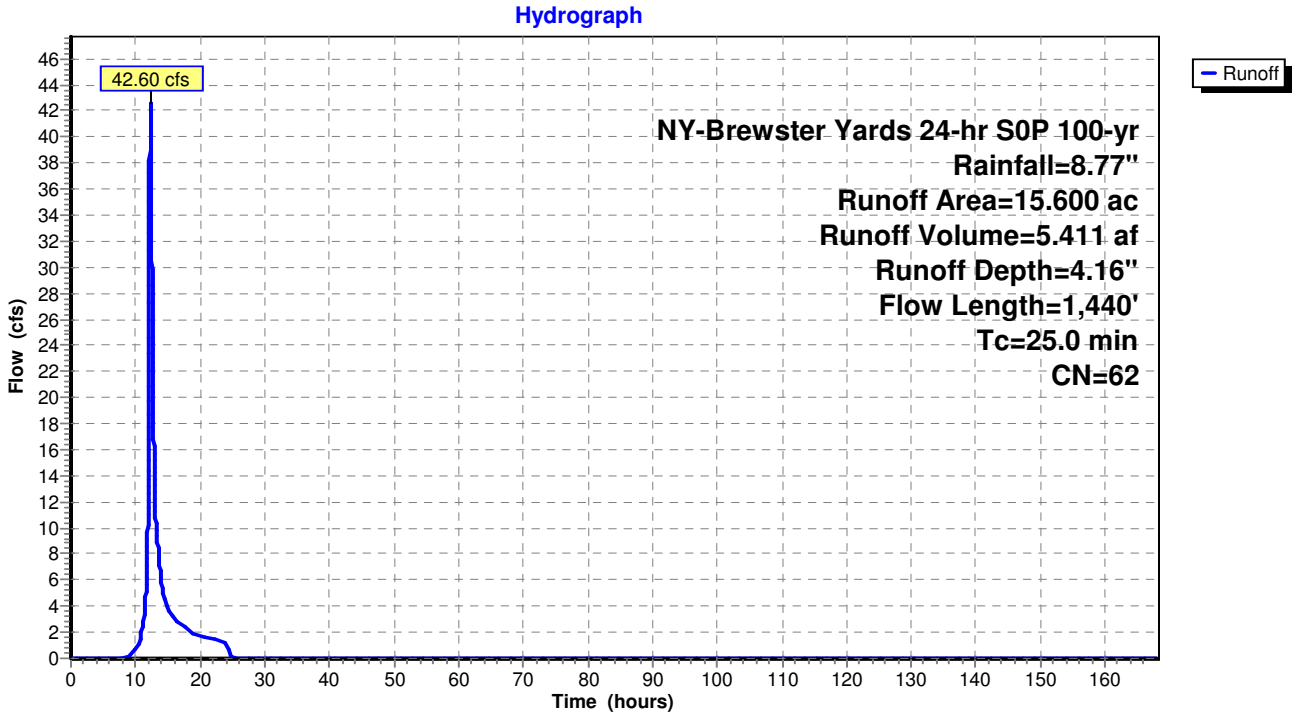
Runoff = 42.60 cfs @ 12.31 hrs, Volume= 5.411 af, Depth= 4.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
8.900	55	Woods, Good, HSG B
5.300	70	Woods, Good, HSG C
1.400	77	Woods, Good, HSG D
15.600	62	Weighted Average
15.600		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.6	100	0.0300	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
0.5	60	0.1330	1.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	200	0.3000	2.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	150	0.0930	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.0	160	0.2875	2.68		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	350	0.9500	4.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.9	420	0.0810	3.77	18.85	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
25.0	1,440	Total			

Subcatchment 2.5S: Untreated



Summary for Subcatchment 3.1S: Building & Fields (Piped)

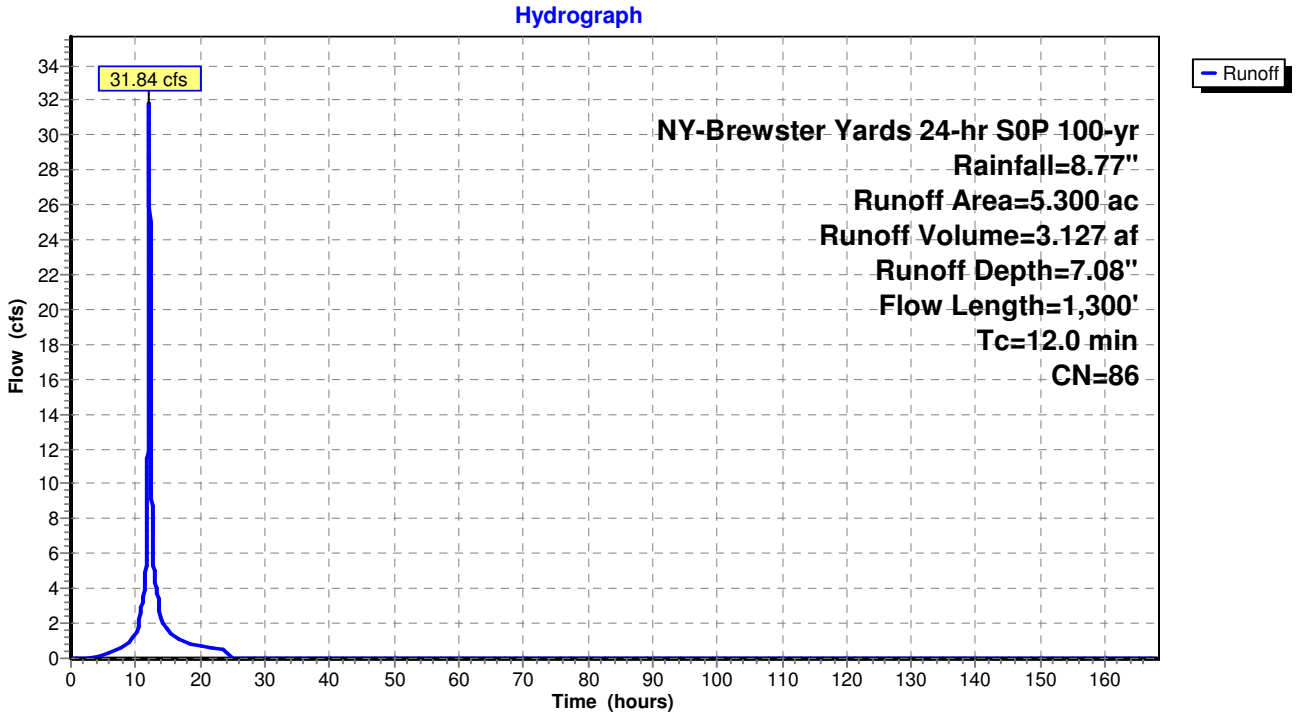
Runoff = 31.84 cfs @ 12.12 hrs, Volume= 3.127 af, Depth= 7.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

	Area (ac)	CN	Description
*	2.700	98	Impervious
*	1.400	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	5.300	86	Weighted Average
	2.600		49.06% Pervious Area
	2.700		50.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0300	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.44"
1.2	150	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.9	250	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	800	0.0412	14.62	45.92	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
12.0	1,300	Total			

Subcatchment 3.1S: Building & Fields (Piped)



Summary for Subcatchment 3.2S: Entrance Infiltration Basin

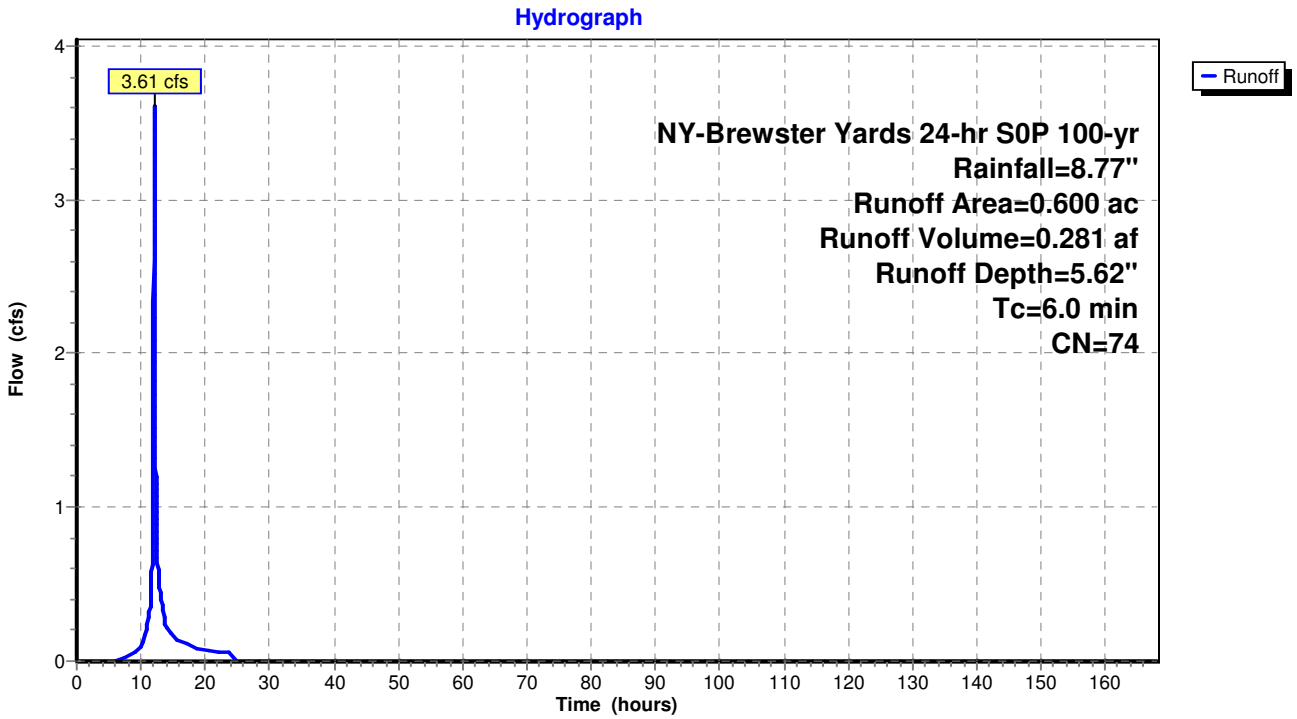
Runoff = 3.61 cfs @ 12.04 hrs, Volume= 0.281 af, Depth= 5.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
0.200	61	>75% Grass cover, Good, HSG B
0.400	80	>75% Grass cover, Good, HSG D
0.600	74	Weighted Average
0.600		100.00% Pervious Area

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

Subcatchment 3.2S: Entrance Infiltration Basin



Summary for Subcatchment 3.3S: Fields & Parking (Piped)

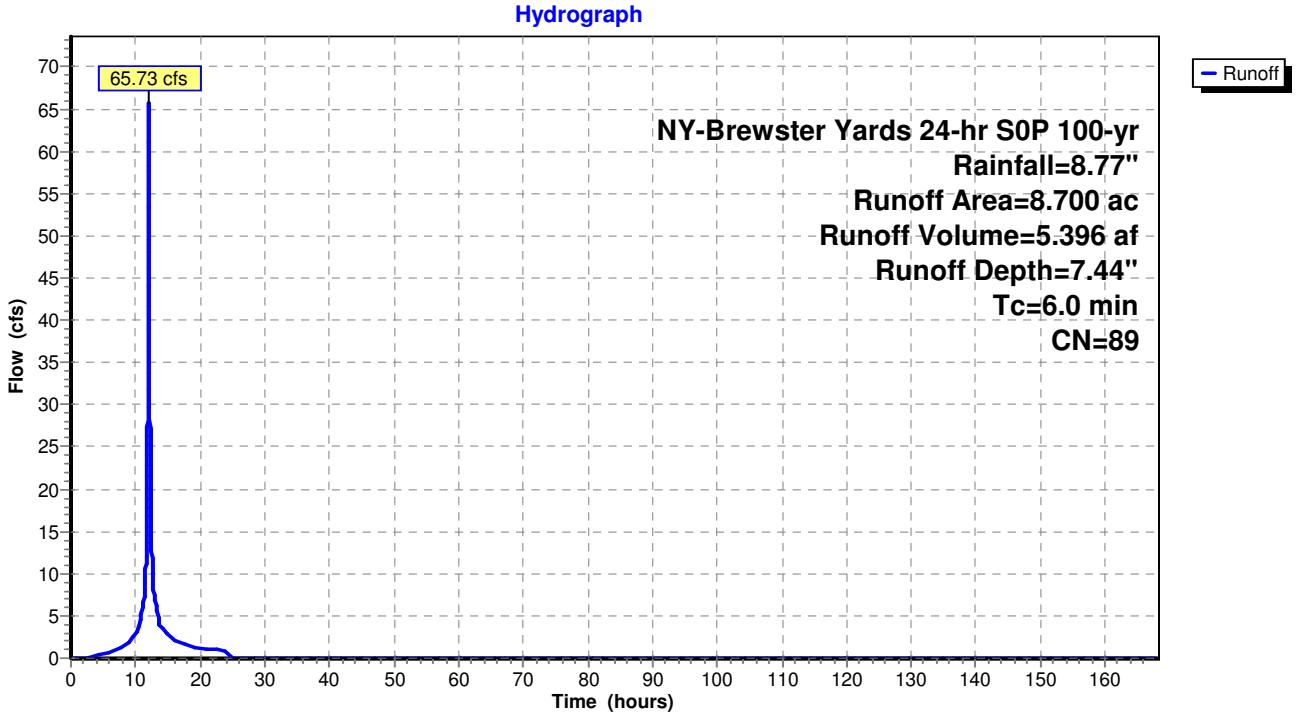
Runoff = 65.73 cfs @ 12.04 hrs, Volume= 5.396 af, Depth= 7.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

	Area (ac)	CN	Description
*	4.800	98	Impervious
*	2.500	86	Field Turf
	1.400	61	>75% Grass cover, Good, HSG B
	8.700	89	Weighted Average
	3.900		44.83% Pervious Area
	4.800		55.17% Impervious Area

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

Subcatchment 3.3S: Fields & Parking (Piped)



Summary for Subcatchment 3.4S: South Showcase Field (Piped)

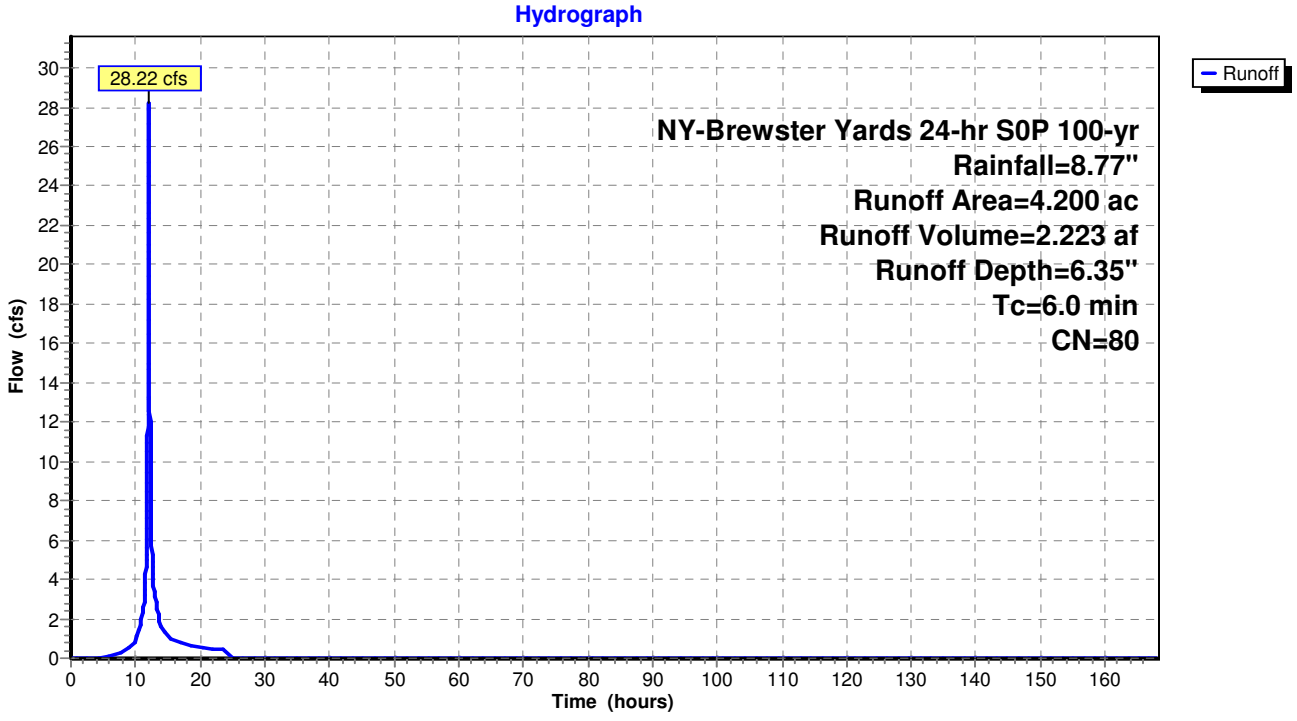
Runoff = 28.22 cfs @ 12.04 hrs, Volume= 2.223 af, Depth= 6.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

	Area (ac)	CN	Description
*	0.400	98	Impervious
*	2.600	86	Field Turf
	1.200	61	>75% Grass cover, Good, HSG B
	4.200	80	Weighted Average
	3.800		90.48% Pervious Area
	0.400		9.52% Impervious Area

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

Subcatchment 3.4S: South Showcase Field (Piped)



Summary for Subcatchment 3.5S: South Detention Basin

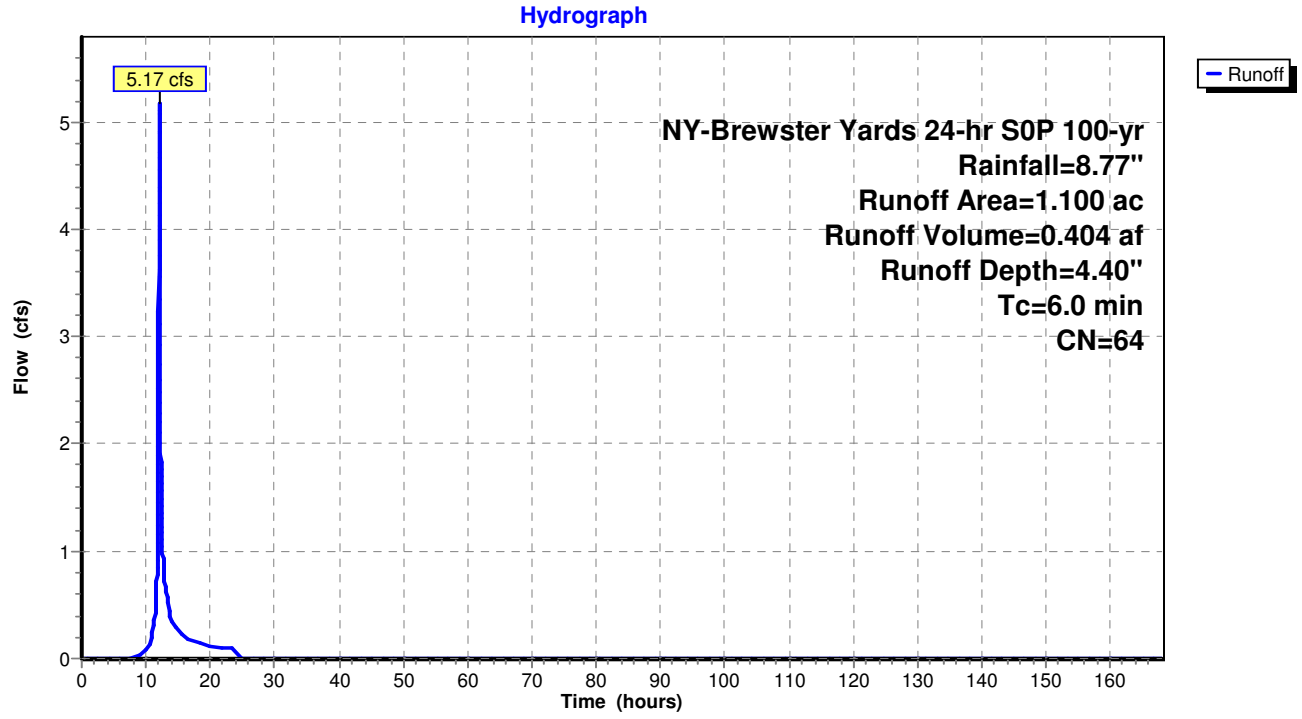
Runoff = 5.17 cfs @ 12.04 hrs, Volume= 0.404 af, Depth= 4.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

	Area (ac)	CN	Description
*	0.100	98	Impervious
	1.000	61	>75% Grass cover, Good, HSG B
	1.100	64	Weighted Average
	1.000		90.91% Pervious Area
	0.100		9.09% Impervious Area

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

Subcatchment 3.5S: South Detention Basin



Summary for Subcatchment 3.6S: South Upper Pond

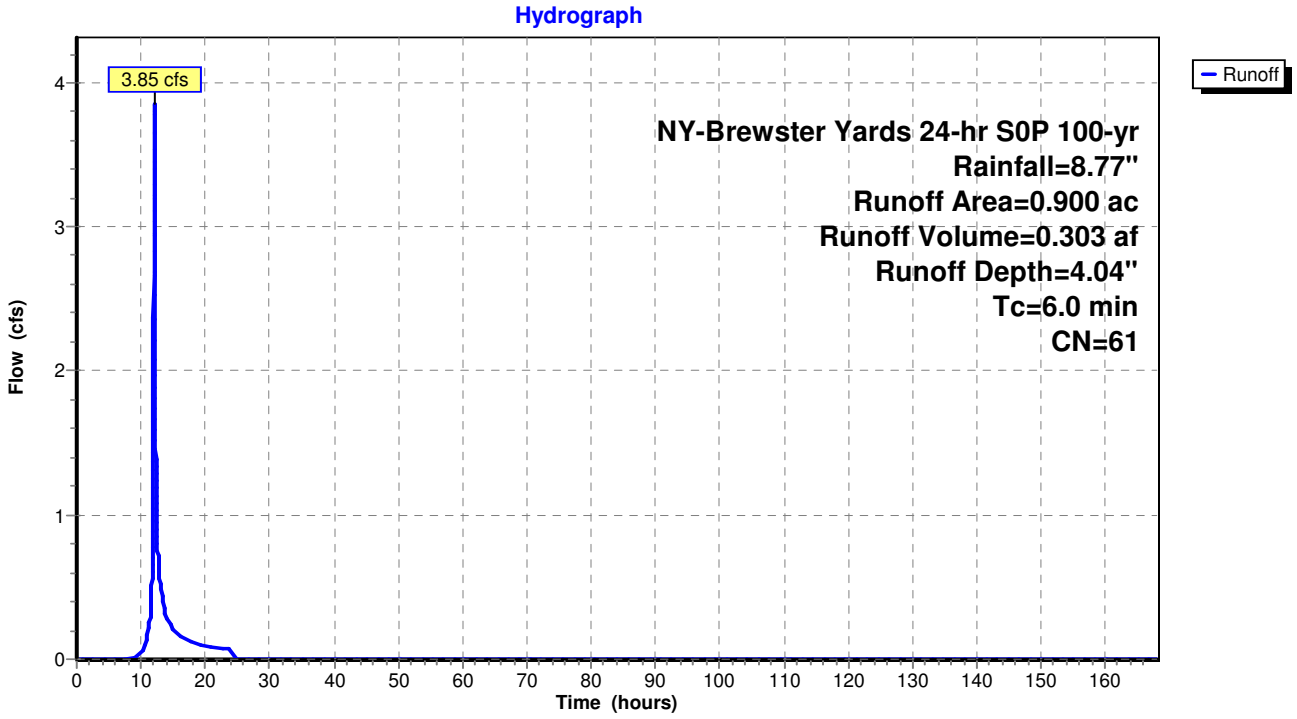
Runoff = 3.85 cfs @ 12.04 hrs, Volume= 0.303 af, Depth= 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
0.900	61	>75% Grass cover, Good, HSG B
0.900		100.00% Pervious Area

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

Subcatchment 3.6S: South Upper Pond



Summary for Subcatchment 3.7S: South Lower Pond

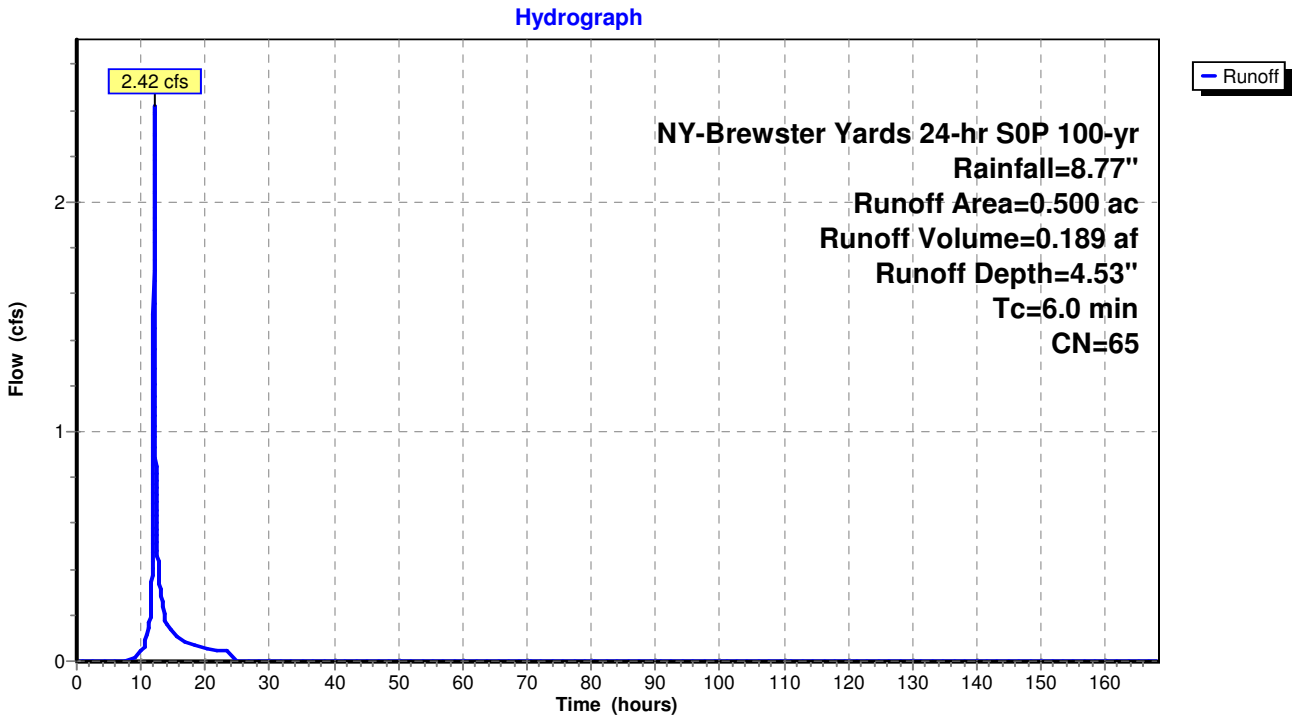
Runoff = 2.42 cfs @ 12.04 hrs, Volume= 0.189 af, Depth= 4.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
0.400	61	>75% Grass cover, Good, HSG B
0.100	80	>75% Grass cover, Good, HSG D
0.500	65	Weighted Average
0.500		100.00% Pervious Area

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

Subcatchment 3.7S: South Lower Pond



Summary for Subcatchment 3.8S: Untreated

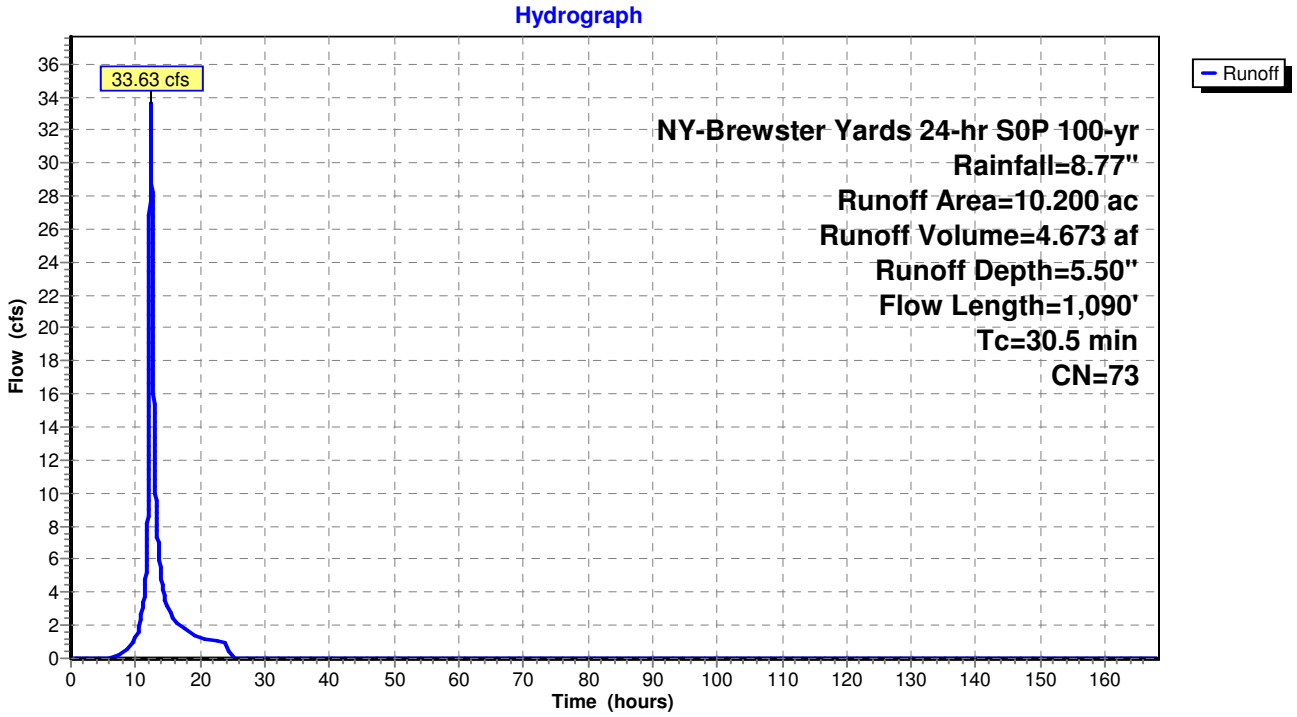
Runoff = 33.63 cfs @ 12.37 hrs, Volume= 4.673 af, Depth= 5.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
2.200	80	>75% Grass cover, Good, HSG D
3.200	55	Woods, Good, HSG B
0.100	70	Woods, Good, HSG C
3.800	77	Woods, Good, HSG D
0.700	98	Paved parking, HSG D
0.200	98	Water Surface, HSG D
10.200	73	Weighted Average
9.300		91.18% Pervious Area
0.900		8.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	50	0.2000	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
6.7	50	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.44"
15.6	70	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
1.4	60	0.0200	0.71		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30		8.02		**Lake or Reservoir,** Mean Depth= 2.00'
3.6	830	0.0840	3.84	19.20	**Channel Flow,** Area= 5.0 sf Perim= 8.3' r= 0.60' n= 0.080 Earth, long dense weeds
30.5	1,090	Total			

Subcatchment 3.8S: Untreated



Summary for Subcatchment 4.1S: Untreated

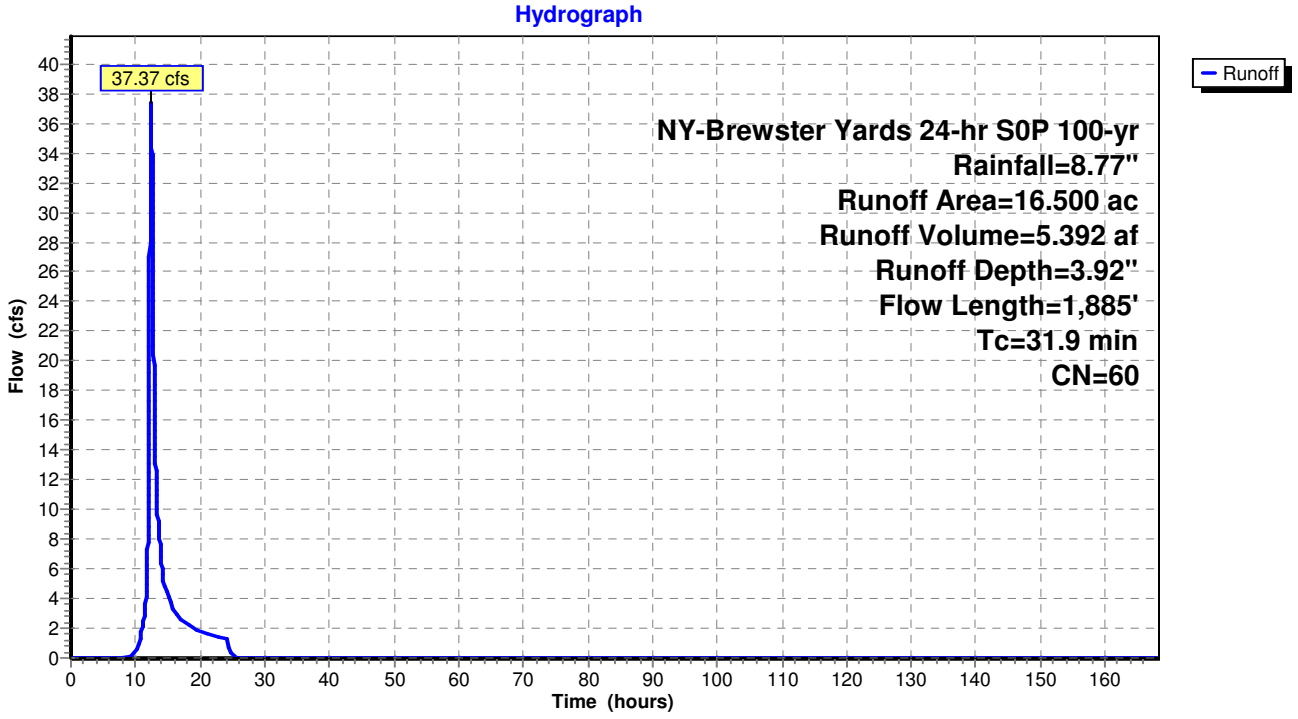
Runoff = 37.37 cfs @ 12.41 hrs, Volume= 5.392 af, Depth= 3.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
NY-Brewster Yards 24-hr S0P 100-yr Rainfall=8.77"

Area (ac)	CN	Description
12.900	55	Woods, Good, HSG B
3.500	77	Woods, Good, HSG D
0.100	82	Dirt roads, HSG B
16.500	60	Weighted Average
16.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	100	0.0190	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.44"
7.9	885	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	900	0.0500	5.09	71.20	**Channel Flow,** Area= 14.0 sf Perim= 45.0' r= 0.31' n= 0.030 Earth, grassed & winding
31.9	1,885	Total			

Subcatchment 4.1S: Untreated

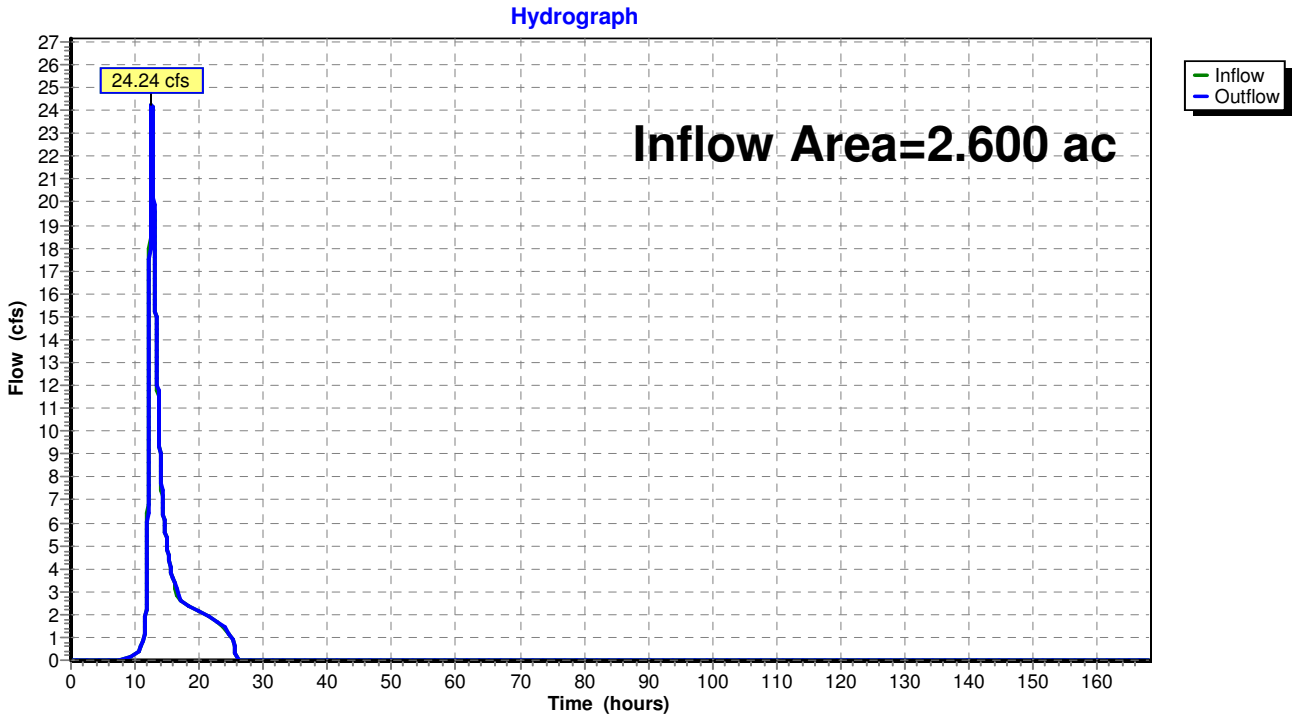


Summary for Reach DP 1:

Inflow Area = 2.600 ac, 0.00% Impervious, Inflow Depth = 24.19" for 100-yr event
Inflow = 24.24 cfs @ 12.59 hrs, Volume= 5.241 af
Outflow = 24.24 cfs @ 12.60 hrs, Volume= 5.241 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 1:

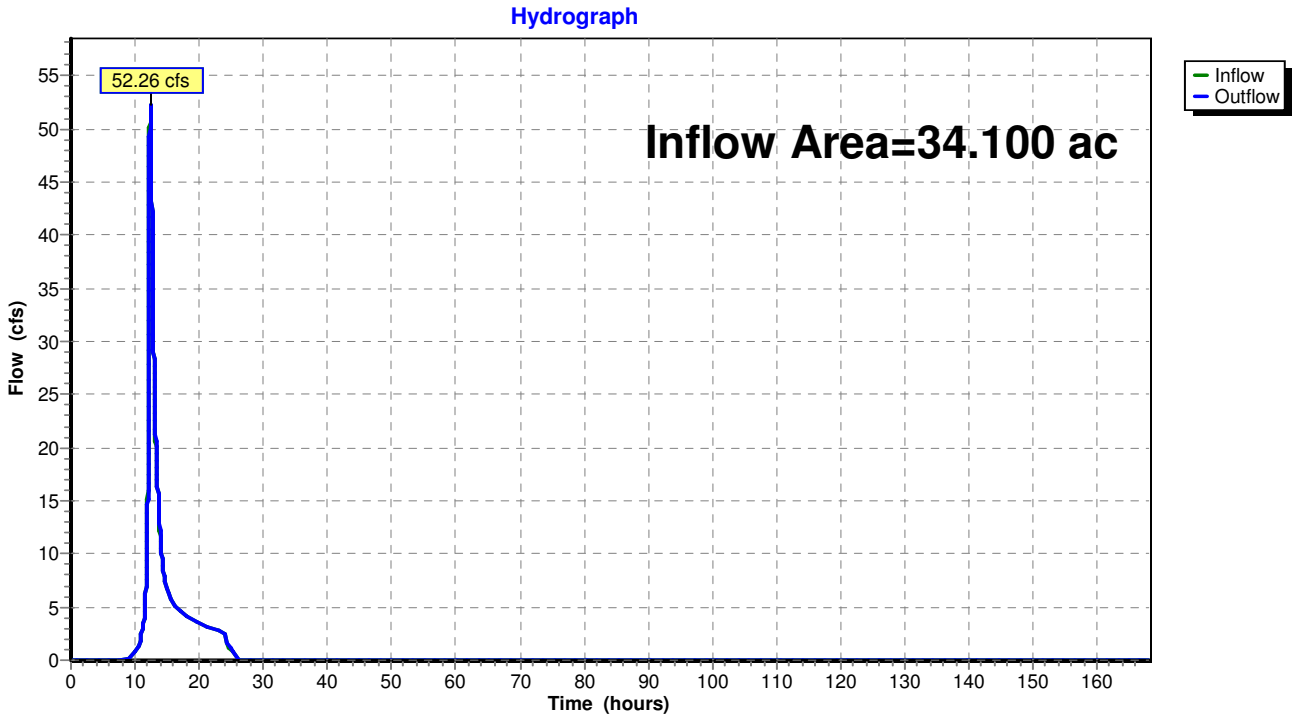


Summary for Reach DP 2:

Inflow Area = 34.100 ac, 8.80% Impervious, Inflow Depth = 3.15" for 100-yr event
Inflow = 52.26 cfs @ 12.37 hrs, Volume= 8.965 af
Outflow = 52.26 cfs @ 12.38 hrs, Volume= 8.965 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 2:

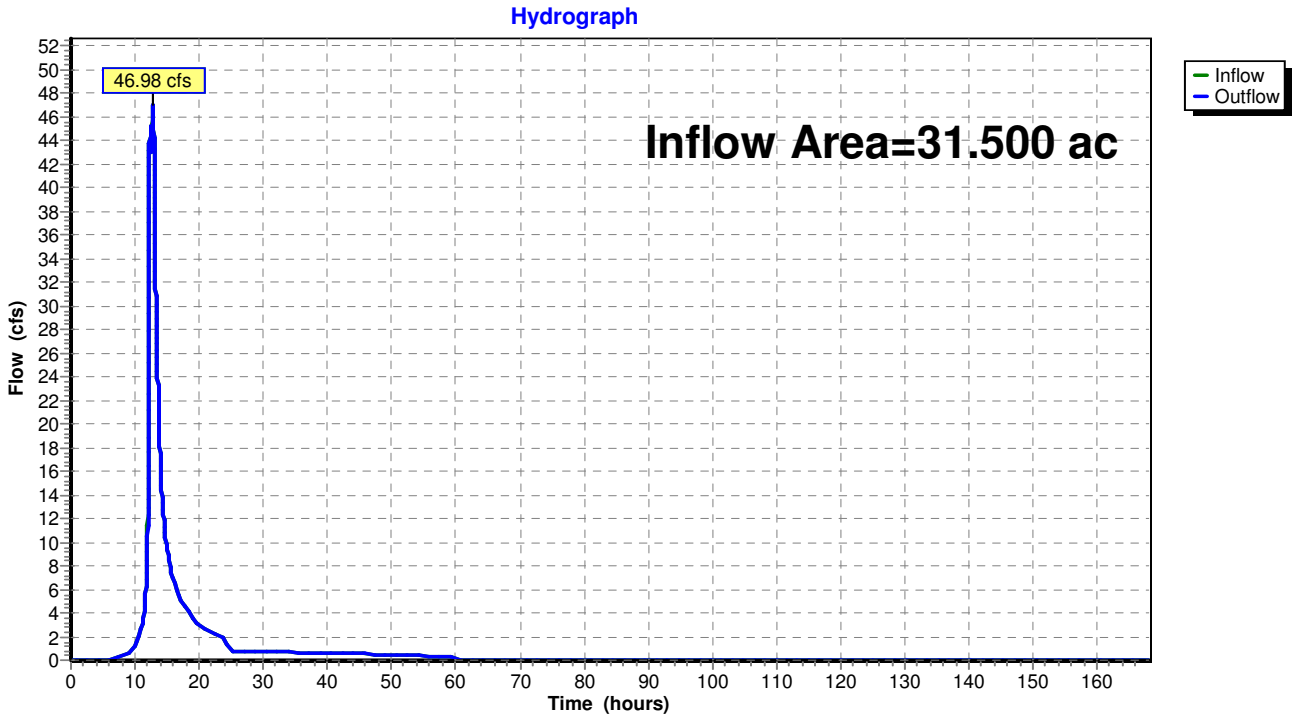


Summary for Reach DP 3:

Inflow Area = 31.500 ac, 28.25% Impervious, Inflow Depth = 4.48" for 100-yr event
Inflow = 46.98 cfs @ 12.83 hrs, Volume= 11.767 af
Outflow = 46.98 cfs @ 12.84 hrs, Volume= 11.767 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 3:

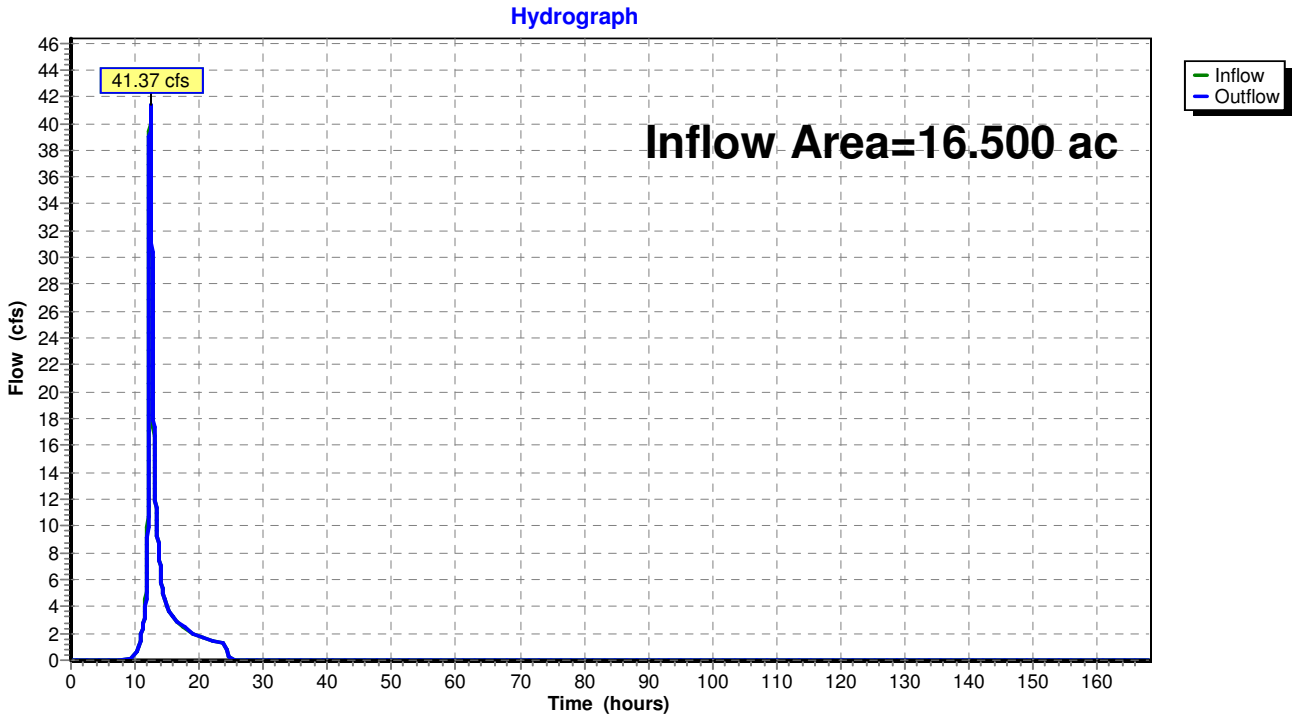


Summary for Reach DP 4:

Inflow Area = 16.500 ac, 0.00% Impervious, Inflow Depth = 4.04" for 100-yr event
Inflow = 41.37 cfs @ 12.37 hrs, Volume= 5.559 af
Outflow = 41.37 cfs @ 12.38 hrs, Volume= 5.559 af, Atten= 0%, Lag= 0.6 min

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs

Reach DP 4:



Summary for Pond 1.1 IB: North Turnaround Infiltration Basin

Inflow Area = 0.500 ac, 0.00% Impervious, Inflow Depth = 6.59" for 100-yr event
Inflow = 2.94 cfs @ 12.11 hrs, Volume= 0.275 af
Outflow = 2.89 cfs @ 12.14 hrs, Volume= 0.275 af, Atten= 2%, Lag= 1.7 min
Discarded = 0.04 cfs @ 12.14 hrs, Volume= 0.102 af
Primary = 2.85 cfs @ 12.14 hrs, Volume= 0.173 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 625.35' @ 12.14 hrs Surf.Area= 1,695 sf Storage= 2,721 cf
Flood Elev= 625.50' Surf.Area= 1,765 sf Storage= 2,979 cf

Plug-Flow detention time= 285.8 min calculated for 0.275 af (100% of inflow)
Center-of-Mass det. time= 285.9 min (1,090.2 - 804.3)

Volume	Invert	Avail.Storage	Storage Description
#1	623.00'	3,920 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

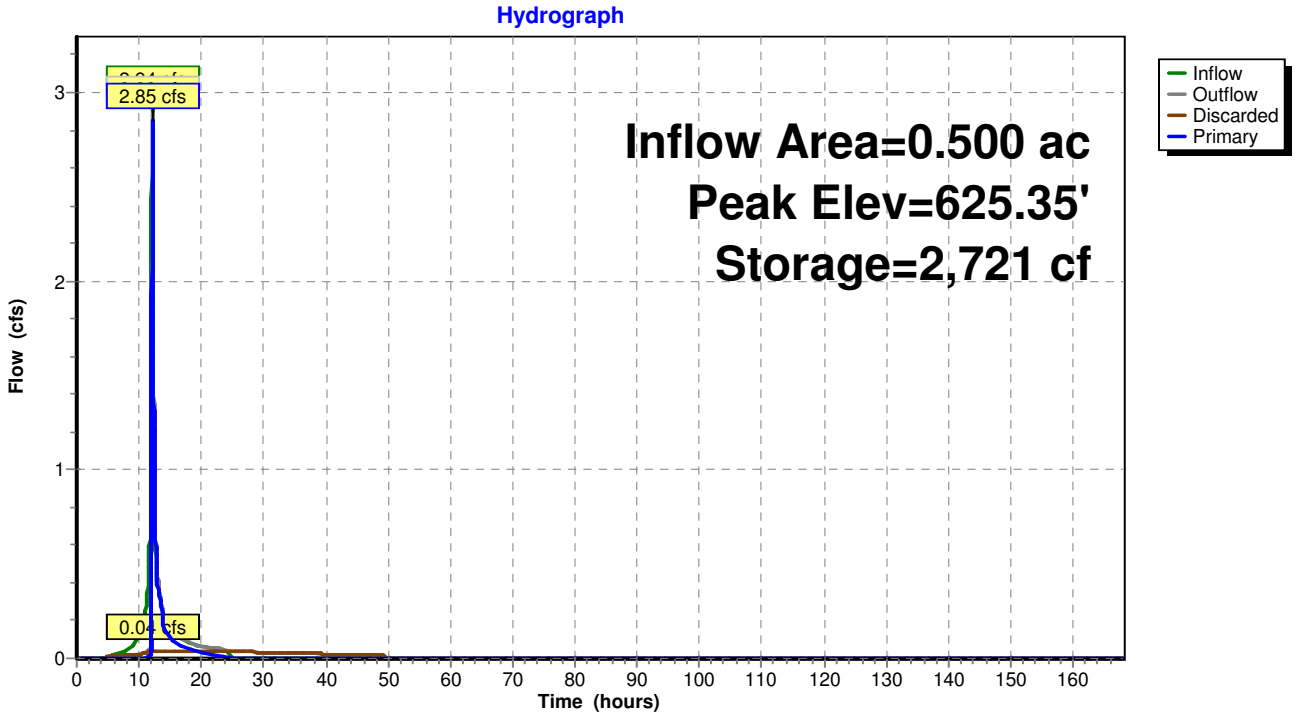
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
623.00	660	0	0
624.00	1,060	860	860
626.00	2,000	3,060	3,920

Device	Routing	Invert	Outlet Devices
#1	Primary	622.00'	**12.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 622.00' / 621.80' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	625.10'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	623.00'	**1.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.04 cfs @ 12.14 hrs HW=625.35' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=2.85 cfs @ 12.14 hrs HW=625.35' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 2.85 cfs of 6.39 cfs potential flow)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 2.85 cfs @ 1.42 fps)

Pond 1.1 IB: North Turnaround Infiltration Basin



Stage-Area-Storage for Pond 1.1 IB: North Turnaround Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
623.00	660	0
623.05	680	33
623.10	700	68
623.15	720	103
623.20	740	140
623.25	760	178
623.30	780	216
623.35	800	256
623.40	820	296
623.45	840	338
623.50	860	380
623.55	880	423
623.60	900	468
623.65	920	513
623.70	940	560
623.75	960	608
623.80	980	656
623.85	1,000	706
623.90	1,020	756
623.95	1,040	808
624.00	1,060	860
624.05	1,083	914
624.10	1,107	968
624.15	1,130	1,024
624.20	1,154	1,081
624.25	1,178	1,140
624.30	1,201	1,199
624.35	1,225	1,260
624.40	1,248	1,322
624.45	1,272	1,385
624.50	1,295	1,449
624.55	1,318	1,514
624.60	1,342	1,581
624.65	1,365	1,648
624.70	1,389	1,717
624.75	1,413	1,787
624.80	1,436	1,858
624.85	1,460	1,931
624.90	1,483	2,004
624.95	1,507	2,079
625.00	1,530	2,155
625.05	1,553	2,232
625.10	1,577	2,310
625.15	1,600	2,390
625.20	1,624	2,470
625.25	1,648	2,552
625.30	1,671	2,635
625.35	1,695	2,719
625.40	1,718	2,805
625.45	1,742	2,891
625.50	1,765	2,979
625.55	1,788	3,068
625.60	1,812	3,158
625.65	1,835	3,249
625.70	1,859	3,341
625.75	1,883	3,435
625.80	1,906	3,529
625.85	1,930	3,625
625.90	1,953	3,722
625.95	1,977	3,821
626.00	**2,000**	**3,920**

Summary for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 6.96" for 100-yr event
Inflow = 111.03 cfs @ 12.07 hrs, Volume= 9.800 af
Outflow = 63.35 cfs @ 12.24 hrs, Volume= 9.800 af, Atten= 43%, Lag= 9.8 min
Primary = 63.35 cfs @ 12.24 hrs, Volume= 9.800 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 669.53' @ 12.24 hrs Surf.Area= 34,227 sf Storage= 147,942 cf
Flood Elev= 669.50' Surf.Area= 34,100 sf Storage= 147,015 cf

Plug-Flow detention time= 579.7 min calculated for 9.800 af (100% of inflow)
Center-of-Mass det. time= 579.6 min (1,372.7 - 793.0)

Volume	Invert	Avail.Storage	Storage Description
#1	659.00'	240 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 600 cf Overall x 40.0% Voids
#2	660.00'	164,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		164,340 cf	Total Available Storage

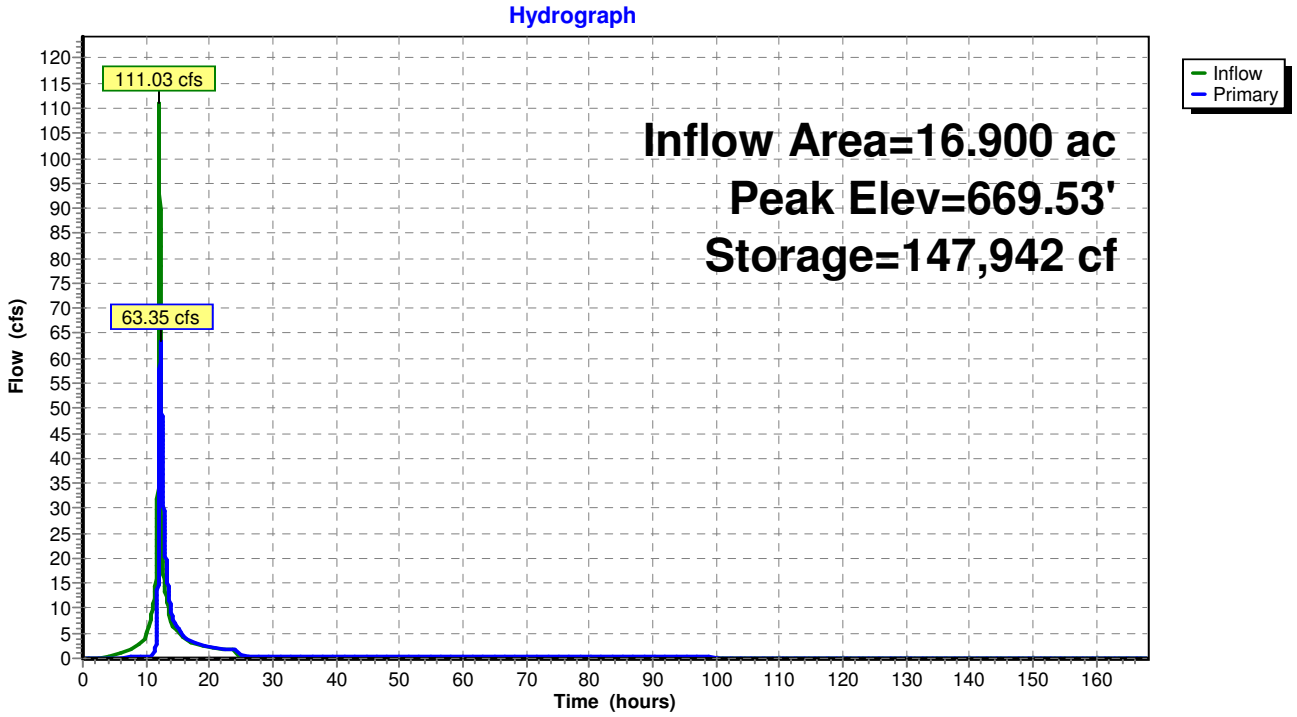
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
659.00	600	0	0
660.00	600	600	600

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	1,900	0	0
662.00	6,000	7,900	7,900
664.00	11,800	17,800	25,700
666.00	18,800	30,600	56,300
668.00	26,600	45,400	101,700
670.00	35,800	62,400	164,100

Device	Routing	Invert	Outlet Devices
#1	Primary	659.00'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	666.70'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=63.33 cfs @ 12.24 hrs HW=669.53' TW=665.78' (Dynamic Tailwater)
↑
└**1=Orifice/Grate** (Orifice Controls 0.20 cfs @ 9.31 fps)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 63.13 cfs @ 5.58 fps)

Pond 2.2 EDB: North Detention Basin, Orifice, & Weir



Stage-Area-Storage for Pond 2.2 EDB: North Detention Basin, Orifice, & Weir

Elevation (feet)	Storage (cubic-feet)
659.00	0
659.15	36
659.30	72
659.45	108
659.60	144
659.75	180
659.90	216
660.05	338
660.20	661
660.35	1,031
660.50	1,446
660.65	1,908
660.80	2,416
660.95	2,970
661.10	3,570
661.25	4,217
661.40	4,909
661.55	5,648
661.70	6,432
661.85	7,263
662.00	8,140
662.15	9,073
662.30	10,070
662.45	11,134
662.60	12,262
662.75	13,456
662.90	14,714
663.05	16,039
663.20	17,428
663.35	18,883
663.50	20,403
663.65	21,988
663.80	23,638
663.95	25,354
664.10	27,138
664.25	28,999
664.40	30,940
664.55	32,959
664.70	35,058
664.85	37,234
665.00	39,490
665.15	41,824
665.30	44,237
665.45	46,729
665.60	49,300
665.75	51,949
665.90	54,677
666.05	57,485
666.20	60,378
666.35	63,359
666.50	66,428
666.65	69,584
666.80	72,828
666.95	76,160
667.10	79,580
667.25	83,087
667.40	86,682
667.55	90,365
667.70	94,136
667.85	97,994
668.00	101,940
668.15	105,982
668.30	110,127
668.45	114,376
668.60	118,728
668.75	123,184
668.90	127,743
669.05	132,406
669.20	137,172
669.35	142,042
669.50	147,015
669.65	152,092
669.80	157,272
669.95	**162,556**

Summary for Pond 2.3 IB: North Infiltration Basin

Inflow Area = 17.900 ac, 16.76% Impervious, Inflow Depth = 1.85" for 100-yr event
Inflow = 6.56 cfs @ 12.04 hrs, Volume= 2.762 af
Outflow = 0.21 cfs @ 86.15 hrs, Volume= 2.633 af, Atten= 97%, Lag= 4,446.3 min
Discarded = 0.21 cfs @ 86.15 hrs, Volume= 2.633 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 656.91' @ 86.15 hrs Surf.Area= 18,233 sf Storage= 45,237 cf
Flood Elev= 659.20' Surf.Area= 22,700 sf Storage= 92,000 cf

Plug-Flow detention time= 2,611.6 min calculated for 2.633 af (95% of inflow)
Center-of-Mass det. time= 2,428.0 min (5,113.8 - 2,685.8)

Volume	Invert	Avail.Storage	Storage Description
#1	654.00'	110,800 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

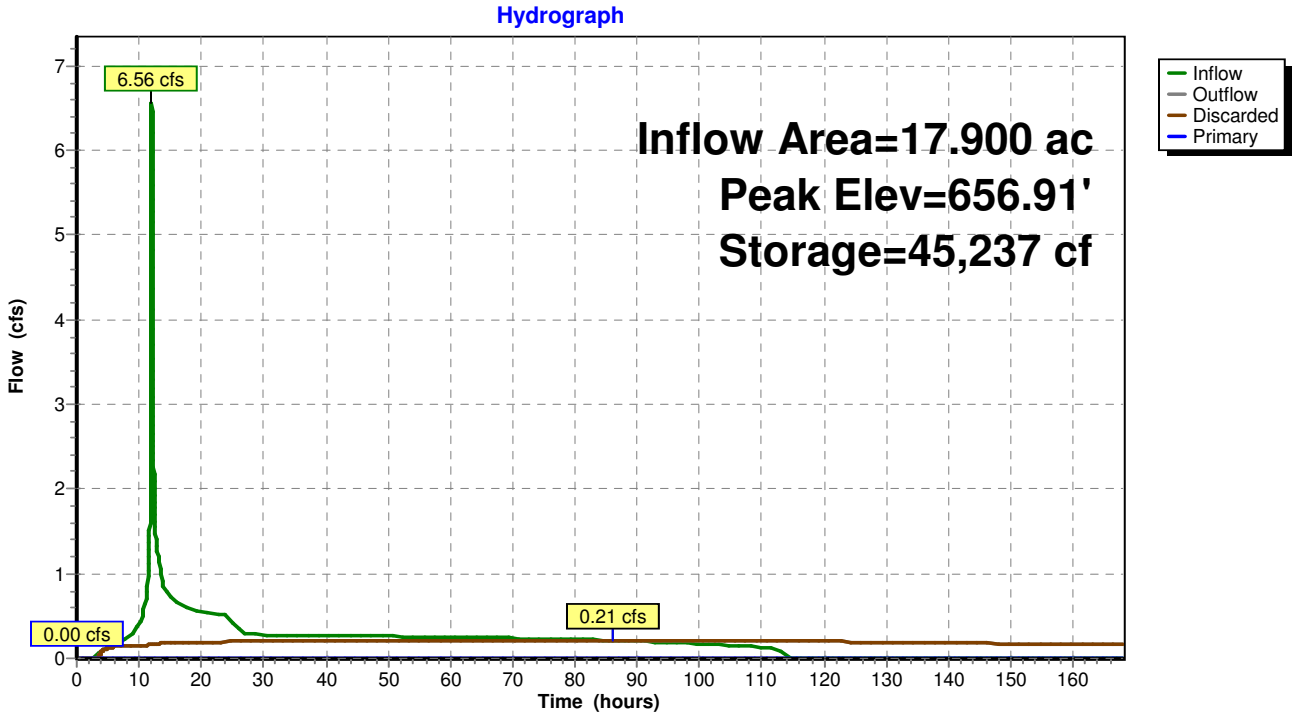
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
654.00	12,900	0	0
656.00	16,500	29,400	29,400
658.00	20,300	36,800	66,200
660.00	24,300	44,600	110,800

Device	Routing	Invert	Outlet Devices
#1	Primary	653.00'	**6.0" Round Culvert** L= 220.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 653.00' / 641.00' S= 0.0545 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	659.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	654.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.21 cfs @ 86.15 hrs HW=656.91' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.21 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=654.00' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 0.82 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2.3 IB: North Infiltration Basin



Stage-Area-Storage for Pond 2.3 IB: North Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
654.00	12,900	0
654.10	13,080	1,299
654.20	13,260	2,616
654.30	13,440	3,951
654.40	13,620	5,304
654.50	13,800	6,675
654.60	13,980	8,064
654.70	14,160	9,471
654.80	14,340	10,896
654.90	14,520	12,339
655.00	14,700	13,800
655.10	14,880	15,279
655.20	15,060	16,776
655.30	15,240	18,291
655.40	15,420	19,824
655.50	15,600	21,375
655.60	15,780	22,944
655.70	15,960	24,531
655.80	16,140	26,136
655.90	16,320	27,759
656.00	16,500	29,400
656.10	16,690	31,060
656.20	16,880	32,738
656.30	17,070	34,435
656.40	17,260	36,152
656.50	17,450	37,888
656.60	17,640	39,642
656.70	17,830	41,416
656.80	18,020	43,208
656.90	18,210	45,019
657.00	18,400	46,850
657.10	18,590	48,700
657.20	18,780	50,568
657.30	18,970	52,455
657.40	19,160	54,362
657.50	19,350	56,288
657.60	19,540	58,232
657.70	19,730	60,196
657.80	19,920	62,178
657.90	20,110	64,179
658.00	20,300	66,200
658.10	20,500	68,240
658.20	20,700	70,300
658.30	20,900	72,380
658.40	21,100	74,480
658.50	21,300	76,600
658.60	21,500	78,740
658.70	21,700	80,900
658.80	21,900	83,080
658.90	22,100	85,280
659.00	22,300	87,500
659.10	22,500	89,740
659.20	22,700	92,000
659.30	22,900	94,280
659.40	23,100	96,580
659.50	23,300	98,900
659.60	23,500	101,240
659.70	23,700	103,600
659.80	23,900	105,980
659.90	24,100	108,380
660.00	**24,300**	**110,800**

Summary for Pond 2.4 EDB: North Lower Detention Basin

Inflow Area = 0.600 ac, 0.00% Impervious, Inflow Depth = 155.76" for 100-yr event
Inflow = 64.19 cfs @ 12.24 hrs, Volume= 7.788 af
Outflow = 38.18 cfs @ 12.65 hrs, Volume= 7.788 af, Atten= 41%, Lag= 24.3 min
Primary = 17.40 cfs @ 12.65 hrs, Volume= 3.554 af
Secondary = 20.78 cfs @ 12.65 hrs, Volume= 4.234 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Starting Elev= 594.00' Surf.Area= 0 sf Storage= 0 cf
Peak Elev= 659.49' @ 12.65 hrs Surf.Area= 17,941 sf Storage= 90,657 cf
Flood Elev= 659.50' Surf.Area= 17,950 sf Storage= 90,758 cf

Plug-Flow detention time= 87.9 min calculated for 7.788 af (100% of inflow)
Center-of-Mass det. time= 87.7 min (942.3 - 854.6)

Volume	Invert	Avail.Storage	Storage Description
#1	651.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	652.00'	99,200 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		99,520 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
651.00	800	0	0
652.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
652.00	7,500	0	0
654.00	9,800	17,300	17,300
656.00	12,200	22,000	39,300
658.00	14,900	27,100	66,400
660.00	17,900	32,800	99,200

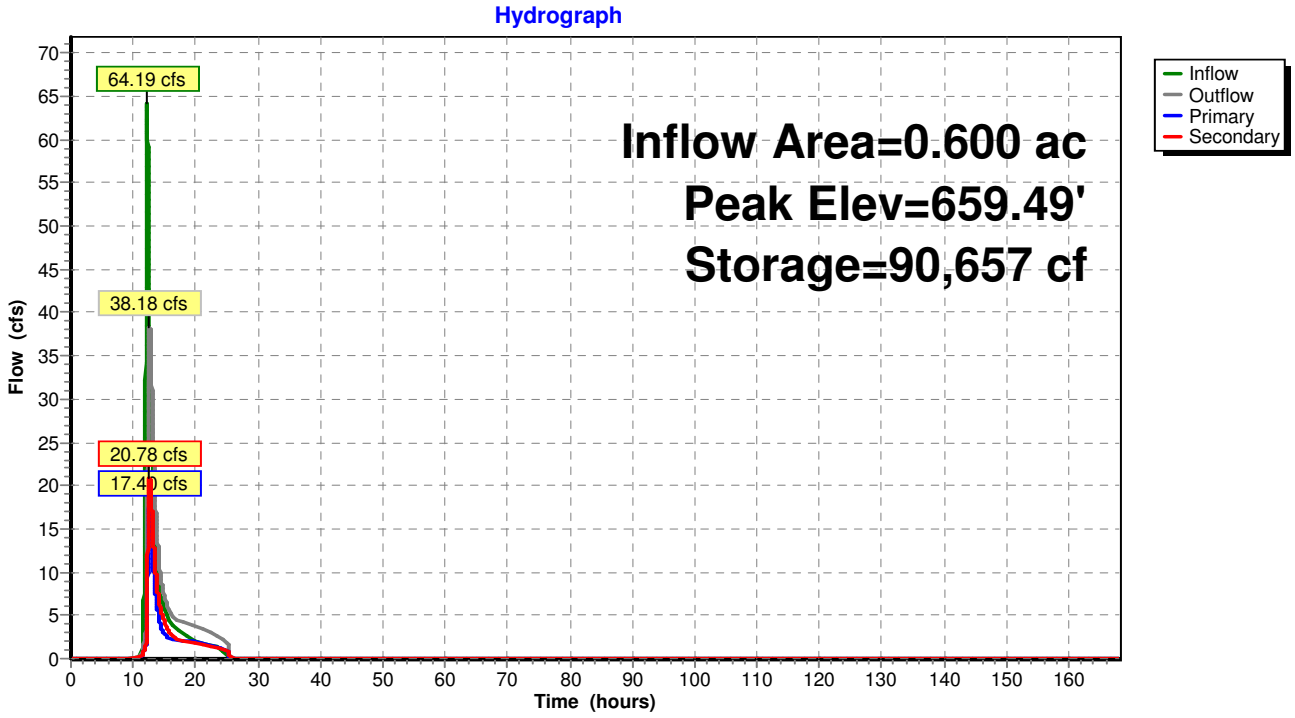
Device	Routing	Invert	Outlet Devices
#1	Primary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	656.80'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	651.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	651.00'	**24.0" Round Culvert** L= 600.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 651.00' / 640.00' S= 0.0183 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#5	Device 4	656.40'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

#6 Device 4 651.00' **6.0" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=17.39 cfs @ 12.65 hrs HW=659.49' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 17.39 cfs of 35.19 cfs potential flow)
  ├─**2=Broad-Crested Rectangular Weir** (Weir Controls 14.68 cfs @ 5.45 fps)
  └─**3=Orifice/Grate** (Orifice Controls 2.71 cfs @ 13.82 fps)

Secondary OutFlow Max=20.78 cfs @ 12.65 hrs HW=659.49' TW=0.00' (Dynamic Tailwater)
└─**4=Culvert** (Passes 20.78 cfs of 35.19 cfs potential flow)
  ├─**5=Broad-Crested Rectangular Weir** (Weir Controls 18.07 cfs @ 5.84 fps)
  └─**6=Orifice/Grate** (Orifice Controls 2.71 cfs @ 13.82 fps)

Pond 2.4 EDB: North Lower Detention Basin



Stage-Area-Storage for Pond 2.4 EDB: North Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
651.00	0
651.10	32
651.20	64
651.30	96
651.40	128
651.50	160
651.60	192
651.70	224
651.80	256
651.90	288
652.00	320
652.10	1,076
652.20	1,843
652.30	2,622
652.40	3,412
652.50	4,214
652.60	5,027
652.70	5,852
652.80	6,688
652.90	7,536
653.00	8,395
653.10	9,266
653.20	10,148
653.30	11,042
653.40	11,947
653.50	12,864
653.60	13,792
653.70	14,732
653.80	15,683
653.90	16,646
654.00	17,620
654.10	18,606
654.20	19,604
654.30	20,614
654.40	21,636
654.50	22,670
654.60	23,716
654.70	24,774
654.80	25,844
654.90	26,926
655.00	28,020
655.10	29,126
655.20	30,244
655.30	31,374
655.40	32,516
655.50	33,670
655.60	34,836
655.70	36,014
655.80	37,204
655.90	38,406
656.00	39,620
656.10	40,847
656.20	42,087
656.30	43,341
656.40	44,608
656.50	45,889
656.60	47,183
656.70	48,491
656.80	49,812
656.90	51,147
657.00	52,495
657.10	53,857
657.20	55,232
657.30	56,621
657.40	58,023
657.50	59,439
657.60	60,868
657.70	62,311
657.80	63,767
657.90	65,237
658.00	66,720
658.10	68,218
658.20	69,730
658.30	71,257
658.40	72,800
658.50	74,358
658.60	75,930
658.70	77,518
658.80	79,120
658.90	80,737
659.00	82,370
659.10	84,018
659.20	85,680
659.30	87,357
659.40	89,050
659.50	90,758
659.60	92,480
659.70	94,218
659.80	95,970
659.90	97,737
660.00	**99,520**

Summary for Pond 3.2 EDB: Entrance Detention Basin

Inflow Area = 5.900 ac, 45.76% Impervious, Inflow Depth = 6.93" for 100-yr event
Inflow = 34.64 cfs @ 12.12 hrs, Volume= 3.408 af
Outflow = 17.14 cfs @ 12.34 hrs, Volume= 3.408 af, Atten= 51%, Lag= 13.3 min
Primary = 5.87 cfs @ 12.34 hrs, Volume= 1.809 af
Secondary = 11.28 cfs @ 12.34 hrs, Volume= 1.599 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 673.46' @ 12.34 hrs Surf.Area= 13,446 sf Storage= 56,733 cf
Flood Elev= 673.50' Surf.Area= 13,525 sf Storage= 57,264 cf

Plug-Flow detention time= 293.3 min calculated for 3.408 af (100% of inflow)
Center-of-Mass det. time= 293.4 min (1,089.7 - 796.3)

Volume	Invert	Avail.Storage	Storage Description
#1	663.00'	120 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 300 cf Overall x 40.0% Voids
#2	664.00'	64,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		64,120 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
663.00	300	0	0
664.00	300	300	300

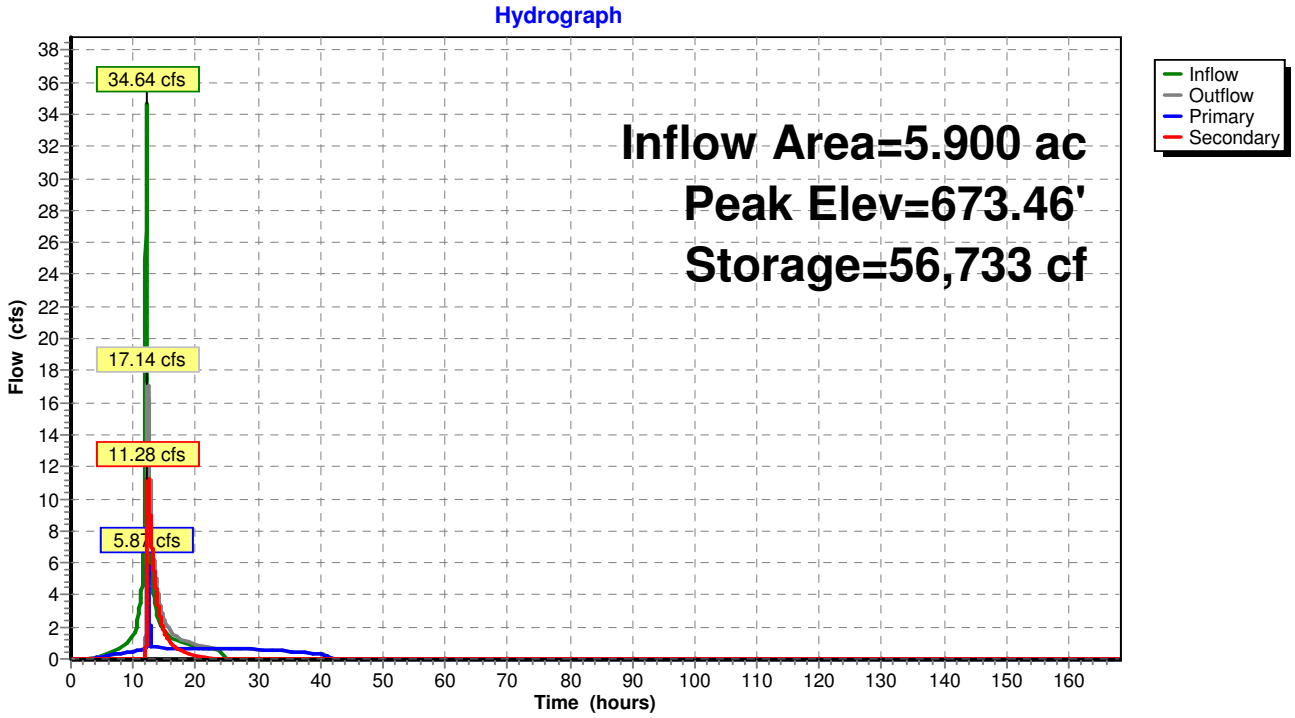
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
664.00	1,000	0	0
666.00	2,500	3,500	3,500
668.00	4,500	7,000	10,500
670.00	7,100	11,600	22,100
672.00	10,300	17,400	39,500
674.00	14,200	24,500	64,000

Device	Routing	Invert	Outlet Devices
#1	Primary	663.00'	**18.0" Round Culvert** L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 663.00' / 656.00' S= 0.0437 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	663.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	672.90'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Secondary	671.20'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.86 cfs @ 12.34 hrs HW=673.46' TW=619.18' (Dynamic Tailwater)
└**1=Culvert** (Passes 5.86 cfs of 26.51 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.76 cfs @ 15.48 fps)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 5.10 cfs @ 2.28 fps)

Secondary OutFlow Max=11.28 cfs @ 12.34 hrs HW=673.46' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 11.28 cfs @ 4.99 fps)

Pond 3.2 EDB: Entrance Detention Basin



Stage-Area-Storage for Pond 3.2 EDB: Entrance Detention Basin

Elevation (feet)	Storage (cubic-feet)
663.00	0
663.15	18
663.30	36
663.45	54
663.60	72
663.75	90
663.90	108
664.05	171
664.20	335
664.35	516
664.50	714
664.65	928
664.80	1,160
664.95	1,408
665.10	1,674
665.25	1,956
665.40	2,255
665.55	2,571
665.70	2,904
665.85	3,253
666.00	3,620
666.15	4,006
666.30	4,415
666.45	4,846
666.60	5,300
666.75	5,776
666.90	6,275
667.05	6,796
667.20	7,340
667.35	7,906
667.50	8,495
667.65	9,106
667.80	9,740
667.95	10,396
668.10	11,077
668.25	11,786
668.40	12,524
668.55	13,292
668.70	14,089
668.85	14,915
669.00	15,770
669.15	16,655
669.30	17,568
669.45	18,512
669.60	19,484
669.75	20,486
669.90	21,516
670.05	22,577
670.20	23,672
670.35	24,803
670.50	25,970
670.65	27,173
670.80	28,412
670.95	29,687
671.10	30,998
671.25	32,345
671.40	33,728
671.55	35,147
671.70	36,602
671.85	38,093
672.00	39,620
672.15	41,187
672.30	42,798
672.45	44,452
672.60	46,151
672.75	47,893
672.90	49,680
673.05	51,510
673.20	53,384
673.35	55,302
673.50	57,264
673.65	59,269
673.80	61,319
673.95	**63,412**

Summary for Pond 3.5 EDB: South Detention Basin

Inflow Area = 14.000 ac, 37.86% Impervious, Inflow Depth = 6.88" for 100-yr event
Inflow = 99.11 cfs @ 12.04 hrs, Volume= 8.023 af
Outflow = 40.44 cfs @ 12.23 hrs, Volume= 8.023 af, Atten= 59%, Lag= 11.6 min
Primary = 34.95 cfs @ 12.20 hrs, Volume= 7.856 af
Secondary = 5.53 cfs @ 12.24 hrs, Volume= 0.167 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 633.41' @ 12.24 hrs Surf.Area= 20,149 sf Storage= 132,631 cf
Flood Elev= 633.50' Surf.Area= 20,300 sf Storage= 134,470 cf

Plug-Flow detention time= 453.5 min calculated for 8.022 af (100% of inflow)
Center-of-Mass det. time= 453.7 min (1,243.3 - 789.6)

Volume	Invert	Avail.Storage	Storage Description
#1	620.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	621.00'	144,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		144,420 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
620.00	800	0	0
621.00	800	800	800

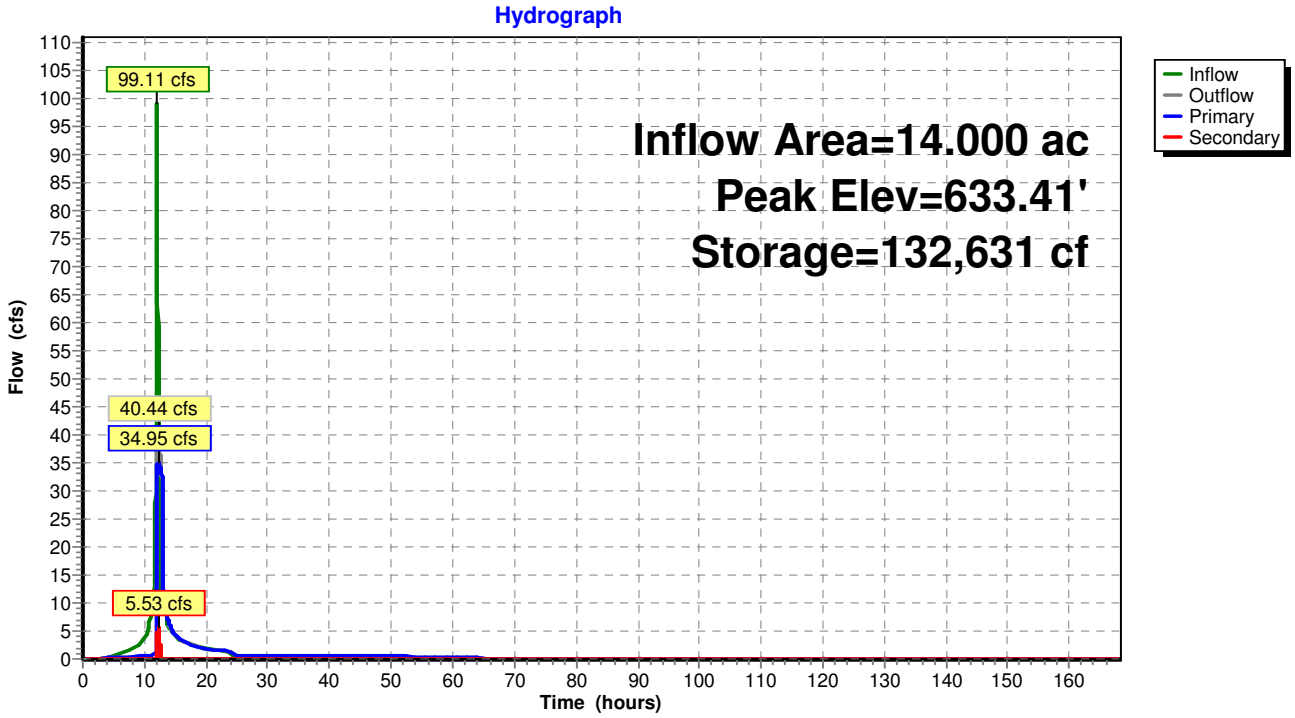
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
621.00	3,000	0	0
622.00	4,600	3,800	3,800
624.00	6,500	11,100	14,900
626.00	8,700	15,200	30,100
628.00	11,300	20,000	50,100
630.00	14,100	25,400	75,500
632.00	17,100	31,200	106,700
634.00	20,300	37,400	144,100

Device	Routing	Invert	Outlet Devices
#1	Primary	620.00'	**24.0" Round Culvert** L= 480.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 620.00' / 615.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	630.40'	**8.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	620.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	632.00'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=34.93 cfs @ 12.20 hrs HW=633.38' TW=619.02' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 34.93 cfs @ 11.12 fps)
  └─**2=Broad-Crested Rectangular Weir** (Passes < 136.53 cfs potential flow)
  └─**3=Orifice/Grate** (Passes < 0.86 cfs potential flow)

Secondary OutFlow Max=5.53 cfs @ 12.24 hrs HW=633.41' TW=0.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Weir Controls 5.53 cfs @ 3.94 fps)

Pond 3.5 EDB: South Detention Basin



Stage-Area-Storage for Pond 3.5 EDB: South Detention Basin

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
620.00	0	627.80	48,186
620.15	48	627.95	49,857
620.30	96	628.10	51,557
620.45	144	628.25	53,289
620.60	192	628.40	55,052
620.75	240	628.55	56,847
620.90	288	628.70	58,673
621.05	472	628.85	60,531
621.20	952	629.00	62,420
621.35	1,468	629.15	64,341
621.50	2,020	629.30	66,293
621.65	2,608	629.45	68,277
621.80	3,232	629.60	70,292
621.95	3,892	629.75	72,339
622.10	4,585	629.90	74,417
622.25	5,300	630.05	76,527
622.40	6,036	630.20	78,670
622.55	6,794	630.35	80,847
622.70	7,573	630.50	83,058
622.85	8,373	630.65	85,302
623.00	9,195	630.80	87,580
623.15	10,038	630.95	89,892
623.30	10,903	631.10	92,238
623.45	11,789	631.25	94,617
623.60	12,696	631.40	97,030
623.75	13,625	631.55	99,477
623.90	14,575	631.70	101,958
624.05	15,546	631.85	104,472
624.20	16,542	632.00	107,020
624.35	17,562	632.15	109,603
624.50	18,608	632.30	112,222
624.65	19,677	632.45	114,877
624.80	20,772	632.60	117,568
624.95	21,891	632.75	120,295
625.10	23,036	632.90	123,058
625.25	24,204	633.05	125,857
625.40	25,398	633.20	128,692
625.55	26,616	633.35	131,563
625.70	27,860	633.50	134,470
625.85	29,127	633.65	137,413
626.00	30,420	633.80	140,392
626.15	31,740	633.95	**143,407**
626.30	33,088		
626.45	34,467		
626.60	35,874		
626.75	37,311		
626.90	38,776		
627.05	40,272		
627.20	41,796		
627.35	43,350		
627.50	44,933		
627.65	46,545		

Summary for Pond 3.6lB: South Upper Infiltration Basin

Inflow Area = 20.800 ac, 38.46% Impervious, Inflow Depth = 2.69" for 100-yr event
Inflow = 5.31 cfs @ 12.04 hrs, Volume= 4.662 af
Outflow = 1.42 cfs @ 16.50 hrs, Volume= 4.662 af, Atten= 73%, Lag= 267.1 min
Discarded = 1.42 cfs @ 16.50 hrs, Volume= 4.662 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 610.29' @ 16.50 hrs Surf.Area= 8,181 sf Storage= 9,542 cf
Flood Elev= 617.50' Surf.Area= 18,675 sf Storage= 104,556 cf

Plug-Flow detention time= 57.4 min calculated for 4.662 af (100% of inflow)
Center-of-Mass det. time= 57.3 min (1,757.3 - 1,699.9)

Volume	Invert	Avail.Storage	Storage Description
#1	609.00'	114,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

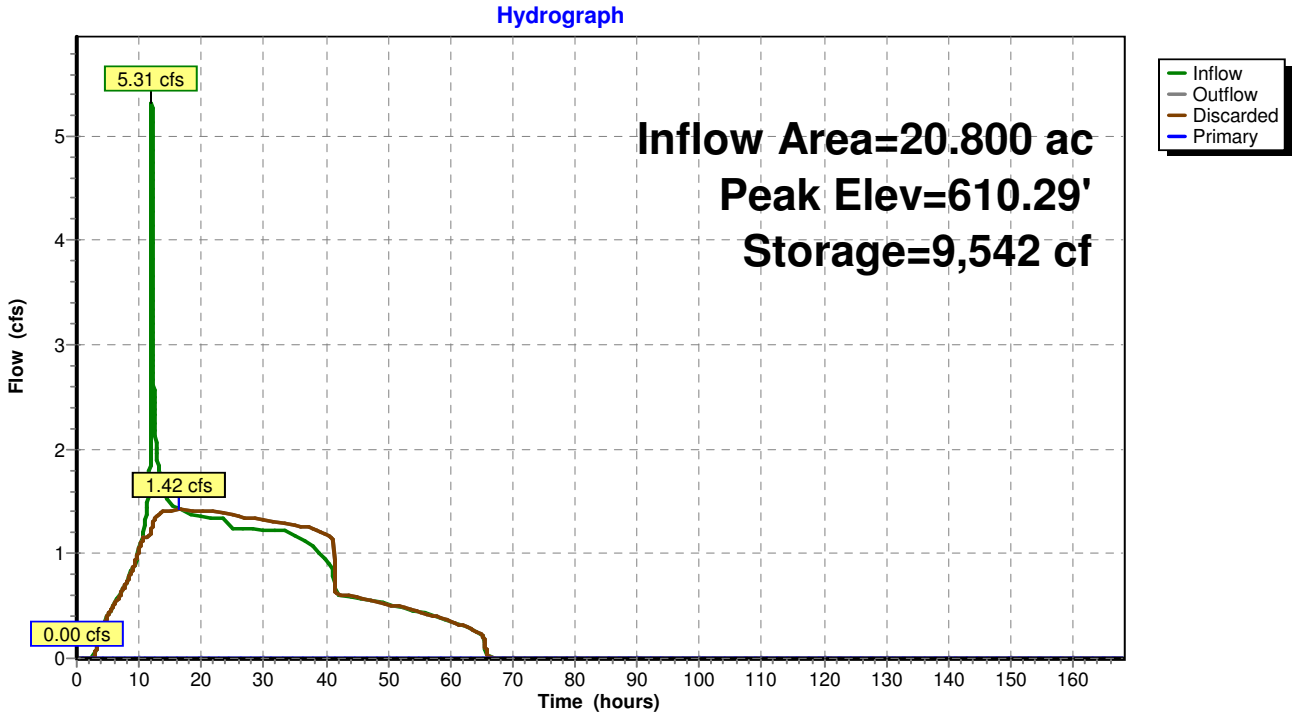
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
609.00	6,600	0	0
610.00	7,800	7,200	7,200
612.00	10,400	18,200	25,400
614.00	13,200	23,600	49,000
616.00	16,200	29,400	78,400
618.00	19,500	35,700	114,100

Device	Routing	Invert	Outlet Devices
#1	Primary	608.00'	**12.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 608.00' / 594.00' S= 0.1750 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	617.40'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Discarded	609.00'	**7.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=1.42 cfs @ 16.50 hrs HW=610.29' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 1.42 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=609.00' TW=593.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 2.67 cfs potential flow)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.6IB: South Upper Infiltration Basin



Stage-Area-Storage for Pond 3.6IB: South Upper Infiltration Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
609.00	6,600	0
609.10	6,720	666
609.20	6,840	1,344
609.30	6,960	2,034
609.40	7,080	2,736
609.50	7,200	3,450
609.60	7,320	4,176
609.70	7,440	4,914
609.80	7,560	5,664
609.90	7,680	6,426
610.00	7,800	7,200
610.10	7,930	7,987
610.20	8,060	8,786
610.30	8,190	9,598
610.40	8,320	10,424
610.50	8,450	11,263
610.60	8,580	12,114
610.70	8,710	12,979
610.80	8,840	13,856
610.90	8,970	14,746
611.00	9,100	15,650
611.10	9,230	16,567
611.20	9,360	17,496
611.30	9,490	18,438
611.40	9,620	19,394
611.50	9,750	20,363
611.60	9,880	21,344
611.70	10,010	22,339
611.80	10,140	23,346
611.90	10,270	24,366
612.00	10,400	25,400
612.10	10,540	26,447
612.20	10,680	27,508
612.30	10,820	28,583
612.40	10,960	29,672
612.50	11,100	30,775
612.60	11,240	31,892
612.70	11,380	33,023
612.80	11,520	34,168
612.90	11,660	35,327
613.00	11,800	36,500
613.10	11,940	37,687
613.20	12,080	38,888
613.30	12,220	40,103
613.40	12,360	41,332
613.50	12,500	42,575
613.60	12,640	43,832
613.70	12,780	45,103
613.80	12,920	46,388
613.90	13,060	47,687
614.00	13,200	49,000
614.10	13,350	50,328
614.20	13,500	51,670
614.30	13,650	53,027
614.40	13,800	54,400
614.50	13,950	55,788
614.60	14,100	57,190
614.70	14,250	58,608
614.80	14,400	60,040
614.90	14,550	61,487
615.00	14,700	62,950
615.10	14,850	64,428
615.20	15,000	65,920
615.30	15,150	67,427
615.40	15,300	68,950
615.50	15,450	70,488
615.60	15,600	72,040
615.70	15,750	73,608
615.80	15,900	75,190
615.90	16,050	76,787
616.00	16,200	78,400
616.10	16,365	80,028
616.20	16,530	81,673
616.30	16,695	83,334
616.40	16,860	85,012
616.50	17,025	86,706
616.60	17,190	88,417
616.70	17,355	90,144
616.80	17,520	91,888
616.90	17,685	93,648
617.00	17,850	95,425
617.10	18,015	97,218
617.20	18,180	99,028
617.30	18,345	100,854
617.40	18,510	102,697
617.50	18,675	104,556
617.60	18,840	106,432
617.70	19,005	108,324
617.80	19,170	110,233
617.90	19,335	112,158
618.00	**19,500**	**114,100**

Summary for Pond 3.7EDB: South Lower Detention Basin

Inflow Area = 21.300 ac, 37.56% Impervious, Inflow Depth = 3.10" for 100-yr event
Inflow = 39.78 cfs @ 12.33 hrs, Volume= 5.494 af
Outflow = 24.18 cfs @ 12.90 hrs, Volume= 5.494 af, Atten= 39%, Lag= 33.9 min
Primary = 24.18 cfs @ 12.90 hrs, Volume= 5.494 af

Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 605.41' @ 12.90 hrs Surf.Area= 16,007 sf Storage= 98,753 cf
Flood Elev= 605.50' Surf.Area= 16,125 sf Storage= 100,089 cf

Plug-Flow detention time= 495.3 min calculated for 5.494 af (100% of inflow)
Center-of-Mass det. time= 495.4 min (1,355.6 - 860.3)

Volume	Invert	Avail.Storage	Storage Description
#1	593.00'	320 cf	**Underdrain Gravel (Prismatic)** Listed below (Recalc) 800 cf Overall x 40.0% Voids
#2	594.00'	107,600 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		107,920 cf	Total Available Storage

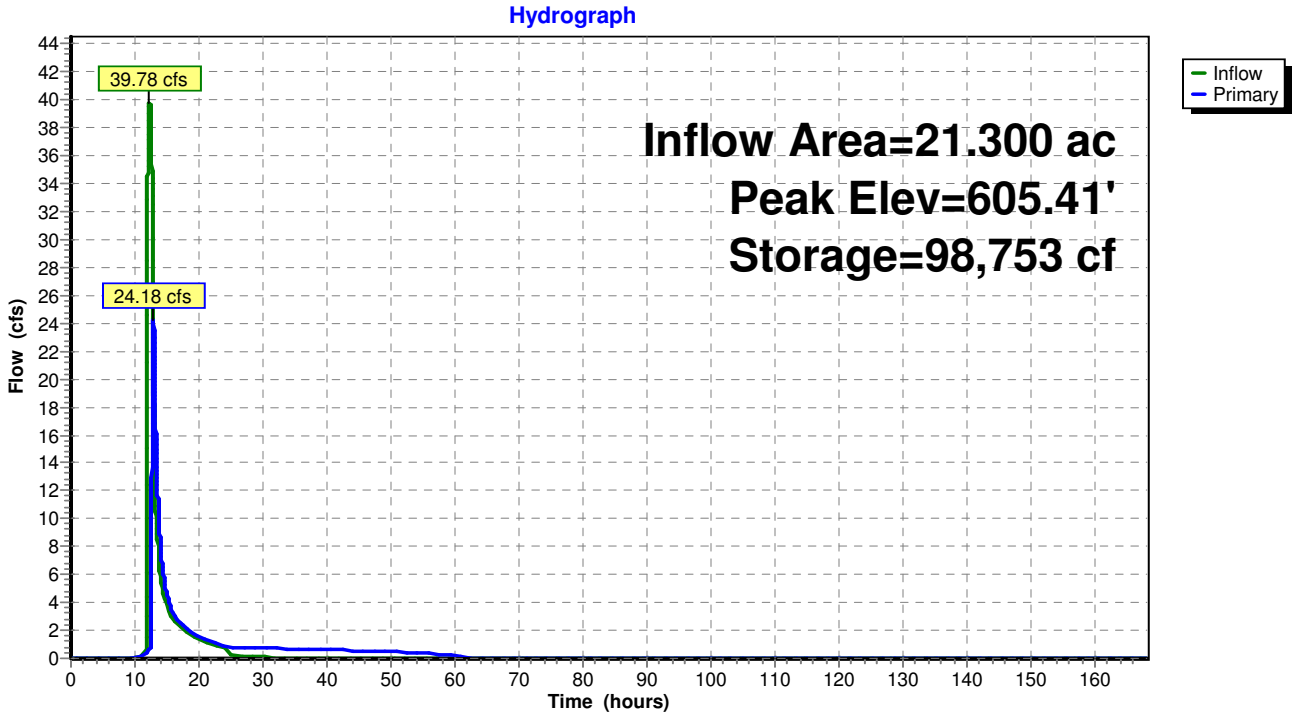
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
593.00	800	0	0
594.00	800	800	800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
594.00	3,200	0	0
596.00	4,800	8,000	8,000
598.00	6,600	11,400	19,400
600.00	8,600	15,200	34,600
602.00	10,900	19,500	54,100
604.00	13,300	24,200	78,300
606.00	16,000	29,300	107,600

Device	Routing	Invert	Outlet Devices
#1	Primary	593.00'	**24.0" Round Culvert** L= 85.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 593.00' / 590.00' S= 0.0353 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	593.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	603.10'	**2.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=24.17 cfs @ 12.90 hrs HW=605.41' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 24.17 cfs of 51.10 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.83 cfs @ 16.88 fps)
  └─**3=Broad-Crested Rectangular Weir** (Weir Controls 23.35 cfs @ 5.05 fps)

Pond 3.7EDB: South Lower Detention Basin



Stage-Area-Storage for Pond 3.7EDB: South Lower Detention Basin

Elevation (feet)	Storage (cubic-feet)
593.00	0
593.15	48
593.30	96
593.45	144
593.60	192
593.75	240
593.90	288
594.05	481
594.20	976
594.35	1,489
594.50	2,020
594.65	2,569
594.80	3,136
594.95	3,721
595.10	4,324
595.25	4,945
595.40	5,584
595.55	6,241
595.70	6,916
595.85	7,609
596.00	8,320
596.15	9,050
596.30	9,800
596.45	10,571
596.60	11,362
596.75	12,173
596.90	13,004
597.05	13,856
597.20	14,728
597.35	15,620
597.50	16,533
597.65	17,465
597.80	18,418
597.95	19,391
598.10	20,385
598.25	21,401
598.40	22,440
598.55	23,501
598.70	24,585
598.85	25,691
599.00	26,820
599.15	27,971
599.30	29,145
599.45	30,341
599.60	31,560
599.75	32,801
599.90	34,065
600.05	35,351
600.20	36,663
600.35	38,000
600.50	39,364
600.65	40,753
600.80	42,168
600.95	43,609
601.10	45,076
601.25	46,568
601.40	48,087
601.55	49,631
601.70	51,202
601.85	52,798
602.00	54,420
602.15	56,068
602.30	57,744
602.45	59,447
602.60	61,176
602.75	62,933
602.90	64,716
603.05	66,526
603.20	68,364
603.35	70,229
603.50	72,120
603.65	74,038
603.80	75,984
603.95	77,957
604.10	79,957
604.25	81,987
604.40	84,048
604.55	86,139
604.70	88,261
604.85	90,413
605.00	92,595
605.15	94,808
605.30	97,051
605.45	99,324
605.60	101,628
605.75	103,962
605.90	**106,327**

Summary for Pond FS 3.6:

Inflow Area = 19.900 ac, 40.20% Impervious, Inflow Depth = 5.83" for 100-yr event
Inflow = 40.49 cfs @ 12.33 hrs, Volume= 9.665 af
Outflow = 40.49 cfs @ 12.34 hrs, Volume= 9.665 af, Atten= 0%, Lag= 0.6 min
Primary = 1.46 cfs @ 12.07 hrs, Volume= 4.359 af
Secondary = 39.03 cfs @ 12.34 hrs, Volume= 5.306 af

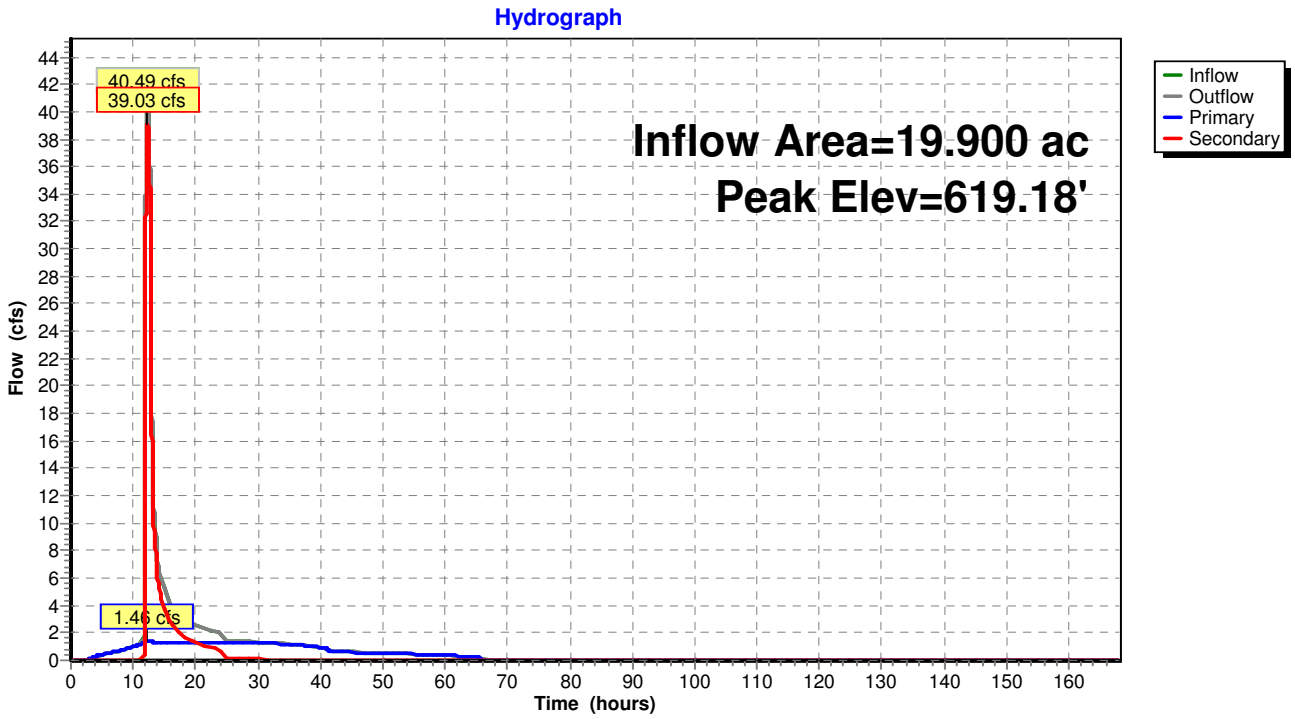
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 619.18' @ 12.34 hrs
Flood Elev= 629.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	615.20'	**6.0" Round Culvert** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 609.00' S= 0.0517 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 3	617.10'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Secondary	615.20'	**30.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 615.20' / 610.80' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=1.46 cfs @ 12.07 hrs HW=618.94' TW=609.51' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.46 cfs @ 7.43 fps)

Secondary OutFlow Max=39.03 cfs @ 12.34 hrs HW=619.18' TW=601.56' (Dynamic Tailwater)
└**3=Culvert** (Inlet Controls 39.03 cfs @ 7.95 fps)
└**2=Broad-Crested Rectangular Weir** (Passes 39.03 cfs of 39.75 cfs potential flow)

Pond FS 3.6:


Hydrograph
Inflow Area=19.900 ac
Peak Elev=619.18'
40.49 cfs
39.03 cfs
1.46 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160

Stage-Area-Storage for Pond FS 3.6:

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
615.20	**0**	623.00	0
615.35	0	623.15	0
615.50	0	623.30	0
615.65	0	623.45	0
615.80	0	623.60	0
615.95	0	623.75	0
616.10	0	623.90	0
616.25	0	624.05	0
616.40	0	624.20	0
616.55	0	624.35	0
616.70	0	624.50	0
616.85	0	624.65	0
617.00	0	624.80	0
617.15	0	624.95	0
617.30	0	625.10	0
617.45	0	625.25	0
617.60	0	625.40	0
617.75	0	625.55	0
617.90	0	625.70	0
618.05	0	625.85	0
618.20	0	626.00	0
618.35	0	626.15	0
618.50	0	626.30	0
618.65	0	626.45	0
618.80	0	626.60	0
618.95	0	626.75	0
619.10	0	626.90	0
619.25	0	627.05	0
619.40	0	627.20	0
619.55	0	627.35	0
619.70	0	627.50	0
619.85	0	627.65	0
620.00	0	627.80	0
620.15	0	627.95	0
620.30	0	628.10	0
620.45	0	628.25	0
620.60	0	628.40	0
620.75	0	628.55	0
620.90	0	628.70	0
621.05	0	628.85	0
621.20	0	629.00	0
621.35	0	629.15	0
621.50	0	629.30	0
621.65	0	629.45	0
621.80	0		
621.95	0		
622.10	0		
622.25	0		
622.40	0		
622.55	0		
622.70	0		
622.85	0		

Summary for Pond OS 2.2: North Detention Flow Split

Inflow Area = 16.900 ac, 17.75% Impervious, Inflow Depth = 6.96" for 100-yr event
Inflow = 63.35 cfs @ 12.24 hrs, Volume= 9.800 af
Outflow = 63.35 cfs @ 12.25 hrs, Volume= 9.800 af, Atten= 0%, Lag= 0.6 min
Primary = 0.65 cfs @ 12.25 hrs, Volume= 2.293 af
Secondary = 62.69 cfs @ 12.25 hrs, Volume= 7.507 af

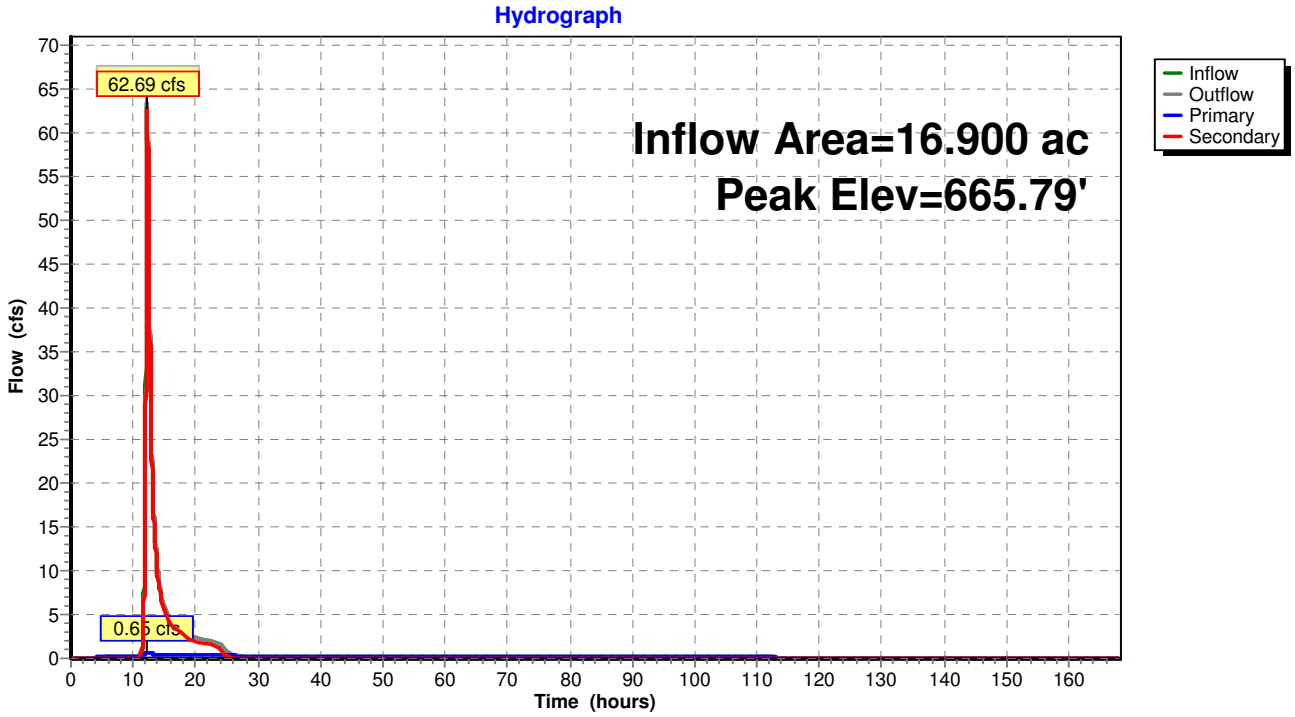
Routing by Sim-Route method, Time Span= 0.00-168.00 hrs, dt= 0.01 hrs
Peak Elev= 665.79' @ 12.25 hrs
Flood Elev= 669.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	658.00'	**6.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 658.00' / 656.00' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Device 1	658.00'	**3.0" Vert. Orifice/Grate** C= 0.600
#3	Secondary	660.90'	**36.0" Round Culvert** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 660.90' / 656.00' S= 0.0612 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=0.65 cfs @ 12.25 hrs HW=665.79' TW=654.87' (Dynamic Tailwater)
↑└**1=Culvert** (Passes 0.65 cfs of 1.31 cfs potential flow)
↑└**2=Orifice/Grate** (Orifice Controls 0.65 cfs @ 13.33 fps)

Secondary OutFlow Max=62.68 cfs @ 12.25 hrs HW=665.79' TW=657.29' (Dynamic Tailwater)
↑└**3=Culvert** (Inlet Controls 62.68 cfs @ 8.87 fps)

Pond OS 2.2: North Detention Flow Split



Stage-Area-Storage for Pond OS 2.2: North Detention Flow Split

Elevation (feet)	Storage (cubic-feet)
658.00	**0**
658.15	0
658.30	0
658.45	0
658.60	0
658.75	0
658.90	0
659.05	0
659.20	0
659.35	0
659.50	0
659.65	0
659.80	0
659.95	0
660.10	0
660.25	0
660.40	0
660.55	0
660.70	0
660.85	0
661.00	0
661.15	0
661.30	0
661.45	0
661.60	0
661.75	0
661.90	0
662.05	0
662.20	0
662.35	0
662.50	0
662.65	0
662.80	0
662.95	0
663.10	0
663.25	0
663.40	0
663.55	0
663.70	0
663.85	0
664.00	0
664.15	0
664.30	0
664.45	0
664.60	0
664.75	0
664.90	0
665.05	0
665.20	0
665.35	0
665.50	0
665.65	0
665.80	0
665.95	0
666.10	0
666.25	0
666.40	0
666.55	0
666.70	0
666.85	0
667.00	0
667.15	0
667.30	0
667.45	0
667.60	0
667.75	0
667.90	0
668.05	0
668.20	0
668.35	0
668.50	0
668.65	0
668.80	0
668.95	0

APPENDIX D

NYSDEC SPDES for Construction Activities Construction Site Log Book

APPENDIX F
CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG BOOK

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES

SAMPLE CONSTRUCTION SITE LOG BOOK

Table of Contents

I. Pre-Construction Meeting Documents
   a. Preamble to Site Assessment and Inspections
   b. Pre-Construction Site Assessment Checklist

II. Construction Duration Inspections
   a. Directions
   b. Modification to the SWPPP

I. **PRE-CONSTRUCTION MEETING DOCUMENTS**

Project Name _____

Permit No. _____ **Date of Authorization** _____

Name of Operator _____

Prime Contractor _____

a. **Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector[1] conduct an assessment of the site prior to the commencement of construction[2] and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization[3] using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to "Qualified Inspector" inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.
2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.
3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Pre-construction Site Assessment Checklist
(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

[ ] [ ] [ ] Has a Notice of Intent been filed with the NYS Department of Conservation?
[ ] [ ] [ ] Is the SWPPP on-site? Where?_____
[ ] [ ] [ ] Is the Plan current? What is the latest revision date?_____
[ ] [ ] [ ] Is a copy of the NOI (with brief description) onsite? Where?_____
[ ] [ ] [ ] Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

[ ] [ ] [ ] Are construction limits clearly flagged or fenced?
[ ] [ ] [ ] Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
[ ] [ ] [ ] Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

[ ] [ ] [ ] Clean stormwater runoff has been diverted from areas to be disturbed.
[ ] [ ] [ ] Bodies of water located either on site or in the vicinity of the site have been identified and protected.
[ ] [ ] [ ] Appropriate practices to protect on-site or downstream surface water are installed.
[ ] [ ] [ ] Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

Yes No NA

[ ] [ ] [ ] A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
[ ] [ ] [ ] Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
[ ] [ ] [ ] Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

Yes No NA

[ ] [ ] [ ] Silt fence material and installation comply with the standard drawing and specifications.
[ ] [ ] [ ] Silt fences are installed at appropriate spacing intervals
[ ] [ ] [ ] Sediment/detention basin was installed as first land disturbing activity.
[ ] [ ] [ ] Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

[ ] [ ] [ ] The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
[ ] [ ] [ ] The plan is contained in the SWPPP on page _____
[ ] [ ] [ ] Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;

2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;

3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);

5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and

6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)	**Date of Inspection**
Qualified Inspector (print name)	**Qualified Inspector Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA

[ ] [ ] [ ] Is there an increase in turbidity causing a substantial visible contrast to natural conditions at the outfalls?
[ ] [ ] [ ] Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
[ ] [ ] [ ] All disturbance is within the limits of the approved plans.
[ ] [ ] [ ] Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA

[ ] [ ] [ ] Is construction site litter, debris and spoils appropriately managed?
[ ] [ ] [ ] Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ] [ ] [ ] Is construction impacting the adjacent property?
[ ] [ ] [ ] Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA

[ ] [ ] [ ] Maximum diameter pipes necessary to span creek without dredging are installed.
[ ] [ ] [ ] Installed non-woven geotextile fabric beneath approaches.
[ ] [ ] [ ] Is fill composed of aggregate (no earth or soil)?
[ ] [ ] [ ] Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

3. Stabilized Construction Access

Yes No NA

[ ] [ ] [ ] Stone is clean enough to effectively remove mud from vehicles.
[ ] [ ] [ ] Installed per standards and specifications?
[ ] [ ] [ ] Does all traffic use the stabilized entrance to enter and leave site?
[ ] [ ] [ ] Is adequate drainage provided to prevent ponding at entrance?

Runoff Control Practices

1. Excavation Dewatering

Yes No NA

[ ] [ ] [ ] Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ] [ ] [ ] Clean water from upstream pool is being pumped to the downstream pool.
[ ] [ ] [ ] Sediment laden water from work area is being discharged to a silt-trapping device.
[ ] [ ] [ ] Constructed upstream berm with one-foot minimum freeboard.

Runoff Control Practices (continued)

2. Flow Spreader

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ] [ ] [ ] Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

[ ] [ ] [ ] Installed per plan with minimum side slopes 2H:1V or flatter.
[ ] [ ] [ ] Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ] [ ] [ ] Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

Yes No NA

[ ] [ ] [ ] Is channel stable? (flow is not eroding soil underneath or around the structure).
[ ] [ ] [ ] Check is in good condition (rocks in place and no permanent pools behind the structure).
[ ] [ ] [ ] Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

[ ] [ ] [ ] Installed per plan.
[ ] [ ] [ ] Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

[ ] [ ] [ ] Stockpiles are stabilized with vegetation and/or mulch.
[ ] [ ] [ ] Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

[ ] [ ] [ ] Temporary seedings and mulch have been applied to idle areas.
[ ] [ ] [ ] 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Silt Fence and Linear Barriers

Yes No NA

[ ] [ ] [ ] Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ] [ ] [ ] Joints constructed by wrapping the two ends together for continuous support.
[ ] [ ] [ ] Fabric buried 6 inches minimum.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ___% of design capacity.

Sediment Control Practices (continued)

2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)

Yes No NA

[ ] [ ] [ ] Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ] [ ] [ ] Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ] [ ] [ ] Drainage area is 1acre or less.
[ ] [ ] [ ] Excavated area is 900 cubic feet.
[ ] [ ] [ ] Excavated side slopes should be 2:1.
[ ] [ ] [ ] 2" x 4" frame is constructed and structurally sound.
[ ] [ ] [ ] Posts 3-foot maximum spacing between posts.
[ ] [ ] [ ] Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ] [ ] [ ] Posts are stable, fabric is tight and without rips or frayed areas.
[ ] [ ] [ ] Manufactured insert fabric is free of tears and punctures.
[ ] [ ] [ ] Filter Sock is not torn or flattened and fill material is contained within the mesh sock.

Sediment accumulation ___% of design capacity.

3. Temporary Sediment Trap

Yes No NA

[ ] [ ] [ ] Outlet structure is constructed per the approved plan or drawing.
[ ] [ ] [ ] Geotextile fabric has been placed beneath rock fill.
[ ] [ ] [ ] Sediment trap slopes and disturbed areas are stabilized.

Sediment accumulation is ___% of design capacity.

4. Temporary Sediment Basin

Yes No NA

[ ] [ ] [ ] Basin and outlet structure constructed per the approved plan.
[ ] [ ] [ ] Basin side slopes are stabilized with seed/mulch.
[ ] [ ] [ ] Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
[ ] [ ] [ ] Sediment basin dewatering pool is dewatering at appropriate rate.

Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:

APPENDIX E

Project and Owner Information

Site Data:

160 & 132 Pugsley Road
Town of Southeast, New York 10509
Area: 153.5 acres ±

Owner Information:

Town of Southeast
1360 Route 22
Brewster, NY 10509
845-279-4313
thay@southeast-ny.gov

Applicant Information:

ProSwing Sports Realty, Inc.
27 Radio Circle Drive
Mount Kisco, NY 10590
914-242-1626
Dan@proswingbaseball.com

Parties Responsible for Implementation of the Short and Long Term Maintenance Plan:

To Be Determined

Qualified Professional Responsible for Inspection of the Stormwater Pollution Prevention Plan:

Insite Engineering, Surveying & Landscape Architecture, P.C.
3 Garrett Place
Carmel, New York 10512
845-225-9690

APPENDIX F
NYSDEC Stormwater Design Manual Chapter 5 Analysis

NYSDEC Chapter 5 Requirements	Remarks				
	Design Point 1	Design Point 2	Design Point 3	Design Point 4	
Practices					
Preservation of Undisturbed Areas	●	●	●	●	See Note #1
Preservation of Buffers	●	●	●	●	See Note #1
Reduction of Clearing & Grading	●	●	●	●	See Note #1
Locating Development in Less Sensitive Areas	●	●	●	●	See Note #1
Open Space Design	-				
Soil Restoration	●	●	●	●	See Note #3
Practices					
Roadway Reduction	●	●	●	●	See Note #2
Sidewalk Reduction	●	●	●	●	See Note #2
Driveway Reduction	●	●	●	●	See Note #2
Cul-de-sac Reduction	-				
Building Footprint Reduction	-				
Parking Reduction	●	●	●	●	See Note #2
Conservation of Natural Areas	●	●			
Sheetflow to Riparian Buffers or Filter Strips	o				See Note #4
Vegetated Swale	o				See Note #4
Tree Planting / Tree Pit	o				See Note #4
Disconnection of Rooftop Runoff	o				See Note #4
Stream Daylighting	o				See Note #4
Rain Gardens	o				See Note #4
Green Roofs	o				See Note #4
Stormwater Planters	o				See Note #4
Rain Barrels / Cisterns	o				See Note #4
Porous Pavement	o				See Note #4

Table Key: ● = Practice Used in Accordance with Chapter 5 Requirements
o = Practice Not Used
- = Practice is Not Applicable

Notes:

1. Although no formal calculations have been provided, the subject project has provided conservation of natural areas, development in less sensitive areas and preservation of buffers and undisturbed areas to the maximum extent practical.
2. The reduction in clearing and grading as well as the driveway/road, sidewalks, and parking areas footprint reduction will be enforced with the approval of the project SWPPP. Notes on the project plans, establish that any changes in the project plans would require an amended approval from the necessary regulatory agencies.
3. Soil restoration notes have been provided on the project plans.
4. Three (3) infiltration practices have been designed as a standard stormwater management practice (SMP) and are proposed for treatment of the RRv and WQv from the proposed development.

APPENDIX G

NYSDEC Stormwater Management Practice Construction and Maintenance Checklists

Infiltration Basin Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Runoff diverted		
Soil permeability tested		
Groundwater / bedrock depth		
2. Excavation		
Size and location		
Side slopes stable		
Excavation does not compact subsoils		
3. Embankment		
Barrel		
Anti-seep collar or Filter diaphragm		
Fill material		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Final Excavation		
Drainage area stabilized		
Sediment removed from facility		
Basin floor tilled		
Facility stabilized		
5. Final Inspection		
Pretreatment facility in place		
Inlets / outlets		
Contributing watershed stabilized before flow is routed to the factility		

Comments:

Actions to be Taken:

Stormwater/Wetland Pond Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for “honeycomb” prior to backfilling; parge if necessary		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Actions to be Taken:

Infiltration Trench Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Trench surface clear of debris		
Inflow pipes clear of debris		
Overflow spillway clear of debris		
Inlet area clear of debris		
2. Sediment Traps or Forebays (Annual)		
Obviously trapping sediment		
Greater than 50% of storage volume remaining		
3. Dewatering (Monthly)		
Trench dewaters between storms		
4. Sediment Cleanout of Trench (Annual)		
No evidence of sedimentation in trench		
Sediment accumulation doesn't yet require cleanout		
5. Inlets (Annual)		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Good condition		
No evidence of erosion		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repair		
No evidence of erosion		
7. Aggregate Repairs (Annual)		
Surface of aggregate clean		
Top layer of stone does not need replacement		
Trench does not need rehabilitation		

Comments:

Actions to be Taken:

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

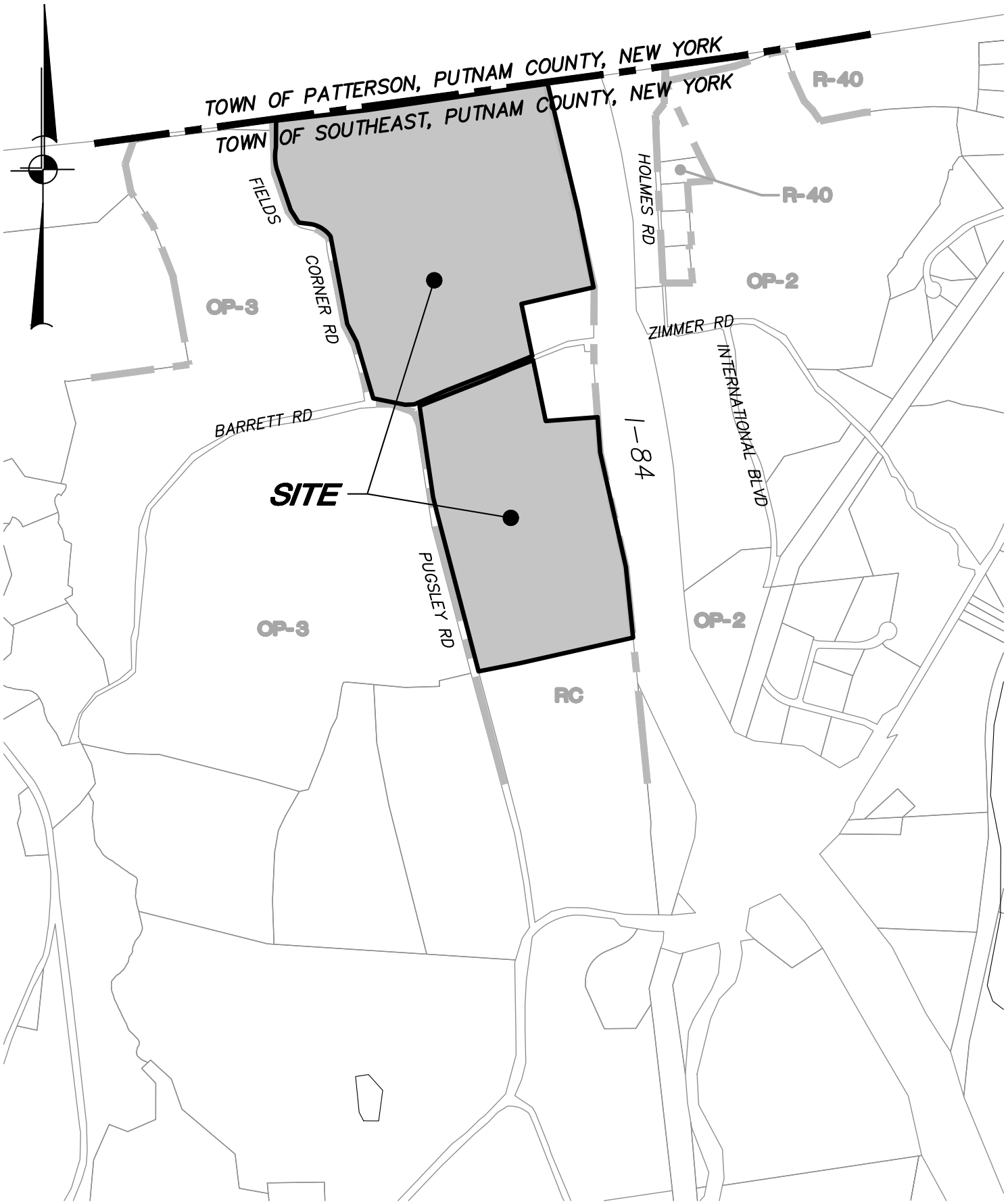
APPENDIX H

Temporary Sediment Trap Sizing Calculations

3,600 CF minimum of storage required for each acre of contributing area

Sediment Trap #	Contributing Area (Acres)	Minimum Volume Required (cf)	Volume Provided (cf)
2.2	6.8	24,480	70,656
2.4	6.0	21,600	44,680
3.2	5.9	21,240	31,820
3.5	9.8	35,280	81,286
3.7	5.6	20,160	66,892

FIGURES



PROJECT:

BREWSTER YARDS

160 & 132 PUGSLEY ROAD, TOWN OF SOUTHEAST, PUTNAM COUNTY, NY

DRAWING:

LOCATION MAP

PREPARED BY:

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place • Carmel, New York 10512
Phone (845) 225-9690 • Fax (845) 225-9717
www.insite-eng.com

DATE:	01-18-22
SCALE:	1" = 1,000'
PROJECT NO.:	19249.100
FIGURE:	1

Z:\E\19249100 ProSwing Pugsley\Stormwater\Figures\Figure 1 - Location Map.dwg, 1/18/2022 12:53:26 PM, pmanning, 1:1

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
ChC	Charlton loam, 8% to 15% slopes	B
CrC	Charlton–Chatfield complex, rolling, very rocky	B
CsD	Chatfield–Charlton complex, hilly, very rocky	B
CtC	Chatfield–Hollis–Rock outcrop complex, rolling	B,C/D
HrF	Hollis–Rock outcrop complex, very steep	C/D
LcB	Leicester loam, 3% to 8% slopes, stony	C
PnC	Paxton fine sandy loam, 8% to 15% slopes	C
RgB	Ridgebury loam, 2% to 8% slopes, very stony	C
	NRCS Soil Boundary Line	

LEGEND

1.0	SUBCATCHMENT
SF →	TIME OF CONCENTRATION SHEET FLOW
SCF →	TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
DESIGN POINT	DESIGN POINT
	SUBCATCHMENT CONTRIBUTING AREA

DESIGN POINT 1
DESIGN POINT 2
DESIGN POINT 3
DESIGN POINT 4
1.0
2.0
3.0
4.0
SF
SCF
CF

GRAPHIC SCALE
0 50 100 200
(IN FEET)
1 inch = 100 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY
2	11-28-22	ISSUED FOR 60% SUBMISSION	TMB
1	8-23-21	PLANNING BOARD SUBMISSION	JLT

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(845) 225-9717 fax
www.insite-eng.com

PROJECT:
BREWSTER YARDS
160 & 132 PUGSLEY ROAD, TOWN OF SOUTHEAST, PUTNAM COUNTY, NY

DRAWING:
PRE DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER	19249.100	PROJECT MANAGER	J.M.W.
DATE	7-6-21	DRAWN BY	M.E.U.
SCALE	1" = 100'	CHECKED BY	K.M.G.

FIGURE NO. 2

Z:\E\19249\00 Pre&Reg Pgphy\01Stormwater\Figures\Figure 2 - Pre Pt SP1.dwg, 12/7/2022 11:25:56 AM, Mark J. Ell

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
ChC	Charlton loam, 8% to 15% slopes	B
CrC	Charlton–Chatfield complex, rolling, very rocky	B
CsD	Chatfield–Charlton complex, hilly, very rocky	B
CtC	Chatfield–Hollis–Rock outcrop complex, rolling	B,C/D
HrF	Hollis–Rock outcrop complex, very steep	C/D
LcB	Leicester loam, 3% to 8% slopes, stony	C
PnC	Paxton fine sandy loam, 8% to 15% slopes	C
RgB	Ridgebury loam, 2% to 8% slopes, very stony	C
	NRCS Soil Boundary Line	

LEGEND

- 1.2S — SUBCATCHMENT
- 1.2 EDB — STORMWATER MANAGEMENT PRACTICE
- SF — TIME OF CONCENTRATION SHEET FLOW
- SCF — TIME OF CONCENTRATION SHALLOW CONCENTRATED FLOW
- PF — TIME OF CONCENTRATION PIPE FLOW
- CF — TIME OF CONCENTRATION CHANNEL FLOW
- DESIGN LINE — DESIGN LINE
- SUBCATCHMENT CONTRIBUTING AREA
- STORMWATER MANAGEMENT / GREEN INFRASTRUCTURE PRACTICE AREA

DESIGN POINT 1

DESIGN POINT 2

DESIGN POINT 3

DESIGN POINT 4

GRAPHIC SCALE

0 50 100 200

(IN FEET)
1 inch = 100 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY
1	11-28-22	ISSUED FOR 60% SUBMISSION	TMB

INSITE
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Carmel, NY 10512
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(845) 225-9717 fax
www.insite-emp.com

PROJECT:
BREWSTER YARDS
160 & 132 PUGSLEY ROAD, TOWN OF SOUTHEAST, PUTNAM COUNTY, NY

DRAWING:
POST DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER	19249.100	PROJECT MANAGER	J.M.W.	FIGURE NO. 3
DATE	01-18-22	DRAWN BY	T.M.B.	
SCALE	1" = 100'	CHECKED BY	Z.M.P.	

Z:\EMP\19000-19999\19249\Stormwater\Figures\Figure 3 - Post Dev Drng_12-7-2022 10:50:34 AM, Users, 1:1

PROPOSED INFILTRATION TEST HOLE LOCATION (TYP.)

PROPOSED DEEP TEST HOLE LOCATION (TYP.)

D1 I1 D2 I2 I3 D3 D4 D5 D6 D7 D8 D9 D10 D11 I11 D12 I12 D13 D14

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STONE WALL
- EXISTING WETLAND WATERCOURSE
- EXISTING WETLAND SYMBOL
- EXISTING WETLAND LIMIT LINE
- EXISTING TOWN WETLAND/WATERCOURSE BUFFER
- NYSDEC 100' WETLAND ADJACENT AREA & NYCDEP 100' WETLAND LIMITING DISTANCE
- EXISTING NYCDEP 100' WATERCOURSE LIMITING DISTANCE
- EXISTING EDGE OF POND / WATERCOURSE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING SPOT GRADE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED RETAINING WALL
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED OUTLET STRUCTURE
- PROPOSED END SECTION
- PROPOSED WATER CURB STOP VALVE
- PROPOSED CLEAN OUT
- PROPOSED WELL
- PROPOSED ROOF DRAIN
- PROPOSED DRAINAGE PIPE
- PROPOSED SEWER MAIN
- PROPOSED SEWER FORCE MAIN
- PROPOSED SEWER SERVICE LINE
- PROPOSED LOW PRESSURE SEWER LINE
- PROPOSED HDPE WELL SERVICE LINE
- PROPOSED DOMESTIC WATER SERVICE LINE
- PROPOSED PVC DR-18 WATER MAIN
- PROPOSED PVC DR-18 TANK SUPPLY LINE
- PROPOSED PVC DR-18 PUMP SUPPLY LINE
- PROPOSED DEEP TEST LOCATION
- PROPOSED INFILTRATION TEST LOCATION

GRAPHIC SCALE

0 30 60 120

(IN FEET)
1 inch = 60 ft.

DEEP HOLE TEST RESULTS:

DEEP TESTS PERFORMED:
01-06-22

DEEP TESTS PERFORMED BY:
TAYLOR BETZ
(INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.)

DEEP TESTS WITNESSED BY:
MELISSA NG (NYCDEP)

D-1: 0"-10" TOPSOIL. 10"-26" SILTY LOAM WITH SOME SAND & GRAVEL. 26"-102+" SILTY LOAM WITH SOME SAND, GRAVEL, & LARGE COBBLES. NO ROCK. NO GROUNDWATER.

D-2: 0"-12" TOPSOIL. 12"-26" BROWN SILTY LOAM WITH SOME SAND & GRAVEL. 26"-123" TAN SILTY LOAM WITH SOME SAND, GRAVEL, & LARGE COBBLES. NO ROCK. POCKET MOTTLING AT 66". GROUNDWATER AT 123".

D-3: 0"-10" TOPSOIL. 10"-25" SILTY SAND WITH SOME GRAVEL. 25"-69+" SILTY LOAM WITH SOME GRAVEL. NO ROCK. NO GROUNDWATER.

D-4: 0"-12" TOPSOIL. 12"-40" SILTY SAND WITH SOME GRAVEL. 40"-110+" SILTY LOAM WITH SOME GRAVEL. NO ROCK. GROUNDWATER AT 110".

D-5: 0"-12" TOPSOIL. 12"-27" SILTY SAND WITH SOME GRAVEL. 27"-72+" SILTY LOAM WITH SOME GRAVEL. NO ROCK. NO GROUNDWATER.

D-6: 0"-10" TOPSOIL. 10"-26" SILTY SAND WITH SOME GRAVEL. 26"-108+" SILTY LOAM WITH SOME GRAVEL. NO ROCK. GROUNDWATER AT 108".

D-7: 0-6" TOPSOIL. 6"-46" BROWN SILTY SAND. 46"-112" TAN SILTY LOAM WITH GRAVEL. SEEPAGE/MOTTLING AT 81". GROUNDWATER AT 112"

D-8: 0"-10" TOPSOIL. 10"-22" BROWN SILTY SAND. 22"-130" TAN SILTY LOAM WITH GRAVEL. MOTTLING AT 63". GROUNDWATER AT 130".

D-9: 0"-9" TOPSOIL. 9"-17" BROWN SILTY SAND. 17"-48" TAN SILTY SAND WITH SOME COBBLES. SEEPAGE/MOTTLING AT 34". GROUNDWATER AT 48".

D-10: 0"-10" TOPSOIL. 10"-36" BROWN LOAM WITH SILT. ROCK AT 36".

D-11: 0"-7" TOPSOIL. 7"-118" FINE SAND WITH GRAVEL AND TRACE SILTS. ROCK AT 118".

D-12: 0"-6" TOPSOIL. 6"-36" BROWN SILTY SAND. 36"-48" FINE SAND. 48"-109" FINE SAND WITH COBBLES. ROCK AT 109".

D-13: 0"-14" TOPSOIL. 14"-24" BROWN SILTY SAND. 24"-91" TAN SILTY SAND WITH SOME COBBLES. GROUNDWATER AT 90". ROCK AT 91".

D-14: 0"-6" TOPSOIL. 6"-24" BROWN SILTY SAND. 24"-62" TAN SILTY SAND MODERATELY COMPACT. 62"-116" TAN SILTY SAND MODERATELY COMPACT WITH SMALL COBBLES. GROUNDWATER AT 116".

INFILTRATION TEST RESULTS:

TESTS PERFORMED:
01-06-22

TESTS PERFORMED BY:
TAYLOR BETZ (INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.)

TESTS WITNESSED BY:
MELISSA NG (NYCDEP)

TEST		DEPTH FROM EXISTING GRADE
I-1:	90 IN./HR.	88"
I-2:	0.5 IN./HR.	111"
I-3:	15 IN./HR.	54"
I-11:	102 IN./HR.	93"
I-12:	180 IN./HR.	111"

NO.	DATE	REVISION	BY
1	11-28-22	ISSUED FOR 60% SUBMISSION	TMB

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
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PROJECT:
BREWSTER YARDS
160 & 132 PUGSLEY ROAD, TOWN OF SOUTHEAST, PUTNAM COUNTY, NY.

DRAWING:
TESTING PLAN

PROJECT NUMBER	19249.100	PROJECT MANAGER	J.M.W.
DATE	05-04-22	DRAWN BY	P.J.M.
SCALE	1" = 60'	CHECKED BY	T.M.B.

FIGURE NO. 4

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\19249\01 Pre-Design Graphics\Stormwater\Figures\Figure 4 - Testing Plan.dwg, 11/21/2022 12:30:05 AM, client, 1:1

Appendix F
TRAFFIC IMPACT STUDY AMENDMENT

ATTACHMENTS:

A – Streetlight/Spot Traffic Count Data

B – Highway Capacity Analysis Sheets &
Level of Service Summary Tables

C – Accident Analysis Summary Tables

ATTACHMENT 'A'

STREETLIGHT/SPOT TRAFFIC COUNT DATA

TRAFFIC COUNT

JOB NO.: 20-063
PROJECT: Sky Blue Sports
LOCATION: Wallkill, NY

STREETLIGHT DATA - CONNECTICUT SPORTSPLEX

COUNT DATE

TIME			Weekday Breakdown SB T Exit	NB T Enter	*Hourly Totals*	Summer Weekday Breakdown SB T Exit	NB T Enter	*Hourly Totals*	
12:00 AM	-	1:00 AM			***0***			***0***	
1:00 AM	-	2:00 AM			***0***			***0***	
2:00 AM	-	3:00 AM	0		***0***			***0***	
3:00 AM	-	4:00 AM			***0***			***0***	
4:00 AM	-	5:00 AM			***0***			***0***	
5:00 AM	-	6:00 AM			***0***			***0***	
6:00 AM	-	7:00 AM			***0***		1	***1***	
7:00 AM	-	8:00 AM		1	***1***	3	41	***44***	
8:00 AM	-	9:00 AM		1	***1***	1	14	***15***	
9:00 AM	-	10:00 AM	0	1	***1***	4	9	***13***	
10:00 AM	-	11:00 AM		1	***1***	3	26	***29***	
11:00 AM	-	12:00 PM		3	***3***	6	46	***52***	***Use for Weekday AM Trip Gen***
12:00 PM	-	1:00 PM		3	***3***	9	19	***28***	
1:00 PM	-	2:00 PM	2	6	***8***	13	13	***26***	
2:00 PM	-	3:00 PM	2	20	***22***	12	9	***21***	
3:00 PM	-	4:00 PM	4	34	***38***	8	28	***36***	
4:00 PM	-	5:00 PM	10	71	***81***	19	86	***105***	
5:00 PM	-	6:00 PM	38	204	***242***	30	249	***279***	
6:00 PM	-	7:00 PM	45	239	***284***	89	163	***252***	***Use for Weekday PM Trip Gen***
7:00 PM	-	8:00 PM	110	106	***216***	73	82	***155***	
8:00 PM	-	9:00 PM	141	51	***192***	136	42	***178***	
9:00 PM	-	10:00 PM	40	5	***45***	45	11	***56***	
10:00 PM	-	11:00 PM	29	0	***29***	89	1	***90***	
11:00 PM	-	12:00 AM	2	0	***2***	3		***3***	

PEAK AM HOUR						
11:00 AM	**-**	**12:00 PM**	**0**	**3**	**6**	**46**
PEAK PM HOUR						
6:00 PM	**-**	**7:00 PM**	**45**	**239**	**30**	**249**
TOTAL (ALL HOURS)						
12:00 AM	**-**	***12:00 AM***	***423***	***746***	***543***	***840***

TRAFFIC COUNT

JOB NO.: 20-063
PROJECT: Sky Blue Sports
LOCATION: Wallkill, NY

STREETLIGHT DATA - CONNECTICUT SPORTSPLEX

COUNT DATE

TIME			Weekend Breakdown SB T Exit	NB T Enter	*Hourly Totals*		Summer Weekend Breakdown SB T Exit	NB T Enter	*Hourly Totals*
12:00 AM	-	1:00 AM	3		***3***		40		***40***
1:00 AM	-	2:00 AM			***0***		4		***4***
2:00 AM	-	3:00 AM			***0***				***0***
3:00 AM	-	4:00 AM			***0***				***0***
4:00 AM	-	5:00 AM			***0***			5	***5***
5:00 AM	-	6:00 AM			***0***				***0***
6:00 AM	-	7:00 AM		20	***20***			80	***80***
7:00 AM	-	8:00 AM	6	183	***189***		3	180	***183***
8:00 AM	-	9:00 AM	7	229	***236***		4	219	***223***
9:00 AM	-	10:00 AM	44	224	***268***		11	162	***173***
10:00 AM	-	11:00 AM	66	250	***316***		17	175	***192***
11:00 AM	-	12:00 PM	122	313	***435***		121	165	***286***
12:00 PM	-	1:00 PM	117	243	***360***		115	208	***323***
1:00 PM	-	2:00 PM	**218**	**265**	***483***	******Use for Saturday Trip Gen******	108	212	***320***
2:00 PM	-	3:00 PM	163	187	***350***		138	199	***337***
3:00 PM	-	4:00 PM	224	223	***447***		145	195	***340***
4:00 PM	-	5:00 PM	181	127	***308***		129	137	***266***
5:00 PM	-	6:00 PM	179	124	***303***		138	118	***256***
6:00 PM	-	7:00 PM	118	39	***157***		116	74	***190***
7:00 PM	-	8:00 PM	92	30	***122***		130	19	***149***
8:00 PM	-	9:00 PM	51	9	***60***		159	24	***183***
9:00 PM	-	10:00 PM	26	3	***29***		199	20	***219***
10:00 PM	-	11:00 PM	60	5	***65***		141	5	***146***
11:00 PM	-	12:00 AM	7		***7***		12		***12***

PEAK SAT HOUR					PEAK SAT HOUR				
1:00 PM	**-**	**2:00 PM**	**218**	**265**	**3:00 PM**	**-**	**4:00 PM**	**145**	**195**
TOTAL (ALL HOURS)					***TOTAL (ALL HOURS)***				
12:00 AM	***-***	***12:00 AM***	***1,684***	***2,474***	***12:00 AM***	***-***	***12:00 AM***	***1,730***	***2,197***

Study Name 1-CONNECTICUT SPORTSPLEX DRVWY & GAS STATION DRVWY-THU
Start Date 10-06-2022
Start Time 5:00 PM
Site Code

	SPORTSPLEX DVWY Southbound			GAS STATION DVWY Westbound			SPORTSPLEX DVWY Northbound		
Start Time	Left	Thru	U-Turn	Left	Right	U-Turn	Thru	Right	U-Turn
5:00 PM	0	27	0	1	1	0	18	0	0
5:15 PM	5	15	0	1	0	0	7	0	0
5:30 PM	0	8	0	0	3	0	17	0	0
5:45 PM	2	7	0	0	2	0	42	0	0
6:00 PM	1	8	0	0	4	0	39	0	0
6:15 PM	2	23	0	0	6	0	61	1	0
6:30 PM	3	29	0	0	3	0	39	0	0
6:45 PM	0	15	0	0	4	0	43	0	0
7:00 PM	0	6	0	0	3	0	18	0	0
7:15 PM	0	5	0	0	1	0	12	0	0
7:30 PM	0	16	0	0	4	0	31	1	0
7:45 PM	1	51	0	0	2	0	29	0	0

Study Name 1-CONNECTICUT SPORTSPLEX DRVWY & GAS STATION DRVWY-SAT
Start Date 10-08-2022
Start Time 12:00 PM
Site Code

	SPORTSPLEX DVWY Southbound			GAS STATION DVWY Westbound			SPORTSPLEX DVWY Northbound		
Start Time	Left	Thru	U-Turn	Left	Right	U-Turn	Thru	Right	U-Turn
12:00 PM	0	21	0	2	0	0	18	0	0
12:15 PM	2	32	0	0	0	0	11	1	0
12:30 PM	0	28	0	0	1	0	14	0	0
12:45 PM	0	23	0	0	1	0	24	2	0
1:00 PM	1	10	0	0	1	0	25	1	0
1:15 PM	0	17	0	0	1	0	19	0	0
1:30 PM	0	16	0	0	0	0	16	0	0
1:45 PM	1	23	0	0	2	0	19	1	0
2:00 PM	0	13	0	0	1	0	14	1	0
2:15 PM	0	22	0	0	3	0	13	0	0
2:30 PM	0	29	0	0	0	0	13	1	0
2:45 PM	1	22	0	0	1	0	36	0	0

TABLE NO. A-1
TRIP GENERATION COMPARISON TABLE
CONNECTICUT SPORTSPLEX, NORTH BRANDFORD, CT

Trip Generation Source		Peak Weekday AM Hour			Peak Weekday PM Hour			Peak Saturday Hour		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
StreetLight Data [1]		46	6	52	239	45	284	265	218	483
Turning Movement Count [2]		N/A			199	81	280	69	106	175
Difference	Trips	N/A			-40	+36	-4	-196	-112	-308
	%	N/A			-16.7%	+80.0%	-1.4%	-74.0%	-51.4%	-63.8%

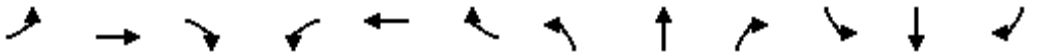
NOTES

(1) An average of a typical weekdays (Tuesday thru Thursday) for the months of July and August in the year 2019 was utilized to develop the trip generation for the Peak Weekday AM Hour. An average of a typical weekdays (Tuesday thru Thursday) for the months of March, April, September and October in the year 2019 was utilized to develop the trip generation for the Peak Weekday PM Hour. An average of Saturdays for the months of March, April, September and October in the year 2019 was utilized to develop the trip generation for the Peak Saturday Hour. The trip generation numbers represent the highest hours during each of the data periods.

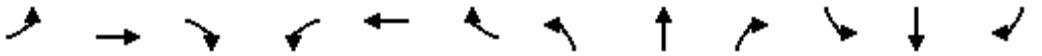
(2) A turning movement count was conducted at the Connecticut Sportsplex driveway on Thursday, October 6, 2022 from 5:00 PM - 8:00 PM and on Saturday, October 8, 2022 from 12:00 PM - 3:00 PM. The trip generation numbers represent the highest hours during each of the count periods.

ATTACHMENT 'B'

HIGHWAY CAPACITY ANALYSIS SHEETS & LEVEL OF SERVICE SUMMARY TABLES



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	25	21	229	11	687	3	182	144	622	214	2
Future Volume (vph)	5	25	21	229	11	687	3	182	144	622	214	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850			0.850		0.999	
Flt Protected		0.995			0.954		0.950			0.950		
Satd. Flow (prot)	0	1549	0	0	1735	1546	1762	1761	1479	1661	1725	0
Flt Permitted		0.968			0.696		0.611			0.548		
Satd. Flow (perm)	0	1507	0	0	1266	1546	1133	1761	1479	958	1725	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				523			158		1	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	40%	26%	0%	2%	2%	2%	0%	9%	14%	4%	9%	0%
Adj. Flow (vph)	5	27	23	252	12	755	3	200	158	684	235	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	264	755	3	200	158	684	237	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	

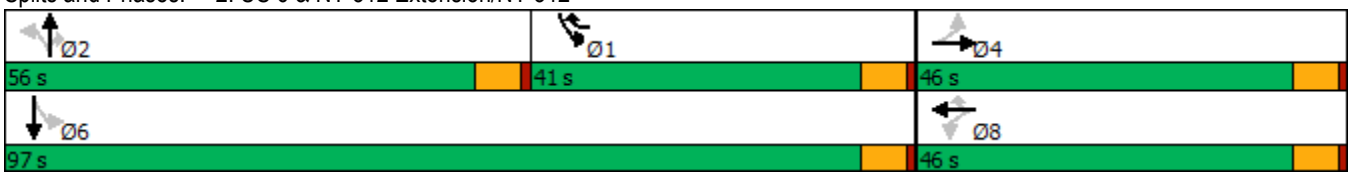


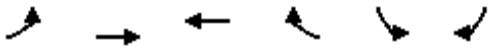
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		23.7			23.7	60.1	16.7	16.7	16.7	53.1	53.1	
Actuated g/C Ratio		0.27			0.27	0.67	0.19	0.19	0.19	0.59	0.59	
v/c Ratio		0.13			0.79	0.62	0.01	0.61	0.39	0.85	0.23	
Control Delay		18.7			49.7	4.8	34.3	44.6	9.1	31.7	10.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		18.7			49.7	4.8	34.3	44.6	9.1	31.7	10.0	
LOS		B			D	A	C	D	A	C	B	
Approach Delay		18.7			16.4			29.0			26.1	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)		15			148	43	2	111	0	240	56	
Queue Length 95th (ft)		47			263	146	10	207	55	#583	125	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		721			596	1210	666	1036	935	931	1612	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.08			0.44	0.62	0.00	0.19	0.17	0.73	0.15	

Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 89.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 79.0%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	815	969	2	3	2
Future Volume (vph)	0	815	969	2	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Grade (%)		2%	-2%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.955	
Flt Protected					0.968	
Satd. Flow (prot)	0	1775	1776	0	1309	0
Flt Permitted					0.968	
Satd. Flow (perm)	0	1775	1776	0	1309	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	6%	8%	50%	33%	0%
Adj. Flow (vph)	0	1006	1196	2	4	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1006	1198	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		9	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

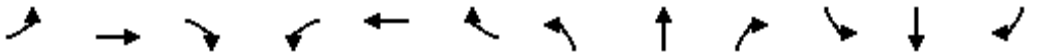
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	815	969	2	3	2
Future Vol, veh/h	0	815	969	2	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	-2	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	6	8	50	33	0
Mvmt Flow	0	1006	1196	2	4	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1198	0	-	0	2203	1197
Stage 1	-	-	-	-	1197	-
Stage 2	-	-	-	-	1006	-
Critical Hdwy	4.1	-	-	-	6.33	6
Critical Hdwy Stg 1	-	-	-	-	5.33	-
Critical Hdwy Stg 2	-	-	-	-	5.33	-
Follow-up Hdwy	2.2	-	-	-	3.797	3.3
Pot Cap-1 Maneuver	590	-	-	-	51	244
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	590	-	-	-	51	244
Mov Cap-2 Maneuver	-	-	-	-	51	-
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	347	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	57.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	590	-	-	-	75
HCM Lane V/C Ratio	-	-	-	-	0.082
HCM Control Delay (s)	0	-	-	-	57.3
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	412	160	253	553	118	136	107	151	213	191	378
Future Volume (vph)	226	412	160	253	553	118	136	107	151	213	191	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.91	0.91	1.00	1.00	0.95	0.95
Frt			0.850		0.974				0.850		0.900	
Flt Protected	0.950			0.950			0.950	0.983		0.950		
Satd. Flow (prot)	3287	1750	1575	3320	3226	0	1580	3250	1496	1646	3164	0
Flt Permitted	0.950			0.950			0.950	0.983		0.950		
Satd. Flow (perm)	3287	1750	1575	3320	3226	0	1580	3250	1496	1646	3164	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			180		18				163		349	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			479	
Travel Time (s)		9.0			21.5			9.6			10.9	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	8%	2%	6%	9%	12%	5%	6%	9%	6%	4%	2%
Adj. Flow (vph)	254	463	180	284	621	133	153	120	170	239	215	425
Shared Lane Traffic (%)							42%					
Lane Group Flow (vph)	254	463	180	284	754	0	89	184	170	239	640	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	43			43			43	43	43	43	43	
Detector 2 Size(ft)	40			40			40	40	40	40	40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2	3	1	6		3	3	1	4	4	
Permitted Phases			2						3			
Detector Phase	5	2	3	1	6		3	3	1	4	4	
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	
Total Split (s)	26.0	36.0	34.0	26.0	36.0		34.0	34.0	26.0	34.0	34.0	
Total Split (%)	20.0%	27.7%	26.2%	20.0%	27.7%		26.2%	26.2%	20.0%	26.2%	26.2%	
Maximum Green (s)	20.0	30.0	28.0	20.0	30.0		28.0	28.0	20.0	28.0	28.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	Max	None	None	C-Max		None	None	None	None	None	
Act Effct Green (s)	14.4	54.6	73.1	15.5	55.8		12.5	12.5	28.0	23.4	23.4	
Actuated g/C Ratio	0.11	0.42	0.56	0.12	0.43		0.10	0.10	0.22	0.18	0.18	
v/c Ratio	0.70	0.63	0.19	0.72	0.54		0.59	0.59	0.38	0.81	0.75	
Control Delay	65.9	37.3	2.9	58.5	29.5		71.3	63.6	5.6	71.4	27.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	65.9	37.3	2.9	58.5	29.5		71.3	63.6	5.6	71.4	27.8	
LOS	E	D	A	E	C		E	E	A	E	C	
Approach Delay		38.5			37.4			42.9			39.7	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	108	308	0	114	232		80	83	3	192	122	
Queue Length 95th (ft)	147	#541	37	m164	340		136	118	30	277	182	
Internal Link Dist (ft)		515			1337			344			399	
Turn Bay Length (ft)	200		250	300						320		
Base Capacity (vph)	505	735	1131	510	1394		340	700	496	354	955	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.50	0.63	0.16	0.56	0.54		0.26	0.26	0.34	0.68	0.67	

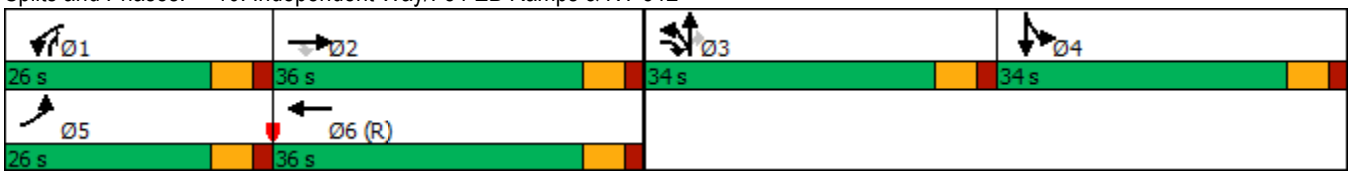
Intersection Summary

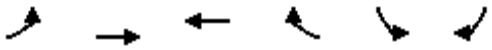
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 39.1 Intersection LOS: D
Intersection Capacity Utilization 71.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

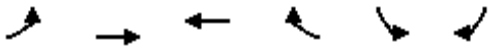
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	153	623	550	31	117	373
Future Volume (vph)	153	623	550	31	117	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1854	1765	1454	1760	1652
Flt Permitted	0.269				0.950	
Satd. Flow (perm)	489	1854	1765	1454	1760	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				36		60
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	3%	3%	10%	6%	1%
Adj. Flow (vph)	176	716	632	36	134	429
Shared Lane Traffic (%)						
Lane Group Flow (vph)	176	716	632	36	134	429
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOT	NYSDOT
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



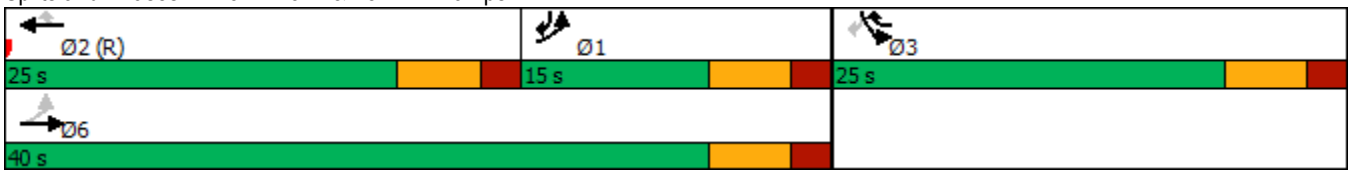
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	15.0	40.0	25.0	25.0	25.0	15.0
Total Split (%)	23.1%	61.5%	38.5%	38.5%	38.5%	23.1%
Maximum Green (s)	9.0	34.0	19.0	19.0	19.0	9.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Max	C-Max	None	None	None
Act Effct Green (s)	45.9	47.1	30.9	44.0	9.4	22.1
Actuated g/C Ratio	0.71	0.72	0.48	0.68	0.14	0.34
v/c Ratio	0.34	0.53	0.76	0.04	0.53	0.71
Control Delay	6.5	5.5	24.8	1.5	32.5	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	5.5	24.8	1.5	32.5	21.9
LOS	A	A	C	A	C	C
Approach Delay		5.7	23.5		24.4	
Approach LOS		A	C		C	
Queue Length 50th (ft)	15	66	208	0	50	116
Queue Length 95th (ft)	60	225	#410	6	88	173
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	516	1342	837	993	514	602
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.53	0.76	0.04	0.26	0.71

Intersection Summary	
Area Type:	Other
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 0 (0%), Referenced to phase 2:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	246	3	5	473	3	3
Future Volume (vph)	246	3	5	473	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1515	0	0	1749	1129	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1515	0	0	1749	1129	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	19%	33%	60%	8%	33%	67%
Adj. Flow (vph)	324	4	7	622	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	328	0	0	629	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

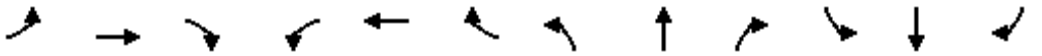
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	246	3	5	473	3	3
Future Vol, veh/h	246	3	5	473	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	19	33	60	8	33	67
Mvmt Flow	324	4	7	622	4	4

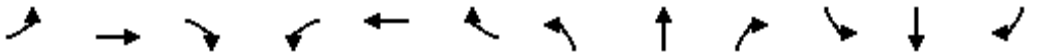
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	328	0	962	326
Stage 1	-	-	-	-	326	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	-	-	4.7	-	7.53	7.27
Critical Hdwy Stg 1	-	-	-	-	6.53	-
Critical Hdwy Stg 2	-	-	-	-	6.53	-
Follow-up Hdwy	-	-	2.74	-	3.797	3.903
Pot Cap-1 Maneuver	-	-	968	-	202	567
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	411	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	968	-	200	567
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	406	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	296	-	-	968	-
HCM Lane V/C Ratio	0.027	-	-	0.007	-
HCM Control Delay (s)	17.5	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



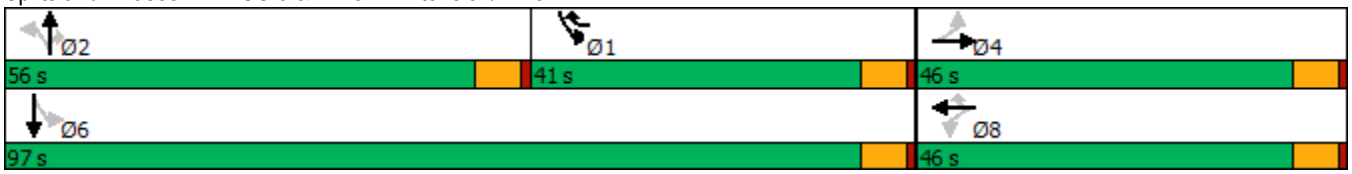
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	15	2	130	18	835	0	251	206	748	220	7
Future Volume (vph)	7	15	2	130	18	835	0	251	206	748	220	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990				0.850			0.850		0.995	
Flt Protected		0.985			0.958					0.950		
Satd. Flow (prot)	0	1458	0	0	1742	1546	1855	1761	1479	1661	1722	0
Flt Permitted		0.897			0.734					0.438		
Satd. Flow (perm)	0	1328	0	0	1335	1546	1855	1761	1479	766	1722	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				393			226		2	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	40%	26%	0%	2%	2%	2%	0%	9%	14%	4%	9%	0%
Adj. Flow (vph)	8	16	2	143	20	918	0	276	226	822	242	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	0	0	163	918	0	276	226	822	250	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	

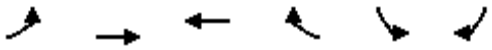


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		16.6			16.6	58.2		20.0	20.0	61.6	61.6	
Actuated g/C Ratio		0.18			0.18	0.64		0.22	0.22	0.68	0.68	
v/c Ratio		0.11			0.67	0.81		0.71	0.45	0.94	0.21	
Control Delay		31.0			48.9	14.2		43.7	7.3	40.4	6.5	
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		31.0			48.9	14.2		43.7	7.3	40.4	6.5	
LOS		C			D	B		D	A	D	A	
Approach Delay		31.0			19.4			27.3			32.5	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)		11			86	190		144	0	273	45	
Queue Length 95th (ft)		37			170	527		252	57	#670	99	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)									260	390		
Base Capacity (vph)		597			599	1135		988	929	873	1649	
Starvation Cap Reductn		0			0	0		0	0	0	0	
Spillback Cap Reductn		0			0	0		0	0	0	0	
Storage Cap Reductn		0			0	0		0	0	0	0	
Reduced v/c Ratio		0.04			0.27	0.81		0.28	0.24	0.94	0.15	

Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 90.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	995	981	10	3	1
Future Volume (vph)	0	995	981	10	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Grade (%)		2%	-2%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.966	
Flt Protected					0.964	
Satd. Flow (prot)	0	1844	1917	0	1608	0
Flt Permitted					0.964	
Satd. Flow (perm)	0	1844	1917	0	1608	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	0	1157	1141	12	3	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1157	1153	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		9	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

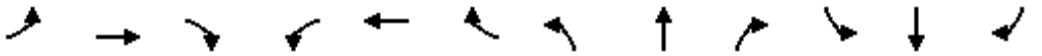
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	995	981	10	3	1
Future Vol, veh/h	0	995	981	10	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	-2	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	2	0	0	0	0
Mvmt Flow	0	1157	1141	12	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1153	0	-	0	2304	1147
Stage 1	-	-	-	-	1147	-
Stage 2	-	-	-	-	1157	-
Critical Hdwy	4.1	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	613	-	-	-	55	261
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	344	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	613	-	-	-	55	261
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	60.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	613	-	-	-	69
HCM Lane V/C Ratio	-	-	-	-	0.067
HCM Control Delay (s)	0	-	-	-	60.9
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	591	275	322	561	102	279	110	408	104	103	134
Future Volume (vph)	208	591	275	322	561	102	279	110	408	104	103	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.91	0.91	1.00	1.00	0.95	0.95
Frt			0.850		0.977				0.850		0.915	
Flt Protected	0.950			0.950			0.950	0.973		0.950		
Satd. Flow (prot)	3287	1750	1575	3320	3238	0	1580	3223	1496	1646	3211	0
Flt Permitted	0.950			0.950			0.950	0.973		0.950		
Satd. Flow (perm)	3287	1750	1575	3320	3238	0	1580	3223	1496	1646	3211	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			279		15				273		151	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			479	
Travel Time (s)		9.0			21.5			9.6			10.9	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	8%	2%	6%	9%	12%	5%	6%	9%	6%	4%	2%
Adj. Flow (vph)	234	664	309	362	630	115	313	124	458	117	116	151
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	234	664	309	362	745	0	156	281	458	117	267	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	43			43			43	43	43	43	43	
Detector 2 Size(ft)	40			40			40	40	40	40	40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2	3	1	6		3	3	1	4	4	
Permitted Phases			2						3			
Detector Phase	5	2	3	1	6		3	3	1	4	4	
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	
Total Split (s)	26.0	36.0	34.0	26.0	36.0		34.0	34.0	26.0	34.0	34.0	
Total Split (%)	20.0%	27.7%	26.2%	20.0%	27.7%		26.2%	26.2%	20.0%	26.2%	26.2%	
Maximum Green (s)	20.0	30.0	28.0	20.0	30.0		28.0	28.0	20.0	28.0	28.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	Max	None	None	C-Max		None	None	None	None	None	
Act Effct Green (s)	13.6	55.7	80.2	18.1	60.2		18.5	18.5	36.6	13.7	13.7	
Actuated g/C Ratio	0.10	0.43	0.62	0.14	0.46		0.14	0.14	0.28	0.11	0.11	
v/c Ratio	0.68	0.89	0.29	0.79	0.49		0.70	0.61	0.74	0.68	0.56	
Control Delay	66.1	51.1	2.9	58.9	26.0		68.3	57.4	16.8	74.2	27.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	66.1	51.1	2.9	58.9	26.0		68.3	57.4	16.8	74.2	27.6	
LOS	E	D	A	E	C		E	E	B	E	C	
Approach Delay		41.7			36.8			38.5			41.8	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	99	515	10	145	193		139	124	96	96	48	
Queue Length 95th (ft)	137	#911	51	m202	m339		205	159	136	154	87	
Internal Link Dist (ft)		515			1337			344			399	
Turn Bay Length (ft)	200		250	300						320		
Base Capacity (vph)	505	750	1173	510	1506		340	694	635	354	810	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.46	0.89	0.26	0.71	0.49		0.46	0.40	0.72	0.33	0.33	

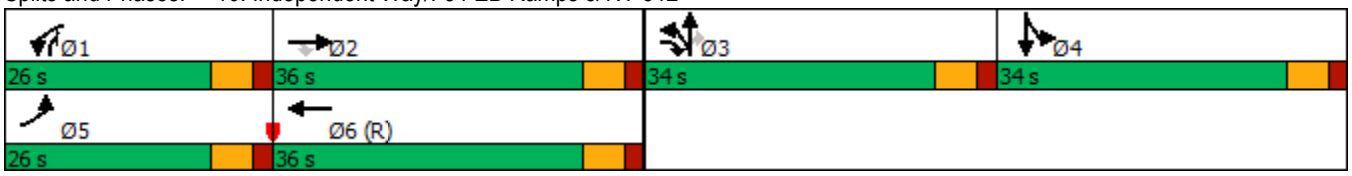
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 39.4		Intersection LOS: D	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

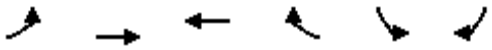
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

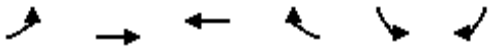
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	490	613	540	87	102	444
Future Volume (vph)	490	613	540	87	102	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1854	1765	1454	1760	1652
Flt Permitted	0.283				0.950	
Satd. Flow (perm)	515	1854	1765	1454	1760	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				55		64
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	3%	3%	10%	6%	1%
Adj. Flow (vph)	563	705	621	100	117	510
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	705	621	100	117	510
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	15.0	40.0	25.0	25.0	25.0	15.0
Total Split (%)	23.1%	61.5%	38.5%	38.5%	38.5%	23.1%
Maximum Green (s)	9.0	34.0	19.0	19.0	19.0	9.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Max	C-Max	None	None	None
Act Effct Green (s)	46.4	47.6	31.4	44.0	8.8	21.6
Actuated g/C Ratio	0.71	0.73	0.48	0.68	0.14	0.33
v/c Ratio	1.05	0.52	0.73	0.10	0.49	0.86
Control Delay	65.6	6.1	23.0	2.2	32.3	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	6.1	23.0	2.2	32.3	32.3
LOS	E	A	C	A	C	C
Approach Delay		32.5	20.1		32.3	
Approach LOS		C	C		C	
Queue Length 50th (ft)	~166	109	199	5	44	154
Queue Length 95th (ft)	m#469	m276	#391	16	80	226
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	535	1357	852	1002	514	591
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.52	0.73	0.10	0.23	0.86

Intersection Summary	
Area Type:	Other
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 0 (0%), Referenced to phase 2:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 29.1	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

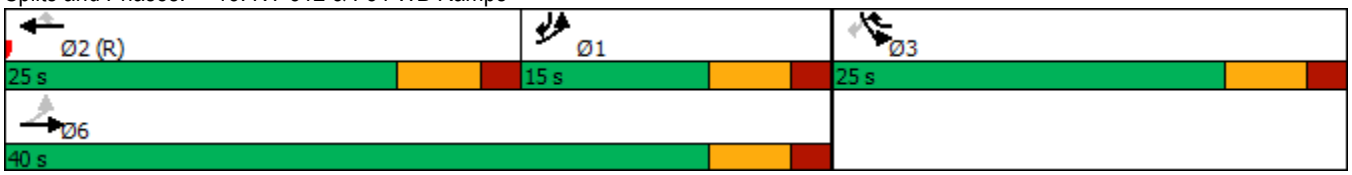
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	408	3	4	284	3	7
Future Volume (vph)	408	3	4	284	3	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.902	
Flt Protected				0.999	0.987	
Satd. Flow (prot)	1772	0	0	1810	1505	0
Flt Permitted				0.999	0.987	
Satd. Flow (perm)	1772	0	0	1810	1505	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	0%	5%	0%	14%
Adj. Flow (vph)	464	3	5	323	3	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	467	0	0	328	11	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.7%		ICU Level of Service A	
Analysis Period (min) 15			

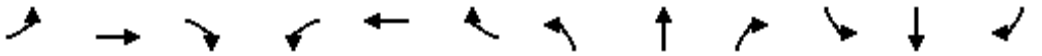
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	408	3	4	284	3	7
Future Vol, veh/h	408	3	4	284	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	0	0	5	0	14
Mvmt Flow	464	3	5	323	3	8

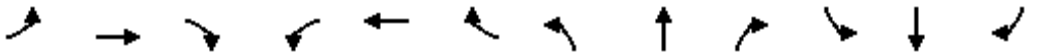
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	467	0	799	466
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	333	-
Critical Hdwy	-	-	4.1	-	7.2	6.74
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.426
Pot Cap-1 Maneuver	-	-	1105	-	299	544
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	679	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1105	-	297	544
Mov Cap-2 Maneuver	-	-	-	-	297	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	675	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	435	-	-	1105	-
HCM Lane V/C Ratio	0.026	-	-	0.004	-
HCM Control Delay (s)	13.5	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	34	2	184	8	773	6	204	176	784	230	16
Future Volume (vph)	25	34	2	184	8	773	6	204	176	784	230	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850		0.990	
Flt Protected		0.980			0.954		0.950			0.950		
Satd. Flow (prot)	0	1431	0	0	1735	1546	1762	1761	1479	1661	1718	0
Flt Permitted		0.821			0.687		0.593			0.501		
Satd. Flow (perm)	0	1198	0	0	1249	1546	1100	1761	1479	876	1718	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				478			193		5	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	40%	26%	0%	2%	2%	2%	0%	9%	14%	4%	9%	0%
Adj. Flow (vph)	27	37	2	202	9	849	7	224	193	862	253	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	211	849	7	224	193	862	271	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	

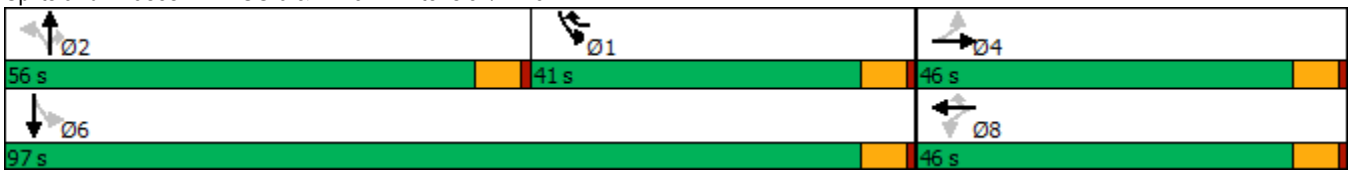


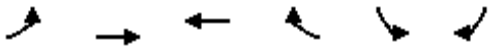
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		20.4			20.4	62.0	17.8	17.8	17.8	59.5	59.5	
Actuated g/C Ratio		0.22			0.22	0.67	0.19	0.19	0.19	0.65	0.65	
v/c Ratio		0.25			0.77	0.71	0.03	0.66	0.44	0.99	0.24	
Control Delay		32.3			52.9	7.9	31.8	44.8	8.3	51.8	8.2	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		32.3			52.9	7.9	31.8	44.8	8.3	51.8	8.2	
LOS		C			D	A	C	D	A	D	A	
Approach Delay		32.3			16.8			28.0			41.4	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)		31			114	90	3	120	0	325	57	
Queue Length 95th (ft)		73			215	297	16	219	57	#746	125	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		529			551	1197	607	972	903	869	1632	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.12			0.38	0.71	0.01	0.23	0.21	0.99	0.17	

Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 92.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 86.5%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1021	980	4	6	0
Future Volume (vph)	0	1021	980	4	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	9
Grade (%)		2%	-2%		-2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999			
Flt Protected					0.950	
Satd. Flow (prot)	0	1844	1896	0	1402	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1844	1896	0	1402	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	1%	25%	17%	0%
Adj. Flow (vph)	0	1064	1021	4	6	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1064	1025	0	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		9	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	1.13	1.13
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

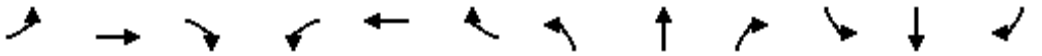
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1021	980	4	6	0
Future Vol, veh/h	0	1021	980	4	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	2	-2	-	-2	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	2	1	25	17	0
Mvmt Flow	0	1064	1021	4	6	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1025	0	-	0	2087	1023
Stage 1	-	-	-	-	1023	-
Stage 2	-	-	-	-	1064	-
Critical Hdwy	4.1	-	-	-	6.17	6
Critical Hdwy Stg 1	-	-	-	-	5.17	-
Critical Hdwy Stg 2	-	-	-	-	5.17	-
Follow-up Hdwy	2.2	-	-	-	3.653	3.3
Pot Cap-1 Maneuver	685	-	-	-	66	306
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	350	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	685	-	-	-	66	306
Mov Cap-2 Maneuver	-	-	-	-	66	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	350	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	65.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	685	-	-	-	66
HCM Lane V/C Ratio	-	-	-	-	0.095
HCM Control Delay (s)	0	-	-	-	65.2
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	296	433	510	489	101	380	221	405	69	211	116
Future Volume (vph)	332	296	433	510	489	101	380	221	405	69	211	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.91	0.91	1.00	1.00	0.95	0.95
Frt			0.850		0.974				0.850		0.947	
Flt Protected	0.950			0.950			0.950	0.978		0.950		
Satd. Flow (prot)	3287	1750	1575	3320	3227	0	1580	3236	1496	1646	3310	0
Flt Permitted	0.950			0.950			0.950	0.978		0.950		
Satd. Flow (perm)	3287	1750	1575	3320	3227	0	1580	3236	1496	1646	3310	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			154		17				416		73	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			479	
Travel Time (s)		9.0			21.5			9.6			10.9	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	8%	2%	6%	9%	12%	5%	6%	9%	6%	4%	2%
Adj. Flow (vph)	373	333	487	573	549	113	427	248	455	78	237	130
Shared Lane Traffic (%)							48%					
Lane Group Flow (vph)	373	333	487	573	662	0	222	453	455	78	367	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	43			43			43	43	43	43	43	
Detector 2 Size(ft)	40			40			40	40	40	40	40	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	
Protected Phases	5	2	3	1	6		3	3	1	4	4	
Permitted Phases			2						3			
Detector Phase	5	2	3	1	6		3	3	1	4	4	
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	
Total Split (s)	26.0	36.0	34.0	26.0	36.0		34.0	34.0	26.0	34.0	34.0	
Total Split (%)	20.0%	27.7%	26.2%	20.0%	27.7%		26.2%	26.2%	20.0%	26.2%	26.2%	
Maximum Green (s)	20.0	30.0	28.0	20.0	30.0		28.0	28.0	20.0	28.0	28.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	Min	None	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	18.0	45.3	75.5	20.0	47.3		24.2	24.2	44.2	16.5	16.5	
Actuated g/C Ratio	0.14	0.35	0.58	0.15	0.36		0.19	0.19	0.34	0.13	0.13	
v/c Ratio	0.82	0.55	0.50	1.12	0.56		0.76	0.75	0.58	0.38	0.76	
Control Delay	69.6	40.3	13.0	115.4	33.1		66.3	58.1	5.4	56.0	54.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	69.6	40.3	13.0	115.4	33.1		66.3	58.1	5.4	56.0	54.0	
LOS	E	D	B	F	C		E	E	A	E	D	
Approach Delay		38.3			71.3			38.5			54.3	
Approach LOS		D			E			D			D	
Queue Length 50th (ft)	158	227	152	~292	217		194	198	14	61	128	
Queue Length 95th (ft)	209	357	264	m#320	m268		284	251	50	106	172	
Internal Link Dist (ft)		515			1337			344			399	
Turn Bay Length (ft)	200		250	300						320		
Base Capacity (vph)	505	610	1021	510	1185		340	696	783	354	770	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.74	0.55	0.48	1.12	0.56		0.65	0.65	0.58	0.22	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 50.3		Intersection LOS: D	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

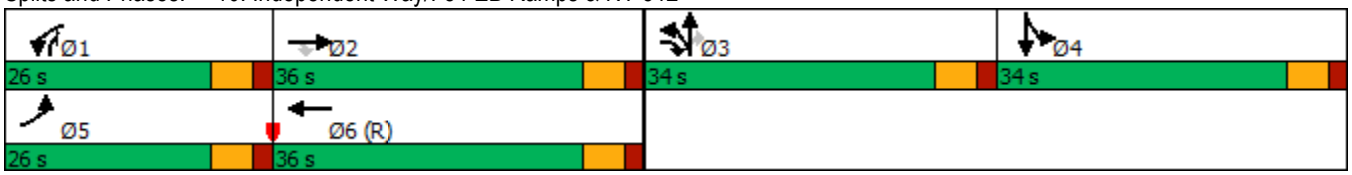
Queue shown is maximum after two cycles.

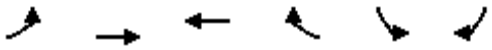
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

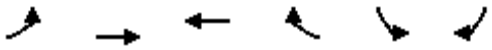
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	285	484	584	105	50	516
Future Volume (vph)	285	484	584	105	50	516
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1854	1765	1454	1760	1652
Flt Permitted	0.265				0.950	
Satd. Flow (perm)	482	1854	1765	1454	1760	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				121		50
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	3%	3%	10%	6%	1%
Adj. Flow (vph)	328	556	671	121	57	593
Shared Lane Traffic (%)						
Lane Group Flow (vph)	328	556	671	121	57	593
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	15.0	40.0	25.0	25.0	25.0	15.0
Total Split (%)	23.1%	61.5%	38.5%	38.5%	38.5%	23.1%
Maximum Green (s)	9.0	34.0	19.0	19.0	19.0	9.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	Min	C-Min	None	None	None
Act Effct Green (s)	48.4	49.6	33.4	44.0	6.7	19.6
Actuated g/C Ratio	0.74	0.76	0.51	0.68	0.10	0.30
v/c Ratio	0.62	0.39	0.74	0.12	0.31	1.11
Control Delay	12.4	4.1	21.3	1.1	30.9	95.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	4.1	21.3	1.1	30.9	95.6
LOS	B	A	C	A	C	F
Approach Delay		7.2	18.2		90.0	
Approach LOS		A	B		F	
Queue Length 50th (ft)	40	53	208	0	21	~225
Queue Length 95th (ft)	92	178	#398	11	49	#372
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	531	1414	906	1023	514	533
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.39	0.74	0.12	0.11	1.11

Intersection Summary	
Area Type:	Other
Cycle Length: 65	
Actuated Cycle Length: 65	
Offset: 0 (0%), Referenced to phase 2:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 34.1	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

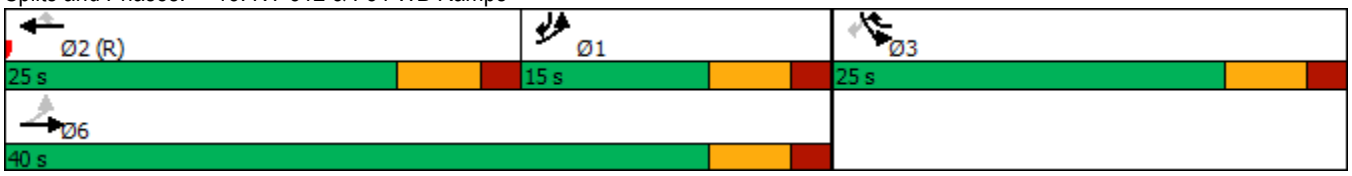
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	251	1	3	212	4	1
Future Volume (vph)	251	1	3	212	4	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.977	
Flt Protected				0.999	0.960	
Satd. Flow (prot)	1774	0	0	1810	1746	0
Flt Permitted				0.999	0.960	
Satd. Flow (perm)	1774	0	0	1810	1746	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	0%	5%	0%	0%
Adj. Flow (vph)	285	1	3	241	5	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	286	0	0	244	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

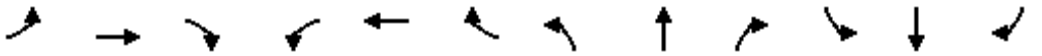
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	251	1	3	212	4	1
Future Vol, veh/h	251	1	3	212	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	0	0	5	0	0
Mvmt Flow	285	1	3	241	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	286	0	533	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	247	-
Critical Hdwy	-	-	4.1	-	7.2	6.6
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1288	-	454	734
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	756	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1288	-	453	734
Mov Cap-2 Maneuver	-	-	-	-	453	-
Stage 1	-	-	-	-	720	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	491	-	-	1288	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Control Delay (s)	12.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	26	22	245	12	764	3	207	155	718	224	2
Future Volume (vph)	5	26	22	245	12	764	3	207	155	718	224	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850			0.850		0.999	
Flt Protected		0.996			0.954		0.950			0.950		
Satd. Flow (prot)	0	1549	0	0	1574	1502	1762	1761	1479	1661	1725	0
Flt Permitted		0.971			0.694		0.583			0.468		
Satd. Flow (perm)	0	1511	0	0	1145	1502	1081	1761	1479	818	1725	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				473			170		1	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	40%	26%	0%	13%	0%	5%	0%	9%	14%	4%	9%	0%
Adj. Flow (vph)	5	29	24	269	13	840	3	227	170	789	246	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	282	840	3	227	170	789	248	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



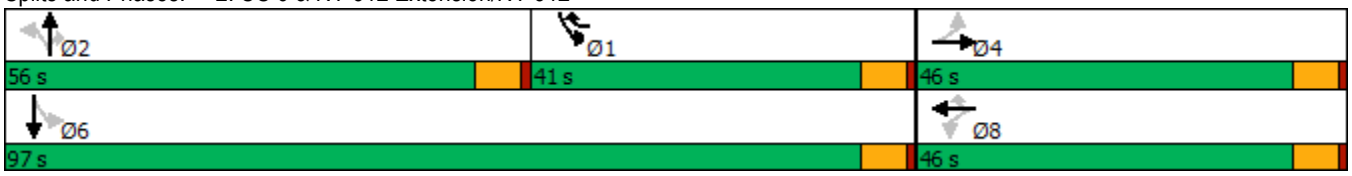
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		30.0			30.0	71.6	19.2	19.2	19.2	60.8	60.8	
Actuated g/C Ratio		0.29			0.29	0.70	0.19	0.19	0.19	0.59	0.59	
v/c Ratio		0.13			0.85	0.71	0.01	0.69	0.41	1.02	0.24	
Control Delay		18.6			57.9	7.7	36.3	52.0	9.0	65.7	11.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		18.6			57.9	7.7	36.3	52.0	9.0	65.7	11.9	
LOS		B			E	A	D	D	A	E	B	
Approach Delay		18.6			20.3			33.6			52.9	
Approach LOS		B			C			C			D	
Queue Length 50th (ft)		16			173	104	2	141	0	~415	74	
Queue Length 95th (ft)		49			#322	294	10	243	57	#759	140	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		610			451	1188	532	868	815	773	1520	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.10			0.63	0.71	0.01	0.26	0.21	1.02	0.16	

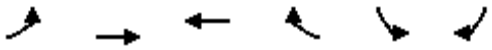
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 103			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay: 35.2		Intersection LOS: D	
Intersection Capacity Utilization 86.5%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

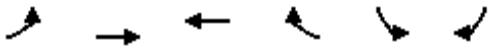
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





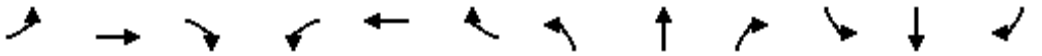
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	24	899	1079	100	33	9
Future Volume (vph)	24	899	1079	100	33	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)		2%	-2%		-2%	
Storage Length (ft)	100			0	0	110
Storage Lanes	1			0	2	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95
Frt			0.987		0.968	
Flt Protected	0.950				0.962	
Satd. Flow (prot)	1718	3372	3337	0	3453	0
Flt Permitted	0.132				0.962	
Satd. Flow (perm)	239	3372	3337	0	3453	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			25		11	
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	6%	8%	6%	9%	0%
Adj. Flow (vph)	30	1110	1332	123	41	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	1110	1455	0	52	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		28	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	0.91	0.91
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		2	
Detector Template					NYSDOT	
Leading Detector (ft)	0	0	0		83	
Trailing Detector (ft)	0	0	0		-5	
Detector 1 Position(ft)	0	0	0		-5	
Detector 1 Size(ft)	20	6	6		40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					43	
Detector 2 Size(ft)					40	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	



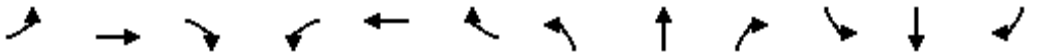
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		3	
Permitted Phases	6					
Detector Phase	1	6	2		3	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	
Total Split (s)	11.0	69.0	58.0		11.0	
Total Split (%)	13.8%	86.3%	72.5%		13.8%	
Maximum Green (s)	5.0	63.0	52.0		5.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	67.4	69.8	65.4		5.0	
Actuated g/C Ratio	0.84	0.87	0.82		0.06	
v/c Ratio	0.10	0.38	0.53		0.23	
Control Delay	2.5	2.3	4.3		32.4	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.5	2.3	4.3		32.4	
LOS	A	A	A		C	
Approach Delay		2.3	4.3		32.4	
Approach LOS		A	A		C	
Queue Length 50th (ft)	2	66	74		10	
Queue Length 95th (ft)	6	75	147		24	
Internal Link Dist (ft)		1236	450		1172	
Turn Bay Length (ft)	100					
Base Capacity (vph)	293	2942	2732		226	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.10	0.38	0.53		0.23	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 4.0	Intersection LOS: A
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: NY 312 & Pugsley Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	471	174	260	680	131	156	114	153	228	201	446
Future Volume (vph)	263	471	174	260	680	131	156	114	153	228	201	446
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3287	1750	1575	3320	3234	0	3368	1810	1496	1646	1827	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3287	1750	1575	3320	3234	0	3368	1810	1496	1646	1827	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		28				137			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	8%	2%	6%	9%	12%	5%	6%	9%	6%	4%	2%
Adj. Flow (vph)	296	529	196	292	764	147	175	128	172	256	226	501
Shared Lane Traffic (%)												
Lane Group Flow (vph)	296	529	196	292	911	0	175	128	172	256	226	501
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	33.0	14.0	14.0	29.0		14.0	14.0	14.0	19.0	19.0	18.0
Total Split (%)	22.5%	41.3%	17.5%	17.5%	36.3%		17.5%	17.5%	17.5%	23.8%	23.8%	22.5%
Maximum Green (s)	12.0	27.0	8.0	8.0	23.0		8.0	8.0	8.0	13.0	13.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	11.0	27.3	41.0	8.0	24.3		7.7	7.7	15.7	13.0	13.0	30.0
Actuated g/C Ratio	0.14	0.34	0.51	0.10	0.30		0.10	0.10	0.20	0.16	0.16	0.38
v/c Ratio	0.65	0.89	0.23	0.88	0.91		0.54	0.74	0.43	0.96	0.76	0.75
Control Delay	38.2	41.7	4.6	49.1	36.7		41.1	61.1	7.8	81.9	50.7	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	41.7	4.6	49.1	36.7		41.1	61.1	7.8	81.9	50.7	23.9
LOS	D	D	A	D	D		D	E	A	F	D	C
Approach Delay		33.6			39.7			34.4			45.2	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	72	193	16	74	249		43	63	8	128	109	158
Queue Length 95th (ft)	111	#402	44	m#104	m#310		73	#142	37	#265	#212	272
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	493	597	873	332	1000		336	181	403	267	296	688
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.89	0.22	0.88	0.91		0.52	0.71	0.43	0.96	0.76	0.73

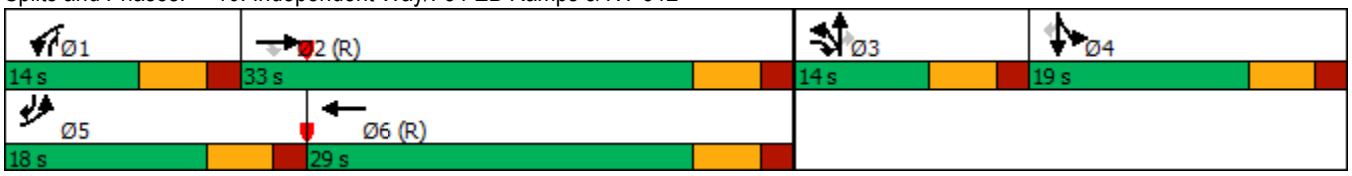
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 38.8		Intersection LOS: D	
Intersection Capacity Utilization 70.8%		ICU Level of Service C	
Analysis Period (min) 15			

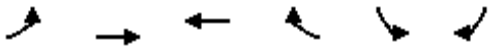
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

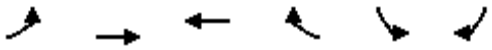
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	181	671	609	39	125	463
Future Volume (vph)	181	671	609	39	125	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1854	1765	1454	1760	1652
Flt Permitted	0.172				0.950	
Satd. Flow (perm)	313	1854	1765	1454	1760	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				45		124
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	3%	3%	10%	6%	1%
Adj. Flow (vph)	208	771	700	45	144	532
Shared Lane Traffic (%)						
Lane Group Flow (vph)	208	771	700	45	144	532
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOT	NYSDOT
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	25.0	65.0	40.0	15.0	15.0	25.0
Total Split (%)	31.3%	81.3%	50.0%	18.8%	18.8%	31.3%
Maximum Green (s)	19.0	59.0	34.0	9.0	9.0	19.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	59.4	59.4	34.4	49.0	8.6	33.6
Actuated g/C Ratio	0.74	0.74	0.43	0.61	0.11	0.42
v/c Ratio	0.37	0.56	0.92	0.05	0.76	0.70
Control Delay	9.3	3.2	42.1	2.2	61.4	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	3.2	42.1	2.2	61.4	19.9
LOS	A	A	D	A	E	B
Approach Delay		4.5	39.7		28.7	
Approach LOS		A	D		C	
Queue Length 50th (ft)	21	49	323	0	71	160
Queue Length 95th (ft)	m30	m65	#515	11	#149	257
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	568	1377	759	894	198	765
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.56	0.92	0.05	0.73	0.70

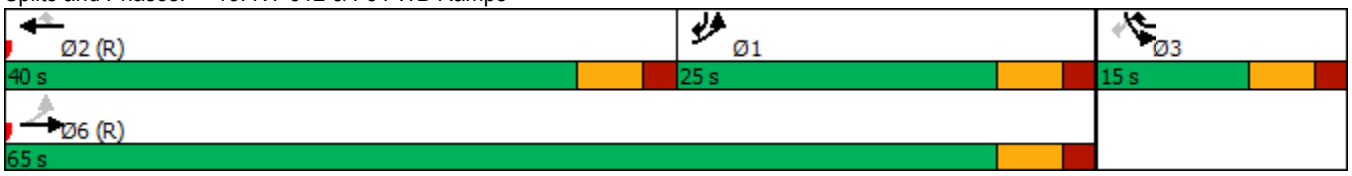
Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 15 (19%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	262	5	10	500	4	4
Future Volume (vph)	262	5	10	500	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1512	0	0	1742	1129	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1512	0	0	1742	1129	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	19%	33%	60%	8%	33%	67%
Adj. Flow (vph)	345	7	13	658	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	671	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

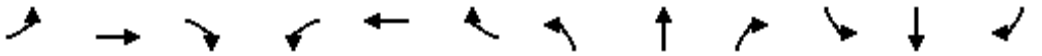
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	262	5	10	500	4	4
Future Vol, veh/h	262	5	10	500	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	19	33	60	8	33	67
Mvmt Flow	345	7	13	658	5	5

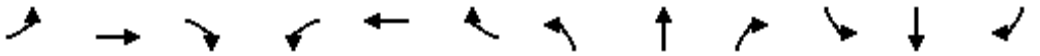
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	1033	349
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	-	-	4.7	-	7.53	7.27
Critical Hdwy Stg 1	-	-	-	-	6.53	-
Critical Hdwy Stg 2	-	-	-	-	6.53	-
Follow-up Hdwy	-	-	2.74	-	3.797	3.903
Pot Cap-1 Maneuver	-	-	946	-	179	548
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	385	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	946	-	175	548
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	377	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	265	-	-	946	-
HCM Lane V/C Ratio	0.04	-	-	0.014	-
HCM Control Delay (s)	19.1	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	15	2	144	19	972	0	267	223	857	226	8
Future Volume (vph)	8	15	2	144	19	972	0	267	223	857	226	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991				0.850			0.850		0.995	
Flt Protected		0.984			0.958					0.950		
Satd. Flow (prot)	0	1871	0	0	1762	1561	1855	1845	1636	1727	1819	0
Flt Permitted		0.887			0.728					0.359		
Satd. Flow (perm)	0	1687	0	0	1339	1561	1855	1845	1636	653	1819	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				321			275		2	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	4%	3%	0%	3%	0%
Adj. Flow (vph)	10	19	2	178	23	1200	0	330	275	1058	279	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	201	1200	0	330	275	1058	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



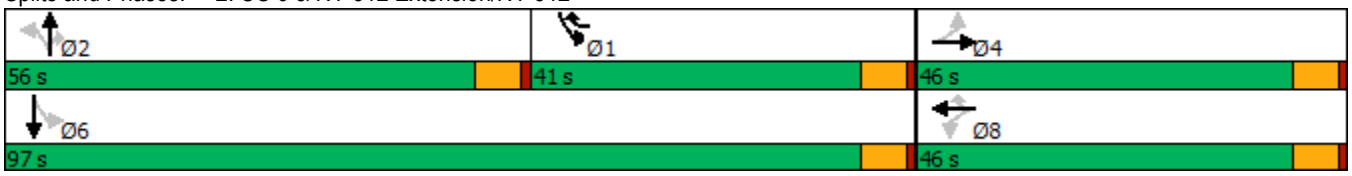
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		20.2			20.2	62.0		23.5	23.5	65.3	65.3	
Actuated g/C Ratio		0.21			0.21	0.63		0.24	0.24	0.67	0.67	
v/c Ratio		0.09			0.73	1.08		0.74	0.46	1.28	0.24	
Control Delay		31.4			52.9	68.9		45.8	6.4	159.3	7.7	
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		31.4			52.9	68.9		45.8	6.4	159.3	7.7	
LOS		C			D	E		D	A	F	A	
Approach Delay		31.4			66.6			27.9			126.8	
Approach LOS		C			E			C			F	
Queue Length 50th (ft)		14			115	~748		187	0	~697	61	
Queue Length 95th (ft)		38			190	#1009		278	39	#994	115	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)									260	390		
Base Capacity (vph)		704			558	1107		961	984	827	1664	
Starvation Cap Reductn		0			0	0		0	0	0	0	
Spillback Cap Reductn		0			0	0		0	0	0	0	
Storage Cap Reductn		0			0	0		0	0	0	0	
Reduced v/c Ratio		0.04			0.36	1.08		0.34	0.28	1.28	0.17	

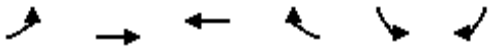
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 97.8			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.28			
Intersection Signal Delay: 83.3		Intersection LOS: F	
Intersection Capacity Utilization 93.4%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

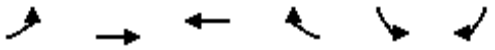
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





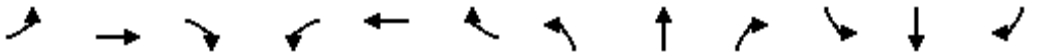
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	1128	1124	49	106	27
Future Volume (vph)	10	1128	1124	49	106	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)		2%	-2%		-2%	
Storage Length (ft)	100			0	0	110
Storage Lanes	1			0	2	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95
Frt			0.994		0.970	
Flt Protected	0.950				0.962	
Satd. Flow (prot)	1787	3504	3624	0	3676	0
Flt Permitted	0.138				0.962	
Satd. Flow (perm)	260	3504	3624	0	3676	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			9		31	
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	12	1312	1307	57	123	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	1312	1364	0	154	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		28	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	0.91	0.91
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		2	
Detector Template					NYSDOT	
Leading Detector (ft)	0	0	0		83	
Trailing Detector (ft)	0	0	0		-5	
Detector 1 Position(ft)	0	0	0		-5	
Detector 1 Size(ft)	20	6	6		40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					43	
Detector 2 Size(ft)					40	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	



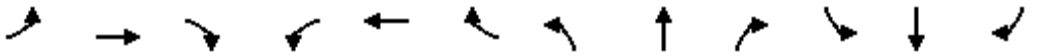
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		3	
Permitted Phases	6					
Detector Phase	1	6	2		3	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	
Total Split (s)	11.0	62.0	51.0		18.0	
Total Split (%)	13.8%	77.5%	63.8%		22.5%	
Maximum Green (s)	5.0	56.0	45.0		12.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	59.8	59.8	57.6		8.2	
Actuated g/C Ratio	0.75	0.75	0.72		0.10	
v/c Ratio	0.04	0.50	0.52		0.38	
Control Delay	3.3	5.0	6.7		29.0	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.3	5.0	6.7		29.0	
LOS	A	A	A		C	
Approach Delay		5.0	6.7		29.0	
Approach LOS		A	A		C	
Queue Length 50th (ft)	1	108	152		29	
Queue Length 95th (ft)	5	152	210		53	
Internal Link Dist (ft)		1236	450		1172	
Turn Bay Length (ft)	100					
Base Capacity (vph)	289	2620	2613		577	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.04	0.50	0.52		0.27	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: NY 312 & Pugsley Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	288	697	304	323	663	112	351	124	421	113	108	173
Future Volume (vph)	288	697	304	323	663	112	351	124	421	113	108	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.978				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1872	1591	3450	3479	0	3467	1919	1599	1711	1881	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3484	1872	1591	3450	3479	0	3467	1919	1599	1711	1881	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		26				123			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	1%	1%	2%	2%	2%	2%	0%	2%	2%	1%	2%
Adj. Flow (vph)	294	711	310	330	677	114	358	127	430	115	110	177
Shared Lane Traffic (%)												
Lane Group Flow (vph)	294	711	310	330	791	0	358	127	430	115	110	177
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	38.0	16.0	14.0	34.0		16.0	16.0	14.0	12.0	12.0	18.0
Total Split (%)	22.5%	47.5%	20.0%	17.5%	42.5%		20.0%	20.0%	17.5%	15.0%	15.0%	22.5%
Maximum Green (s)	12.0	32.0	10.0	8.0	28.0		10.0	10.0	8.0	6.0	6.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	10.5	32.1	48.0	8.0	29.5		9.9	9.9	17.9	6.0	6.0	22.5
Actuated g/C Ratio	0.13	0.40	0.60	0.10	0.37		0.12	0.12	0.22	0.08	0.08	0.28
v/c Ratio	0.64	0.95	0.31	0.96	0.61		0.83	0.54	0.95	0.90	0.78	0.33
Control Delay	41.8	42.2	4.2	68.2	18.0		52.6	41.9	48.8	96.8	73.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	42.2	4.2	68.2	18.0		52.6	41.9	48.8	96.8	73.0	9.7
LOS	D	D	A	E	B		D	D	D	F	E	A
Approach Delay		33.1			32.8			49.3			51.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	78	211	23	91	103		91	60	104	58	55	20
Queue Length 95th (ft)	121	#540	45	m#142	m186		#159	114	#248	#154	#140	66
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	522	750	1005	345	1301		433	239	453	128	141	561
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.95	0.31	0.96	0.61		0.83	0.53	0.95	0.90	0.78	0.32

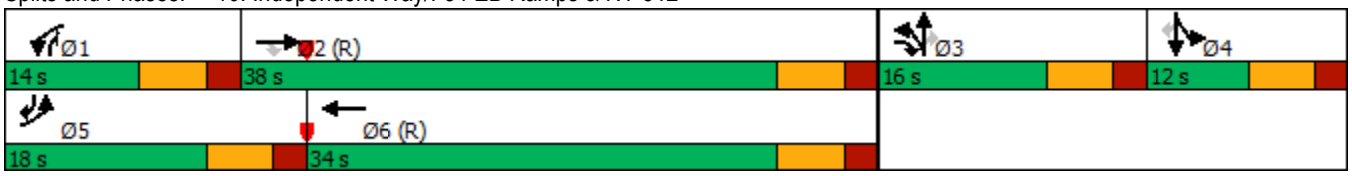
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 39.0		Intersection LOS: D	
Intersection Capacity Utilization 84.0%		ICU Level of Service E	
Analysis Period (min) 15			

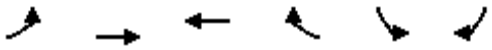
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

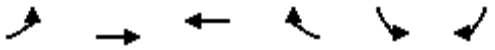
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	568	663	593	99	113	506
Future Volume (vph)	568	663	593	99	113	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1814	1909	1800	1480	1793	1669
Flt Permitted	0.221				0.950	
Satd. Flow (perm)	422	1909	1800	1480	1793	1669
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				108		148
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	8%	4%	0%
Adj. Flow (vph)	617	721	645	108	123	550
Shared Lane Traffic (%)						
Lane Group Flow (vph)	617	721	645	108	123	550
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOT	NYSDOT
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	25.0	65.0	40.0	15.0	15.0	25.0
Total Split (%)	31.3%	81.3%	50.0%	18.8%	18.8%	31.3%
Maximum Green (s)	19.0	59.0	34.0	9.0	9.0	19.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	59.7	59.7	34.7	49.0	8.3	33.3
Actuated g/C Ratio	0.75	0.75	0.43	0.61	0.10	0.42
v/c Ratio	0.96	0.51	0.83	0.11	0.66	0.71
Control Delay	33.8	5.0	31.4	1.7	52.6	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	5.0	31.4	1.7	52.6	19.4
LOS	C	A	C	A	D	B
Approach Delay		18.3	27.2		25.5	
Approach LOS		B	C		C	
Queue Length 50th (ft)	127	125	279	0	60	158
Queue Length 95th (ft)	m#143	m153	#476	17	#127	275
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	645	1424	781	919	201	780
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.51	0.83	0.12	0.61	0.71

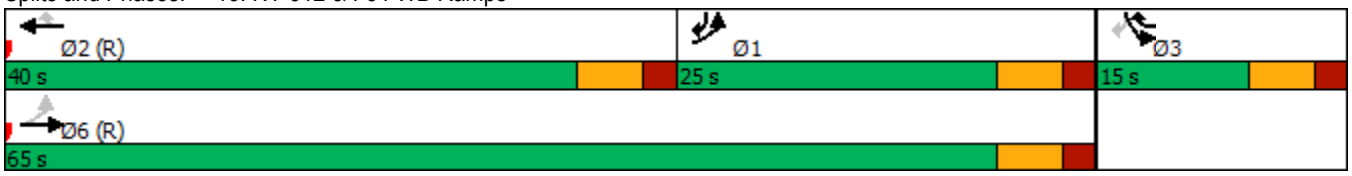
Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 60 (75%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	432	4	6	305	6	13
Future Volume (vph)	432	4	6	305	6	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.908	
Flt Protected				0.999	0.984	
Satd. Flow (prot)	1772	0	0	1810	1519	0
Flt Permitted				0.999	0.984	
Satd. Flow (perm)	1772	0	0	1810	1519	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	0%	5%	0%	14%
Adj. Flow (vph)	491	5	7	347	7	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	496	0	0	354	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.4

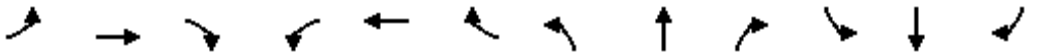
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	432	4	6	305	6	13
Future Vol, veh/h	432	4	6	305	6	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	0	0	5	0	14
Mvmt Flow	491	5	7	347	7	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	496	0	855	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	-	-	4.1	-	7.2	6.74
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.426
Pot Cap-1 Maneuver	-	-	1078	-	274	522
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1078	-	272	522
Mov Cap-2 Maneuver	-	-	-	-	272	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	405	-	-	1078	-
HCM Lane V/C Ratio	0.053	-	-	0.006	-
HCM Control Delay (s)	14.4	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	36	2	197	9	871	7	214	188	883	230	16
Future Volume (vph)	26	36	2	197	9	871	7	214	188	883	230	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850		0.990	
Flt Protected		0.980			0.954		0.950			0.950		
Satd. Flow (prot)	0	1784	0	0	1736	1561	1762	1900	1669	1710	1828	0
Flt Permitted		0.823			0.686		0.600			0.497		
Satd. Flow (perm)	0	1498	0	0	1249	1561	1113	1900	1669	895	1828	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				480			196		5	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	6%	0%	2%	0%	1%	0%	1%	1%	1%	2%	0%
Adj. Flow (vph)	27	38	2	205	9	907	7	223	196	920	240	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	214	907	7	223	196	920	257	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



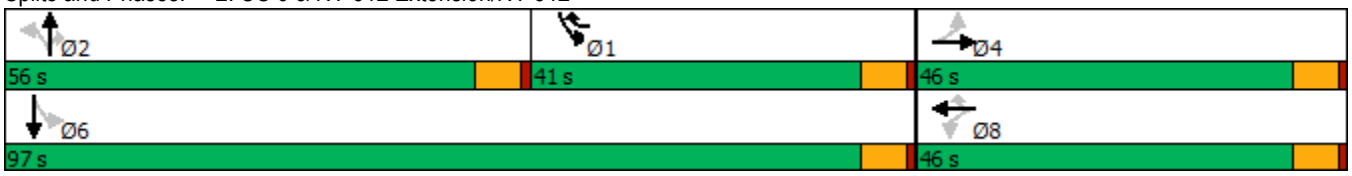
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		20.4			20.4	62.0	16.8	16.8	16.8	58.5	58.5	
Actuated g/C Ratio		0.22			0.22	0.68	0.18	0.18	0.18	0.64	0.64	
v/c Ratio		0.20			0.77	0.75	0.03	0.64	0.42	1.03	0.22	
Control Delay		30.3			52.2	8.9	32.3	43.8	8.0	61.5	8.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		30.3			52.2	8.9	32.3	43.8	8.0	61.5	8.0	
LOS		C			D	A	C	D	A	E	A	
Approach Delay		30.3			17.2			27.1			49.8	
Approach LOS		C			B			C			D	
Queue Length 50th (ft)		30			114	112	3	118	0	~424	53	
Queue Length 95th (ft)		71			214	350	16	215	57	#812	116	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		669			557	1216	620	1060	1017	893	1746	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.10			0.38	0.75	0.01	0.21	0.19	1.03	0.15	

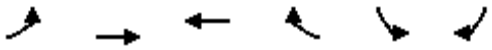
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 91			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 32.8		Intersection LOS: C	
Intersection Capacity Utilization 93.2%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

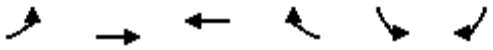
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	1115	1082	29	21	3
Future Volume (vph)	5	1115	1082	29	21	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)		2%	-2%		-2%	
Storage Length (ft)	100			0	0	110
Storage Lanes	1			0	2	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95
Frt			0.996		0.982	
Flt Protected	0.950				0.958	
Satd. Flow (prot)	1787	3504	3584	0	3177	0
Flt Permitted	0.179				0.958	
Satd. Flow (perm)	337	3504	3584	0	3177	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			6		3	
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	1%	14%	20%	0%
Adj. Flow (vph)	5	1161	1127	30	22	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	1161	1157	0	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		28	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	0.91	0.91
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		2	
Detector Template					NYSDOT	
Leading Detector (ft)	0	0	0		83	
Trailing Detector (ft)	0	0	0		-5	
Detector 1 Position(ft)	0	0	0		-5	
Detector 1 Size(ft)	20	6	6		40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					43	
Detector 2 Size(ft)					40	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	

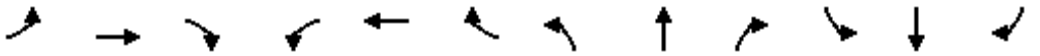


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		3	
Permitted Phases	6					
Detector Phase	1	6	2		3	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	
Total Split (s)	11.0	65.0	54.0		15.0	
Total Split (%)	13.8%	81.3%	67.5%		18.8%	
Maximum Green (s)	5.0	59.0	48.0		9.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	Min	Min		None	
Act Effct Green (s)	32.2	38.0	36.7		6.4	
Actuated g/C Ratio	0.80	0.94	0.91		0.16	
v/c Ratio	0.01	0.35	0.35		0.05	
Control Delay	1.8	1.5	3.2		19.4	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	1.8	1.5	3.2		19.4	
LOS	A	A	A		B	
Approach Delay		1.5	3.2		19.4	
Approach LOS		A	A		B	
Queue Length 50th (ft)	0	0	0		1	
Queue Length 95th (ft)	3	112	202		14	
Internal Link Dist (ft)		1236	450		1172	
Turn Bay Length (ft)	100					
Base Capacity (vph)	465	3422	3383		774	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.01	0.34	0.34		0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 40.3			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.35			
Intersection Signal Delay: 2.5		Intersection LOS: A	
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: NY 312 & Pugsley Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	365	336	460	531	561	112	418	235	427	80	222	149
Future Volume (vph)	365	336	460	531	561	112	418	235	427	80	222	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.975				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	1853	1591	3450	3474	0	3537	1845	1615	1662	1881	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	1853	1591	3450	3474	0	3537	1845	1615	1662	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		27				239			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	2%	1%	2%	2%	1%	0%	4%	1%	5%	1%	1%
Adj. Flow (vph)	372	343	469	542	572	114	427	240	436	82	227	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	372	343	469	542	686	0	427	240	436	82	227	152
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	24.0	23.0	18.0	24.0		23.0	23.0	18.0	15.0	15.0	18.0
Total Split (%)	22.5%	30.0%	28.8%	22.5%	30.0%		28.8%	28.8%	22.5%	18.8%	18.8%	22.5%
Maximum Green (s)	12.0	18.0	17.0	12.0	18.0		17.0	17.0	12.0	9.0	9.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	11.4	19.8	41.0	12.0	20.3		15.2	15.2	27.2	9.0	9.0	26.4
Actuated g/C Ratio	0.14	0.25	0.51	0.15	0.25		0.19	0.19	0.34	0.11	0.11	0.33
v/c Ratio	0.77	0.75	0.54	1.05	0.76		0.63	0.68	0.62	0.44	1.08	0.25
Control Delay	44.7	41.1	12.0	79.3	35.9		34.1	40.4	8.9	41.3	120.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	41.1	12.0	79.3	35.9		34.1	40.4	8.9	41.3	120.9	6.8
LOS	D	D	B	E	D		C	D	A	D	F	A
Approach Delay		30.7			55.0			25.5			69.1	
Approach LOS		C			E			C			E	
Queue Length 50th (ft)	92	164	105	~152	185		98	109	37	39	~128	10
Queue Length 95th (ft)	#148	#300	188	m#246	#267		144	183	80	82	#262	49
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	507	457	907	517	902		751	392	707	186	211	621
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.75	0.52	1.05	0.76		0.57	0.61	0.62	0.44	1.08	0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 41.2		Intersection LOS: D	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

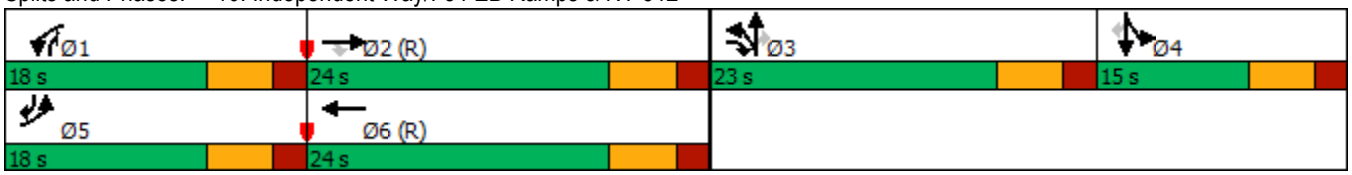
Queue shown is maximum after two cycles.

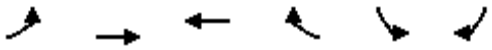
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

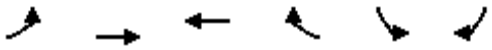
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	316	528	632	116	61	572
Future Volume (vph)	316	528	632	116	61	572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1891	1783	1583	1865	1652
Flt Permitted	0.185				0.950	
Satd. Flow (perm)	346	1891	1783	1583	1865	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				118		148
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	1%	2%	1%	0%	1%
Adj. Flow (vph)	322	539	645	118	62	584
Shared Lane Traffic (%)						
Lane Group Flow (vph)	322	539	645	118	62	584
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	30.0	70.0	40.0	10.0	10.0	30.0
Total Split (%)	37.5%	87.5%	50.0%	12.5%	12.5%	37.5%
Maximum Green (s)	24.0	64.0	34.0	4.0	4.0	24.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	64.0	64.0	37.0	47.0	4.0	31.0
Actuated g/C Ratio	0.80	0.80	0.46	0.59	0.05	0.39
v/c Ratio	0.49	0.36	0.78	0.12	0.67	0.80
Control Delay	10.0	3.1	28.0	2.1	72.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	3.1	28.0	2.1	72.2	24.8
LOS	B	A	C	A	E	C
Approach Delay		5.7	24.0		29.4	
Approach LOS		A	C		C	
Queue Length 50th (ft)	76	43	281	0	31	178
Queue Length 95th (ft)	m120	101	#480	21	#92	309
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	706	1512	825	979	93	787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.36	0.78	0.12	0.67	0.74

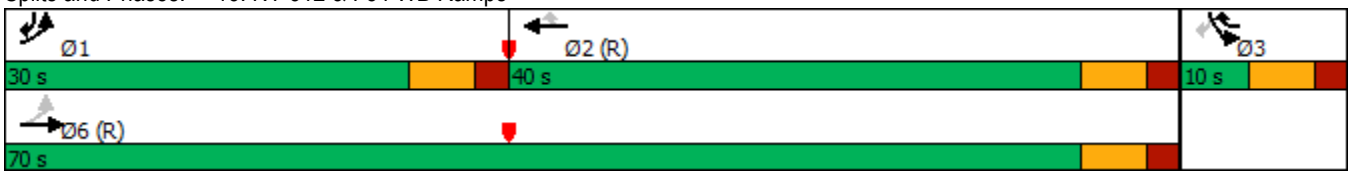
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 18.6		Intersection LOS: B	
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	269	2	4	232	4	2
Future Volume (vph)	269	2	4	232	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.961	
Flt Protected				0.999	0.966	
Satd. Flow (prot)	1772	0	0	1810	1729	0
Flt Permitted				0.999	0.966	
Satd. Flow (perm)	1772	0	0	1810	1729	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	0%	5%	0%	0%
Adj. Flow (vph)	306	2	5	264	5	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	308	0	0	269	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

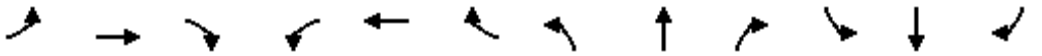
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	269	2	4	232	4	2
Future Vol, veh/h	269	2	4	232	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	0	0	5	0	0
Mvmt Flow	306	2	5	264	5	2

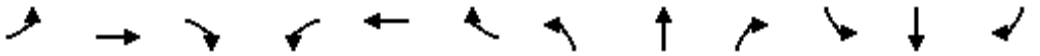
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	308	0	581	307
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	274	-
Critical Hdwy	-	-	4.1	-	7.2	6.6
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1264	-	421	713
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	419	713
Mov Cap-2 Maneuver	-	-	-	-	419	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	-	-	1264	-
HCM Lane V/C Ratio	0.014	-	-	0.004	-
HCM Control Delay (s)	12.5	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	26	22	245	12	766	3	207	157	730	224	2
Future Volume (vph)	5	26	22	245	12	766	3	207	157	730	224	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850			0.850		0.999	
Flt Protected		0.996			0.954		0.950			0.950		
Satd. Flow (prot)	0	1549	0	0	1574	1502	1762	1761	1479	1661	1725	0
Flt Permitted		0.971			0.694		0.583			0.468		
Satd. Flow (perm)	0	1511	0	0	1145	1502	1081	1761	1479	818	1725	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				473			173		1	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	40%	26%	0%	13%	0%	5%	0%	9%	14%	4%	9%	0%
Adj. Flow (vph)	5	29	24	269	13	842	3	227	173	802	246	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	282	842	3	227	173	802	248	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



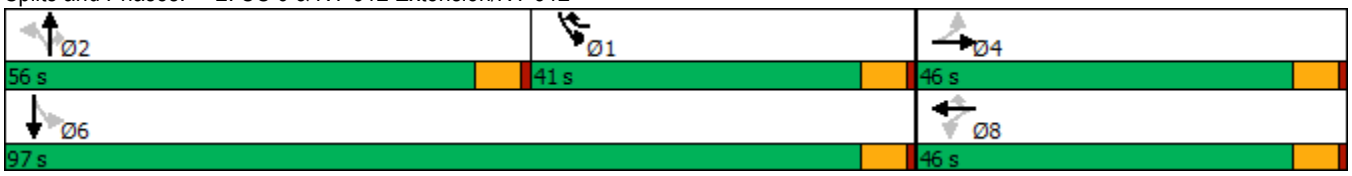
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		30.0			30.0	71.6	19.2	19.2	19.2	60.8	60.8	
Actuated g/C Ratio		0.29			0.29	0.70	0.19	0.19	0.19	0.59	0.59	
v/c Ratio		0.13			0.85	0.71	0.01	0.69	0.42	1.04	0.24	
Control Delay		18.6			57.9	7.8	36.3	52.0	9.0	70.4	11.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		18.6			57.9	7.8	36.3	52.0	9.0	70.4	11.9	
LOS		B			E	A	D	D	A	E	B	
Approach Delay		18.6			20.3			33.4			56.6	
Approach LOS		B			C			C			E	
Queue Length 50th (ft)		16			173	106	2	141	0	~443	74	
Queue Length 95th (ft)		49			#322	295	10	243	57	#781	140	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		610			451	1188	532	868	816	773	1520	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.10			0.63	0.71	0.01	0.26	0.21	1.04	0.16	

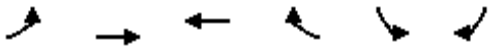
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 103			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 36.7		Intersection LOS: D	
Intersection Capacity Utilization 87.2%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

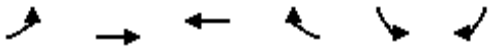
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





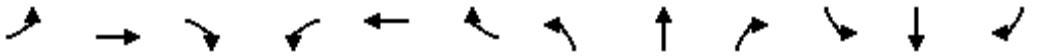
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	39	899	1079	131	37	11
Future Volume (vph)	39	899	1079	131	37	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)		2%	-2%		-2%	
Storage Length (ft)	100			0	0	110
Storage Lanes	1			0	2	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95
Frt			0.984		0.965	
Flt Protected	0.950				0.963	
Satd. Flow (prot)	1718	3372	3329	0	3452	0
Flt Permitted	0.119				0.963	
Satd. Flow (perm)	215	3372	3329	0	3452	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			33		14	
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	6%	8%	6%	9%	0%
Adj. Flow (vph)	48	1110	1332	162	46	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	1110	1494	0	60	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		28	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	0.91	0.91
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		2	
Detector Template					NYSDOT	
Leading Detector (ft)	0	0	0		83	
Trailing Detector (ft)	0	0	0		-5	
Detector 1 Position(ft)	0	0	0		-5	
Detector 1 Size(ft)	20	6	6		40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					43	
Detector 2 Size(ft)					40	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	



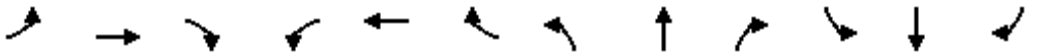
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		3	
Permitted Phases	6					
Detector Phase	1	6	2		3	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	
Total Split (s)	11.0	69.0	58.0		11.0	
Total Split (%)	13.8%	86.3%	72.5%		13.8%	
Maximum Green (s)	5.0	63.0	52.0		5.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	65.2	66.4	59.8		5.0	
Actuated g/C Ratio	0.82	0.83	0.75		0.06	
v/c Ratio	0.18	0.40	0.60		0.26	
Control Delay	3.3	2.8	5.8		32.2	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.3	2.8	5.8		32.2	
LOS	A	A	A		C	
Approach Delay		2.8	5.8		32.2	
Approach LOS		A	A		C	
Queue Length 50th (ft)	4	66	165		11	
Queue Length 95th (ft)	8	75	150		26	
Internal Link Dist (ft)		1236	450		1172	
Turn Bay Length (ft)	100					
Base Capacity (vph)	269	2798	2496		228	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.18	0.40	0.60		0.26	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 48.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: NY 312 & Pugsley Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	473	174	260	702	131	156	114	153	228	201	456
Future Volume (vph)	265	473	174	260	702	131	156	114	153	228	201	456
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3287	1750	1575	3320	3235	0	3368	1810	1496	1646	1827	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3287	1750	1575	3320	3235	0	3368	1810	1496	1646	1827	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		27				137			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	8%	2%	6%	9%	12%	5%	6%	9%	6%	4%	2%
Adj. Flow (vph)	298	531	196	292	789	147	175	128	172	256	226	512
Shared Lane Traffic (%)												
Lane Group Flow (vph)	298	531	196	292	936	0	175	128	172	256	226	512
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	33.0	14.0	14.0	29.0		14.0	14.0	14.0	19.0	19.0	18.0
Total Split (%)	22.5%	41.3%	17.5%	17.5%	36.3%		17.5%	17.5%	17.5%	23.8%	23.8%	22.5%
Maximum Green (s)	12.0	27.0	8.0	8.0	23.0		8.0	8.0	8.0	13.0	13.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	11.0	27.3	41.0	8.0	24.3		7.7	7.7	15.7	13.0	13.0	30.0
Actuated g/C Ratio	0.14	0.34	0.51	0.10	0.30		0.10	0.10	0.20	0.16	0.16	0.38
v/c Ratio	0.66	0.89	0.23	0.88	0.94		0.54	0.74	0.43	0.96	0.76	0.76
Control Delay	38.0	41.6	4.6	48.7	38.9		41.1	61.1	7.8	81.9	50.7	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	41.6	4.6	48.7	38.9		41.1	61.1	7.8	81.9	50.7	25.0
LOS	D	D	A	D	D		D	E	A	F	D	C
Approach Delay		33.5			41.2			34.4			45.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	73	194	16	73	257		43	63	8	128	109	164
Queue Length 95th (ft)	111	#404	44	m#101	m#322		73	#142	37	#265	#212	281
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	493	597	873	332	1000		336	181	403	267	296	688
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.89	0.22	0.88	0.94		0.52	0.71	0.43	0.96	0.76	0.74

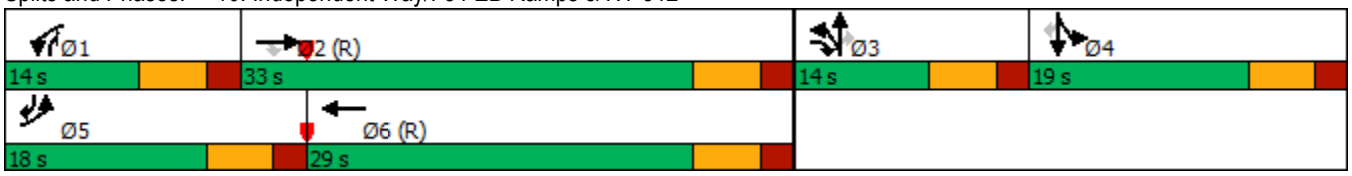
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 39.4		Intersection LOS: D	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

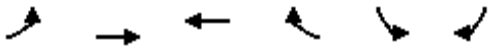
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

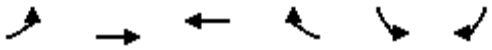
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	182	672	616	39	125	477
Future Volume (vph)	182	672	616	39	125	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1728	1854	1765	1454	1760	1652
Flt Permitted	0.165				0.950	
Satd. Flow (perm)	300	1854	1765	1454	1760	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				45		121
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	3%	3%	10%	6%	1%
Adj. Flow (vph)	209	772	708	45	144	548
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	772	708	45	144	548
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	25.0	65.0	40.0	15.0	15.0	25.0
Total Split (%)	31.3%	81.3%	50.0%	18.8%	18.8%	31.3%
Maximum Green (s)	19.0	59.0	34.0	9.0	9.0	19.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	59.4	59.4	34.4	49.0	8.6	33.6
Actuated g/C Ratio	0.74	0.74	0.43	0.61	0.11	0.42
v/c Ratio	0.37	0.56	0.93	0.05	0.76	0.72
Control Delay	9.8	3.2	43.8	2.2	61.4	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	3.2	43.8	2.2	61.4	21.0
LOS	A	A	D	A	E	C
Approach Delay		4.6	41.3		29.4	
Approach LOS		A	D		C	
Queue Length 50th (ft)	24	49	329	0	71	170
Queue Length 95th (ft)	m33	m64	#525	11	#149	271
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	562	1377	759	894	198	763
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.56	0.93	0.05	0.73	0.72

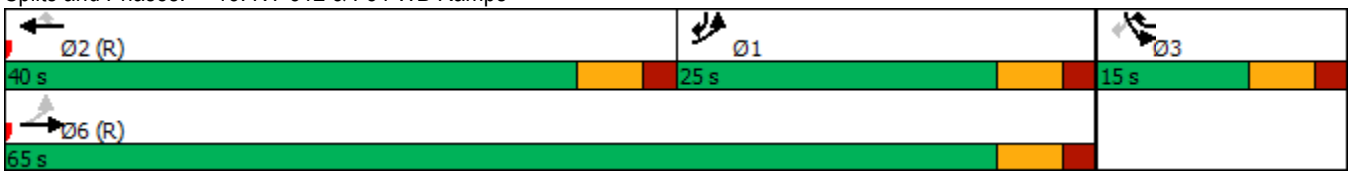
Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 15 (19%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 23.1	Intersection LOS: C
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	262	5	10	500	4	4
Future Volume (vph)	262	5	10	500	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997				0.932	
Flt Protected				0.999	0.976	
Satd. Flow (prot)	1512	0	0	1742	1129	0
Flt Permitted				0.999	0.976	
Satd. Flow (perm)	1512	0	0	1742	1129	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	19%	33%	60%	8%	33%	67%
Adj. Flow (vph)	345	7	13	658	5	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	671	10	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

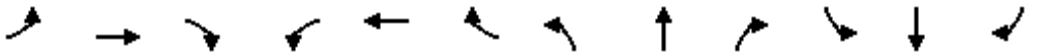
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	262	5	10	500	4	4
Future Vol, veh/h	262	5	10	500	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	19	33	60	8	33	67
Mvmt Flow	345	7	13	658	5	5

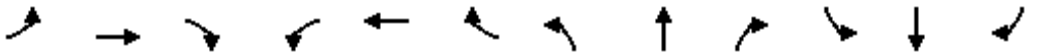
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	1033	349
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	-	-	4.7	-	7.53	7.27
Critical Hdwy Stg 1	-	-	-	-	6.53	-
Critical Hdwy Stg 2	-	-	-	-	6.53	-
Follow-up Hdwy	-	-	2.74	-	3.797	3.903
Pot Cap-1 Maneuver	-	-	946	-	179	548
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	385	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	946	-	175	548
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	377	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	265	-	-	946	-
HCM Lane V/C Ratio	0.04	-	-	0.014	-
HCM Control Delay (s)	19.1	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	15	2	146	19	984	0	267	235	922	226	8
Future Volume (vph)	8	15	2	146	19	984	0	267	235	922	226	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991				0.850			0.850		0.995	
Flt Protected		0.984			0.958					0.950		
Satd. Flow (prot)	0	1871	0	0	1762	1561	1855	1845	1636	1727	1819	0
Flt Permitted		0.887			0.728					0.362		
Satd. Flow (perm)	0	1687	0	0	1339	1561	1855	1845	1636	658	1819	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				321			290		2	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	4%	3%	0%	3%	0%
Adj. Flow (vph)	10	19	2	180	23	1215	0	330	290	1138	279	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	203	1215	0	330	290	1138	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



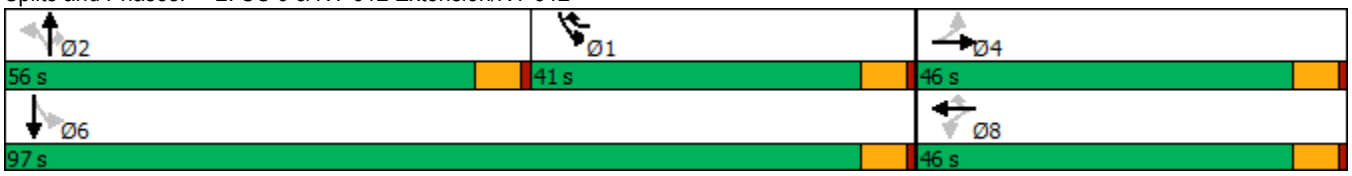
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		20.5			20.5	62.4		24.0	24.0	65.8	65.8	
Actuated g/C Ratio		0.21			0.21	0.63		0.24	0.24	0.67	0.67	
v/c Ratio		0.09			0.73	1.10		0.74	0.47	1.38	0.24	
Control Delay		31.6			53.2	74.9		45.4	6.4	201.6	7.8	
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		31.6			53.2	74.9		45.4	6.4	201.6	7.8	
LOS		C			D	E		D	A	F	A	
Approach Delay		31.6			71.8			27.1			162.3	
Approach LOS		C			E			C			F	
Queue Length 50th (ft)		15			118	~782		188	0	~812	62	
Queue Length 95th (ft)		39			195	#1047		279	39	#1127	116	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)									260	390		
Base Capacity (vph)		699			554	1105		955	986	826	1654	
Starvation Cap Reductn		0			0	0		0	0	0	0	
Spillback Cap Reductn		0			0	0		0	0	0	0	
Storage Cap Reductn		0			0	0		0	0	0	0	
Reduced v/c Ratio		0.04			0.37	1.10		0.35	0.29	1.38	0.17	

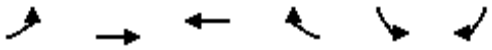
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 98.6			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.38			
Intersection Signal Delay: 100.5		Intersection LOS: F	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

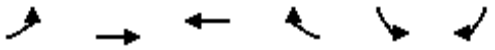
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





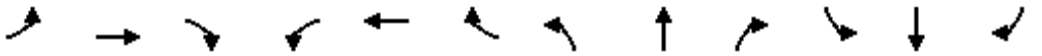
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	86	1128	1124	212	137	41
Future Volume (vph)	86	1128	1124	212	137	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)		2%	-2%		-2%	
Storage Length (ft)	100			0	0	110
Storage Lanes	1			0	2	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95
Frt			0.976		0.965	
Flt Protected	0.950				0.963	
Satd. Flow (prot)	1787	3504	3559	0	3662	0
Flt Permitted	0.087				0.963	
Satd. Flow (perm)	164	3504	3559	0	3662	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			44		43	
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	100	1312	1307	247	159	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	1312	1554	0	207	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		28	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	0.91	0.91
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		2	
Detector Template					NYSDOT	
Leading Detector (ft)	0	0	0		83	
Trailing Detector (ft)	0	0	0		-5	
Detector 1 Position(ft)	0	0	0		-5	
Detector 1 Size(ft)	20	6	6		40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					43	
Detector 2 Size(ft)					40	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	



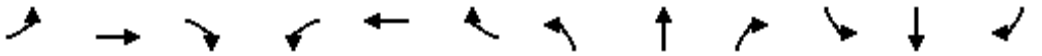
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		3	
Permitted Phases	6					
Detector Phase	1	6	2		3	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	
Total Split (s)	11.0	62.0	51.0		18.0	
Total Split (%)	13.8%	77.5%	63.8%		22.5%	
Maximum Green (s)	5.0	56.0	45.0		12.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	59.0	59.0	50.2		9.0	
Actuated g/C Ratio	0.74	0.74	0.63		0.11	
v/c Ratio	0.45	0.51	0.69		0.46	
Control Delay	11.3	5.5	10.7		29.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	11.3	5.5	10.7		29.1	
LOS	B	A	B		C	
Approach Delay		5.9	10.7		29.1	
Approach LOS		A	B		C	
Queue Length 50th (ft)	11	115	198		40	
Queue Length 95th (ft)	32	164	244		65	
Internal Link Dist (ft)		1236	450		1172	
Turn Bay Length (ft)	100					
Base Capacity (vph)	222	2582	2247		585	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.45	0.51	0.69		0.35	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: NY 312 & Pugsley Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	714	304	323	775	112	351	124	421	113	108	223
Future Volume (vph)	302	714	304	323	775	112	351	124	421	113	108	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.981				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3484	1872	1591	3450	3489	0	3467	1919	1599	1711	1881	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3484	1872	1591	3450	3489	0	3467	1919	1599	1711	1881	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		22				123			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	1%	1%	2%	2%	2%	2%	0%	2%	2%	1%	2%
Adj. Flow (vph)	308	729	310	330	791	114	358	127	430	115	110	228
Shared Lane Traffic (%)												
Lane Group Flow (vph)	308	729	310	330	905	0	358	127	430	115	110	228
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	38.0	16.0	14.0	34.0		16.0	16.0	14.0	12.0	12.0	18.0
Total Split (%)	22.5%	47.5%	20.0%	17.5%	42.5%		20.0%	20.0%	17.5%	15.0%	15.0%	22.5%
Maximum Green (s)	12.0	32.0	10.0	8.0	28.0		10.0	10.0	8.0	6.0	6.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	10.7	32.1	48.0	8.0	29.4		9.9	9.9	17.9	6.0	6.0	22.7
Actuated g/C Ratio	0.13	0.40	0.60	0.10	0.37		0.12	0.12	0.22	0.08	0.08	0.28
v/c Ratio	0.66	0.97	0.31	0.96	0.70		0.83	0.54	0.95	0.90	0.78	0.42
Control Delay	42.5	46.9	4.1	63.4	20.0		52.6	41.9	48.8	96.8	73.0	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	46.9	4.1	63.4	20.0		52.6	41.9	48.8	96.8	73.0	13.3
LOS	D	D	A	E	C		D	D	D	F	E	B
Approach Delay		36.0			31.6			49.3			49.0	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	82	221	22	90	150		91	60	104	58	55	40
Queue Length 95th (ft)	126	#562	43	m#118	m224		#159	114	#248	#154	#140	98
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	522	750	1005	345	1294		433	239	453	128	141	561
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.97	0.31	0.96	0.70		0.83	0.53	0.95	0.90	0.78	0.41

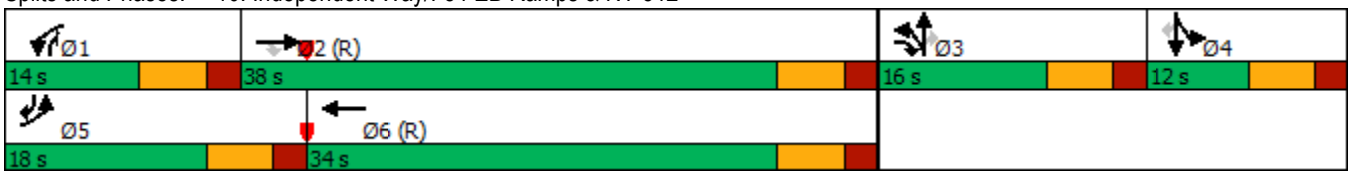
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 39.2		Intersection LOS: D	
Intersection Capacity Utilization 84.9%		ICU Level of Service E	
Analysis Period (min) 15			

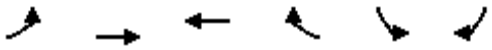
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

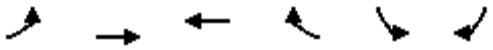
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	577	670	631	99	113	580
Future Volume (vph)	577	670	631	99	113	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1814	1909	1800	1480	1793	1669
Flt Permitted	0.187				0.950	
Satd. Flow (perm)	357	1909	1800	1480	1793	1669
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				91		130
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	8%	4%	0%
Adj. Flow (vph)	627	728	686	108	123	630
Shared Lane Traffic (%)						
Lane Group Flow (vph)	627	728	686	108	123	630
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	25.0	65.0	40.0	15.0	15.0	25.0
Total Split (%)	31.3%	81.3%	50.0%	18.8%	18.8%	31.3%
Maximum Green (s)	19.0	59.0	34.0	9.0	9.0	19.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag		Lead			Lag
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	59.7	59.7	34.7	49.0	8.3	33.3
Actuated g/C Ratio	0.75	0.75	0.43	0.61	0.10	0.42
v/c Ratio	1.02	0.51	0.88	0.11	0.66	0.82
Control Delay	50.6	5.1	36.1	2.3	52.6	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	5.1	36.1	2.3	52.6	26.6
LOS	D	A	D	A	D	C
Approach Delay		26.2	31.5		30.8	
Approach LOS		C	C		C	
Queue Length 50th (ft)	~139	135	308	3	60	215
Queue Length 95th (ft)	m#206	m152	#523	21	#127	#407
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	612	1424	781	912	201	770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.51	0.88	0.12	0.61	0.82

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 60 (75%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 86.4%	ICU Level of Service E
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.

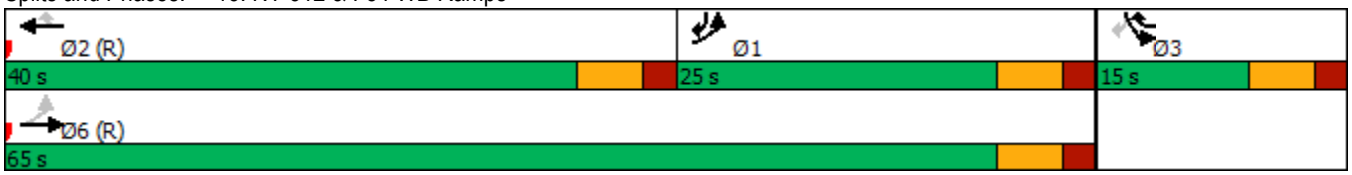
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	432	4	6	305	6	13
Future Volume (vph)	432	4	6	305	6	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.908	
Flt Protected				0.999	0.984	
Satd. Flow (prot)	1772	0	0	1810	1519	0
Flt Permitted				0.999	0.984	
Satd. Flow (perm)	1772	0	0	1810	1519	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	0%	5%	0%	14%
Adj. Flow (vph)	491	5	7	347	7	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	496	0	0	354	22	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

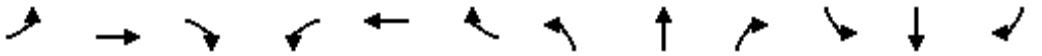
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	432	4	6	305	6	13
Future Vol, veh/h	432	4	6	305	6	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	0	0	5	0	14
Mvmt Flow	491	5	7	347	7	15

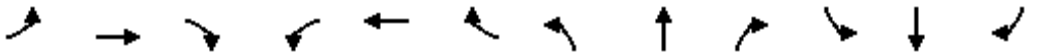
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	496	0	855	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	-	-	4.1	-	7.2	6.74
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.426
Pot Cap-1 Maneuver	-	-	1078	-	274	522
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1078	-	272	522
Mov Cap-2 Maneuver	-	-	-	-	272	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	405	-	-	1078	-
HCM Lane V/C Ratio	0.053	-	-	0.006	-
HCM Control Delay (s)	14.4	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	36	2	208	9	930	7	214	201	955	230	16
Future Volume (vph)	26	36	2	208	9	930	7	214	201	955	230	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850		0.990	
Flt Protected		0.980			0.954		0.950			0.950		
Satd. Flow (prot)	0	1784	0	0	1736	1561	1762	1900	1669	1710	1828	0
Flt Permitted		0.821			0.686		0.600			0.495		
Satd. Flow (perm)	0	1494	0	0	1249	1561	1113	1900	1669	891	1828	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				480			209		5	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	6%	0%	2%	0%	1%	0%	1%	1%	1%	2%	0%
Adj. Flow (vph)	27	38	2	217	9	969	7	223	209	995	240	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	226	969	7	223	209	995	257	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



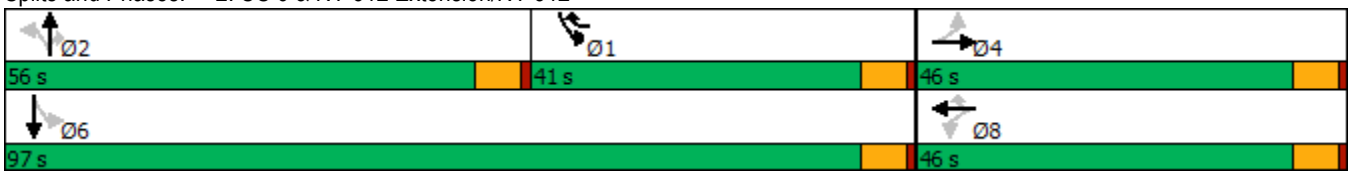
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	46.0	46.0		46.0	46.0	41.0	56.0	56.0	56.0	41.0	97.0	
Total Split (%)	32.2%	32.2%		32.2%	32.2%	28.7%	39.2%	39.2%	39.2%	28.7%	67.8%	
Maximum Green (s)	40.0	40.0		40.0	40.0	35.0	50.0	50.0	50.0	35.0	91.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		21.4			21.4	63.1	17.0	17.0	17.0	58.7	58.7	
Actuated g/C Ratio		0.23			0.23	0.68	0.18	0.18	0.18	0.64	0.64	
v/c Ratio		0.19			0.78	0.79	0.03	0.64	0.44	1.13	0.22	
Control Delay		29.9			52.8	11.2	32.9	44.4	8.0	95.7	8.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		29.9			52.8	11.2	32.9	44.4	8.0	95.7	8.5	
LOS		C			D	B	C	D	A	F	A	
Approach Delay		29.9			19.0			26.9			77.8	
Approach LOS		C			B			C			E	
Queue Length 50th (ft)		31			122	151	3	120	0	~531	55	
Queue Length 95th (ft)		71			227	456	16	218	60	#955	121	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		658			550	1219	612	1046	1012	882	1735	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.10			0.41	0.79	0.01	0.21	0.21	1.13	0.15	

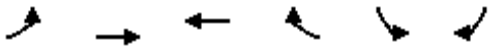
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 92.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 45.4		Intersection LOS: D	
Intersection Capacity Utilization 97.8%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

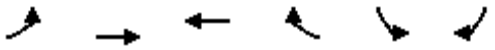
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





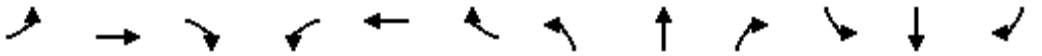
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	1115	1082	209	169	73
Future Volume (vph)	90	1115	1082	209	169	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	14
Grade (%)		2%	-2%		-2%	
Storage Length (ft)	100			0	0	110
Storage Lanes	1			0	2	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.97	0.95
Frt			0.976		0.955	
Flt Protected	0.950				0.966	
Satd. Flow (prot)	1787	3504	3451	0	3214	0
Flt Permitted	0.111				0.966	
Satd. Flow (perm)	209	3504	3451	0	3214	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			50		71	
Link Speed (mph)		45	45		30	
Link Distance (ft)		1316	530		1252	
Travel Time (s)		19.9	8.0		28.5	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	1%	14%	20%	0%
Adj. Flow (vph)	94	1161	1127	218	176	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	1161	1345	0	252	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		28	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	0.99	0.99	0.91	0.91
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		2	
Detector Template					NYSDOT	
Leading Detector (ft)	0	0	0		83	
Trailing Detector (ft)	0	0	0		-5	
Detector 1 Position(ft)	0	0	0		-5	
Detector 1 Size(ft)	20	6	6		40	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					43	
Detector 2 Size(ft)					40	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	



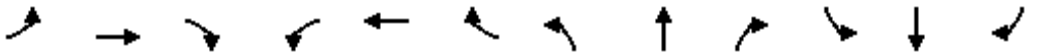
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA		Prot	
Protected Phases	1	6	2		3	
Permitted Phases	6					
Detector Phase	1	6	2		3	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	
Minimum Split (s)	11.0	11.0	11.0		11.0	
Total Split (s)	11.0	65.0	54.0		15.0	
Total Split (%)	13.8%	81.3%	67.5%		18.8%	
Maximum Green (s)	5.0	59.0	48.0		9.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	None	Min	Min		None	
Act Effct Green (s)	38.1	38.1	29.9		8.2	
Actuated g/C Ratio	0.65	0.65	0.51		0.14	
v/c Ratio	0.34	0.51	0.76		0.49	
Control Delay	7.0	6.1	15.0		22.4	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	7.0	6.1	15.0		22.4	
LOS	A	A	B		C	
Approach Delay		6.1	15.0		22.4	
Approach LOS		A	B		C	
Queue Length 50th (ft)	10	94	199		31	
Queue Length 95th (ft)	22	128	271		72	
Internal Link Dist (ft)		1236	450		1172	
Turn Bay Length (ft)	100					
Base Capacity (vph)	274	3295	2809		570	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.34	0.35	0.48		0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 58.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: NY 312 & Pugsley Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	433	417	460	531	686	112	418	235	427	80	222	205
Future Volume (vph)	433	417	460	531	686	112	418	235	427	80	222	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.979				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	1853	1591	3450	3487	0	3537	1845	1615	1662	1881	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	1853	1591	3450	3487	0	3537	1845	1615	1662	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		21				200			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	2%	1%	2%	2%	1%	0%	4%	1%	5%	1%	1%
Adj. Flow (vph)	442	426	469	542	700	114	427	240	436	82	227	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	442	426	469	542	814	0	427	240	436	82	227	209
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	24.0	23.0	18.0	24.0		23.0	23.0	18.0	15.0	15.0	18.0
Total Split (%)	22.5%	30.0%	28.8%	22.5%	30.0%		28.8%	28.8%	22.5%	18.8%	18.8%	22.5%
Maximum Green (s)	12.0	18.0	17.0	12.0	18.0		17.0	17.0	12.0	9.0	9.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	11.9	19.8	41.0	12.0	19.8		15.2	15.2	27.2	9.0	9.0	26.9
Actuated g/C Ratio	0.15	0.25	0.51	0.15	0.25		0.19	0.19	0.34	0.11	0.11	0.34
v/c Ratio	0.88	0.93	0.54	1.05	0.93		0.63	0.68	0.64	0.44	1.08	0.34
Control Delay	53.8	61.4	12.0	75.9	43.7		34.1	40.4	10.5	41.3	120.9	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	61.4	12.0	75.9	43.7		34.1	40.4	10.5	41.3	120.9	10.2
LOS	D	E	B	E	D		C	D	B	D	F	B
Approach Delay		41.6			56.6			26.1			63.6	
Approach LOS		D			E			C			E	
Queue Length 50th (ft)	112	~221	105	~153	~235		98	109	46	39	~128	30
Queue Length 95th (ft)	#192	#402	188	m#198	m#301		144	183	92	82	#262	80
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	507	457	907	517	880		751	392	681	186	211	621
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.93	0.52	1.05	0.93		0.57	0.61	0.64	0.44	1.08	0.34

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 45.0		Intersection LOS: D	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

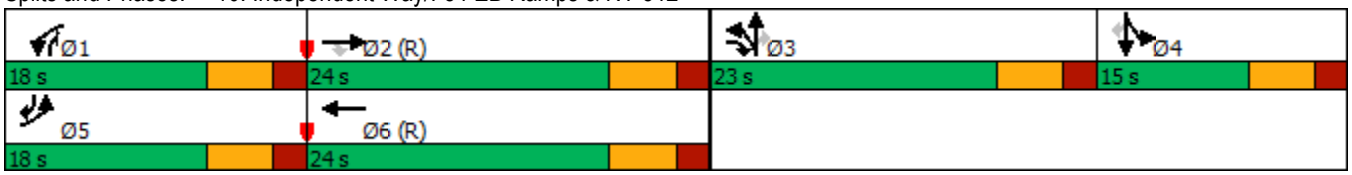
Queue shown is maximum after two cycles.

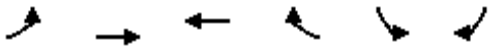
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

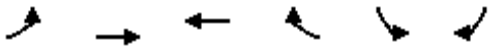
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	362	563	674	116	61	654
Future Volume (vph)	362	563	674	116	61	654
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1891	1783	1583	1865	1652
Flt Permitted	0.128				0.950	
Satd. Flow (perm)	240	1891	1783	1583	1865	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				118		129
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	1%	2%	1%	0%	1%
Adj. Flow (vph)	369	574	688	118	62	667
Shared Lane Traffic (%)						
Lane Group Flow (vph)	369	574	688	118	62	667
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	30.0	70.0	40.0	10.0	10.0	30.0
Total Split (%)	37.5%	87.5%	50.0%	12.5%	12.5%	37.5%
Maximum Green (s)	24.0	64.0	34.0	4.0	4.0	24.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	64.0	64.0	34.9	44.9	4.0	33.1
Actuated g/C Ratio	0.80	0.80	0.44	0.56	0.05	0.41
v/c Ratio	0.58	0.38	0.89	0.13	0.67	0.88
Control Delay	15.4	3.4	37.0	2.2	72.2	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	3.4	37.0	2.2	72.2	32.2
LOS	B	A	D	A	E	C
Approach Delay		8.1	31.9		35.6	
Approach LOS		A	C		D	
Queue Length 50th (ft)	114	91	312	0	31	242
Queue Length 95th (ft)	m167	m95	#528	21	#92	#456
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	653	1512	777	940	93	776
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.38	0.89	0.13	0.67	0.86

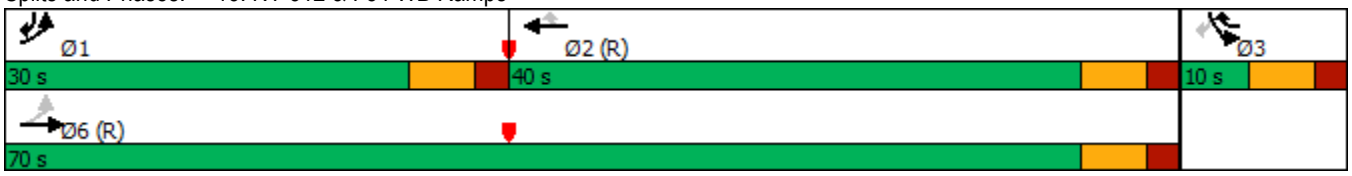
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 23.9		Intersection LOS: C	
Intersection Capacity Utilization 86.0%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	269	2	4	232	4	2
Future Volume (vph)	269	2	4	232	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Grade (%)	3%			-7%	4%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.961	
Flt Protected				0.999	0.966	
Satd. Flow (prot)	1772	0	0	1810	1729	0
Flt Permitted				0.999	0.966	
Satd. Flow (perm)	1772	0	0	1810	1729	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	339			334	611	
Travel Time (s)	5.8			5.7	13.9	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	0%	5%	0%	0%
Adj. Flow (vph)	306	2	5	264	5	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	308	0	0	269	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.00	1.00	1.03	1.03
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

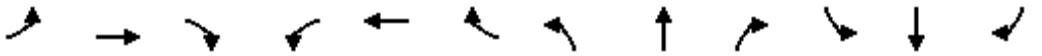
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	269	2	4	232	4	2
Future Vol, veh/h	269	2	4	232	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	3	-	-	-7	4	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	0	0	5	0	0
Mvmt Flow	306	2	5	264	5	2

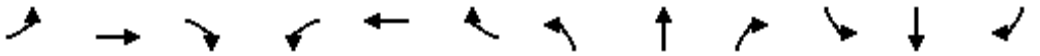
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	308	0	581	307
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	274	-
Critical Hdwy	-	-	4.1	-	7.2	6.6
Critical Hdwy Stg 1	-	-	-	-	6.2	-
Critical Hdwy Stg 2	-	-	-	-	6.2	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1264	-	421	713
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	419	713
Mov Cap-2 Maneuver	-	-	-	-	419	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	-	-	1264	-
HCM Lane V/C Ratio	0.014	-	-	0.004	-
HCM Control Delay (s)	12.5	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	26	22	245	12	766	3	207	157	730	224	2
Future Volume (vph)	5	26	22	245	12	766	3	207	157	730	224	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944				0.850			0.850		0.999	
Flt Protected		0.996			0.954		0.950			0.950		
Satd. Flow (prot)	0	1549	0	0	1574	1502	1762	1761	1479	1661	1725	0
Flt Permitted		0.972			0.694		0.568			0.444		
Satd. Flow (perm)	0	1512	0	0	1145	1502	1054	1761	1479	776	1725	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24				473			173		1	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	40%	26%	0%	13%	0%	5%	0%	9%	14%	4%	9%	0%
Adj. Flow (vph)	5	29	24	269	13	842	3	227	173	802	246	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	282	842	3	227	173	802	248	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



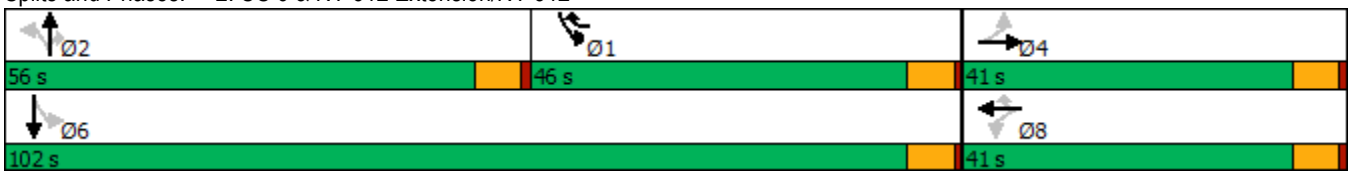
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	41.0	41.0		41.0	41.0	46.0	56.0	56.0	56.0	46.0	102.0	
Total Split (%)	28.7%	28.7%		28.7%	28.7%	32.2%	39.2%	39.2%	39.2%	32.2%	71.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0	40.0	50.0	50.0	50.0	40.0	96.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		33.0			33.0	79.2	19.6	19.6	19.6	65.9	65.9	
Actuated g/C Ratio		0.30			0.30	0.71	0.18	0.18	0.18	0.59	0.59	
v/c Ratio		0.12			0.83	0.70	0.02	0.73	0.43	1.03	0.24	
Control Delay		20.4			58.5	7.4	37.3	57.5	9.2	68.3	11.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		20.4			58.5	7.4	37.3	57.5	9.2	68.3	11.6	
LOS		C			E	A	D	E	A	E	B	
Approach Delay		20.4			20.2			36.6			54.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)		17			186	106	2	157	0	~495	82	
Queue Length 95th (ft)		53			#360	295	10	243	57	#742	125	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		495			363	1207	477	798	764	781	1500	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.12			0.78	0.70	0.01	0.28	0.23	1.03	0.17	

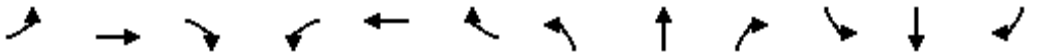
Intersection Summary			
Area Type:	Other		
Cycle Length: 143			
Actuated Cycle Length: 110.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 36.5		Intersection LOS: D	
Intersection Capacity Utilization 87.2%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

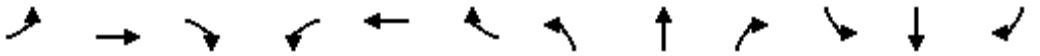
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	15	2	146	19	984	0	267	235	922	226	8
Future Volume (vph)	8	15	2	146	19	984	0	267	235	922	226	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991				0.850			0.850		0.995	
Flt Protected		0.984			0.958					0.950		
Satd. Flow (prot)	0	1871	0	0	1762	1561	1855	1845	1636	1727	1819	0
Flt Permitted		0.888			0.728					0.256		
Satd. Flow (perm)	0	1689	0	0	1339	1561	1855	1845	1636	465	1819	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				133			290		3	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	4%	3%	0%	3%	0%
Adj. Flow (vph)	10	19	2	180	23	1215	0	330	290	1138	279	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	203	1215	0	330	290	1138	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



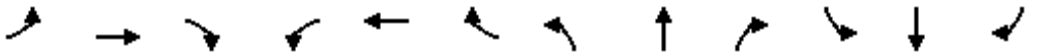
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	42.0	42.0		42.0	42.0	71.0	37.0	37.0	37.0	71.0	108.0	
Total Split (%)	28.0%	28.0%		28.0%	28.0%	47.3%	24.7%	24.7%	24.7%	47.3%	72.0%	
Maximum Green (s)	36.0	36.0		36.0	36.0	65.0	31.0	31.0	31.0	65.0	102.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		25.7			25.7	97.2		28.0	28.0	99.5	99.5	
Actuated g/C Ratio		0.19			0.19	0.71		0.20	0.20	0.72	0.72	
v/c Ratio		0.10			0.81	1.06		0.88	0.51	1.21	0.22	
Control Delay		44.1			78.0	64.4		77.6	8.6	134.7	7.3	
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay		44.1			78.0	64.4		77.6	8.6	134.7	7.3	
LOS		D			E	E		E	A	F	A	
Approach Delay		44.1			66.4			45.3			108.9	
Approach LOS		D			E			D			F	
Queue Length 50th (ft)		22			179	~1200		288	0	~1168	76	
Queue Length 95th (ft)		47			240	#1252		#389	46	#1329	123	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)									260	390		
Base Capacity (vph)		447			353	1143		419	596	938	1361	
Starvation Cap Reductn		0			0	0		0	0	0	0	
Spillback Cap Reductn		0			0	0		0	0	0	0	
Storage Cap Reductn		0			0	0		0	0	0	0	
Reduced v/c Ratio		0.07			0.58	1.06		0.79	0.49	1.21	0.21	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 137.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.21			
Intersection Signal Delay: 79.8		Intersection LOS: E	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			

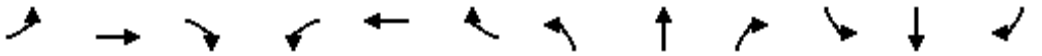
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	36	2	208	9	930	7	214	201	955	230	16
Future Volume (vph)	26	36	2	208	9	930	7	214	201	955	230	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	12	13	11	12	12
Grade (%)		-2%			-2%			-2%			2%	
Storage Length (ft)	0		0	180		0	105		260	390		0
Storage Lanes	0		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850			0.850		0.990	
Flt Protected		0.980			0.954		0.950			0.950		
Satd. Flow (prot)	0	1784	0	0	1736	1561	1762	1900	1669	1710	1828	0
Flt Permitted		0.773			0.686		0.600			0.450		
Satd. Flow (perm)	0	1407	0	0	1249	1561	1113	1900	1669	810	1828	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				119			209		8	
Link Speed (mph)		30			45			55			55	
Link Distance (ft)		395			1214			1103			839	
Travel Time (s)		9.0			18.4			13.7			10.4	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	6%	0%	2%	0%	1%	0%	1%	1%	1%	2%	0%
Adj. Flow (vph)	27	38	2	217	9	969	7	223	209	995	240	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	226	969	7	223	209	995	257	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	1.03	1.03	1.03	1.03	0.99	0.95	1.06	1.01	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	2	2	2	2	2	2	
Detector Template	Left	NYSDOT		Left	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	20	83		20	83	83	83	83	83	83	83	
Trailing Detector (ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Position(ft)	0	-5		0	-5	-5	-5	-5	-5	-5	-5	
Detector 1 Size(ft)	20	40		20	40	40	40	40	40	40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		43			43	43	43	43	43	43	43	
Detector 2 Size(ft)		40			40	40	40	40	40	40	40	
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	



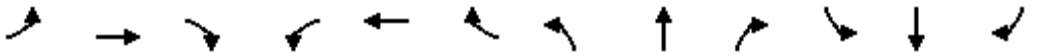
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	1	2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	15.0	
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	21.0	
Total Split (s)	25.0	25.0		25.0	25.0	47.0	18.0	18.0	18.0	47.0	65.0	
Total Split (%)	27.8%	27.8%		27.8%	27.8%	52.2%	20.0%	20.0%	20.0%	52.2%	72.2%	
Maximum Green (s)	19.0	19.0		19.0	19.0	41.0	12.0	12.0	12.0	41.0	59.0	
Yellow Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	
Recall Mode	None	None		None	None	None	None	None	None	None	Min	
Act Effct Green (s)		18.1			18.1	65.1	12.0	12.0	12.0	59.0	59.0	
Actuated g/C Ratio		0.20			0.20	0.73	0.13	0.13	0.13	0.66	0.66	
v/c Ratio		0.23			0.89	0.83	0.05	0.87	0.52	1.05	0.21	
Control Delay		31.2			71.0	14.8	35.0	71.6	10.4	63.6	6.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		31.2			71.0	14.8	35.0	71.6	10.4	63.6	6.4	
LOS		C			E	B	C	E	B	E	A	
Approach Delay		31.3			25.5			41.9			51.9	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)		31			125	268	4	126	0	~527	50	
Queue Length 95th (ft)		68			#254	496	17	#255	61	#767	82	
Internal Link Dist (ft)		315			1134			1023			759	
Turn Bay Length (ft)							105		260	390		
Base Capacity (vph)		301			266	1172	150	256	405	950	1213	
Starvation Cap Reductn		0			0	0	0	0	0	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.22			0.85	0.83	0.05	0.87	0.52	1.05	0.21	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 39.2		Intersection LOS: D	
Intersection Capacity Utilization 97.8%		ICU Level of Service F	
Analysis Period (min) 15			

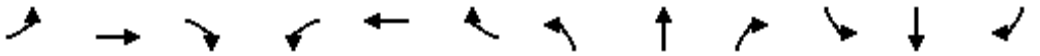
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: US 6 & NY 312 Extension/NY 312



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	433	417	460	531	686	112	418	235	427	80	222	205
Future Volume (vph)	433	417	460	531	686	112	418	235	427	80	222	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	12	12
Grade (%)		1%			-1%			-2%			0%	
Storage Length (ft)	200		250	300		300	0		0	320		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.979				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3383	1853	1591	3450	3487	0	3537	1845	1615	1662	1881	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3383	1853	1591	3450	3487	0	3537	1845	1615	1662	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		22				210			123
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		595			1417			424			453	
Travel Time (s)		9.0			21.5			9.6			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	3%	2%	1%	2%	2%	1%	0%	4%	1%	5%	1%	1%
Adj. Flow (vph)	442	426	469	542	700	114	427	240	436	82	227	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	442	426	469	542	814	0	427	240	436	82	227	209
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	0.99	0.99	0.99	0.99	0.99	0.99	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	0	0	2	0		2	2	2	2	2	2
Detector Template	NYSDOT			NYSDOT			NYSDOT	NYSDOT	NYSDOT	NYSDOT	NYSDOT	
Leading Detector (ft)	83	0	0	83	0		83	83	83	83	83	83
Trailing Detector (ft)	-5	0	0	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Position(ft)	-5	0	-5	-5	0		-5	-5	-5	-5	-5	-5
Detector 1 Size(ft)	40	6	40	40	6		40	40	40	40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43			43			43	43	43	43	43	43
Detector 2 Size(ft)	40			40			40	40	40	40	40	40
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	0.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	5	2	3	1	6		3	3	1	4	4	5
Permitted Phases			2						3			4
Detector Phase	5	2	3	1	6		3	3	1	4	4	5
Switch Phase												
Minimum Initial (s)	3.0	10.0	5.0	3.0	10.0		5.0	5.0	3.0	5.0	5.0	3.0
Minimum Split (s)	9.0	16.0	11.0	9.0	16.0		11.0	11.0	9.0	11.0	11.0	9.0
Total Split (s)	18.0	26.0	21.0	18.0	26.0		21.0	21.0	18.0	15.0	15.0	18.0
Total Split (%)	22.5%	32.5%	26.3%	22.5%	32.5%		26.3%	26.3%	22.5%	18.8%	18.8%	22.5%
Maximum Green (s)	12.0	20.0	15.0	12.0	20.0		15.0	15.0	12.0	9.0	9.0	12.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None	None	C-Max		None	None	None	None	None	None
Act Effct Green (s)	11.9	20.9	41.0	12.0	21.0		14.1	14.1	26.1	9.0	9.0	26.9
Actuated g/C Ratio	0.15	0.26	0.51	0.15	0.26		0.18	0.18	0.33	0.11	0.11	0.34
v/c Ratio	0.88	0.88	0.54	1.05	0.88		0.69	0.74	0.65	0.44	1.08	0.34
Control Delay	53.8	51.1	12.0	75.5	39.4		36.9	46.0	11.0	41.3	120.9	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	51.1	12.0	75.5	39.4		36.9	46.0	11.0	41.3	120.9	10.2
LOS	D	D	B	E	D		D	D	B	D	F	B
Approach Delay		38.3			53.8			28.7			63.6	
Approach LOS		D			D			C			E	
Queue Length 50th (ft)	112	208	105	~153	226		102	113	48	39	~128	30
Queue Length 95th (ft)	#192	#378	188	m#198	m#281		149	#208	98	82	#262	80
Internal Link Dist (ft)		515			1337			344			373	
Turn Bay Length (ft)	200		250	300						320		200
Base Capacity (vph)	507	484	891	517	930		663	345	668	186	211	621
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.88	0.53	1.05	0.88		0.64	0.70	0.65	0.44	1.08	0.34

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 43.8		Intersection LOS: D	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.

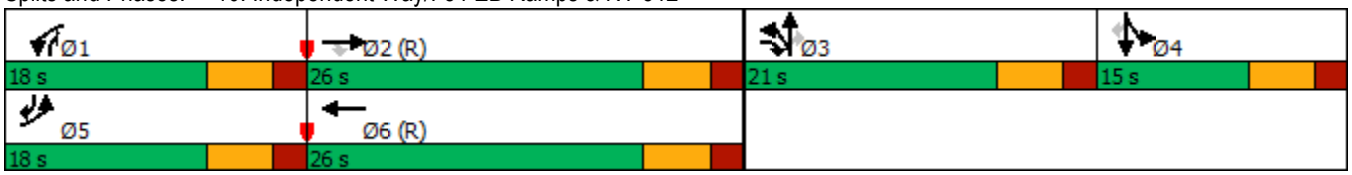
Queue shown is maximum after two cycles.

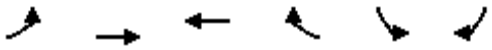
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

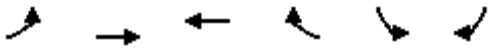
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Independent Way/I-84 EB Ramps & NY 312





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	362	563	674	116	61	654
Future Volume (vph)	362	563	674	116	61	654
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	12	13	13
Grade (%)		-1%	2%		0%	
Storage Length (ft)	325			250	125	0
Storage Lanes	1			1	1	1
Taper Length (ft)	50				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1778	1891	1783	1583	1865	1652
Flt Permitted	0.128				0.950	
Satd. Flow (perm)	240	1891	1783	1583	1865	1652
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				118		129
Link Speed (mph)		45	45		30	
Link Distance (ft)		1417	528		436	
Travel Time (s)		21.5	8.0		9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	1%	2%	1%	0%	1%
Adj. Flow (vph)	369	574	688	118	62	667
Shared Lane Traffic (%)						
Lane Group Flow (vph)	369	574	688	118	62	667
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	1.06	1.01	0.96	0.96
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	0	0	0	2	2
Detector Template	NYSDOT				NYSDOTNYSDOT	
Leading Detector (ft)	83	0	0	0	83	83
Trailing Detector (ft)	-5	0	0	0	-5	-5
Detector 1 Position(ft)	-5	0	0	0	-5	-5
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	43				43	43
Detector 2 Size(ft)	40				40	40
Detector 2 Type	Cl+Ex				Cl+Ex	Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0				0.0	0.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	1	6	2	3	3	1
Permitted Phases	6			2		3
Detector Phase	1	6	2	3	3	1
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	3.0	3.0	3.0
Minimum Split (s)	9.0	16.0	16.0	9.0	9.0	9.0
Total Split (s)	30.0	70.0	40.0	10.0	10.0	30.0
Total Split (%)	37.5%	87.5%	50.0%	12.5%	12.5%	37.5%
Maximum Green (s)	24.0	64.0	34.0	4.0	4.0	24.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	C-Max	None	None	None
Act Effct Green (s)	64.0	64.0	34.9	44.9	4.0	33.1
Actuated g/C Ratio	0.80	0.80	0.44	0.56	0.05	0.41
v/c Ratio	0.58	0.38	0.89	0.13	0.67	0.88
Control Delay	14.9	3.7	37.0	2.2	72.2	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	3.7	37.0	2.2	72.2	32.2
LOS	B	A	D	A	E	C
Approach Delay		8.0	31.9		35.6	
Approach LOS		A	C		D	
Queue Length 50th (ft)	112	71	312	0	31	242
Queue Length 95th (ft)	m164	m103	#528	21	#92	#456
Internal Link Dist (ft)		1337	448		356	
Turn Bay Length (ft)	325			250	125	
Base Capacity (vph)	653	1512	777	940	93	776
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.38	0.89	0.13	0.67	0.86

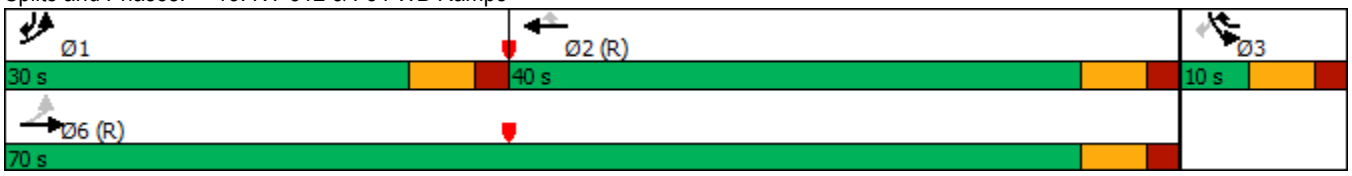
Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.9	Intersection LOS: C
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: NY 312 & I-84 WB Ramps



Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY

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TABLE NO. C-1
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
US ROUTE 6 & NY ROUTE 312

APPROACH		PEAK AM HOUR (7:30 - 8:30 AM)				PEAK PM HOUR (5:00 - 6:00 PM)				PEAK SAT HOUR (12:15 - 1:15 PM)			
		2021 EXISTING	2026 NO-BUILD	2026 BUILD	2026 BUILD W/ IMPV	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2026 BUILD W/ IMPV	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2026 BUILD W/ IMPV
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
US ROUTE 6													
NB	L	C 34.3	D 36.3	D 36.3	D 37.3	- 0.0	- 0.0	- 0.0	- 0.0	C 31.8	C 32.3	C 32.9	C 35.0
	T	D 44.6	D 52.0	D 52.0	E 57.5	D 43.7	D 45.8	D 45.4	E 77.6	D 44.8	D 43.8	D 44.4	E 71.6
	R	A 9.1	A 9.0	A 9.0	A 9.2	A 7.3	A 6.4	A 6.4	A 8.6	A 8.3	A 8.0	A 8.0	B 10.4
	OVERALL	***C 29.0***	***C 33.6***	***C 33.4***	***D 36.6***	***C 27.3***	***C 27.9***	***C 27.1***	***D 45.3***	***C 28.0***	***C 27.1***	***C 26.9***	***D 41.9***
SB	L	C 31.7	E 65.7	E 70.4	E 68.3	D 40.4	F 159.3	F 201.6	F 134.7	D 51.8	E 61.5	F 95.7	E 63.6
	TR	A 10.0	B 11.9	B 11.9	B 11.6	A 6.5	A 7.7	A 7.8	A 7.3	A 8.2	A 8.0	A 8.5	A 6.4
	OVERALL	***C 26.1***	***D 52.9***	***E 56.6***	***D 54.9***	***C 32.5***	***F 126.8***	***F 162.3***	***F 108.9***	***D 41.4***	***D 49.8***	***E 77.8***	***D 51.9***
NY ROUTE 312													
EB	***OVERALL***	***B 18.7***	***B 18.6***	***B 18.6***	***C 20.4***	***C 31.0***	***C 31.4***	***C 31.6***	***D 44.1***	***C 32.3***	***C 30.3***	***C 29.9***	***C 31.2***
WB	LT	D 49.7	E 57.9	E 57.9	E 58.5	D 48.9	D 52.9	D 53.2	E 78.0	D 52.9	D 52.2	D 52.8	E 71.0
	R	A 4.8	A 7.7	A 7.8	A 7.4	B 14.2	E 68.9	E 74.9	E 64.4	A 7.9	A 8.9	B 11.2	B 14.8
	OVERALL	***B 16.4***	***C 20.3***	***C 20.3***	***C 20.2***	***B 19.4***	***E 66.6***	***E 71.8***	***E 66.4***	***B 16.8***	***B 17.2***	***B 19.0***	***C 25.5***
INTERSECTION		**C 22.2**	**D 35.2**	**D 36.7**	**D 36.5**	**C 26.2**	**F 83.3**	**F 100.5**	**E 79.8**	**C 29.3**	**C 32.8**	**D 45.4**	**D 39.2**

Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY

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TABLE NO. C-2
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
NY ROUTE 312 & PUGSLEY ROAD

APPROACH		PEAK AM HOUR (7:30 - 8:30 AM)			PEAK PM HOUR (5:00 - 6:00 PM)			PEAK SAT HOUR (12:15 - 1:15 PM)		
		2021 EXISTING	2026 NO-BUILD ALT. B	2026 BUILD ALT. B	2021 EXISTING	2026 NO-BUILD ALT. B	2026 BUILD ALT. B	2021 EXISTING	2026 NO-BUILD ALT. B	2026 BUILD ALT. B
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
PUGSLEY ROAD										
SB	***OVERALL***	***f 57.3***	***C 32.4***	***C 32.2***	***f 60.9***	***C 29.0***	***C 29.1***	***f 65.2***	***B 19.4***	***C 22.4***
NY ROUTE 312										
EB	L	N/A	A 2.5	A 3.3	N/A	A 3.3	B 11.3	N/A	A 1.8	A 7.0
	LT/T	- 0.0	A 2.3	A 2.8	- 0.0	A 5.0	A 5.5	- 0.0	A 1.5	A 6.1
	OVERALL	***- 0.0***	***A 2.3***	***A 2.8***	***- 0.0***	***A 5.0***	***A 5.9***	***- 0.0***	***A 1.5***	***A 6.1***
WB	***OVERALL***	***- 0.0***	***A 4.3***	***A 5.8***	***- 0.0***	***A 6.7***	***B 10.7***	***- 0.0***	***A 3.2***	***B 15.0***
INTERSECTION		**a 0.2**	**A 4.0**	**A 5.1**	**a 0.1**	**A 7.1**	**A 9.8**	**a 0.2**	**A 2.5**	**B 11.7**

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TABLE NO. C-3
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
NY ROUTE 312 & I-84 EASTBOUND RAMPS/INDEPENDENT WAY

APPROACH		PEAK AM HOUR (7:30 - 8:30 AM)			PEAK PM HOUR (5:00 - 6:00 PM)			PEAK SAT HOUR (12:15 - 1:15 PM)			
		2021 EXISTING	2026 NO-BUILD	2026 BUILD	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2026 BUILD W/ IMPV
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
I-84 EASTBOUND RAMPS/INDEPENDENT WAY											
NB	L	E 71.3	D 41.1	D 41.1	E 68.3	D 52.6	D 52.6	E 66.3	C 34.1	C 34.1	D 36.9
	T	E 63.6	E 61.1	E 61.1	E 57.4	D 41.9	D 41.9	E 58.1	D 40.4	D 40.4	D 46.0
	R	A 5.6	A 7.8	A 7.8	B 16.8	D 48.8	D 48.8	A 5.4	A 8.9	B 10.5	B 11.0
	OVERALL	***D 42.9***	***C 34.4***	***C 34.4***	***D 38.5***	***D 49.3***	***D 49.3***	***D 38.5***	***C 25.5***	***C 26.1***	***C 28.7***
SB	L	E 71.4	F 81.9	F 81.9	E 74.2	F 96.8	F 96.8	E 56.0	D 41.3	D 41.3	D 41.3
	TR-T	C 27.8	D 50.7	D 50.7	C 27.6	E 73.0	E 73.0	D 54.0	F 120.9	F 120.9	F 120.9
	R	N/A N/A	C 23.9	C 25.0	N/A N/A	A 9.7	B 13.3	N/A N/A	A 6.8	B 10.2	B 10.2
	OVERALL	***D 39.7***	***D 45.2***	***D 45.5***	***D 41.8***	***D 51.9***	***D 49.0***	***D 54.3***	***E 69.1***	***E 63.6***	***E 63.6***
NY ROUTE 312											
EB	L	E 65.9	D 38.2	D 38.0	E 66.1	D 41.8	D 42.5	E 69.6	D 44.7	D 53.8	D 53.8
	T	D 37.3	D 41.7	D 41.6	D 51.1	D 42.2	D 46.9	D 40.3	D 41.1	E 61.4	D 51.1
	R	A 2.9	A 4.6	A 4.6	A 2.9	A 4.2	A 4.1	B 13.0	B 12.0	B 12.0	B 12.0
	OVERALL	***D 38.5***	***C 33.6***	***C 33.5***	***D 41.7***	***C 33.1***	***D 36.0***	***D 38.3***	***C 30.7***	***D 41.6***	***D 38.3***
WB	L	E 58.5	D 49.1	D 48.7	E 58.9	E 68.2	E 63.4	F 115.4	E 79.3	E 75.9	E 75.5
	TR	C 29.5	D 36.7	D 38.9	C 26.0	B 18.0	B 20.0	C 33.1	D 35.9	D 43.7	D 39.4
	OVERALL	***D 37.4***	***D 39.7***	***D 41.2***	***D 36.8***	***C 32.8***	***C 31.6***	***E 71.3***	***D 55.0***	***E 56.6***	***D 53.8***
INTERSECTION		**D 39.1**	**D 38.8**	**D 39.4**	**D 39.4**	**D 39.0**	**D 39.2**	**D 50.3**	**D 41.2**	**D 45.0**	**D 43.8**

Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY

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TABLE NO. C-4
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
NY ROUTE 312 & I-84 WESTBOUND RAMPS

APPROACH		PEAK AM HOUR (7:30 - 8:30 AM)			PEAK PM HOUR (5:00 - 6:00 PM)			PEAK SAT HOUR (12:15 - 1:15 PM)			
		2021 EXISTING	2026 NO-BUILD	2026 BUILD	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2026 BUILD W/ IMPV
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
I-84 WESTBOUND RAMPS											
SB	L	C 32.5	E 61.4	E 61.4	C 32.3	D 52.6	D 52.6	C 30.9	E 72.2	E 72.2	E 72.2
	R	C 21.9	B 19.9	C 21.0	C 32.3	B 19.4	C 26.6	F 95.6	C 24.8	C 32.2	C 32.2
	OVERALL	***C 24.4***	***C 28.7***	***C 29.4***	***C 32.3***	***C 25.5***	***C 30.8***	***F 90.0***	***C 29.4***	***D 35.6***	***D 35.6***
NY ROUTE 312											
EB	L	A 6.5	A 9.3	A 9.8	E 65.6	C 33.8	D 50.6	B 12.4	A 10.0	B 15.4	B 14.9
	T	A 5.5	A 3.2	A 3.2	A 6.1	A 5.0	A 5.1	A 4.1	A 3.1	A 3.4	A 3.7
	OVERALL	***A 5.7***	***A 4.5***	***A 4.6***	***C 32.5***	***B 18.3***	***C 26.2***	***A 7.2***	***A 5.7***	***A 8.1***	***A 8.0***
WB	T	C 24.8	D 42.1	D 43.8	C 23.0	C 31.4	D 36.1	C 21.3	C 28.0	D 37.0	D 37.0
	R	A 1.5	A 2.2	A 2.2	A 2.2	A 1.7	A 2.3	A 1.1	A 2.1	A 2.2	A 2.2
	OVERALL	***C 23.5***	***D 39.7***	***D 41.3***	***C 20.1***	***C 27.2***	***C 31.5***	***B 18.2***	***C 24.0***	***C 31.9***	***C 31.9***
INTERSECTION		**B 16.3**	**C 22.3**	**C 23.1**	**C 29.1**	**C 22.5**	**C 28.8**	**C 34.1**	**B 18.6**	**C 23.9**	**C 23.9**

Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY

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TABLE NO. C-5
PEAK HOUR LEVEL OF SERVICE SUMMARY TABLE
FAIR STREET & FIELDS CORNER ROAD

APPROACH		PEAK AM HOUR (7:30 - 8:30 AM)			PEAK PM HOUR (5:00 - 6:00 PM)			PEAK SAT HOUR (12:15 - 1:15 PM)		
		2021 EXISTING	2026 NO-BUILD	2026 BUILD	2021 EXISTING	2026 NO-BUILD	2026 BUILD	2021 EXISTING	2026 NO-BUILD	2026 BUILD
		LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)	LOS DELAY (sec)
FIELDS CORNER ROAD										
NB	***OVERALL***	***c 17.5***	***c 19.1***	***c 19.1***	***b 13.5***	***b 14.4***	***b 14.4***	***b 12.4***	***b 12.5***	***b 12.5***
FAIR STREET										
EB	***OVERALL***	***- 0.0***	***- 0.0***	***- 0.0***	***- 0.0***	***- 0.0***	***- 0.0***	***- 0.0***	***- 0.0***	***- 0.0***
WB	L	a 8.7	a 8.9	a 8.9	a 8.3	a 8.4	a 8.4	a 7.8	a 7.9	a 7.9
	OVERALL	***a 0.1***	***a 0.2***	***a 0.2***	***a 0.1***	***a 0.2***	***a 0.2***	***a 0.1***	***a 0.1***	***a 0.1***
INTERSECTION		**a 0.2**	**a 0.3**	**a 0.3**	**a 0.2**	**a 0.4**	**a 0.4**	**a 0.2**	**a 0.2**	**a 0.2**

Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY

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TABLE NO. C-6

PEAK HOUR 95TH-PERCENTILE QUEUE SUMMARY TABLE

INTERSECTION	STORAGE LENGTH (FEET)	PEAK AM HOUR (7:30 - 8:30 AM)				PEAK PM HOUR (5:00 - 6:00 PM)				PEAK SAT HOUR (12:15 - 1:15 PM)			
		2021 EXISTING QUEUE (ft)	2026 NO-BUILD QUEUE (ft)	2026 BUILD QUEUE (ft)	2026 BUILD W/ QUEUE (ft)	2021 EXISTING QUEUE (ft)	2026 NO-BUILD QUEUE (ft)	2026 BUILD QUEUE (ft)	2026 BUILD W/ QUEUE (ft)	2021 EXISTING QUEUE (ft)	2026 NO-BUILD QUEUE (ft)	2026 BUILD QUEUE (ft)	2026 BUILD W/ QUEUE (ft)
US ROUTE 6 & NYS ROUTE 312													
NB-L	130	10	10	10	10					16	16	16	17
NB-T	975	207	243	243	243	252	278	279	389	219	215	218	255
NB-R	270	55	57	57	57	57	39	39	46	57	57	60	61
SB-L	390	583	759	781	742	670	994	1,127	1,329	746	812	955	767
SB-TR	735	125	140	140	125	99	115	116	123	125	116	121	82
EB-LTR	100	47	49	49	53	37	38	39	47	73	71	71	68
WB-LT	200	263	322	322	360	170	190	195	240	215	214	227	254
WB-R	1,880	146	294	295	295	527	1,009	1,047	1,252	297	350	456	496
NYS ROUTE 312 & PUGSLEY ROAD (ALTERNATIVE B)													
SB-LR	4,100	9	24	26		6	53	65		9	14	72	
EB-L	115	0	6	8	N/A	0	5	32	N/A	0	3	22	N/A
EB-LT/T	1,250	0	75	75		0	152	164		0	112	128	
WB-TR	850	0	147	150		0	210	244		0	202	271	
NYS ROUTE 312 & INTERSTATE 84 EASTBOUND RAMPS/INDEPENDENT WAY													
NB-L	310	136	73	73		205	159	159		284	144	144	144
NB-T	310	118	142	142		159	114	114		251	183	183	183
NB-R	310	30	37	37		136	248	248		50	80	92	80
SB-L	320	277	265	265		154	154	154		106	82	82	82
SB-TR-T	1,250	182	212	212		87	140	140		172	262	262	262
SB-R	320		272	281	N/A		66	98	N/A		49	80	49
EB-L	260	147	111	111		137	121	126		209	148	192	148
EB-T	320	541	402	404		911	540	562		357	300	402	300
EB-R	260	37	44	44		51	45	43		264	188	188	188
WB-L	350	164	104	101		202	142	118		320	246	198	246
WB-TR	1,280	340	310	322		339	186	224		268	267	301	267
NYS ROUTE 312 & INTERSTATE 84 WESTBOUND RAMPS													
SB-L	115	88	149	149		80	127	127		49	92	92	92
SB-R	1,190	173	257	271		226	275	407		372	309	456	456
EB-L	310	60	30	33	N/A	469	143	206	N/A	92	120	167	164
EB-T	1,280	225	65	64		276	153	152		178	101	95	103
WB-T	400	410	515	525		391	476	523		398	480	528	528
WB-R	250	6	11	11		16	17	21		11	21	21	21
FAIR STREET & FIELDS CORNER ROAD													
NB-LTR	590	2	2	2		2	4	4		1	1	1	
EB-LTR	275	0	0	0	N/A	0	0	0	N/A	0	0	0	N/A
WB-LTR	200	1	1	1		0	0	0		0	0	0	

ATTACHMENT 'C'

ACCIDENT ANALYSIS SUMMARY TABLES

Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY
Date: 10/27/2022

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TABLE NO. 1
ACCIDENT ANALYSIS SUMMARY
BREWSTER YARDS - TOWN OF SOUTHEAST, PUTNAM COUNTY, NEW YORK

			ACCIDENTS					VOLUMES			RATE	
LEGS/ LANES	CONTROL	STREET/INTERSECTION	TOTAL	YEARLY	INJ.	FATALS	NON-REPORTABLE	AM/PM AVG. (1)	DAILY (2)	YEARLY (3)	ACTUAL	STATE AVG. (4)
URBAN 3 LEGGED INTERSECTION (SIGNAL W/ LEFT TURN 5 & > LANES)												
3	Signalized	NYS Route 312 & I-84 WB Ramps	2	0.67	1	0	0	1,982	19,815	7,232,475	0.09	0.17
URBAN 3 LEGGED INTERSECTION (SIGN 1-3 LANES)												
3	Unsignalized	NYS Route 312 & Pugsley Road	4	1.33	3	0	1	1,817	18,170	6,632,050	0.20	0.19
URBAN 4 LEGGED INTERSECTION (SIGNAL W/ LEFT TURN 5 & > LANES)												
4	Signalized	US Route 6 & NYS Route 312	15	5.00	1	0	2	2,203	22,025	8,039,125	0.62	0.26
4	Signalized	NYS Route 312 & I-84 EB Ramps/Independent Way	37	12.33	10	0	5	2,929	29,285	10,689,025	1.15	
URBAN UNDIVIDED MAINLINE & JUNCTURE (2 LANES)												
2	N/A	NYS Route 312 between US Route 6 & Pugsley Road	27	9.00	6	0	3	-	19,837	7,240,505	0.12	2.38
2	N/A	NYS Route 312 between Pugsley Road & I-84 EB Ramps/Independent Way	12	4.00	1	0	1	-	19,837	7,240,505	0.24	
2	N/A	NYS Route 312 between I-84 EB Ramps/Independent Way & I-84 WB Ramps	13	4.33	4	0	3	-	16,393	5,983,263	0.32	

NOTES

(1) Average of Peak AM and Peak PM Hour traffic volumes

(2) Daily Traffic Volumes: For Intersections = Average AM/PM Volumes x 10; For Segments = Value Obtained from NYSDOT Traffic Data Viewer (2019 Estimate)

(3) Yearly Traffic Volumes = Daily Traffic Volumes x 365

(4) State average rate based on accident data from 2018-2019 (the latest available data)

Job No.: 21-076
Project: Brewster Yards
Location: Town of Southeast, Putnam County, NY
Date: 10/27/2022

TABLE NO. 2

ACCIDENT ANALYSIS - SEVERITY, COLLISION TYPE & APPARENT FACTOR SUMMARY
BREWSTER YARDS - TOWN OF SOUTHEAST, PUTNAM COUNTY, NEW YORK

SEVERITY SUMMARY		
TYPE	**COUNT**	**%**
Non-Reportable	12	10.9%
Property Damage	80	72.7%
Property Damage and Injury	17	15.5%
Injury	1	0.9%
Fatal	0	0.0%
TOTAL	**110**	**100.0%**

COLLISION TYPE SUMMARY		
TYPE	**COUNT**	**%**
Head On	4	3.6%
Left Turn	5	4.5%
Other	24	21.8%
Overtaking	12	10.9%
Overturned	0	0.0%
Rear End	39	35.5%
Right Angle	16	14.5%
Right Turn	3	2.7%
Side Swipe	6	5.5%
Skidding	0	0.0%
Unknown	1	0.9%
TOTAL	**110**	**100.0%**

APPARENT FACTOR SUMMARY		
TYPE	**COUNT**	**%**
Alcohol Involvement	1	0.9%
Animal's Action	5	4.5%
Backing Unsafely	1	0.9%
Cell Phone (Hand Held)	1	0.9%
Driver Inattention	7	6.4%
Driver Inexperience	1	0.9%
Failure to Keep Right	1	0.9%
Failure to Yield ROW	16	14.5%
Following Too Closely	32	29.1%
Illness	1	0.9%
Lost Consciousness	1	0.9%
Obstruction/Debris	1	0.9%
Other (Vehicle)	2	1.8%
Passing or Lane Usage Improperly	7	6.4%
Pavement Slippery	1	0.9%
Reaction to Other Uninvolved Vehicle	2	1.8%
Tire Failure	1	0.9%
Traffic Control Device Disregarded	12	10.9%
Traffic Control Device Improper/Not Working	1	0.9%
Turning Improper	4	3.6%
Unsafe Speed	8	7.3%
View Obstructed/Limited	1	0.9%
Not Applicable	2	1.8%
Unknown	1	0.9%
TOTAL	**110**	**100.0%**

Appendix G
CIVIL DRAWINGS

See full size drawings.

Preliminary civil drawings prepared for purposes of assessments in the FEIS are dated 11/28/22. The plans updated to 2/10/23 in response to comments in the FEIS are in front:
OP-1, OPG-1, SP-5.# series & revised D-2.

Appendix H
ARCHITECTURAL DRAWINGS

See full size drawings.

Appendix I
SITE LIGHTING DRAWINGS

See full size drawings.

Appendix J
SPORTS FIELD LIGHTING
Examples

T R A N S M I T T A L

DATE: January 24, 2023

TO: Southeast Planning Board

FROM: Frederick Wells
KG+D Architects, PC

RE: Brewster Yards – Field Lighting

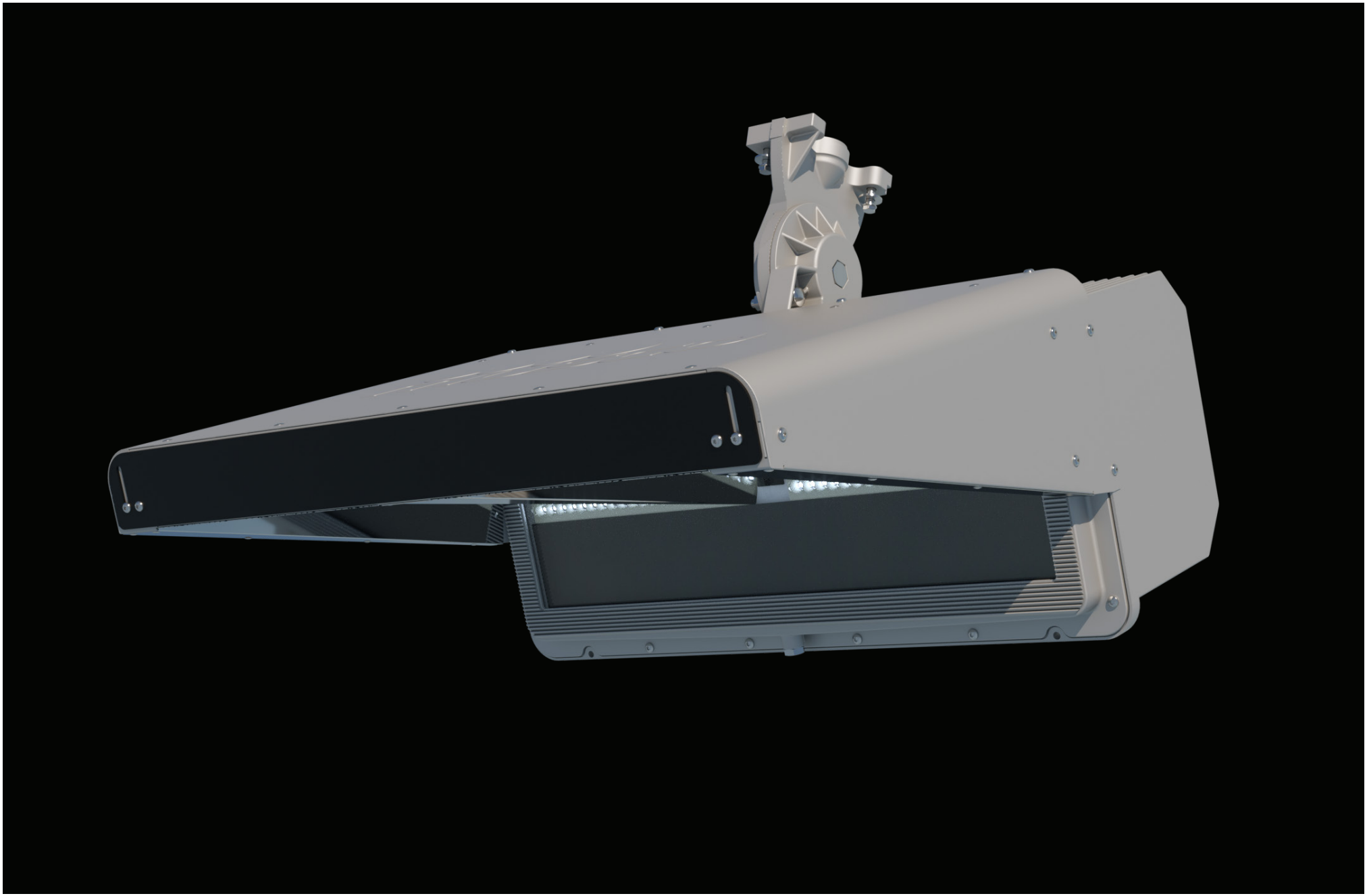
As briefly discussed at the January 23 Board meeting, several questions have been raised during the project review at previous meetings regarding the effects of the proposed sports field lighting at Brewster Yards on the area surrounding the project site. Since a planned video presentation by the representative from Musco Lighting was unsuccessful at last night's meeting, images that were going to be presented are provided herewith.

Examples of LED sports field lighting fixtures that are designed to control the lighting pattern, spill and glare are attached. The "Total Light Control" type of luminaire is proposed at Brewster Yards. Examples of modern sports field lighting using luminaires with shielding are illustrated in the photos of other sports complexes from various perspectives. The photos show how well controlled the light spill and glare is outside of the fields and how quickly the light levels taper off beyond the fields.

This information will be included in the FEIS.

KG+D Architects, PC
285 Main Street, Mount Kisco, New York 10549
914.666.5900 kgdarchitects.com

Total Light Control™ – TLC-LED-1500 Luminaire



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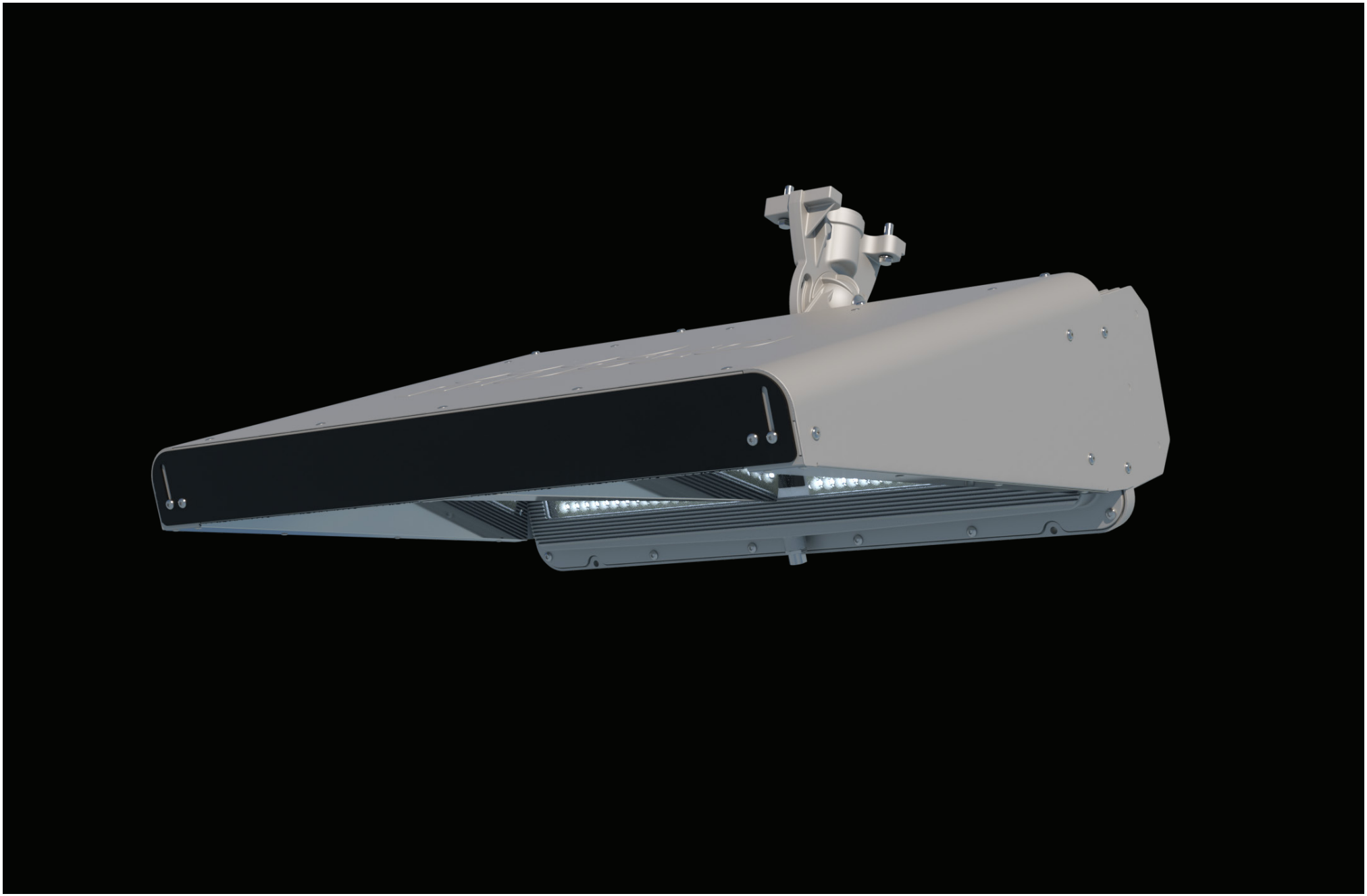
Total Light Control™ – TLC-LED-1200 Luminaire



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Total Light Control™ – TLC-LED-400, TLC-LED-600, and TLC-LED-900 luminaires

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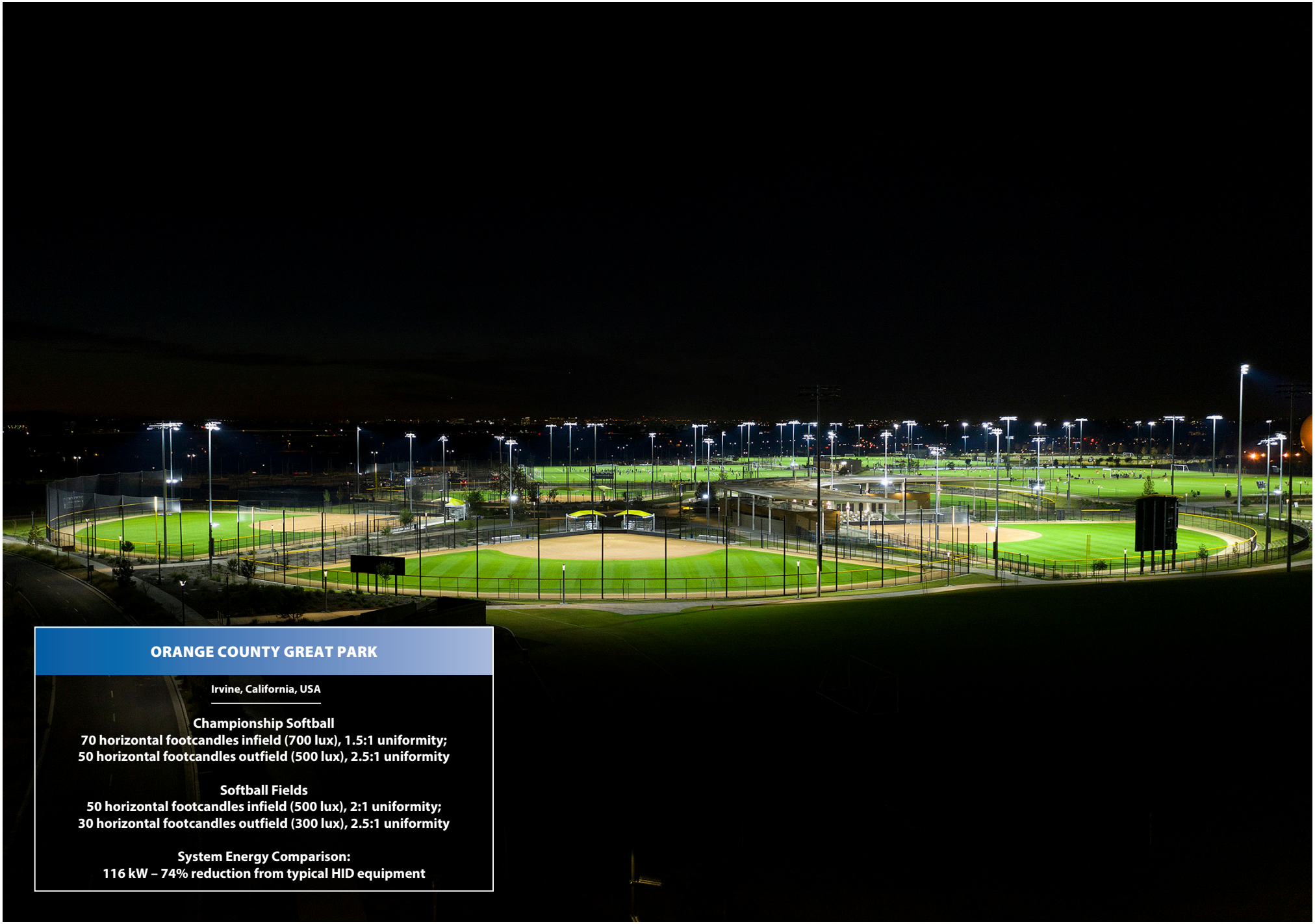

ORANGE COUNTY GREAT PARK

Irvine, California, USA

Championship Softball
70 horizontal footcandles infield (700 lux), 1.5:1 uniformity;
50 horizontal footcandles outfield (500 lux), 2.5:1 uniformity

Softball Fields
50 horizontal footcandles infield (500 lux), 2:1 uniformity;
30 horizontal footcandles outfield (300 lux), 2.5:1 uniformity

System Energy Comparison:
116 kW – 74% reduction from typical HID equipment

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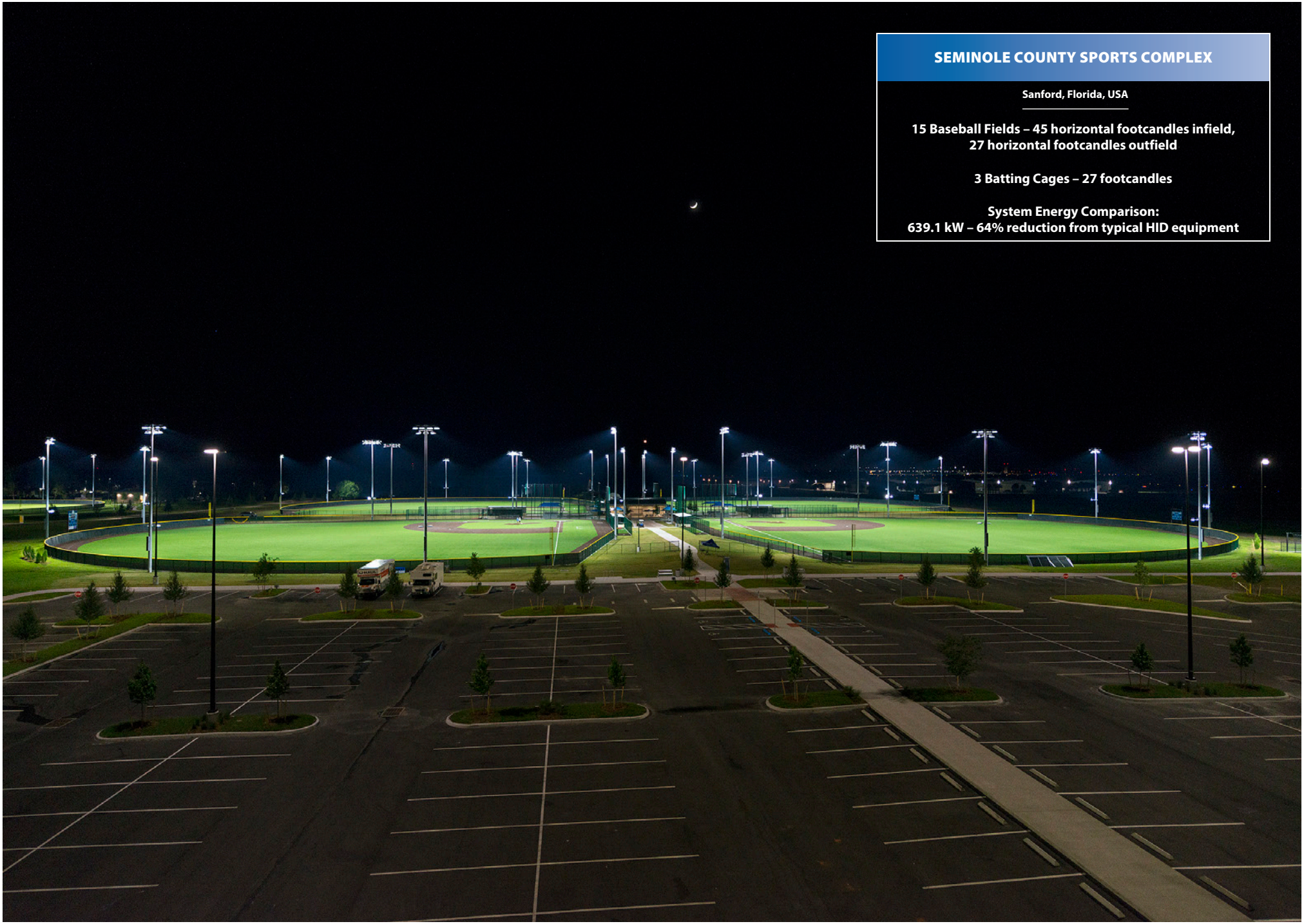

SEMINOLE COUNTY SPORTS COMPLEX

Sanford, Florida, USA

15 Baseball Fields – 45 horizontal footcandles infield, 27 horizontal footcandles outfield

3 Batting Cages – 27 footcandles

System Energy Comparison:
639.1 kW – 64% reduction from typical HID equipment

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MOUNTAIN EDGE REGIONAL PARK

Las Vegas, Nevada, USA

**70 horizontal footcandles infield (700 lux), 2:1 uniformity;
50 horizontal footcandles outfield (500 lux), 2.5:1 uniformity**

**System energy comparison:
255.3 kW – 74% reduction compared to typical HID equipment**

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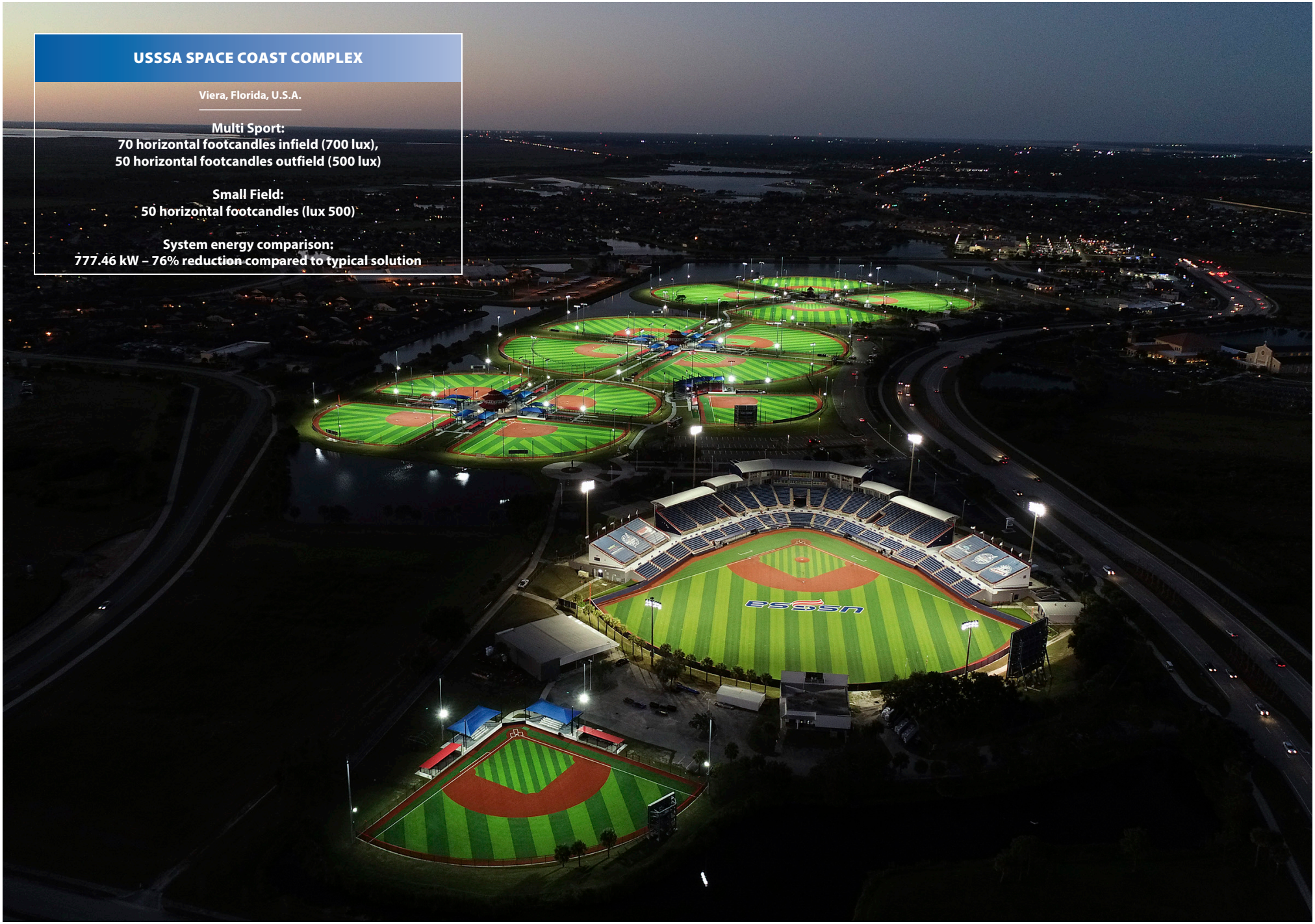

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