Stormwater Pollution & Prevention Plan

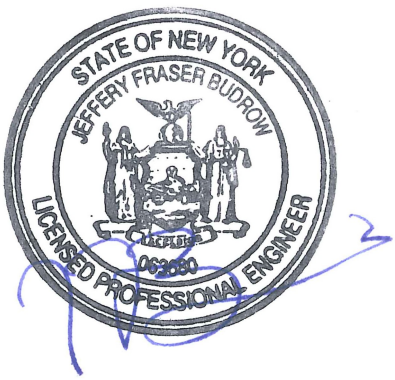
for the

Capital Repertory Theater, Inc

Capital Repertory Theater Parking Lot

329 North Pearl Street
Albany, New York 12207

January 2022



Contract No: N2180066

Weston & Sampson

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGE
FROM CONSTRUCTION ACTIVITY

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1.0 PROJECT INFORMATION

1.1 Project Name and Location

Capital Repertory Theater Parking lot

329 North Pearl Street
Albany, New York 12207

1.2 Owner/ Operator's Contact Information

Capital Repertory Theater, Inc

251 North Pearl Street
Albany, New York 12207
518-382-3884

Contact:
Philip Morris
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1.3 Owner's Consultant Contact Information

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Contact:
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1.4 Project Description

The Capital Repertory Theater proposes a new 15,000 SF parking lot located at the adjacent parcel located at 329 North Pearl Street for overflow parking. The project will include clearing and grubbing of the already disturbed parcel and construction for a temporary parking lot area utilizing porous pavement. The existing grades are low, and there will be no disturbance of the existing grades. Clearing and grubbing of vegetated areas and trees will be restricted to the existing grade.

1.5 Receiving Waters

The existing stormwater runoff from the site naturally drains to the east and south of the site, which eventually infiltrates into the existing soil. Any excess runoff drains into a series of catch basins located along the railroad tracks which connects into the City of Albany's stormwater system. This section of the City's system is considered a Combined Sewer Overflow (CSO) which requires that stormwater runoff for the proposed 100-year storm must be equal or less than the discharge of the 10-year pre-developed condition. The City's system eventually drains into the Hudson River.

1.6 Soils Information

Based upon the Soil Survey for Albany County that was prepared by the U.S. Department of Agriculture Soil Conservation Service, the soils at the subject site are classified as the following:

- Uh – Udorthents, clayey-Urban land complex
- Ur – Urban land

See Appendix B of this report for a copy of the complete site soil survey information, and Appendix P for infiltration tests/ borings results.

1.7 State or Federal Historic Places

According to the on-line GIS map located on the New York State Office of Parks, Recreation & Historic Preservation (NYS OPRHP) web-page, the site is not identified on the State or National Register of Historic Places, but located in an Archaeologically Sensitive area. Due to the nature of this project, it is not anticipated that there will be any disturbance to the existing subbase. A letter provided by the NYS OPRHP State Historic Preservation Office (SHPO) indicates that the project will have no impact on archaeological and/or historic resources listed in or eligible for the New York State and National Registers of Historic Places. A screen shot of the GIS map, and a copy of the letter by SHPO are included in Appendix C of this document.

1.8 New York State SPDES General Permit Information

In accordance with the City of Albany Unified sustainable Development Ordinance, this project requires that a Stormwater Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) be prepared and submitted to the Department of Water for review and approval since the project will disturb more than .25 acres of land, and fits within the list of land uses.

1.8.1 Notice of Intent (NOI)

Any project requesting coverage under the City of Albany Unified Sustainable Development Ordinance, requires a Notice of Intent (NOI) to be completed and submitted to the City of Albany Department of Water for acceptance. Submitting a NOI to the City of Albany Department of Water is an affirmation to the City that a SWPPP has been prepared and will be implemented. As a result, the applicant, through their consultant, is certifying that the SWPPP has been developed in conformance with the Department's technical standards. If the SWPPP utilizes practices provided within the NYS Stormwater Management Design Manual (SMDM) and these practices meet all of the requirements established in those standards, the proposed activity will be eligible to obtain coverage under this Ordinance in five (5) business days after the Department's receipt of the NOI.

As a result, it is anticipated that this project will obtain coverage in five (5) business days, because it has been prepared in conformance with the NYS DEC's technical standards. A copy of the completed NOI is located in Appendix D of this report.

1.8.2 Signatures, Certifications, and Review

Philip Morris, on behalf of the Capital Repertory Theater, Inc, is the owner/ operator of the project site, and is the legal entity that controls the site/ facility's operation. Consequently, this document and the NOI must be approved and signed. This project does require an MS4 approval as it is being reviewed by the City of Albany.

All contractors and sub-contractors involved with earth-disturbing activities as a result of this project must sign a contractor's certification form before undertaking such activities at the site. These forms need to contain the specific elements that each contractor is responsible for and include the name and title of the contractor's trained individual(s) responsible for the implementation of the SWPPP. Copies of the contractor certification pages are located in Appendix D of this report. Completed copies of such forms shall be inserted within this document as well.

1.8.3 Field Documentation

The Owner/ Operator shall maintain a copy of the SWPPP, Notice of Intent (NOI), NOI Acknowledgement Letter from the City of Albany Department of Water, Contractor Certifications, and Inspection Reports on-site until all of the disturbed areas have achieved final stabilization and the Notice of Termination (NOT) has been submitted to the City of Albany Department of Water. These documents shall be located on the project site in a readily accessible location, such as within a job-site trailer, site lockbox, on-site construction office, or a mailbox with a lock. These documents need to be accessible during normal business hours. The Owner/Operator shall retain copies of these documents for a period of five (5) years from the date that the site achieves final stabilization.

1.8.4 Notice of Termination (NOT)

Upon completion of the construction activities contained within this SWPPP, all disturbed areas have achieved final stabilization, all temporary structural erosion and sediment control measures have been removed, and all post-construction stormwater management practices have been constructed in conformance with the SWPPP, the Owner must sign and submit a Notice of Termination (NOT) form to the City of Albany Department of Water indicating that coverage under the general permit is no longer required and the permit coverage may be terminated for the project.

Prior to completing and submitting the NOT, the following items must also be completed:

A. Policies and procedures are in place to ensure the proper operation & maintenance of the practices in accordance with the practices' operations and maintenance plan for public/private institutions.

A Notice of Termination form may be located in Appendix L of this report.

2.0 EXISTING CONDITIONS

2.1 Existing Conditions

The existing site is located at approximately 329 North Pearl Street, the adjacent parcel to the Capital Repertory Theater. The site was previously disturbed, which consisted of a series of houses which had been abandoned and demolished. The existing site has been backfilled with a granular fill material which has a high percolation rate. The site consists of a series of large diameter trees and the existing grade consists of a dense vegetated layer. Water typically sheds to the northeast and southeast portions of the site, where water collects in a depression located to the southeast of the site and infiltrates into the top granular fill material. Excess water typically flows southeast until intercepting the railroad and eventually reaches a nearby catch basin which connects into the City system.

2.2 Existing Hydrologic and Hydraulic Conditions

A hydraulic and hydrologic analysis and model of the existing stormwater collection and conveyance system was created in HydroCAD. HydroCAD is a stormwater modeling system that was created by HydroCAD Software Solutions LLC. This program can utilize the hydrology techniques developed by the Soil Conservation Service (SCS) and other methods such as the Rational Method. The model created for this project utilizes the SCS TR-20 runoff method. This computerized model was used to establish the current runoff rates from the existing conditions of the project site. The model and this report focus in on the 1-, 10-, 25-, and 100-year storm events.

Our stormwater analysis has identified two points in which runoff discharges from the project site. The two points of discharge (POD) are identified as follows:

A. POD 1: Flows leave the site via overland flow to the southeast of the site which infiltrates into the existing top layer of gravel media, or continues until reaching the railroad tracks where it is discharged into a series of catch basins located along the railroad which connects into the City system.

B. POD 2: Flows leave the site via overland flow to the northeast of the site which infiltrates into the existing top layer of gravel media, or continues until reaching the railroad tracks where it is discharged into a series of catch basins located along the railroad which connects into the City system.

A summary of the runoff rates that have been calculated for the existing conditions are included in Table 3.1 of this report.

Maps illustrating drainage areas and points of discharge, and existing conditions HydroCAD models may be found in Appendix F.

3.0 PROPOSED CONDITIONS

3.1 Proposed Conditions

The proposed Nine Dragons (Capital Repertory Theatre) temporary parking lot is an essential part of the revitalization of an Albany neighborhood. With the renovation of an existing building into a flagship theater, Capital Rep's investment in a theater also requires an investment in parking. Capital Rep currently holds a 15-year lease on a parcel known as the Nine Dragons Site fronting on the South side of North Pearl Street and the East side of Colonie Street. Lacking ownership, the parking lot is designed to be temporary and have a design life equal to the 15-year term of its lease. Knowing that this site has archaeological sensitivity, we have developed a plan of constructing the parking lot above the level of the existing ground, eliminating disturbance of any cultural resources and leaving the original ground surface available for future archaeological investigation. Our plan also is sensitive to the environmental concerns presented by increasing the rate of stormwater runoff, which in this area of Albany cannot be increased due to limited capacity of the existing combined sewer.
The proposed order of construction, from the existing ground surface up, is as follows:

- Clear and mow the ground surface to just above ground level, leaving the stumps and roots in place. Rake and remove accumulated trash and debris and leave the site clean.
- "Scuff" the surface of the ground to a depth if not more than 2" using agricultural tine-style of tow-behind equipment. The purpose of the scuffing is to break up overly-compacted topsoil and encourage the percolation of stormwater back into the native soil mass. The tining process does not remove any soil.
- Place a geosynthetic drainage fabric on the surface of the ground. This fabric forms an important physical barrier between new materials and the existing ground, limits transmission of fine soils, and most importantly, makes removal of the temporary parking surface easier in the future. The fabric limits disturbance of the original ground surface by being a physical barrier and also helps disperse loads more evenly from the vehicles parked above. As previously mentioned, it also 'records' the existing ground level for future reference.
- On top of the fabric, place a mixture of #1 and #2 crushed stone, no less than 8" thick, and in some lower places it might be as much as 6' feet thick. This stone provides support to the pavement and all-important storage volume for stormwater to be in contact with the ground for infiltration. The stone provides up to 40% void space.
- Top the coarse crushed stone with a finer 2" thick chinking layer of stone to knit the top of the stone and support porous pavement. This progression of stone is specified by NYSDOT.
- Finish off the surface with porous pavement. Porous pavement is in conformance with NYSDOT standards and is fully plowable and maintainable, the only limitation is it cannot be coated with deicing sands. The selection of the type of 'porous pavement' will be made during the design development phase of the project, and may include porous asphalt, stabilized aggregate, and / or gravel.
- System Description: the system described will encourage runoff to percolate through the pavement, in lieu of running off. Once through the pavement, it resides in the stone layer. This style of design also means that there are few other disturbances on the site for stormwater pipes, catch basins, etc. Everything is built above the level of the native soil. Safe conveyance of larger storms will be accommodated by providing a controlled

outlet from the stone media, stabilized outfall, and a porous 'level-spreader' to disperse flows on the existing undisturbed grades.

- Conclusion: the proposed system is completely built above the existing soil level, requires no other excavations for infrastructure, and is separated from the native ground by a protective barrier layer, that also facilitates its removal in the future.

3.1.1 Stormwater Treatment Measures

In accordance with the general permit, the requirements for runoff reduction cannot be met due native fill soils on the site which cannot be utilized for infiltration. The stone reservoir underneath the porous pavement will provide the required pre-treatment, water quality volume and water quantity for discharge into the local combined sewer system.

3.1.2 Water Quality Calculations

The impacted drainage area for the project is 0.71 acres (30,900 sf) with a total proposed increase in impervious area of 0.34 acres (15,958 sf).

The calculated water quality volume (WQv) for the project site is 0.037 ac-ft. The proposed treatment for site runoff includes the installation of porous asphalt with a stone reservoir. The Runoff Reduction Volume (RRV) cannot be achieved for this site as infiltration cannot be utilized within fill material. The RRV could only be achieved through infiltration as there is limited room on site to install another practice. Proposed conditions calculations are included Appendix F.

3.1.3 Water Quantity Measures

The design of the stormwater treatment system for this site includes the subsurface stone located underneath the porous pavement of the parking lot. The stone will provide storage which will allow the stormwater to infiltrate into the existing soils. An outlet control device will be connected to the gravel bed to ensure that the maximum storage within the stone media will be utilized. Since the project site is located within a CSO region of the City's sewer/stormwater system, the 100-year storm event discharge rate must be less than or equal to the pre-developed 10-year storm.

As illustrated in Table 3.1, there is a net decrease in the total site runoff flow rates from the site for the 1-, 10-, 25-, and 100- year storm events. All storm events and analysis points show a decrease in runoff rates. The decrease in runoff rates can be attributed to the increased stormwater storage within the subsurface stone. The discharge rate of the 100-year storm is less than the pre-developed 10-year storm.

3.2 Proposed Hydrologic and Hydraulic Conditions

A hydraulic and hydrologic analysis model of the proposed stormwater collection and conveyance system was created in HydroCAD. This computerized model was used to establish the runoff flow rates by the proposed conditions of the site as well as to

demonstrate conformance with various requirements. These calculations may be found in Appendix F of this report.

3.2.1 Pre- vs. Post- Comparison

The following table summarizes the runoff rates generated for the existing and proposed conditions of the site based on the calculations contained in Appendix F of this report.

Table 3.1: Existing and Proposed Hydrologic Conditions

Summary of Flow Rates to Various Analysis Points												
Analysis ID	1-year (cfs)			10-year (cfs)			25-year (cfs)			100-year (cfs)		
	Pre-	Post-	Change	Pre-	Post-	Change	Pre-	Post-	Change	Pre-	Post-	Change
POD 1	0.51	0.18	-0.33	1.34	0.55	-0.79	1.85	0.78	-1.07	2.91	1.28	-1.63
POD 2	0.11	0.05	-0.06	0.31	0.15	-0.16	0.42	0.21	-0.21	0.67	0.34	-0.33
TOTAL	0.62	0.23	-0.39	1.75	0.70	-0.95	2.27	0.99	-1.28	3.58	1.62	-1.96

3.2.2 Proposed Drainage Areas

The flow patterns for the proposed drainage areas remain unchanged from the pre-developed conditions. The only difference in the proposed drainage areas are the land cover types due to the proposed parking lot.

4.0 SOIL EROSION AND SEDIMENT CONTROLS

4.1 Erosion and Sediment Control Practices

Erosion and sediment control provisions should be included for all construction activities where excavation, stripping, filling, grading, and/ or earth movement is designated on the plans to take place. These provisions shall be designed in conformance with the most current version of the technical standard, *New York Standards and Specifications for Erosion and Sediment Control*. For convenience, this report contains reduced-scale versions of the soil erosion and sediment control plans and details for this project in Appendix M.

4.2 Construction Sequence Schedule

The contractor is advised that a final construction sequence schedule is to be provided to the construction manager after contractor selection and become a component of not only the contract documents, but this SWPPP. Accordingly, from the start of construction forward, it shall be the responsibility of the contractor to implement and adhere to the construction sequence schedule in order to maximize the effectiveness of this stormwater pollution prevention plan. However, the following basic schedule shall guide the development of the final construction sequence schedule between the contractor and the construction manager:

Construction Schedule

A. Obtain plan approval and other applicable permits.

B. Flag the work limits and mark and protect any vegetation that will be remaining.

C. Hold a pre-construction conference at least one week prior to the start of construction.

D. Install temporary sediment controls as the first construction activity.

E. Install site improvements.

F. All erosion and sediment control practices will be inspected weekly and, additionally, the contractor shall perform an inspection after all rainfall events. Needed repairs will be made immediately.

G. After the site is permanently stabilized, remove all temporary erosion and sediment control measures.

4.3 Pre-Construction Activities

A. Protect existing vegetated areas suitable for filter strips, especially in perimeter areas.

B. Establish a temporary construction entrance to capture mud and debris from construction vehicles before they enter the public rights-of-way.

C. Stabilize bare areas (entrances, construction routes, equipment parking areas, etc.) immediately as work takes place. Top these areas with gravel or maintain a vegetated cover.

D. Sediment tracked onto public streets should be removed or cleaned daily.

E. Identify the drainage areas in the plan. Plan for the appropriate practices to protect existing surface waters.

F. Ensure that silt fence material and installation comply with the standard drawings and specifications.

G. Install silt fences based on appropriate spacing intervals. Decrease the interval as the slope increases. Silt fence should be placed on or parallel to contours where there is no concentration of water flowing to the silt fence and where erosion occurs in the form of sheet erosion. The area below the silt fence should be undisturbed ground.

H. Have a Qualified Inspector perform an initial site inspection to confirm that all of the perimeter erosion and sediment controls have been installed properly and to photograph the site to establish a baseline for the site conditions prior to construction.

I. Install additional erosion and sediment control devices as shown on the plans and/or needed in the field.

4.4 Runoff and Drainage Controls

A. Install practices after sediment traps are installed and before land grading starts.

B. Control the runoff in each small drainage area before flow reaches the runoff from the entire site.

C. Divert off-site or clean runoff around disturbed areas.

D. Convey surface flows from highly erodible soil and steep slopes to more suitable stable areas.

E. Runoff from existing or proposed cut and fill slopes should be redirected to lower the water's velocity without causing erosion.

F. Final site drainage should be constructed to prevent erosion, concentrated flows to adjacent properties, uncontrolled overflow, and ponding.

G. Protect existing natural drainage systems and streams by maintaining vegetative buffers and by implementing other appropriate practices.

H. Install practices to prevent erosion at discharge points.

4.5 Grading

A. Limit the initial clearing and earth disturbance to that necessary to install sediment control measures. Excavation for site improvements may only take place after the sediment and erosion controls are installed. Stockpile excavated topsoil from the site. The topsoil should be protected with silt fence, stabilized, and located away from the storm drains and water bodies.

B. Changes in grade or removal of vegetation should not disturb established buffers and should not be allowed within any regulated distance from wetlands or other such protected zones.

C. Avoid disturbance of steep slopes.

D. An undisturbed buffer should be maintained to control runoff from steep slopes within sensitive areas.

E. Proposed grading should not impair existing surface drainage resulting in a potential erosion hazard impacting adjacent land or water bodies.

4.6 Erosion Control and Soil Stabilization

A. Implement erosion control practices to keep soil in-place.

B. Stabilization should be completed immediately for the surface of all perimeter controls and slopes. When activities temporarily cease during construction, soil stockpiles and exposed soils should be stabilized by seed, mulch, or other appropriate measures as soon as possible, but in no case more than 14 days after the construction activity has ceased. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization should be completed within 14 days or as soon as possible.

C. Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is delayed or completed.

D. Refer to project plans and specification documents for proper timing and application of seed, sod, fertilizer, and mulch.

E. Downspout or sump pump discharges must have acceptable outfalls that are protected by splash blocks, sod, or piping as required by site conditions (i.e. no concentrated flow directed over fill slopes).

4.7 Sediment Controls

A. Provide sediment controls measures at any location where surface runoff from disturbed or graded areas may flow off the construction area. Control measures must be installed to prevent sediment from being transported off-site. No grading, filling, or other disturbance is allowed within existing drainage swales.

B. Swales or other areas that transport concentrated flows should be appropriately stabilized.

4.8 Maintenance and Inspections

A. Initial site inspection after the perimeter controls are installed and prior to commencement of any earth work.

B. Identify the type, number, and frequency of maintenance actions required for stormwater management and erosion control during construction and for permanent practices that remain on the site once construction is finalized.

C. Inspections must be indicated on the Construction Sequence Schedule.

D. Inspections must be performed once every 7 calendar days, unless site disturbance is greater than five (5) acres, and at which time at least two (2) site inspections shall be completed every seven (7) calendar days for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days. See part IV.C of the permit document.

E. Inspections must verify that all practices are operating properly, maintained properly, and that sediment is removed from all control structures.

F. Inspections must look for evidence of the erosion of soils on-site, potential of pollutants entering drainage systems, problems at discharge points (such as turbidity in the receiving waters), and signs of soil and mud transport from the site to the public road(s).

G. Routine maintenance must be identified on the schedule and performed on a regular basis and as soon as a problem is identified.

H. Identify the person or entities responsible for conducting the maintenance actions during construction and post-construction.

I. Retain a copy of the inspection reports on-site with the SWPPP.

J. Inspections may be reduced to once every 30-days if the site has entered into a temporary shutdown (e.g. winter shutdown) as long as all construction activities have been halted and all of the disturbed areas have been temporarily stabilized (see Part IV.C.2.c of the general permit for more information).

K. For construction sites where soil disturbing activities have been shut down with partial project completion, the qualified inspector may stop conducting inspections if all of the disturbed areas have achieved final stabilization and all of the post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational (see Part IV.C.2.d. of the general permit for more information).

L. Inspections shall be completed until permanent stabilization has been achieved.

M. The Qualified Inspector shall notify the City of Albany Department of Water, Owner, Construction Manager, and Owner's Representative with a letter indicating the period of temporary shutdown, the dates of anticipated inspection during the shutdown, and the date of anticipated restart.

N. SWPPP Inspections must be performed by a qualified professional and submitted to the MS4 Coordinator at the Department of Water within 24 hours of inspection completion.

4.9 Final Grading and Landscaping

A. Implement the final grading and stabilization plan once the construction is completed.

B. Stabilize all open areas, including borrow and spoil areas.

C. Implement the specified permanent top soil, seed, sod, mulch, riprap, or other stabilization practices in the remaining disturbed areas as appropriate.

D. Stabilization must be undertaken no later than 14 days after construction activities have ceased, except as noted in the City of Albany Unified Sustainable Development Ordinance.

E. Remove the temporary control measures once the site has reached final stabilization. Final stabilization is defined as "…uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/ crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement".

4.10 Construction Sequence Schedule

The Contractor is advised that a final construction sequence schedule is to be provided to the Construction Manager and Owner's Representative after contractor selection, and shall become a component of the contract documents, and this SWPPP. Accordingly, from the start of construction forward, it shall be the responsibility of the Contractor to implement and adhere to the construction sequence schedule in order to maximize the effectiveness of this stormwater pollution prevention plan.

The following basic implementation process shall guide the development of the final construction sequence schedule to be provided by the Contractor and accepted by the Owner, Construction Manager, and Owner's Representative. This basic process shall be followed for each phase of construction, period, or discrete area of construction.

H. Obtain plan approval and other applicable permits.

I. Flag the work limits and mark and protect any vegetation that will be remaining.

J. Hold a pre-construction conference at least one week prior to the start of construction.

K. Install temporary sediment controls prior to any disturbance.

L. Install site improvements.

M. Inspect all erosion and sediment control measures at least weekly (or more often per requirements of permit) and, additionally, the Contractor shall perform an inspection after all rainfall events greater than 0.5 inches in a 24-hour period. Needed repairs shall be made immediately.

N. Permanently stabilize the site.

O. After the site is permanently stabilized, remove all temporary erosion and sediment control measures.

4.11 SWPPP Inspection Reports

Contractor shall provide copies of all inspection reports within five (5) business days of completion to Owner, Construction Manager and Owner's Representative. Copies of inspection reports shall be maintained on site and made available to the permitting authorities upon request. Copies of monthly summary reports shall be posted on-site in a publicly accessible location. Copies of SWPPP inspection reports are included in Appendix G: Construction Inspection Forms/ Checklists.

4.12 SWPPP Report Modifications

The inspection reports should identify any soil erosion and sediment control measures (as well as the stormwater collection, conveyance, and treatment system components) that need to be revised, added, or removed as a result of the field inspection. This SWPPP is meant to be a dynamic working guide that is to be kept current and amended whenever the design, construction, operation, or maintenance of the site changes in a way which significantly affects the potential for the discharge of pollutants or when the plan proves to be ineffective in eliminating or significantly minimizing pollutant discharges.

Any such changes to the SWPPP must be made in writing on the SWPPP Modification Report located in Appendix I of this report within 7 days of the date such a modification or amendment is made. Modifications to permanent stormwater facilities are not allowed during construction without all necessary approvals and project amendments by the Owner, MS4 Coordinator, Construction Manager, and Owner's Representative.

Construction phase stormwater erosion and sediment controls are subject to modification if required by the responsible qualified professional. The Contractor's failure to monitor or report deficiencies to the operator will result in the Contractor being liable for fines and construction delays resulting from any federal, state, or local agency enforcement action.

5.0 OTHER CONTROLS

5.1 Waste Disposal

All waste materials will be collected and stored in a metal dumpster. The dumpster shall comply with all local and state solid waste management regulations. All trash and construction debris from the site shall be deposited in a dumpster and emptied at least once per week or more often if necessary. Trash shall be hauled to a landfill. No construction waste materials may be buried on-site.

5.2 Sanitary Waste

All sanitary waste shall be collected from portable units and cleaned at a minimum of twice per week by a licensed portable facility provider in complete compliance with local and state regulations.

5.3 Off-Site Vehicle Tracking

A stabilized construction entrance/ exit shall be provided to reduce/ eliminate vehicle tracking of sediment off-site. The paved streets adjacent to the site entrance shall be inspected daily and swept as needed to remove any excess mud, dirt, or rocks tracked from the site. Dump trucks hauling material from the construction site shall be covered with a tarpaulin per local and state regulations.

5.4 Concrete Waste from Concrete Trucks

A. Emptying of excess concrete and/ or washout from concrete delivery trucks may be allowed on the job site, but only in either (1) specifically designated diked areas which have been prepared to prevent contact between the concrete and/or washout and stormwater which will be discharged from the site or (2) in locations where waste concrete can be poured into forms to make riprap or other useful concrete products.

B. The hardened residue from the concrete washout diked areas shall be disposed of in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan located in Section 5.7 of this report and in accordance with applicable state and federal regulations.

C. Contractor shall coordinate with construction manager all areas acceptable for concrete washout and the necessary procedures to maintain/ reuse such washout areas.

5.5 Hazardous Substances and Hazardous Wastes

A. All hazardous waste materials shall be disposed of by the Contractor in the manner specified by local, state, and/ or federal regulations and by the manufacturer of such products. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site shall be

obtained and used for the proper management of potential wastes that may result from these products. A MSDS shall be posted in the immediate area where such a product is stored and/ or used and another copy of each MSDS shall be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties shall be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

B. The Contractor shall implement the Spill Prevention Control and Countermeasures (SPCC) Plan found in section 5.7 of this report and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous waste materials or hazardous wastes will be allowed to come in contact with stormwater discharges. If such contact does occur, the stormwater discharge shall be contained on-site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater.

C. Any spills of hazardous materials, which are in quantities in excess of Reportable Quantities as defined by the EPA regulations, shall be immediately reported to the EPA National Response Center 1-800-424-8802.

D. In order to minimize the potential for a spill of hazardous materials to come into contact with stormwater, the following steps shall be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, etc.) shall be stored in a secure location, under cover, when not in use.

2. The minimum practical quantity of all such materials shall be kept on the job site.

3. A spill control and containment kit (containing, for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, etc.) shall be provided at the storage site.

4. All of the product in a container shall be used before the container is disposed of. All such containers shall be triple-rinsed with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with state and federal regulations and not be allowed to mix with stormwater discharges.

5. All products shall be stored in and used from the original container with the original product label.

6. All products shall be used in strict compliance with instructions on the product label.

7. The disposal of excess or used products shall be in strict compliance with instructions on the product label.

5.6 Contaminated Soils

Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities shall be contained and cleaned up immediately in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations.

5.7 Spill Prevention Control and Countermeasures (SPCC) Plan

5.7.1 Materials Covered

The following materials or substances with known hazardous properties are expected to be present on-site during construction:

- Concrete
- Detergents
- Paints
- Paint Solvents
- Fertilizers
- Soil Stabilization Additives
- Cleaning Solvents
- Petroleum Based Products
- Pesticides
- Acids
- Concrete Additives

5.7.2 Material Management Practices

The following are the material management practices that may be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

A. Good Housekeeping: The following good housekeeping practices shall be followed on-site during the construction project:

1. An effort shall be made to store only enough products required to do the job.

2. All materials stored on-site shall be stored in a neat, orderly manner and, if possible, under a roof or other enclosure.

3. Products shall be kept in their original containers with the original manufacturer's label in legible condition.

4. Substances shall not be mixed with one another unless recommended by the manufacturer.

5. Whenever possible, all a product shall be used up before disposing of the container.

6. Manufacturer's recommendations for proper use and disposal shall be followed.

7. The job site superintendent shall be responsible for daily inspections to ensure proper use and disposal of materials.

B. Hazardous Products: The following practices shall be used to reduce the risks associated with hazardous materials:

1. Products shall be kept in original containers with the original labels in legible condition.

2. Original labels and material safety data sheets (MSDS's) shall be procured and used for each material.

3. If surplus product must be disposed of, manufacturer's or local/ state/ federal recommended methods for proper disposal shall be followed.

4. A spill control containment kit (containing items such as absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, etc.) shall be provided at the storage site.

5. All the product in a container shall be used before the container is disposed of.

6. All such containers shall be triple-rinsed with water prior to disposal. The rinse water used in these containers shall be disposed of in a manner in compliance with state and federal regulations and shall not be allowed to mix with stormwater discharges.

C. Product Specific Practices: The following product specific practices shall be followed on the job site:

1. Petroleum Products: All on-site vehicles shall be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers, which are clearly labeled. Any petroleum storage tanks used on-site shall have a dike or berm containment structure constructed around it to contain any spills that may occur. Any asphalt substances used on-site shall be applied according to the manufacturer's recommendations.

2. Fertilizers: Fertilizers shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, the fertilizer shall be worked into the soil to limit exposure to stormwater. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.

3. Paints, Paint Solvents, and Cleaning Solvents: All containers shall be tightly sealed and stored when not in use. Excess paint and solvents shall not be discharged to the storm sewer system, but will be properly disposed of according to manufacturer's instructions or state and federal regulations.

4. Concrete Trucks: Refer to Section 5.4: Concrete Waste from Concrete Trucks

5.7.3 Spill Prevention Practices

The following practices shall be followed for spill prevention and cleanup:

A. Manufacturer's recommended methods for spill cleanup shall be clearly posted and site personnel will be trained regarding these procedures, the location of the information, and cleanup supplies.

B. Materials and equipment necessary for spill cleanup shall be kept in the material storage area on-site in the spill control and containment kit.

C. All spills shall be cleaned up immediately after discovery.

D. The spill area shall be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.

E. Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill.

To Report a Petroleum or Chemical Spill, call the following:

1. NYS DEC 24 Hour Spill Hotline: 1-800-457-7362

2. EPA National Response Center: 1-800-424-8802

F. Spills of amounts that exceed reportable quantities of certain substances specifically mentioned in federal regulations (40 CFR 302 list and oil) will be immediately reported to the EPA National Response Center. Reportable quantities of some substances that may be used at the job site are as follows:

1. Oil: appearance of a film or sheen on water

2. Pesticides: usually 1 lb.

3. Acids: 5,000 lbs.

4. Solvents, flammable: 100 lbs.

G. The SPCC plan shall be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included as part of Hazardous Materials Spill Log located in Appendix J of this report.

APPENDIX A

SITE LOCATION MAP & AERIAL PHOTOGRAPH


291 N Pearl St

APPENDIX B

SOIL SURVEY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Albany County, New York

April 1, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:1,120 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

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

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

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

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

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

Soil Survey Area: Albany County, New York
Survey Area Data: Version 17, Sep 16, 2019

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

Date(s) aerial images were photographed: Jul 1, 2014—Sep 22, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Uh	Udorthents, clayey-Urban land complex	1.0	48.0%
Ur	Urban land	1.1	52.0%
Totals for Area of Interest		**2.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Albany County, New York

Uh—Udorthents, clayey-Urban land complex

Map Unit Setting

National map unit symbol: 9pj2
Mean annual precipitation: 36 to 41 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, clayey, and similar soils: 40 percent
Urban land: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Clayey

Typical profile

H1 - 0 to 18 inches: silty clay
H2 - 18 to 72 inches: stratified silt loam to clay

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.2 inches)

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Minor Components

Scio

Percent of map unit: 10 percent
Hydric soil rating: No

Hudson

Percent of map unit: 10 percent
Hydric soil rating: No

Rhinebeck

Percent of map unit: 7 percent
Hydric soil rating: No

Madalin

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

Ur—Urban land

Map Unit Setting

National map unit symbol: 9pj8
Mean annual precipitation: 36 to 41 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 100 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H1 - 0 to 6 inches: variable

Minor Components

Unnamed soils

Percent of map unit: 10 percent

Udorthents

Percent of map unit: 5 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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

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

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

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

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

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

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

Map Scale: 1:1,120 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

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

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

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

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Survey Area Data: Version 17, Sep 16, 2019

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

Date(s) aerial images were photographed: Jul 1, 2014—Sep 22, 2017

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

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Uh	Udorthents, clayey-Urban land complex	C/D	1.0	48.0%
Ur	Urban land		1.1	52.0%
Totals for Area of Interest			**2.0**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Component

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Component" returns the attribute value associated with the component with the highest percent composition in the map unit. If more than one component shares the highest percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher attribute value should be returned in the case of a percent composition tie. The result returned by this aggregation method may or may not represent the dominant condition throughout the map unit.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

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APPENDIX C

HISTORIC PRESERVATION AND CULTURAL RESOURCE DATA

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 26, 2020

Zachary Longo
Engineer II
Weston & Sampson
1 Winners Circle
Suite 130
Albany, NY 12205

Re: SEQRA
Capital Rep, Overflow Parking (Nine Dragons Site)
City of Albany, Albany County, NY
20PR02784

Dear Zachary Longo:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process. These comments are those of OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

OPRHP has reviewed the *Revised Project Description -10.16.2020* prepared by Weston & Sampson, Inc. and CSARCH, PC. This document demonstrates that the revised Capital Rep Overflow Parking (Nine Dragons Site) project will avoid impacts to the Livingston Avenue #1 Site (NYSM# 12309; OPRHP Site 00140.004844) by constructing the parking lot above the level of the existing ground surface.

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be Adversely Impacted by this project with the condition that the project follows the construction plans outlined in the *Revised Project Description*.

If you have any questions, I can be reached at Jessica.Schreyer@parks.ny.gov.

Sincerely,

Jessica E. Schreyer

Jessica Schreyer
Scientist Archaeology

APPENDIX D

NOTICE OF INTENT (NOI) AND CONTRACTORS' CERTIFICATION FORMS

ALBANY
NEW YORK | EST. 1686

CITY OF ALBANY
DEPARTMENT OF WATER & WATER SUPPLY
10 NORTH ENTERPRISE DRIVE
ALBANY, NEW YORK 12204
TELEPHONE (518) 434-5300
FAX (518) 434-5332

KATHY M. SHEEHAN
MAYOR

JOSEPH E. COFFEY, JR, P.E.
COMMISSIONER

AWD [ ]
(for Department of Water use only)

NOTICE OF INTENT

Stormwater Discharges Associated With Construction Activities Under Rezone Albany

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you thereby delaying your coverage under this Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-

RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
Capital Repertory Theatre, Inc

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Morris

Owner/Operator Contact Person First Name
Phillip

Owner/Operator Mailing Address
251 North Pearl Street

City
Albany

State
NY

Zip
12207 - [ ]

Phone (Owner/Operator)
518 - 382 - 3884

Fax (Owner/Operator)
[ ] - [ ] - [ ]

Email (Owner/Operator)
pmorris@proctors.org

[ ]

FED TAX ID
[ ] - [ ] (not required for individuals)

Project Site Information

Project/Site Name

Capital Rep (9 Dragons) Parking Lot

Street Address (NOT P.O. BOX)

329 North Pearl Street

Side of Street

○ **North** ○ **South** ◉ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)

Albany

State: N Y

Zip: 12207 -

County: Albany

Name of Nearest Cross Street

North Pearl Street/Colonie Street

Distance to Nearest Cross Street (Feet)

50

Project In Relation to Cross Street

◉ **North** ○ **South** ○ **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel

65.75-1-1

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you must go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i" (identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

-73.784

Y Coordinates (Northing)

42.658

2. What is the nature of this construction project?

◉ **New Construction**

○ **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development
Existing Land Use

- ○ FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ◉ OTHER

Vacant Land

Post-Development
Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots:
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ◉ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note**: for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the existing impervious area to be disturbed (for redevelopment disturbed area). (Round to the nearest tenth of an acre).

Total Site Area	**Total Area To Be Disturbed**	**Existing Impervious Area To Be Disturbed**	**Future Impervious Area Within Disturbed Area**
1.8	0.7	0.0	0.4

5. Do you plan to disturb more than 5 acres of soil at any one time? ○ **Yes** ◉ **No**

6. Indicate the percentage of each Hydrologic Soil Group (HSG) at the site.

A	**B**	**C**	**D**
%	%	100 %	%

7. Is this a phased project? ○ **Yes** ○ **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date	**End Date**
05 / 01 / 2022	06 / 15 / 2022

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

Hudson River

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ○ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ◉ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ○ Other (identify)

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002? ○ **Yes** ◉ **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ○ **Yes** ◉ **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ◉ **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ○ **No**
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ◉ **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ○ **Yes** ◉ **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ◉ **Yes** ○ **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ◉ **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ◉ **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ◉ **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ◉ **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ◉ **Yes** ○ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ◉ **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ☑ **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer

Weston & Sampson

Contact Name (Last, Space, First)

Budrow, Jeffery

Mailing Address

1 Winners Circle, Suite 130

City

Albany

State

NY 12205 -

Phone

518 463 - 4400

Fax

- -

Email

budrowj@wseinc.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of Rezone Albany. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name

Jeffery

MI

F

Last Name

Budrow

Signature

Date

1 / 26 / 2022

25. Has a construction sequence schedule for the planned management practices been prepared? ◉ Yes ○ No

26. Select all of the erosion and sediment control practices that will be employed on this project site.

Temporary Structural

- ◯ Check Dams
- ◯ Construction Road Stabilization
- ◯ Dust Control
- ◯ Earth Dike
- ◯ Level Spreader
- ◯ Perimeter Dike/Swale
- ◯ Pipe Slope Drain
- ◯ Portable Sediment Tank
- ◯ Rock Dam
- ◯ Sediment Basin
- ◯ Sediment Traps
- ✔ Silt Fence
- ✔ Stabilized Construction Entrance
- ◯ Storm Drain Inlet Protection
- ◯ Straw/Hay Bale Dike
- ◯ Temporary Access Waterway Crossing
- ◯ Temporary Stormdrain Diversion
- ◯ Temporary Swale
- ◯ Turbidity Curtain
- ◯ Water Bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ○ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ○ Seeding
- ○ Sodding
- ○ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ○ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ○ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ○ Riprap Slope Protection
- ○ Rock Outlet Protection
- ○ Streambank Protection

Other

Post Construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ◯ Preservation of Undisturbed Areas
- ◯ Preservations of Buffers
- ☑ Reduction of Clearing & Grading
- ◯ Locating Development in Less Sensitive Areas
- ◯ Roadway Reduction
- ◯ Sidewalk Reduction
- ◯ Driveway Reduction
- ◯ Cul-de-sac Reduction
- ◯ Building Footprint Reduction
- ◯ Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual (2010 version).

☑ All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

◯ Compacted areas were considered as impervious cover when calculating the WQv Required, and the compacted areas were assigned a post construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

0.036 . _____ **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required (#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Table 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifyingthe SMPs

Table 1 - Runoff Reduction(RR) Techniques and Standard Stormwater Management Practices (SMPs)

RR Techniques (Area Reduction)	Total Contributing Area (acres)		Total Contributing Impervious Area (acres)
○ Conservation of Natural Areas (RR-1)	.	and/or	.
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)	.	and/or	.
✔ Tree Planting/Tree Pit (RR-3)	.	and/or	0 . 4
○ Disconnection of Rooftop Runoff (RR-4)	.	and/or	.

RR Techniques (Area Reduction)	
○ Vegetated Swale (RR-5)	.
○ Rain Garden (RR-6)	.
○ Stormwater Planter (RR-7)	.
○ Rain Barrel/Cistern (RR-8)	.
✔ Porous Pavement (RR-9)	0 . 4
○ Green Roof (RR-10)	.

Standard SMPs with RRv Capacity	
○ Infiltration Trench (I-1)	.
○ Infiltration Basin (I-2)	.
○ Dry Well (I-3)	.
○ Underground Infiltration System (I-4)	.
○ Bioretention (F-5)	.
○ Dry Swale (O-1)	.

Standard SMPs	
○ Micropool Extended Detention (P-1)	.
○ Wet Pond (P-2)	.
○ Wet Extended Detention (P-3)	.
○ Multiple Pond System (P-4)	.
○ Pocket Pond (P-5)	.
○ Surface Sand Filter (F-1)	.
○ Underground Sand Filter (F-2)	.
○ Perimeter Sand Filter (F-3)	.
○ Organic Filter (F-4)	.
○ Shallow Wetland (W-1)	.
○ Extended Detention Wetland (W-2)	.
○ Pond/Wetland System (W-3)	.
○ Pocket Wetland (W-4)	.
○ Wet Swale (O-2)	.

Table 2 - Alternative SMPs (Do Not Include Practices Being Used For Pretreatment Only)

Alternative SMP	Total Contributing Impervious Area (acres)
○ Hydrodynamic.....	.
○ Wet Vault.....	.
○ Media Filter.....	.
○ Other	.

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice (s)) being used for WQv treatment.

Name

Manufacturer

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs, used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

0.007 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ◉ **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

0.01 **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

○ **Yes** ◪ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.

If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing **criteria.**

33. Identify the Standard SMP's in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv (=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and Table 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Table 1 and Table 2 to identify the SMPs used on Redevelopment projects.

33a Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in Question #29.

WQv Provided

[ ] . [ ] **acre-feet**

Note: For the Standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). [0].[0367] **acre-feet**

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ◉ **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

[0].[063] **acre-feet**

CPv Provided

[0].[254] **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

[1].[59] **CFS**

Post-Development

[0].[67] **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

[3].[46] **CFS**

Post-Development

[1].[58] **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

◯ Site discharges directly to tidal waters or a fifth order or larger stream.

◯ Downstream analysis reveals that the Qp and Qf controls are not required.

38. Has a long term Operation & Maintenance Plan for the post construction stormwater management practice (s) been developed? ✔Yes ◯No

If yes, identify the entity responsible for the long term Operation & Maintenance.

Capital Repertory Theatre, Inc

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). (See Question #32a). This space can also be used for other pertinent project information.

RRv cannot be fully met due to fill material on site and limited area to provide RRv practices. RRv credit was taken for the proposed 33 tree plantings on the site.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ◯ Air Pollution Control
- ◯ Coastal Erosion
- ◯ Hazardous Waste
- ◯ Long Island Wells
- ◯ Mined Land Reclamation
- ◯ Solid Waste
- ◯ Navigable Waters Protection/Article 15
- ◯ Water Quality Certificate
- ◯ Dam Safety
- ◯ Water Supply
- ◯ Freshwater Wetlands/Article 24
- ◯ Tidal Wetlands
- ◯ Wild, Scenic and Recreational Rivers
- ◯ Stream Bed or Bank Protection / Article 15
- ◯ Endangered or Threatened Species (Incidental Take Permit)
- ◯ Individual SPDES
- ◯ SPDES Multi-Sector GP N Y R
- ◯ Other
- ✔ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ◯ **Yes** ◉ **No**
If Yes, Indicate Size of Impact. .

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ◉ **Yes** ◯ **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ◉ **Yes** ◯ **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. AWD

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of this permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the permit for which this NOI is being submitted.

Print First Name: Phillip

MI:

Print Last Name: Morris

Owner/Operator Signature: Morris

Date: 1/25/'22

CONTRACTOR CERTIFICATION STATEMENT

Project Name: Capital Repertory Theater (9 Dragons) Parking Lot
Project Location: 329 North Pearl Street, Albany, NY 12207

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollution Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

Name and Title

Company Name

Company Address and Phone Number

Signature

Date

Responsible for:

Trained Individual Responsible for SWPPP Implementation

Name

Title

APPENDIX E

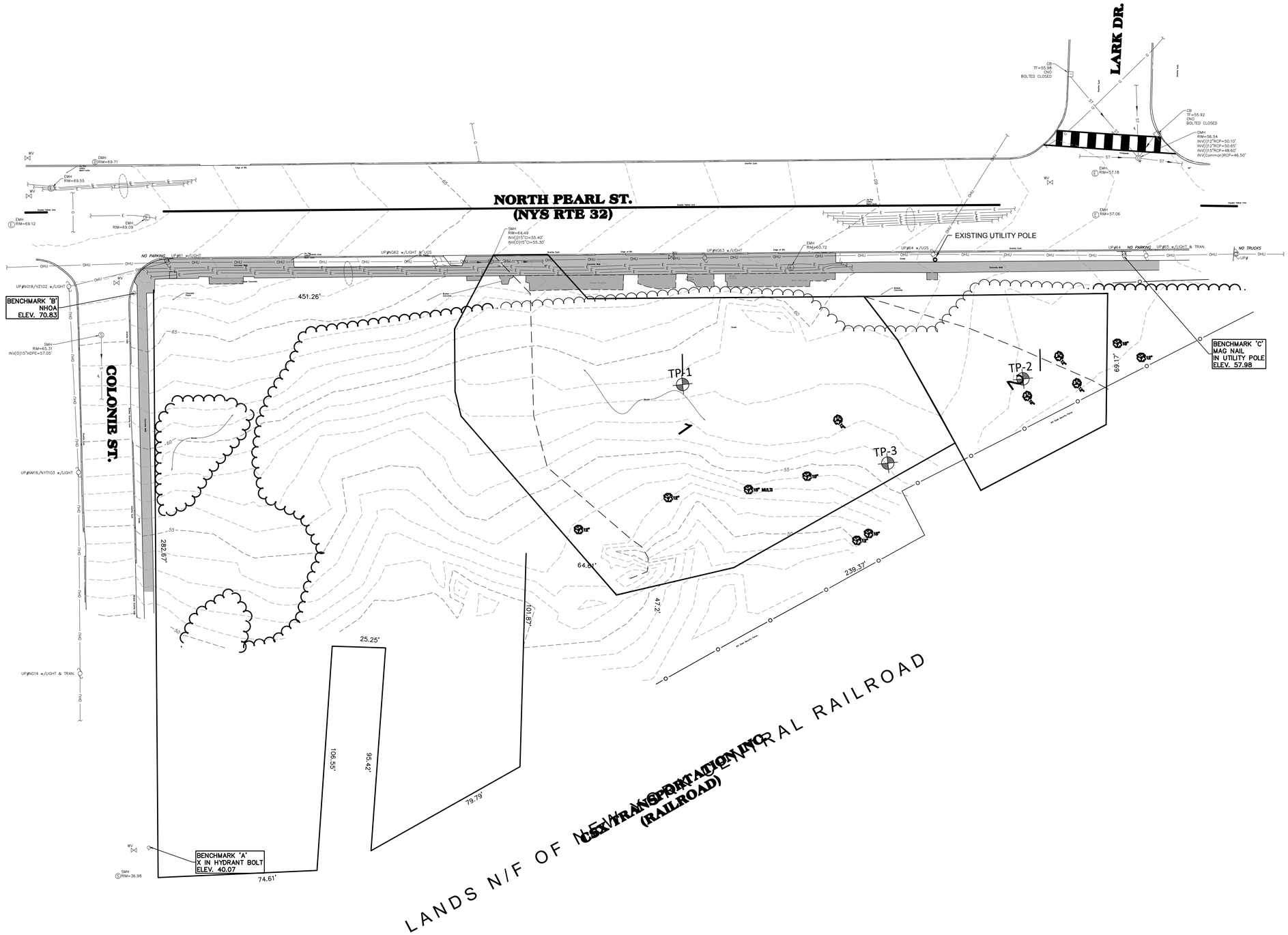
PROJECT SCHEDULE

Proposed Schedule

It is anticipated that the construction for this project will begin Spring, 2022, and be completed by Summer, 2022. The Contractor will submit a schedule for approval which will be included in this document once finalized.

APPENDIX F

STORMWATER CALCULATIONS AND HYDROCAD MODELS



1 **EXISTING SITE CONDITIONS PLAN**
SCALE: BAR SCALE

40 Beaver St. Albany, New York 12207-1511
518 463 6086 www.csarchpc.com

CSARCH

Consultant
Weston&Sampson
1 Winners Circle, Suite 120,
Albany, New York 12205
(518) 453-4500
Fax:(518) 453-4741
(800) SAMPSON
www.westonandsampson.com

Project Title
CAPITAL REPERTORY THEATRE
NORTH PEARL AND LIVINGSTON AVENUE
ALTERATIONS AND SITE WORK

3-25-20

	DATE	DESCRIPTION
1		

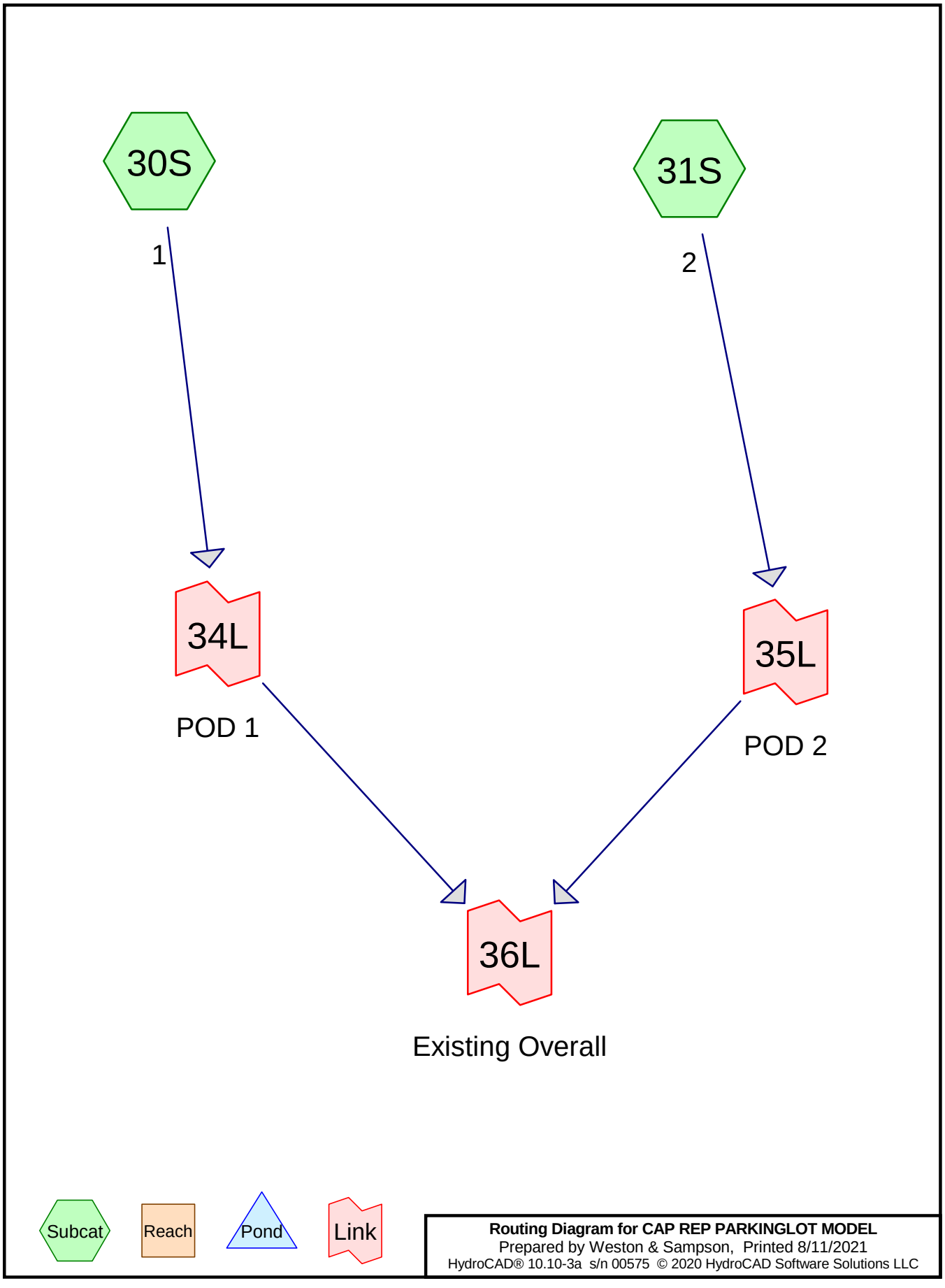
Drawn By:	
Checked By:	
Proj.#	N280066
CSArch Project #	710-1701
Issued for Bid:	October 15, 2018

Sheet Title
STORMWATER EXISTING CONDITIONS

Sheet No.
SK-1

CONSTRUCTION DOCUMENTS

P:\NY\CSARCH\CAPITAL REP 25\ N. PEARL ST\PARKING\STORMWATER\APPENDIX F - STORM CALCS HYDROCAD\OLD EXISTING CONDITIONS PLANS.dwg 8/11/2021 10:03 PM



Routing Diagram for CAP REP PARKINGLOT MODEL
Prepared by Weston & Sampson, Printed 8/11/2021

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	2.25	2
2	2-Year	Type II 24-hr		Default	24.00	1	2.67	2
3	5-Year	Type II 24-hr		Default	24.00	1	3.31	2
4	10-Year	Type II 24-hr		Default	24.00	1	3.88	2
5	25-Year	Type II 24-hr		Default	24.00	1	4.81	2
6	50-Year	Type II 24-hr		Default	24.00	1	5.67	2
7	100-Year	Type II 24-hr		Default	24.00	1	6.68	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.011	98	Paved parking, HSG C (30S)
0.699	82	Woods/grass comb., Poor, HSG C (30S, 31S)
0.710	**82**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.710	HSG C	30S, 31S
0.000	HSG D	
0.000	Other	
0.710		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.011	0.000	0.000	0.011	Paved parking	30S
0.000	0.000	0.699	0.000	0.000	0.699	Woods/grass comb., Poor	30S, 31S
0.000	**0.000**	**0.710**	**0.000**	**0.000**	**0.710**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 30S: 1 Runoff Area=23,747 sf 2.06% Impervious Runoff Depth=0.82"
Flow Length=190' Tc=18.1 min CN=82 Runoff=0.51 cfs 0.037 af

Subcatchment 31S: 2 Runoff Area=7,181 sf 0.00% Impervious Runoff Depth=0.82"
Flow Length=130' Tc=29.0 min CN=82 Runoff=0.11 cfs 0.011 af

Link 34L: POD 1 Inflow=0.51 cfs 0.037 af
Primary=0.51 cfs 0.037 af

Link 35L: POD 2 Inflow=0.11 cfs 0.011 af
Primary=0.11 cfs 0.011 af

Link 36L: Existing Overall Inflow=0.60 cfs 0.048 af
Primary=0.60 cfs 0.048 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.048 af Average Runoff Depth = 0.82"
98.42% Pervious = 0.699 ac 1.58% Impervious = 0.011 ac

Summary for Subcatchment 30S: 1

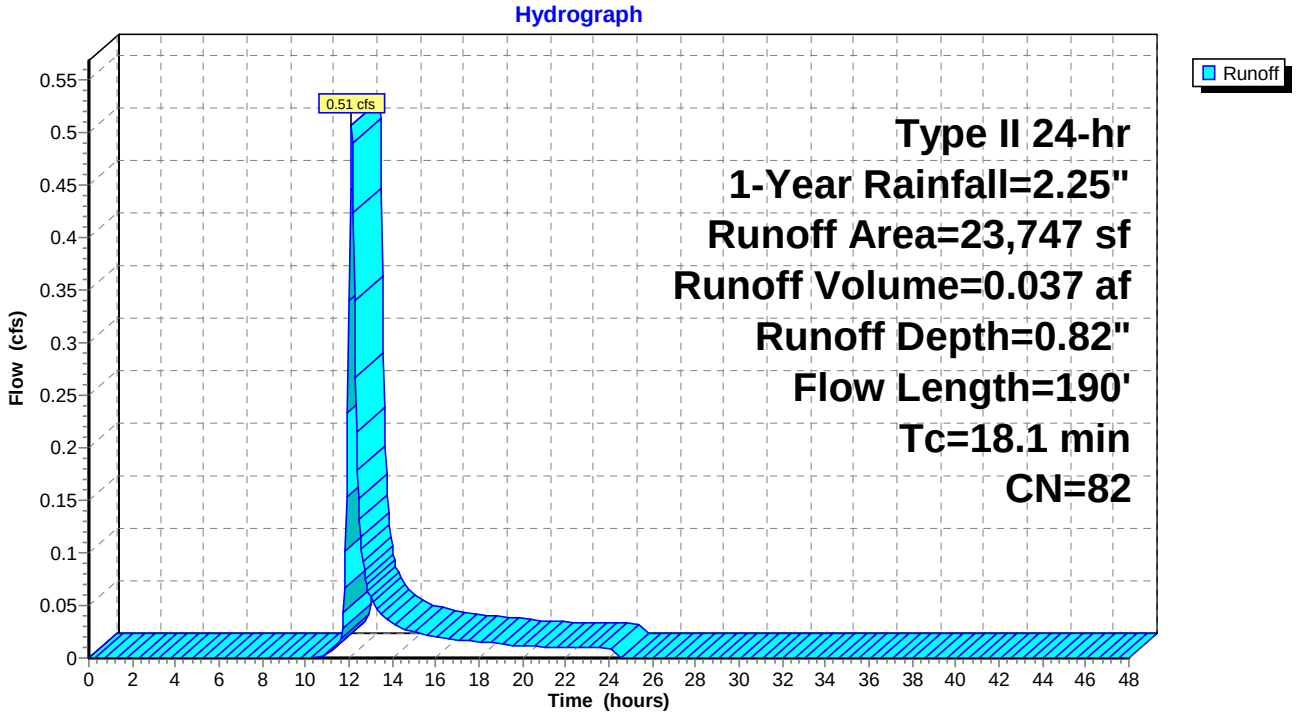
Runoff = 0.51 cfs @ 12.12 hrs, Volume= 0.037 af, Depth= 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (sf)	CN	Description
23,257	82	Woods/grass comb., Poor, HSG C
490	98	Paved parking, HSG C
23,747	82	Weighted Average
23,257		97.94% Pervious Area
490		2.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	14	0.0100	0.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
16.8	86	0.0930	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.8	90	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.1	190	Total			

Subcatchment 30S: 1



Summary for Subcatchment 31S: 2

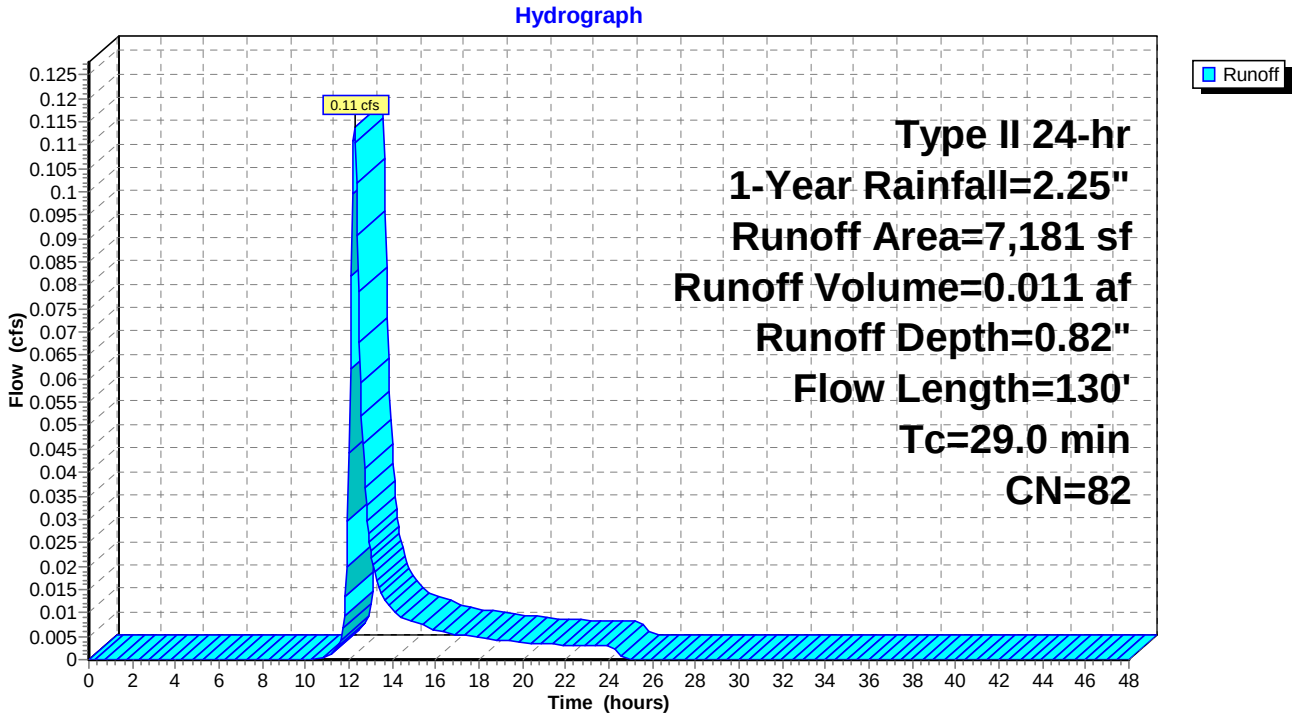
Runoff = 0.11 cfs @ 12.25 hrs, Volume= 0.011 af, Depth= 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (sf)	CN	Description
7,181	82	Woods/grass comb., Poor, HSG C
7,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0350	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
29.0	130	Total			

Subcatchment 31S: 2

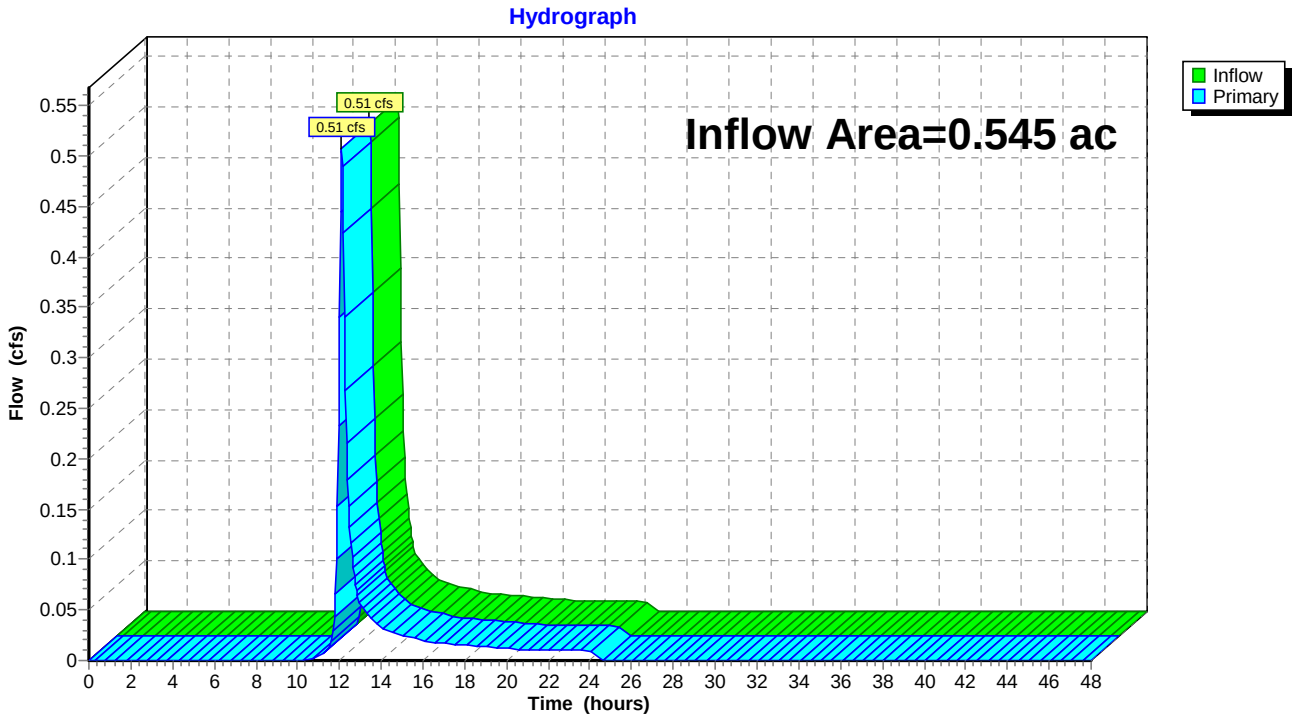


Summary for Link 34L: POD 1

Inflow Area = 0.545 ac, 2.06% Impervious, Inflow Depth = 0.82" for 1-Year event
Inflow = 0.51 cfs @ 12.12 hrs, Volume= 0.037 af
Primary = 0.51 cfs @ 12.12 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 34L: POD 1

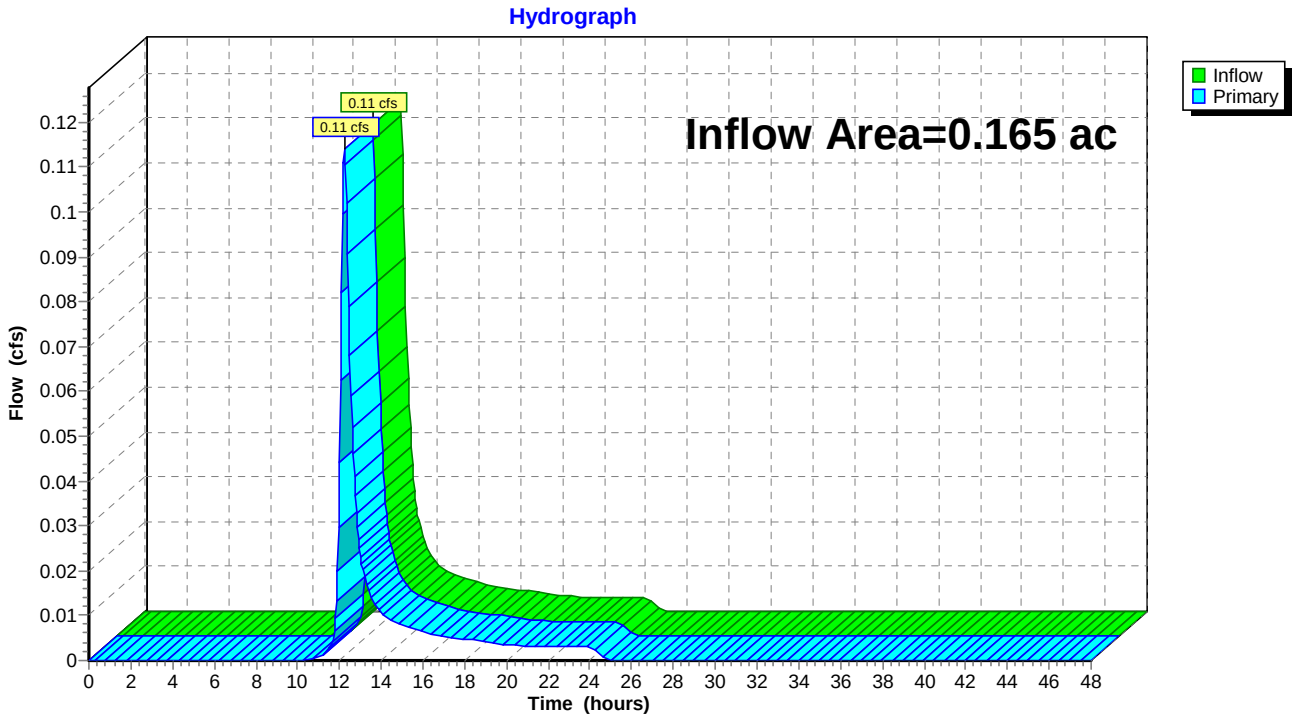


Summary for Link 35L: POD 2

Inflow Area = 0.165 ac, 0.00% Impervious, Inflow Depth = 0.82" for 1-Year event
Inflow = 0.11 cfs @ 12.25 hrs, Volume= 0.011 af
Primary = 0.11 cfs @ 12.25 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 35L: POD 2

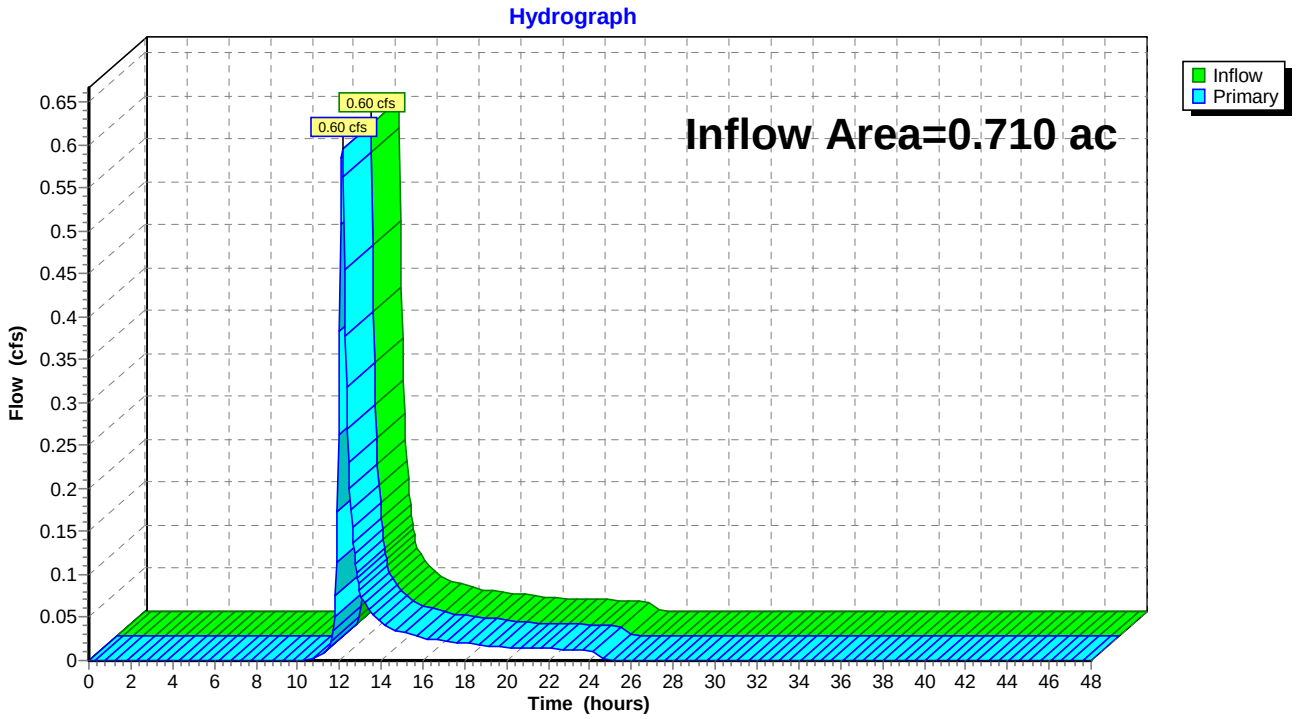


Summary for Link 36L: Existing Overall

Inflow Area = 0.710 ac, 1.58% Impervious, Inflow Depth = 0.82" for 1-Year event
Inflow = 0.60 cfs @ 12.13 hrs, Volume= 0.048 af
Primary = 0.60 cfs @ 12.13 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 36L: Existing Overall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 30S: 1 Runoff Area=23,747 sf 2.06% Impervious Runoff Depth=2.10"
Flow Length=190' Tc=18.1 min CN=82 Runoff=1.34 cfs 0.095 af

Subcatchment 31S: 2 Runoff Area=7,181 sf 0.00% Impervious Runoff Depth=2.10"
Flow Length=130' Tc=29.0 min CN=82 Runoff=0.31 cfs 0.029 af

Link 34L: POD 1 Inflow=1.34 cfs 0.095 af
Primary=1.34 cfs 0.095 af

Link 35L: POD 2 Inflow=0.31 cfs 0.029 af
Primary=0.31 cfs 0.029 af

Link 36L: Existing Overall Inflow=1.59 cfs 0.124 af
Primary=1.59 cfs 0.124 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.124 af Average Runoff Depth = 2.10"
98.42% Pervious = 0.699 ac 1.58% Impervious = 0.011 ac

Summary for Subcatchment 30S: 1

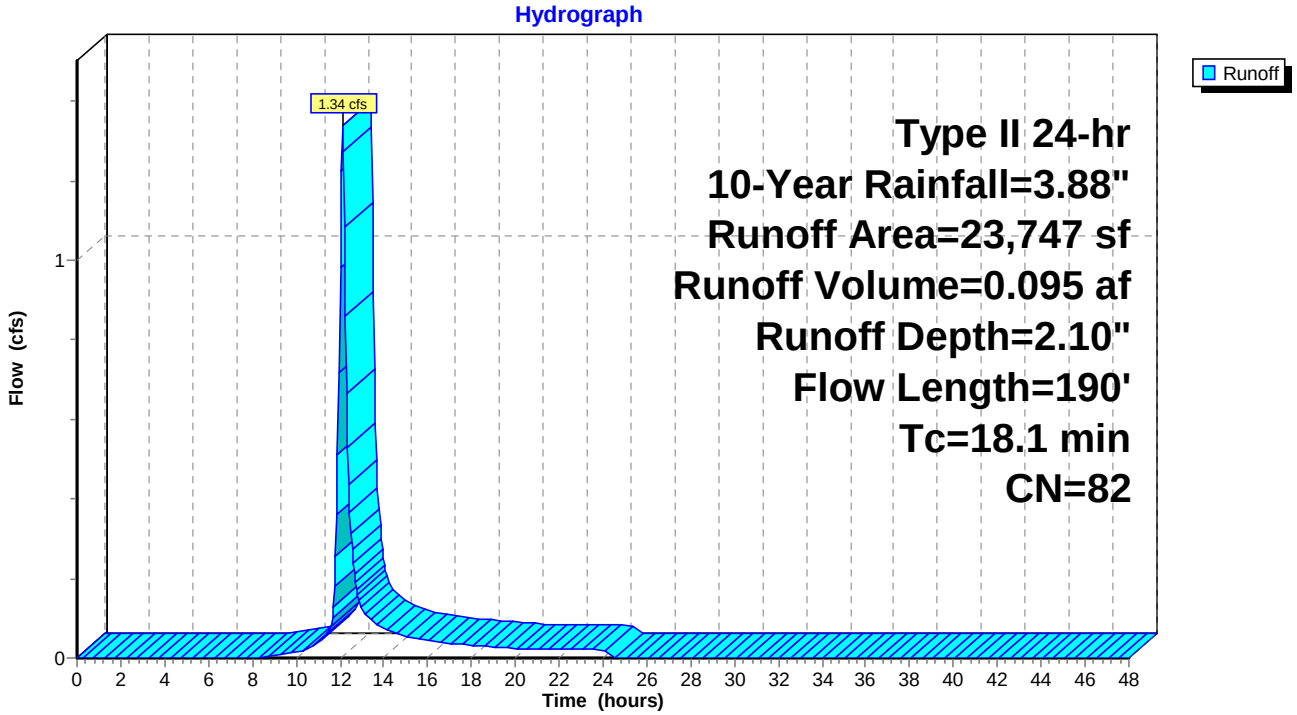
Runoff = 1.34 cfs @ 12.11 hrs, Volume= 0.095 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (sf)	CN	Description
23,257	82	Woods/grass comb., Poor, HSG C
490	98	Paved parking, HSG C
23,747	82	Weighted Average
23,257		97.94% Pervious Area
490		2.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	14	0.0100	0.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
16.8	86	0.0930	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.8	90	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.1	190	Total			

Subcatchment 30S: 1



Summary for Subcatchment 31S: 2

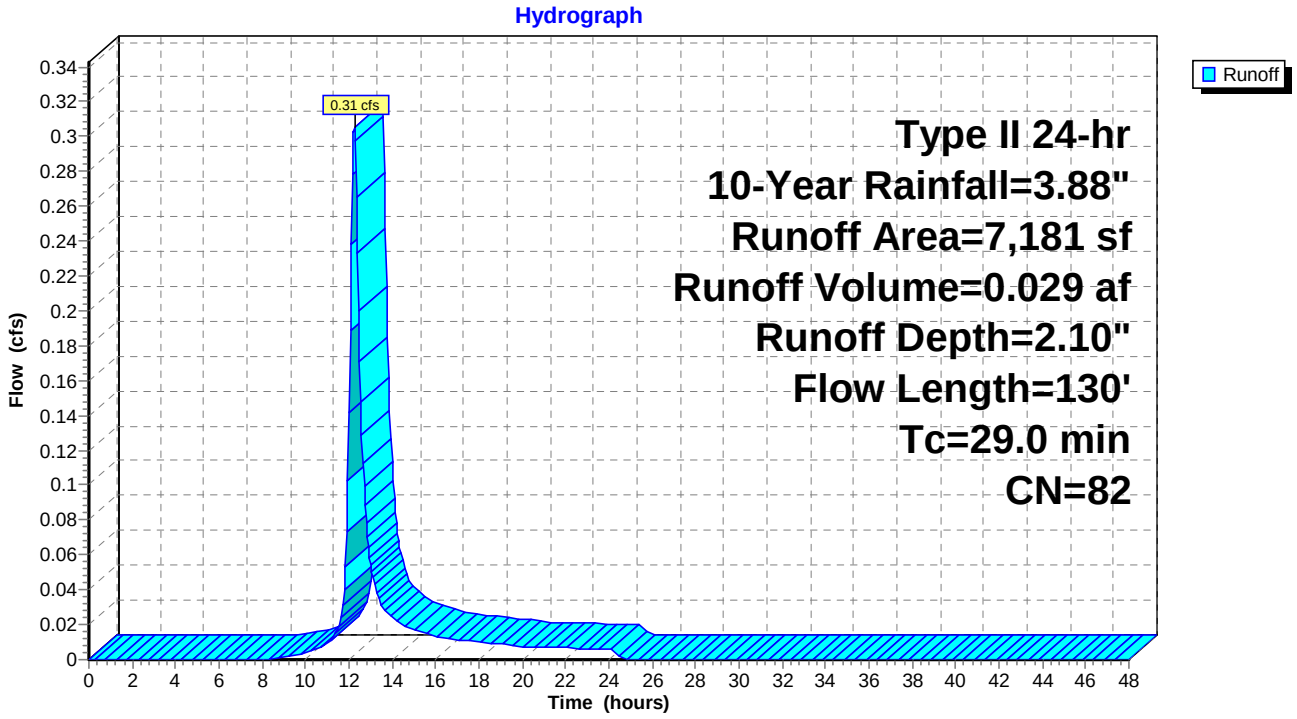
Runoff = 0.31 cfs @ 12.23 hrs, Volume= 0.029 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (sf)	CN	Description
7,181	82	Woods/grass comb., Poor, HSG C
7,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0350	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
29.0	130	Total			

Subcatchment 31S: 2

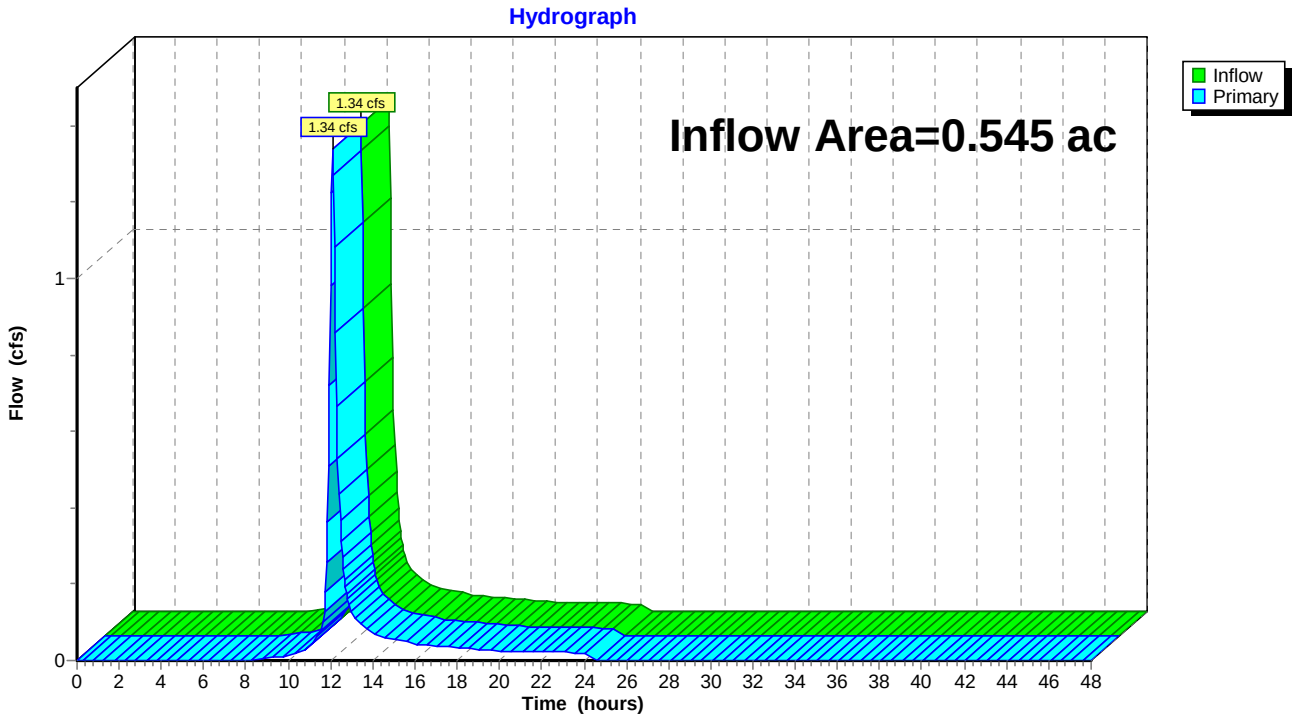


Summary for Link 34L: POD 1

Inflow Area = 0.545 ac, 2.06% Impervious, Inflow Depth = 2.10" for 10-Year event
Inflow = 1.34 cfs @ 12.11 hrs, Volume= 0.095 af
Primary = 1.34 cfs @ 12.11 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 34L: POD 1

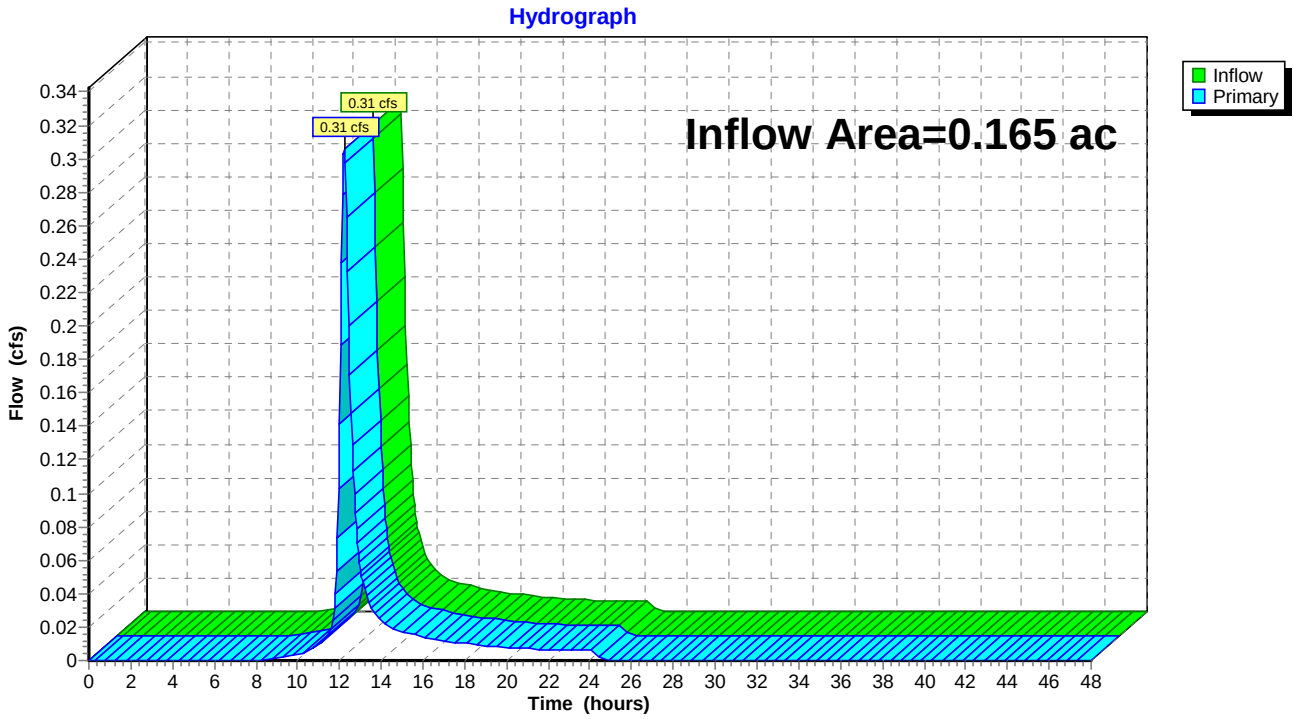


Summary for Link 35L: POD 2

Inflow Area = 0.165 ac, 0.00% Impervious, Inflow Depth = 2.10" for 10-Year event
Inflow = 0.31 cfs @ 12.23 hrs, Volume= 0.029 af
Primary = 0.31 cfs @ 12.23 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 35L: POD 2

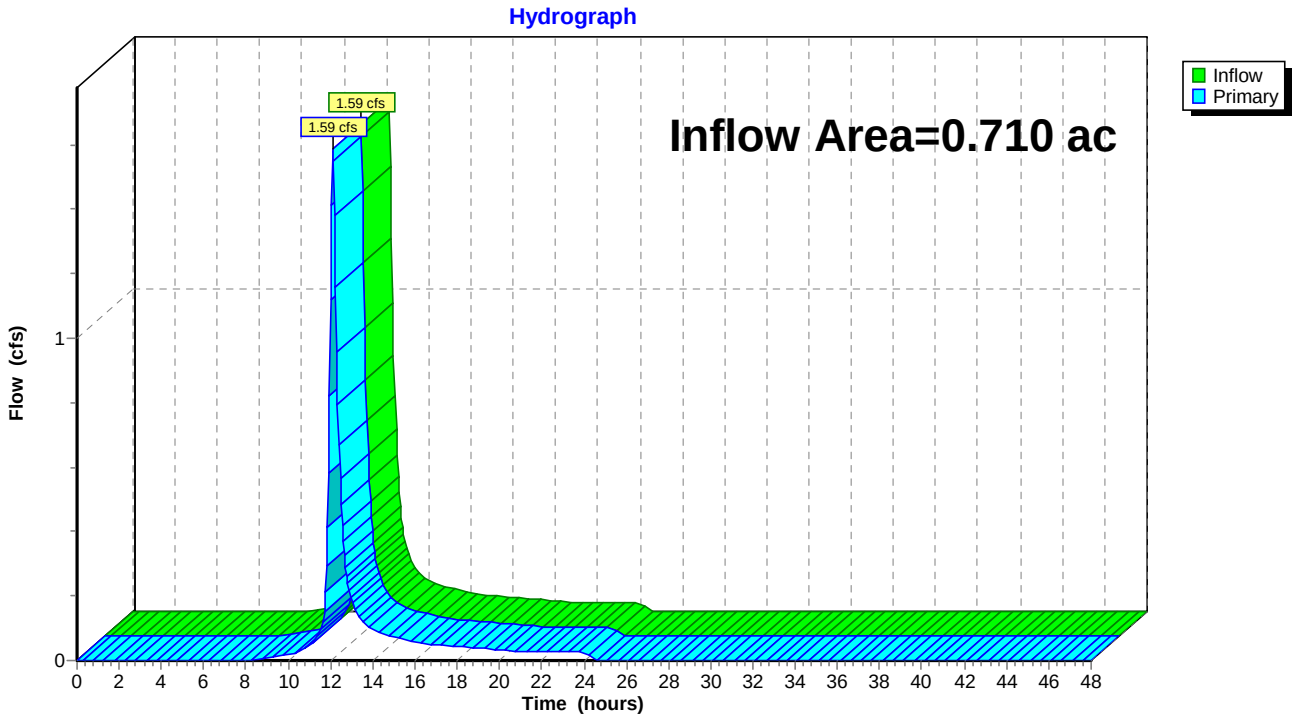


Summary for Link 36L: Existing Overall

Inflow Area = 0.710 ac, 1.58% Impervious, Inflow Depth = 2.10" for 10-Year event
Inflow = 1.59 cfs @ 12.12 hrs, Volume= 0.124 af
Primary = 1.59 cfs @ 12.12 hrs, Volume= 0.124 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 36L: Existing Overall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 30S: 1 Runoff Area=23,747 sf 2.06% Impervious Runoff Depth=2.91"
Flow Length=190' Tc=18.1 min CN=82 Runoff=1.85 cfs 0.132 af

Subcatchment 31S: 2 Runoff Area=7,181 sf 0.00% Impervious Runoff Depth=2.91"
Flow Length=130' Tc=29.0 min CN=82 Runoff=0.42 cfs 0.040 af

Link 34L: POD 1 Inflow=1.85 cfs 0.132 af
Primary=1.85 cfs 0.132 af

Link 35L: POD 2 Inflow=0.42 cfs 0.040 af
Primary=0.42 cfs 0.040 af

Link 36L: Existing Overall Inflow=2.20 cfs 0.172 af
Primary=2.20 cfs 0.172 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.172 af Average Runoff Depth = 2.91"
98.42% Pervious = 0.699 ac 1.58% Impervious = 0.011 ac

Summary for Subcatchment 30S: 1

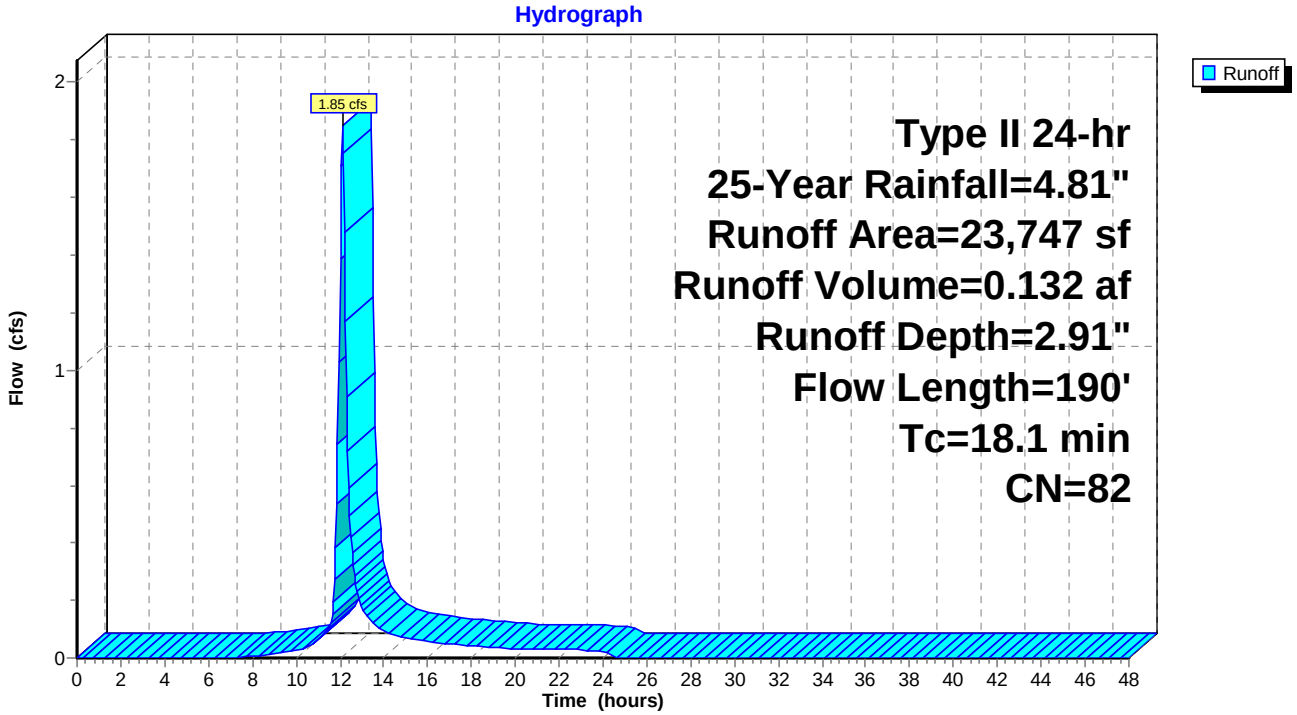
Runoff = 1.85 cfs @ 12.10 hrs, Volume= 0.132 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=4.81"

Area (sf)	CN	Description
23,257	82	Woods/grass comb., Poor, HSG C
490	98	Paved parking, HSG C
23,747	82	Weighted Average
23,257		97.94% Pervious Area
490		2.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	14	0.0100	0.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
16.8	86	0.0930	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.8	90	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.1	190	Total			

Subcatchment 30S: 1



Summary for Subcatchment 31S: 2

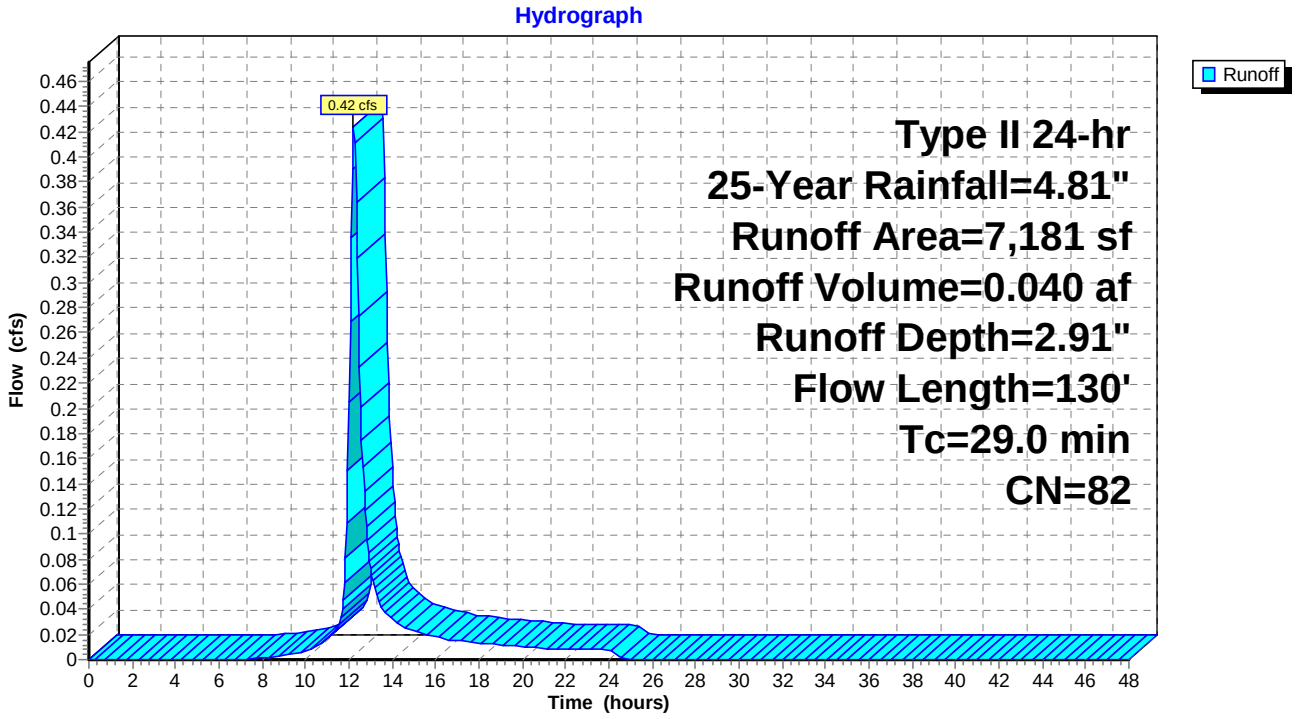
Runoff = 0.42 cfs @ 12.23 hrs, Volume= 0.040 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=4.81"

Area (sf)	CN	Description
7,181	82	Woods/grass comb., Poor, HSG C
7,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0350	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
29.0	130	Total			

Subcatchment 31S: 2

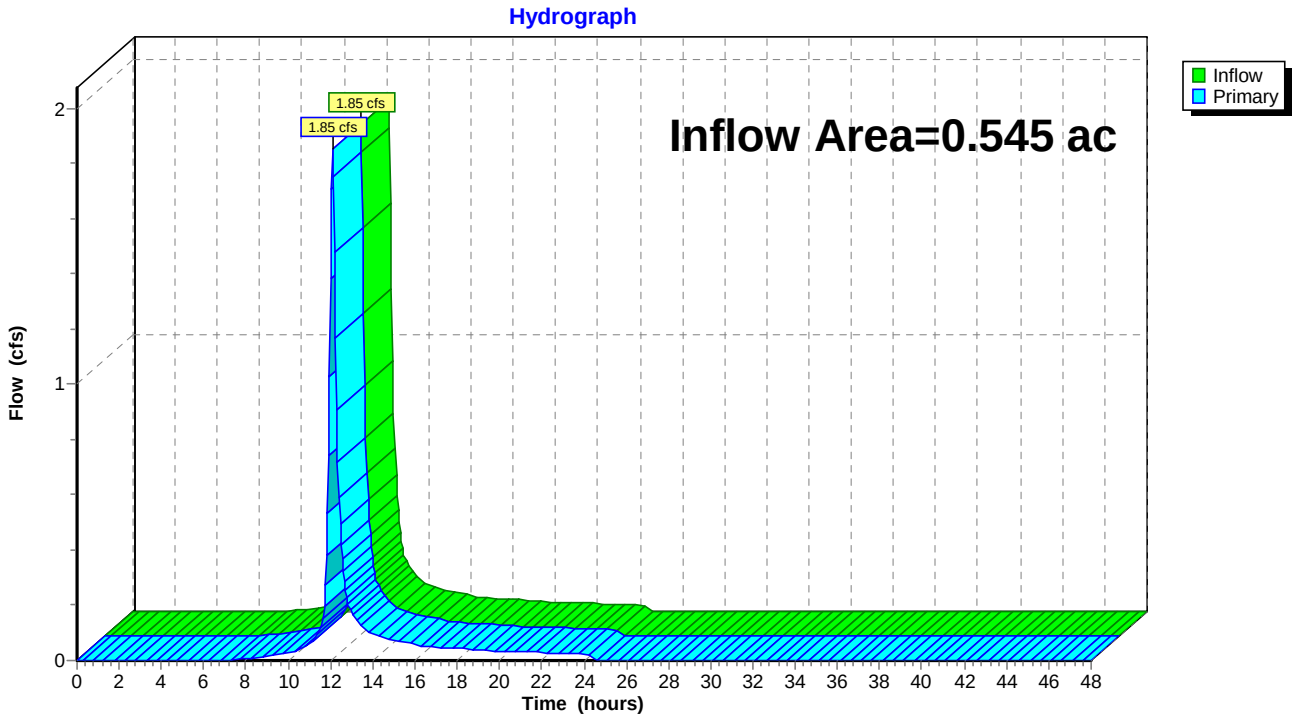


Summary for Link 34L: POD 1

Inflow Area = 0.545 ac, 2.06% Impervious, Inflow Depth = 2.91" for 25-Year event
Inflow = 1.85 cfs @ 12.10 hrs, Volume= 0.132 af
Primary = 1.85 cfs @ 12.10 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 34L: POD 1

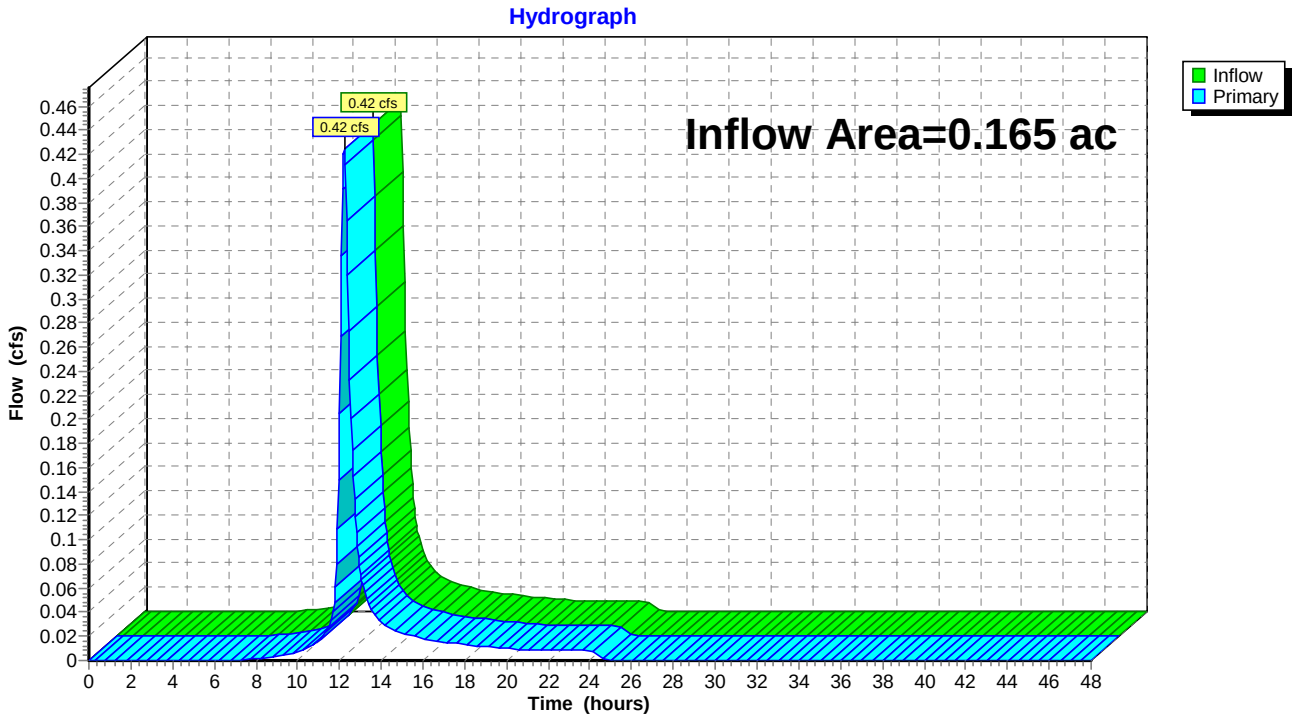


Summary for Link 35L: POD 2

Inflow Area = 0.165 ac, 0.00% Impervious, Inflow Depth = 2.91" for 25-Year event
Inflow = 0.42 cfs @ 12.23 hrs, Volume= 0.040 af
Primary = 0.42 cfs @ 12.23 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 35L: POD 2

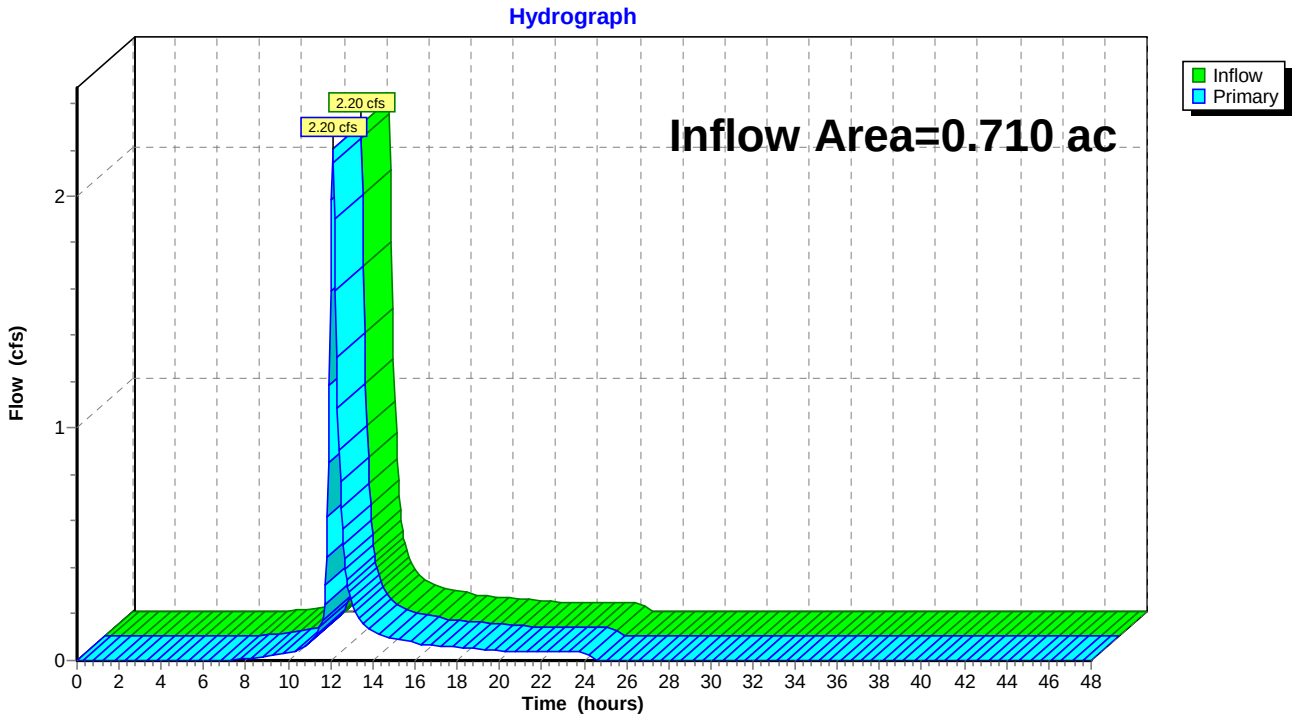


Summary for Link 36L: Existing Overall

Inflow Area = 0.710 ac, 1.58% Impervious, Inflow Depth = 2.91" for 25-Year event
Inflow = 2.20 cfs @ 12.12 hrs, Volume= 0.172 af
Primary = 2.20 cfs @ 12.12 hrs, Volume= 0.172 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 36L: Existing Overall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 30S: 1 Runoff Area=23,747 sf 2.06% Impervious Runoff Depth=4.62"
Flow Length=190' Tc=18.1 min CN=82 Runoff=2.91 cfs 0.210 af

Subcatchment 31S: 2 Runoff Area=7,181 sf 0.00% Impervious Runoff Depth=4.62"
Flow Length=130' Tc=29.0 min CN=82 Runoff=0.67 cfs 0.063 af

Link 34L: POD 1 Inflow=2.91 cfs 0.210 af
Primary=2.91 cfs 0.210 af

Link 35L: POD 2 Inflow=0.67 cfs 0.063 af
Primary=0.67 cfs 0.063 af

Link 36L: Existing Overall Inflow=3.46 cfs 0.273 af
Primary=3.46 cfs 0.273 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.273 af Average Runoff Depth = 4.62"
98.42% Pervious = 0.699 ac 1.58% Impervious = 0.011 ac

Summary for Subcatchment 30S: 1

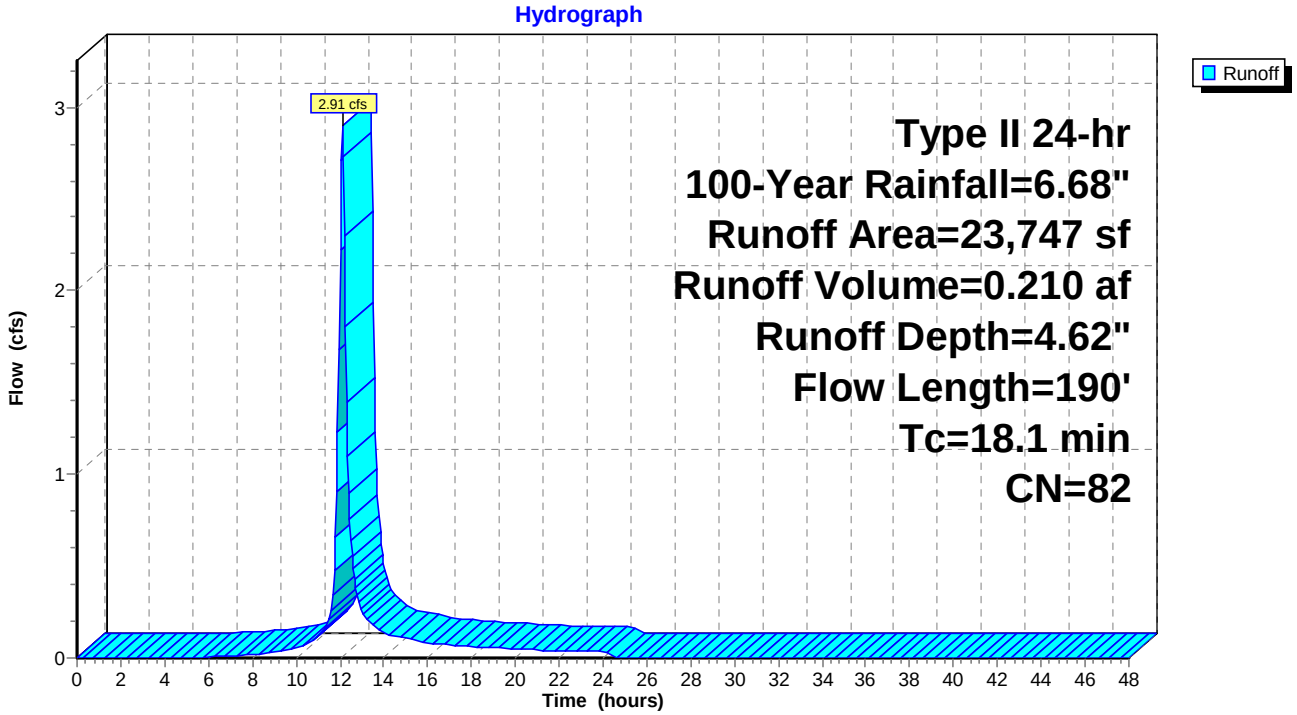
Runoff = 2.91 cfs @ 12.10 hrs, Volume= 0.210 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (sf)	CN	Description
23,257	82	Woods/grass comb., Poor, HSG C
490	98	Paved parking, HSG C
23,747	82	Weighted Average
23,257		97.94% Pervious Area
490		2.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	14	0.0100	0.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
16.8	86	0.0930	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.8	90	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.1	190	Total			

Subcatchment 30S: 1



Summary for Subcatchment 31S: 2

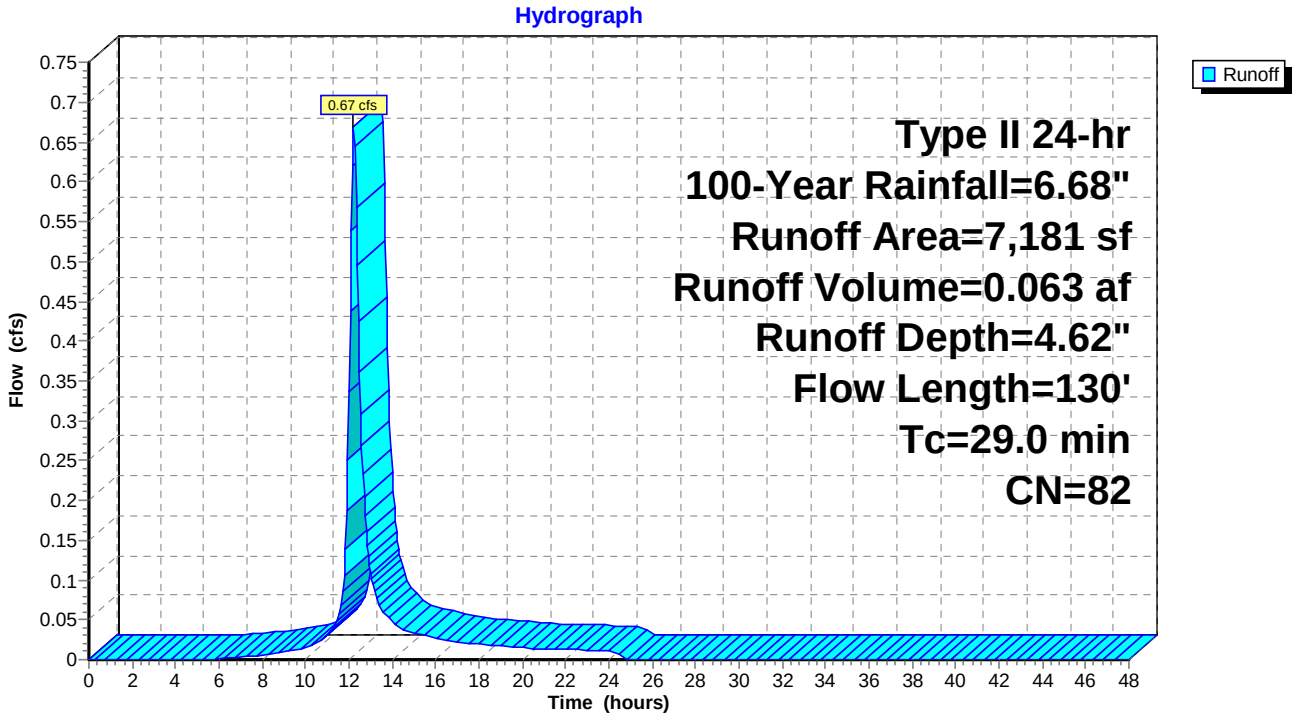
Runoff = 0.67 cfs @ 12.22 hrs, Volume= 0.063 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (sf)	CN	Description
7,181	82	Woods/grass comb., Poor, HSG C
7,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	100	0.0350	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
1.0	30	0.0100	0.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
29.0	130	Total			

Subcatchment 31S: 2

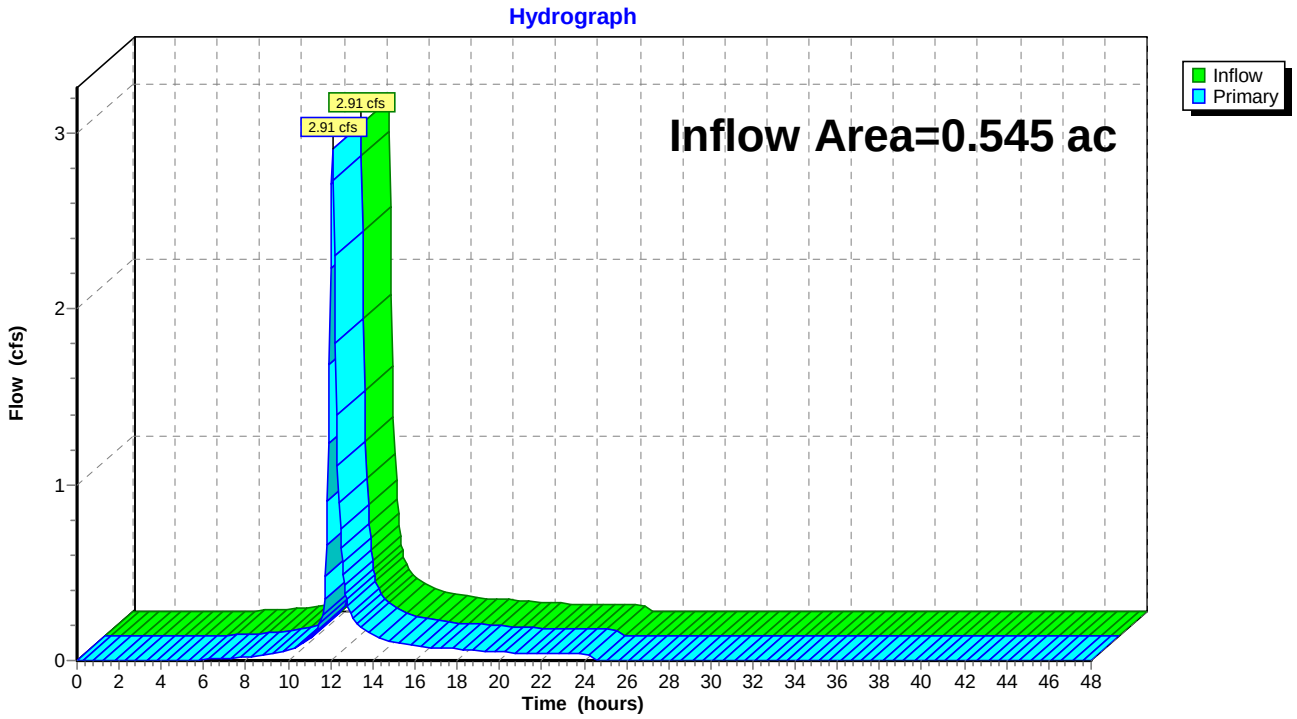


Summary for Link 34L: POD 1

Inflow Area = 0.545 ac, 2.06% Impervious, Inflow Depth = 4.62" for 100-Year event
Inflow = 2.91 cfs @ 12.10 hrs, Volume= 0.210 af
Primary = 2.91 cfs @ 12.10 hrs, Volume= 0.210 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 34L: POD 1

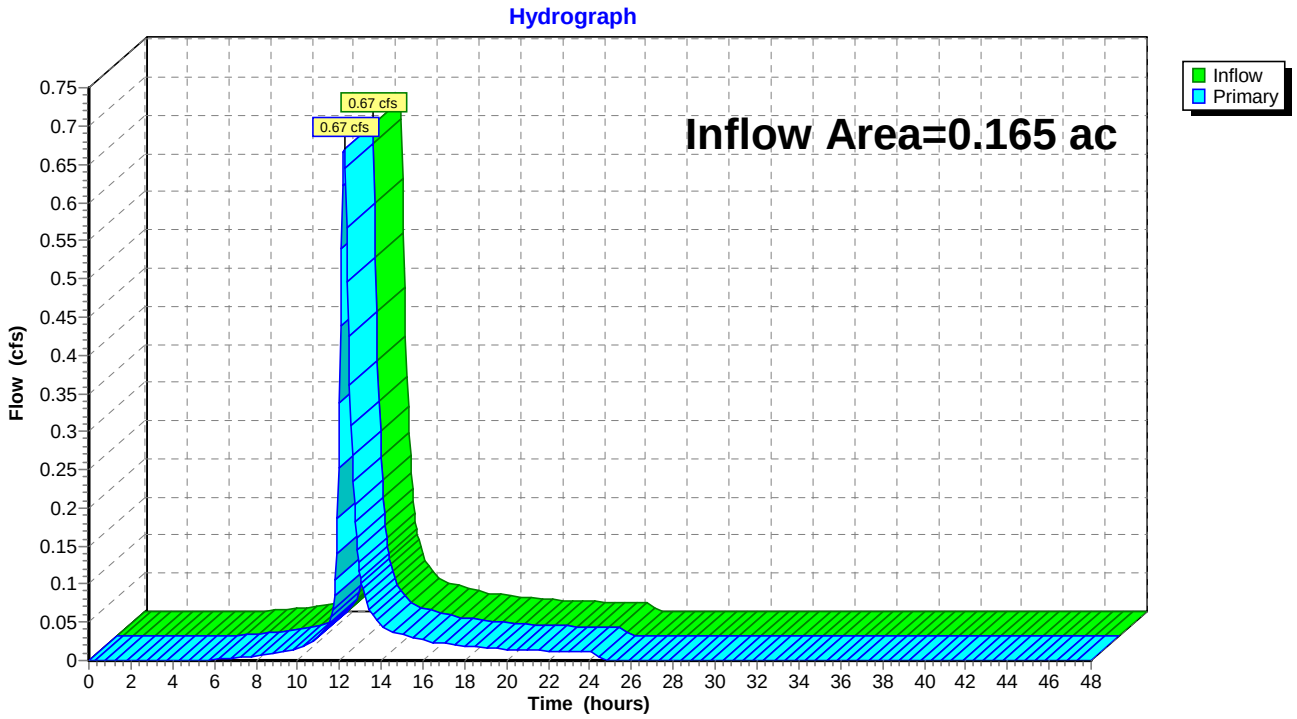


Summary for Link 35L: POD 2

Inflow Area = 0.165 ac, 0.00% Impervious, Inflow Depth = 4.62" for 100-Year event
Inflow = 0.67 cfs @ 12.22 hrs, Volume= 0.063 af
Primary = 0.67 cfs @ 12.22 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 35L: POD 2

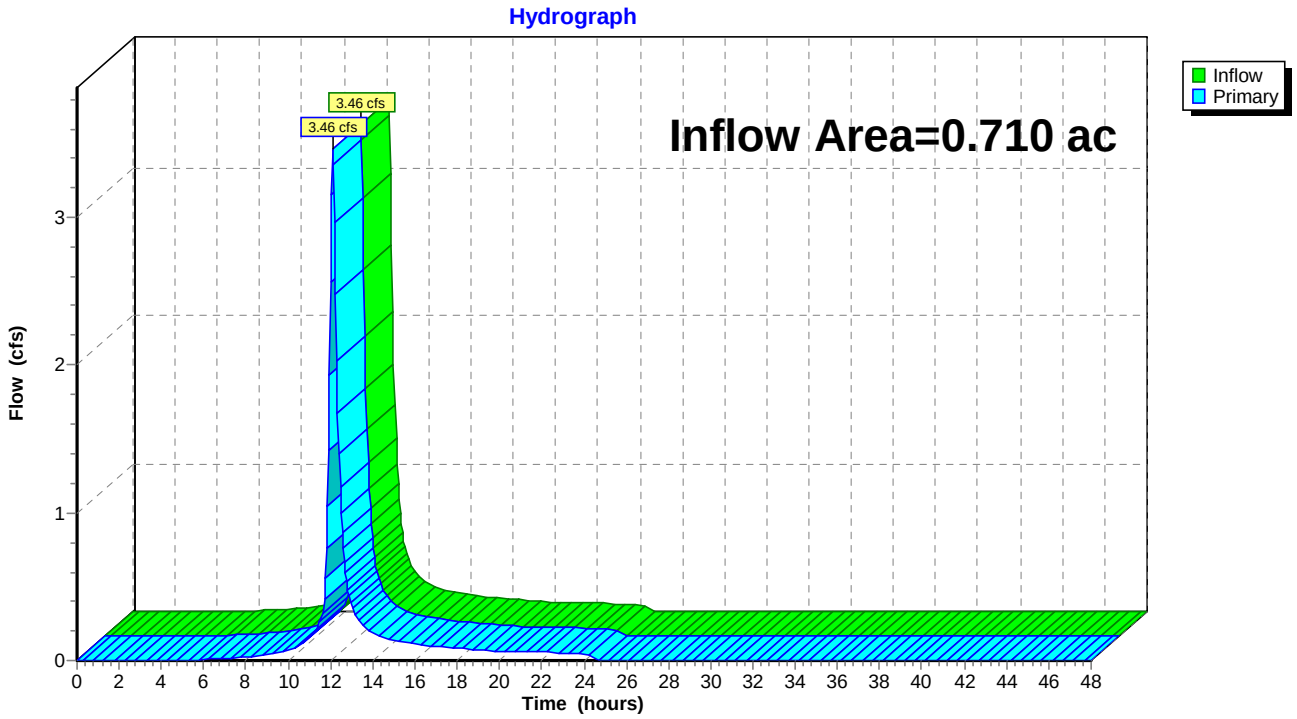


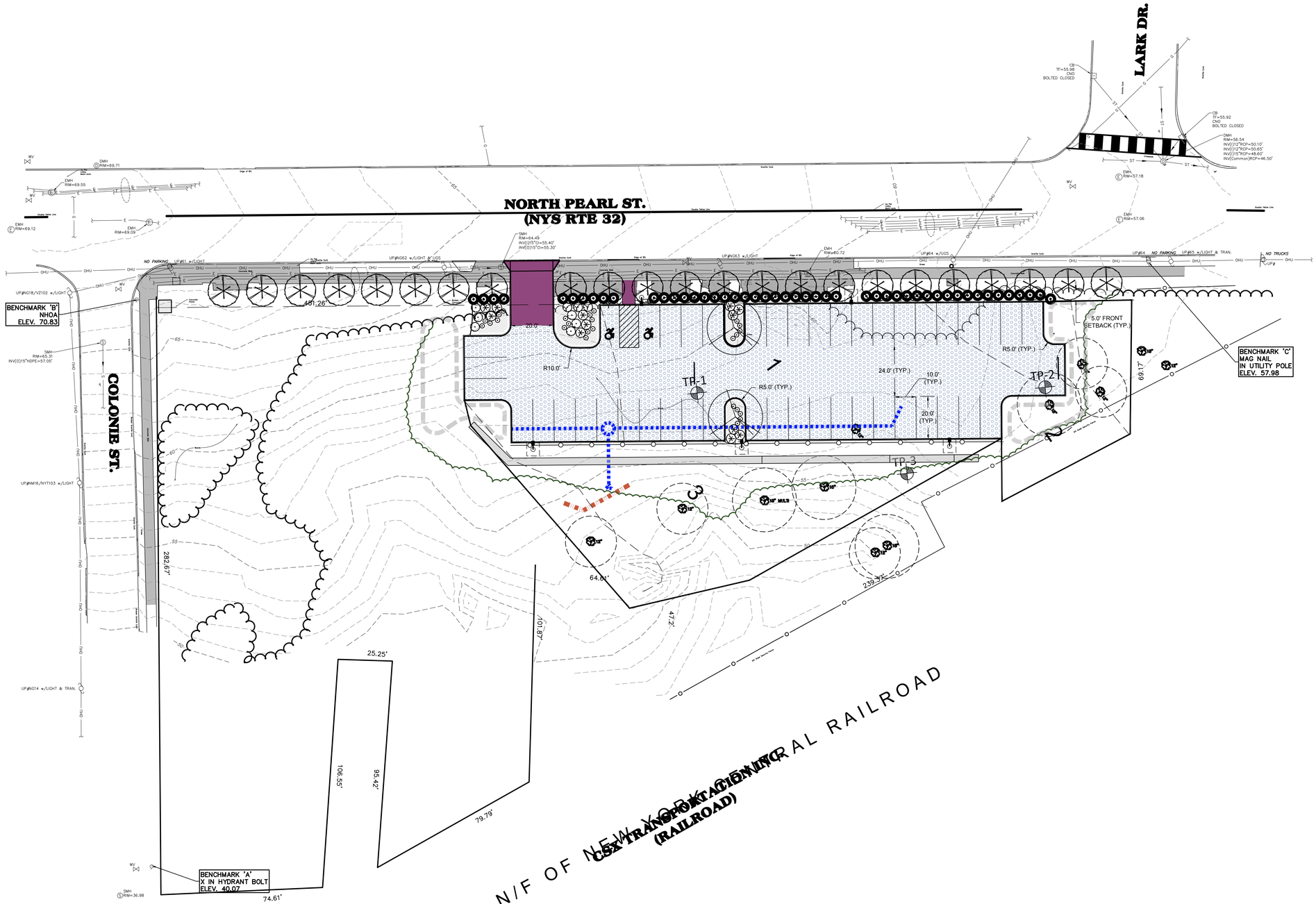
Summary for Link 36L: Existing Overall

Inflow Area = 0.710 ac, 1.58% Impervious, Inflow Depth = 4.62" for 100-Year event
Inflow = 3.46 cfs @ 12.11 hrs, Volume= 0.273 af
Primary = 3.46 cfs @ 12.11 hrs, Volume= 0.273 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 36L: Existing Overall





1 **PROPOSED CONDITIONS**
SCALE: BAR SCALE

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CSARCH

Consultant
Weston&Sampson
1 Winners Circle, Suite 120,
Albany, New York, 12205
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(800) SAMPSON
www.westonandsampson.com

Project Title
CAPITAL REPERTORY THEATRE
NORTH PEARL AND LIVINGSTON AVENUE
ALTERATIONS AND SITE WORK

3-25-20

1	DATE	DESCRIPTION

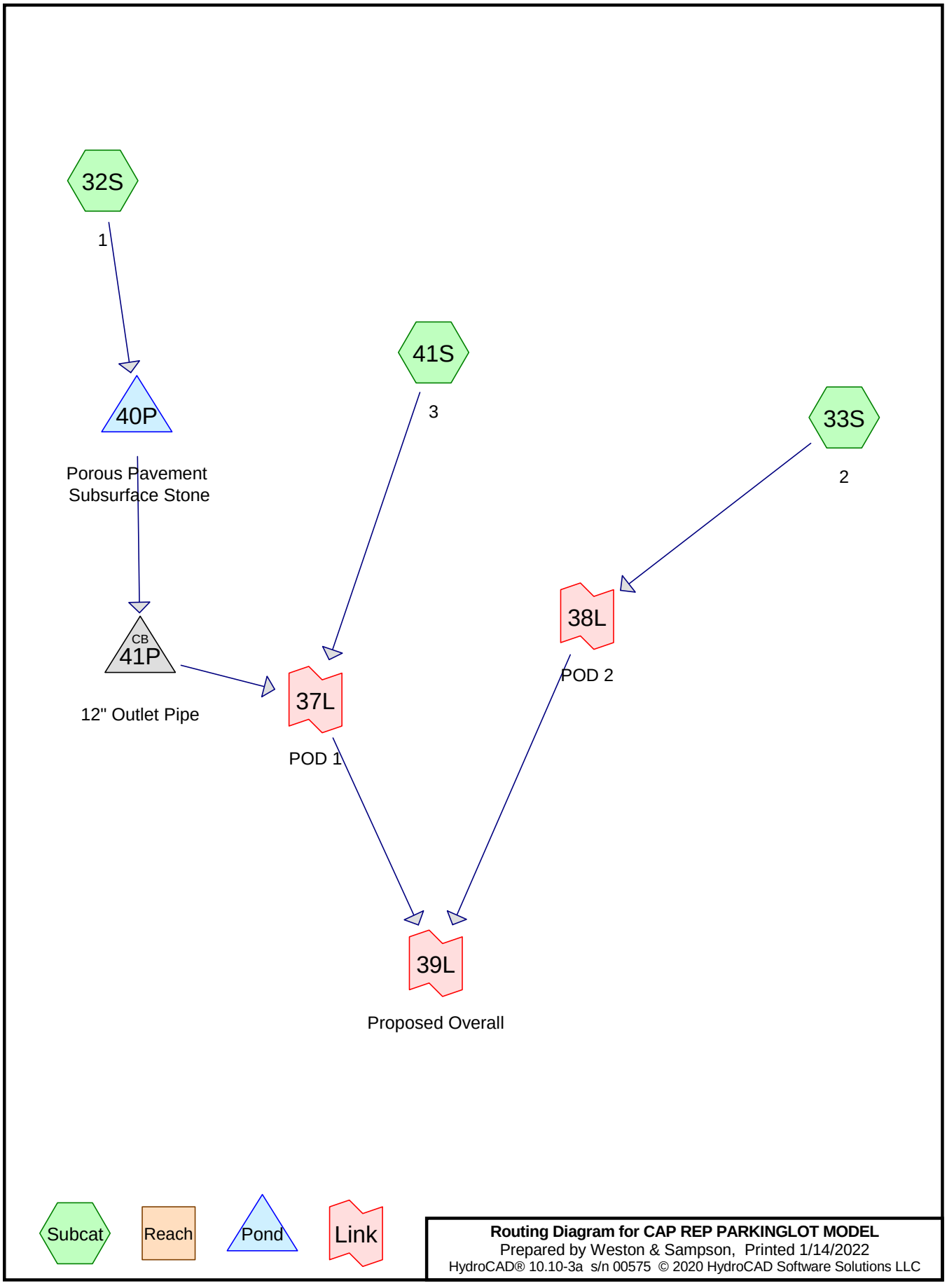
Drawn By:	
Checked By:	
Proj.#	N280066
CSArch Project #	710-1701
Issued for Bid:	October 15, 2018

Sheet Title
STORMWATER PROPOSED CONDITIONS

Sheet No.
SK-2

CONSTRUCTION DOCUMENTS

P:\NYC\SRC\HCAPITAL_REP 25\ N_PEARL_ST\PARKING\STORMWATER\APPENDIX F - STORM CALCS HYDROCAD\100 EXISTING CONDITIONS PLANDWG 8/17/2021 10:00 PM



Routing Diagram for CAP REP PARKINGLOT MODEL
Prepared by Weston & Sampson, Printed 1/14/2022

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.160	74	>75% Grass cover, Good, HSG C (33S, 41S)
0.014	98	Paved parking, HSG C (32S)
0.357	98	Porous Pavement (32S)
0.180	82	Woods/grass comb., Poor, HSG C (33S, 41S)
0.710	**89**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.353	HSG C	32S, 33S, 41S
0.000	HSG D	
0.357	Other	32S
0.710		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.160	0.000	0.000	0.160	>75% Grass cover, Good	33S, 41S
0.000	0.000	0.014	0.000	0.000	0.014	Paved parking	32S
0.000	0.000	0.000	0.000	0.357	0.357	Porous Pavement	32S
0.000	0.000	0.180	0.000	0.000	0.180	Woods/grass comb., Poor	33S, 41S
0.000	**0.000**	**0.353**	**0.000**	**0.357**	**0.710**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	41P	58.50	54.00	22.0	0.2045	0.020	12.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 32S: 1 Runoff Area=16,175 sf 100.00% Impervious Runoff Depth=2.02"
Flow Length=90' Slope=0.0600 '/' Tc=7.2 min CN=98 Runoff=1.11 cfs 0.063 af

Subcatchment 33S: 2 Runoff Area=3,627 sf 0.00% Impervious Runoff Depth=0.67"
Flow Length=70' Slope=0.0214 '/' Tc=25.7 min CN=79 Runoff=0.05 cfs 0.005 af

Subcatchment 41S: 3 Runoff Area=11,143 sf 0.00% Impervious Runoff Depth=0.63"
Flow Length=139' Tc=17.3 min CN=78 Runoff=0.18 cfs 0.013 af

Pond 40P: Porous Pavement Subsurface Peak Elev=57.45' Storage=0.063 af Inflow=1.11 cfs 0.063 af
Outflow=0.00 cfs 0.000 af

Pond 41P: 12" Outlet Pipe Peak Elev=58.50' Inflow=0.00 cfs 0.000 af
12.0" Round Culvert n=0.020 L=22.0' S=0.2045 '/' Outflow=0.00 cfs 0.000 af

Link 37L: POD 1 Inflow=0.18 cfs 0.013 af
Primary=0.18 cfs 0.013 af

Link 38L: POD 2 Inflow=0.05 cfs 0.005 af
Primary=0.05 cfs 0.005 af

Link 39L: Proposed Overall Inflow=0.22 cfs 0.018 af
Primary=0.22 cfs 0.018 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.081 af Average Runoff Depth = 1.36"
47.73% Pervious = 0.339 ac 52.27% Impervious = 0.371 ac

Summary for Subcatchment 32S: 1

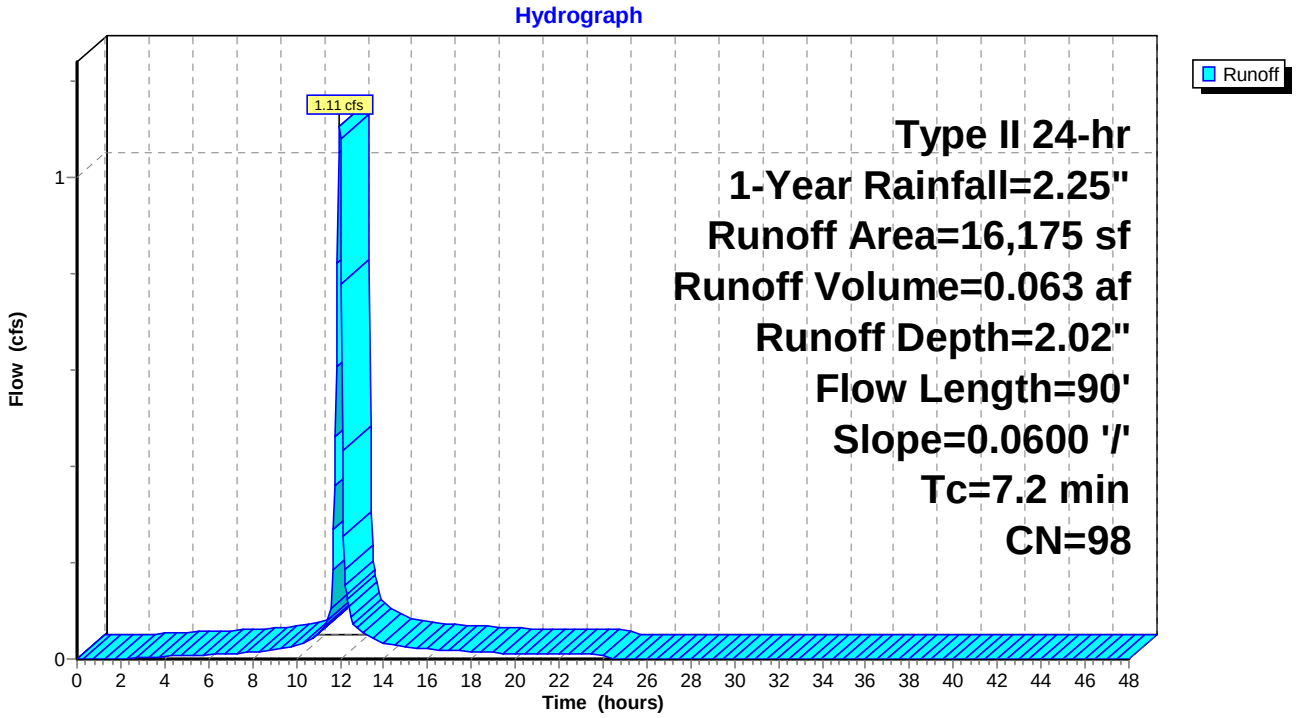
Runoff = 1.11 cfs @ 11.98 hrs, Volume= 0.063 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

	Area (sf)	CN	Description
	625	98	Paved parking, HSG C
*	15,550	98	Porous Pavement
	16,175	98	Weighted Average
	16,175		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Infiltration Through Porous Pavement**
1.2	90	0.0600	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
7.2	90	Total			

Subcatchment 32S: 1



Summary for Subcatchment 33S: 2

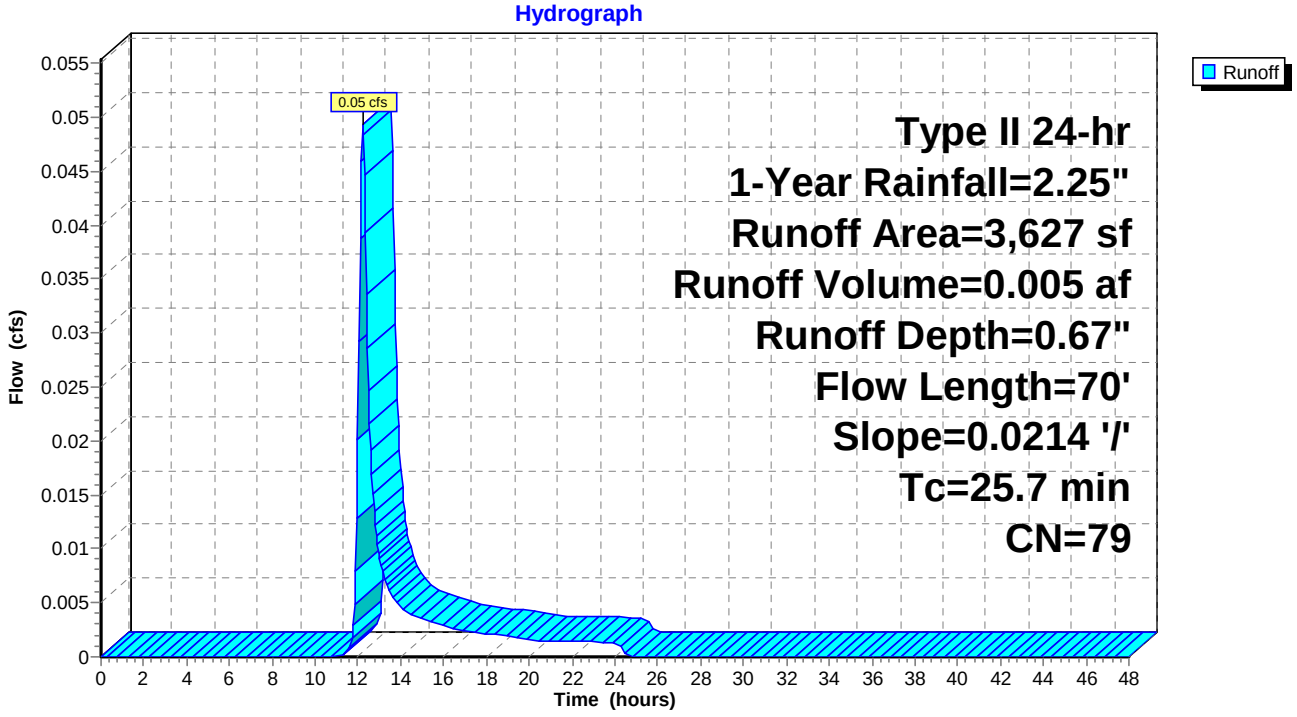
Runoff = 0.05 cfs @ 12.21 hrs, Volume= 0.005 af, Depth= 0.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (sf)	CN	Description
2,213	82	Woods/grass comb., Poor, HSG C
1,414	74	>75% Grass cover, Good, HSG C
3,627	79	Weighted Average
3,627		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7	70	0.0214	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"

Subcatchment 33S: 2



Summary for Subcatchment 41S: 3

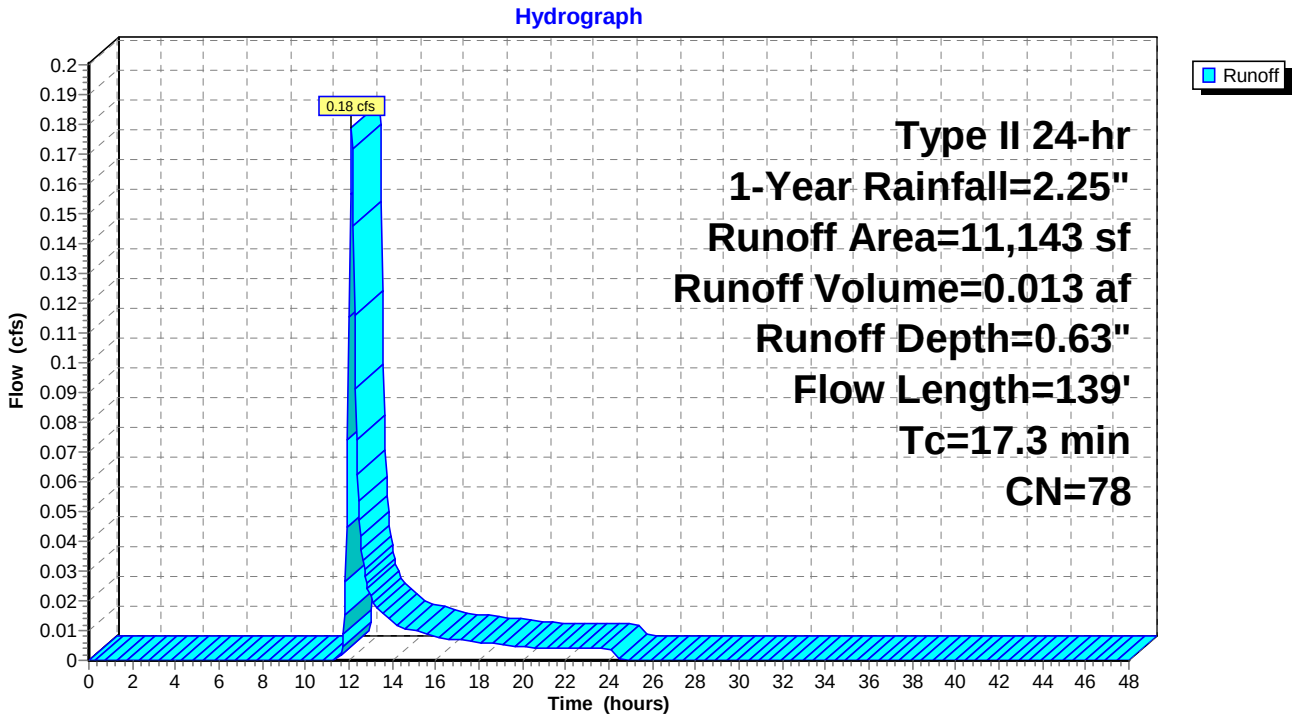
Runoff = 0.18 cfs @ 12.11 hrs, Volume= 0.013 af, Depth= 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.25"

Area (sf)	CN	Description
5,607	82	Woods/grass comb., Poor, HSG C
5,536	74	>75% Grass cover, Good, HSG C
11,143	78	Weighted Average
11,143		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	62	0.0480	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 1.20"
9.3	38	0.0790	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.3	39	0.2180	2.33		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
17.3	139	Total			

Subcatchment 41S: 3



Summary for Pond 40P: Porous Pavement Subsurface Stone

Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 2.02" for 1-Year event
Inflow = 1.11 cfs @ 11.98 hrs, Volume= 0.063 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 57.45' @ 24.45 hrs Surf.Area= 0.347 ac Storage= 0.063 af
Flood Elev= 61.65' Surf.Area= 0.347 ac Storage= 0.254 af

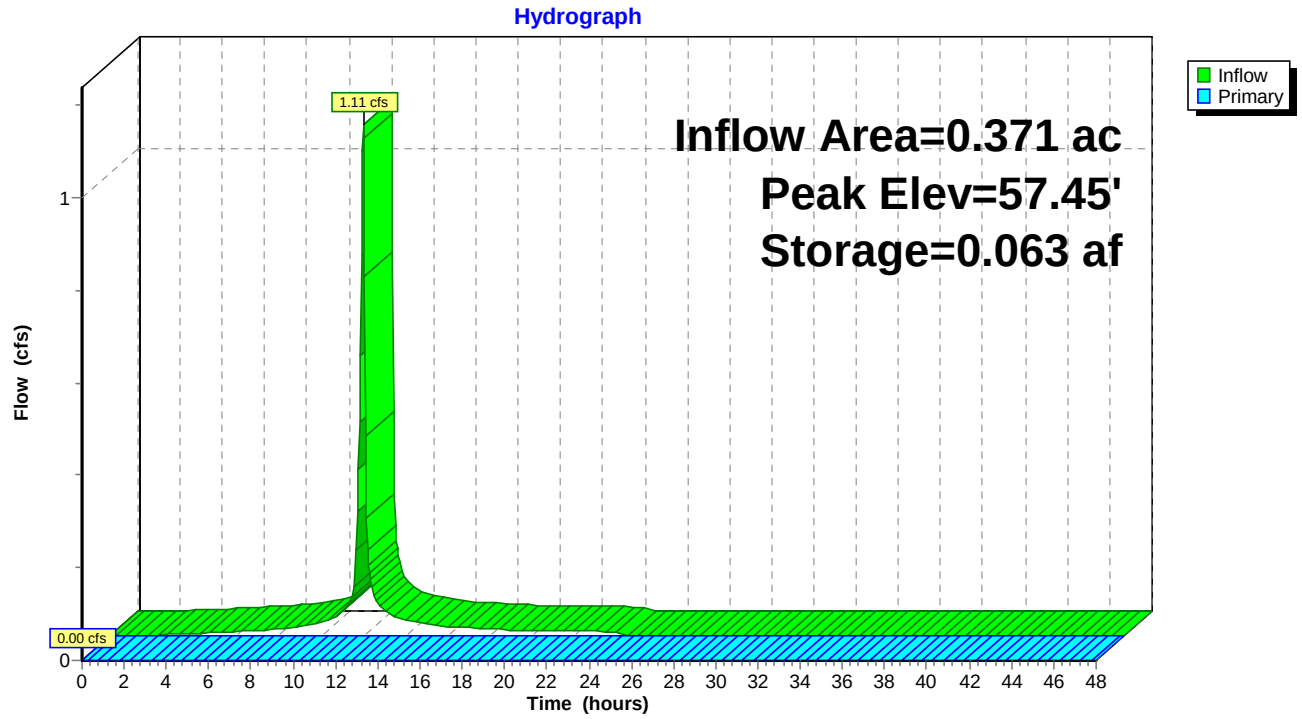
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	0.254 af	**53.00'W x 285.00'L x 1.83'H Prismatoid** 0.635 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	59.50'	**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=0.00 cfs @ 0.00 hrs HW=57.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 40P: Porous Pavement Subsurface Stone



Summary for Pond 41P: 12" Outlet Pipe

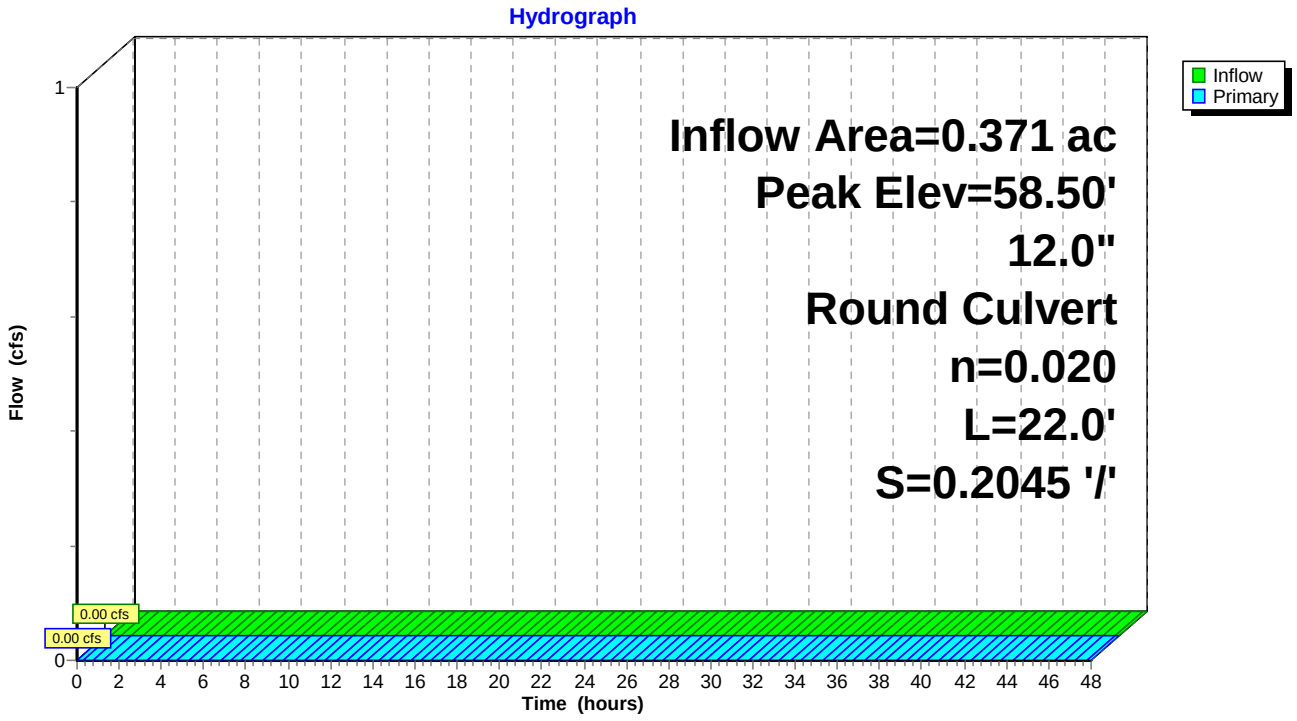
Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 58.50' @ 0.00 hrs
Flood Elev= 61.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.50'	**12.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.50' / 54.00' S= 0.2045 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.50' (Free Discharge)
1=Culvert (Controls 0.00 cfs)

Pond 41P: 12" Outlet Pipe

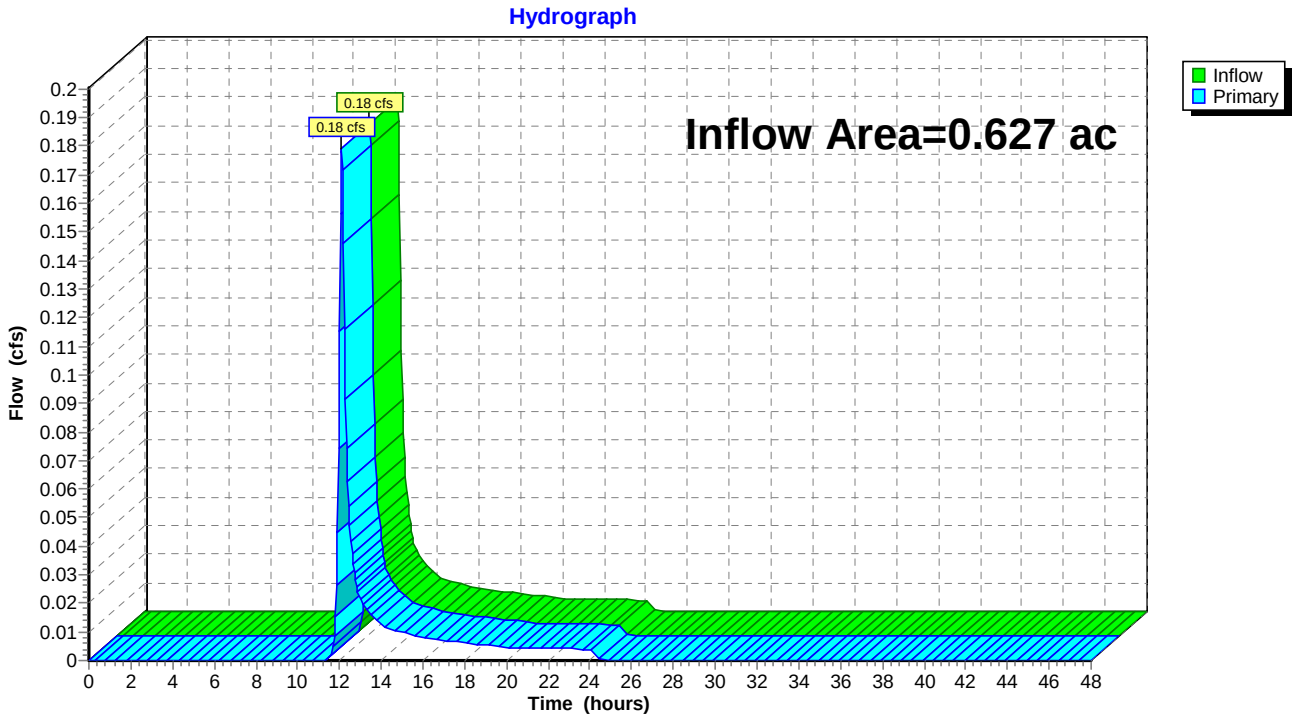


Summary for Link 37L: POD 1

Inflow Area = 0.627 ac, 59.21% Impervious, Inflow Depth = 0.26" for 1-Year event
Inflow = 0.18 cfs @ 12.11 hrs, Volume= 0.013 af
Primary = 0.18 cfs @ 12.11 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 37L: POD 1

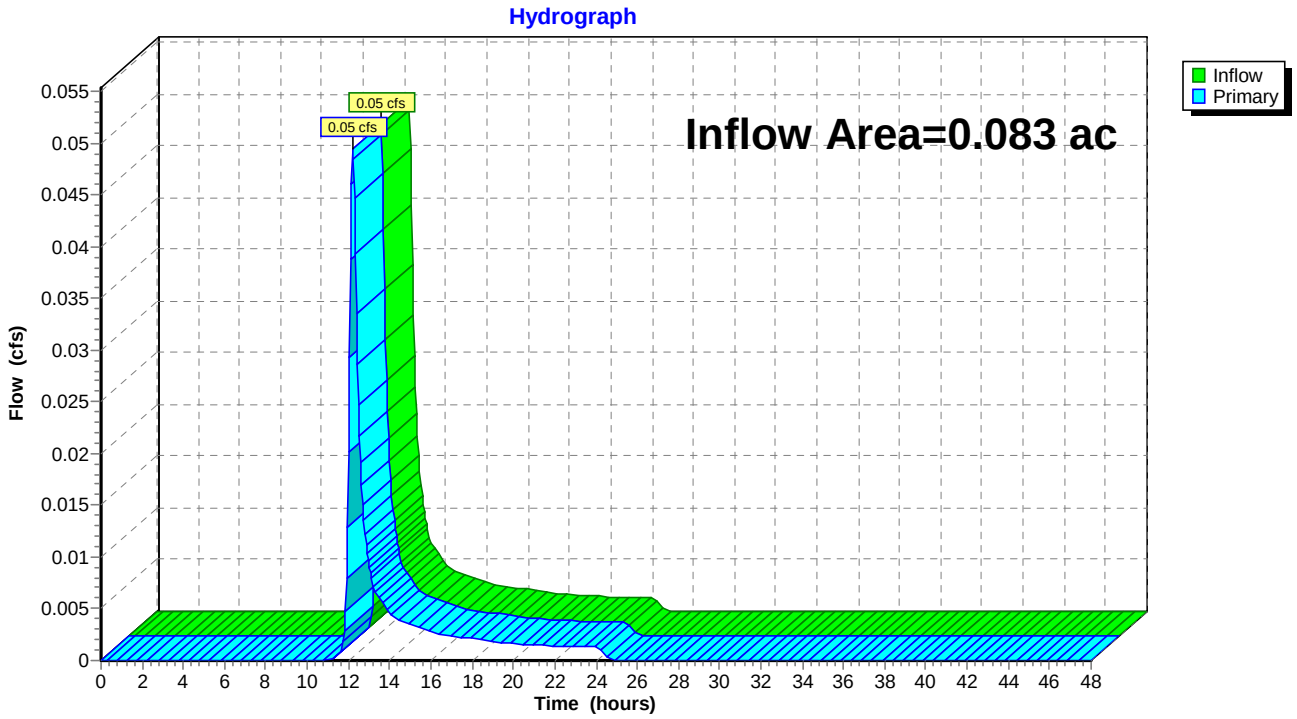


Summary for Link 38L: POD 2

Inflow Area = 0.083 ac, 0.00% Impervious, Inflow Depth = 0.67" for 1-Year event
Inflow = 0.05 cfs @ 12.21 hrs, Volume= 0.005 af
Primary = 0.05 cfs @ 12.21 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 38L: POD 2

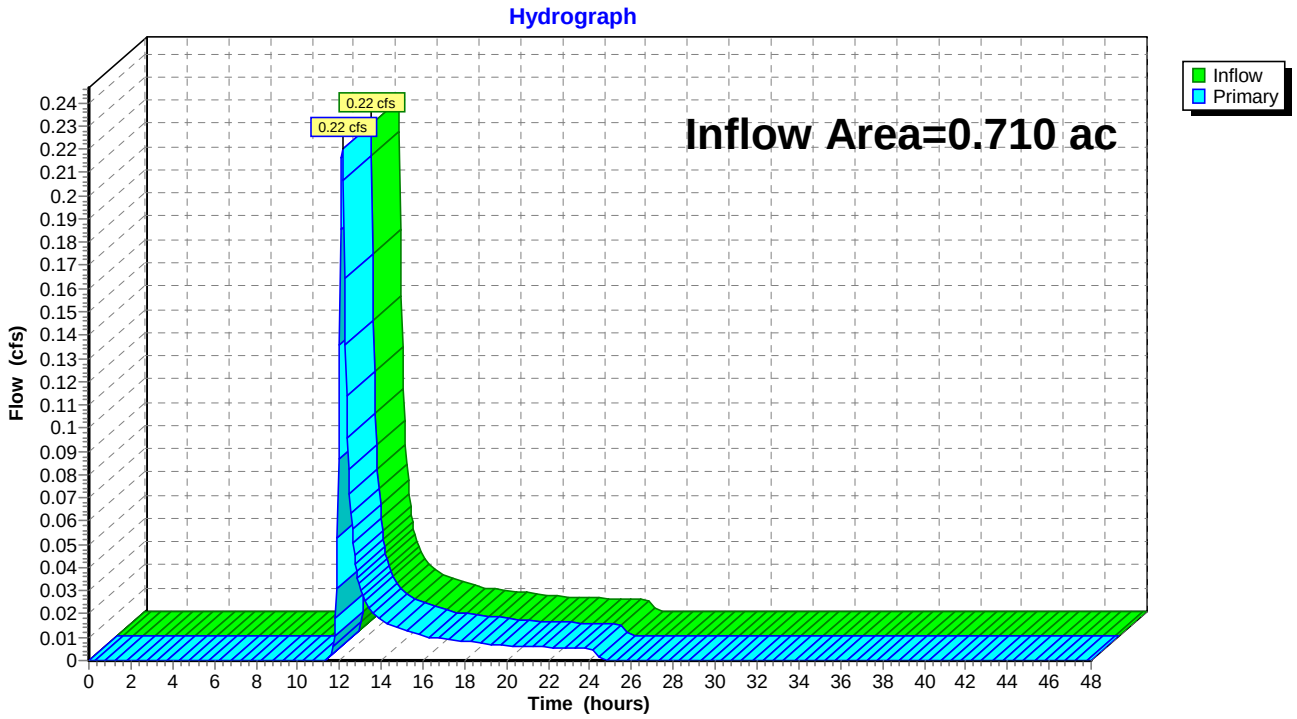


Summary for Link 39L: Proposed Overall

Inflow Area = 0.710 ac, 52.27% Impervious, Inflow Depth = 0.31" for 1-Year event
Inflow = 0.22 cfs @ 12.13 hrs, Volume= 0.018 af
Primary = 0.22 cfs @ 12.13 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 39L: Proposed Overall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 32S: 1 Runoff Area=16,175 sf 100.00% Impervious Runoff Depth=3.65"
Flow Length=90' Slope=0.0600 '/' Tc=7.2 min CN=98 Runoff=1.93 cfs 0.113 af

Subcatchment 33S: 2 Runoff Area=3,627 sf 0.00% Impervious Runoff Depth=1.87"
Flow Length=70' Slope=0.0214 '/' Tc=25.7 min CN=79 Runoff=0.15 cfs 0.013 af

Subcatchment 41S: 3 Runoff Area=11,143 sf 0.00% Impervious Runoff Depth=1.79"
Flow Length=139' Tc=17.3 min CN=78 Runoff=0.55 cfs 0.038 af

Pond 40P: Porous Pavement Subsurface Peak Elev=57.81' Storage=0.113 af Inflow=1.93 cfs 0.113 af
Outflow=0.00 cfs 0.000 af

Pond 41P: 12" Outlet Pipe Peak Elev=58.50' Inflow=0.00 cfs 0.000 af
12.0" Round Culvert n=0.020 L=22.0' S=0.2045 '/' Outflow=0.00 cfs 0.000 af

Link 37L: POD 1 Inflow=0.55 cfs 0.038 af
Primary=0.55 cfs 0.038 af

Link 38L: POD 2 Inflow=0.15 cfs 0.013 af
Primary=0.15 cfs 0.013 af

Link 39L: Proposed Overall Inflow=0.67 cfs 0.051 af
Primary=0.67 cfs 0.051 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.164 af Average Runoff Depth = 2.77"
47.73% Pervious = 0.339 ac 52.27% Impervious = 0.371 ac

Summary for Subcatchment 32S: 1

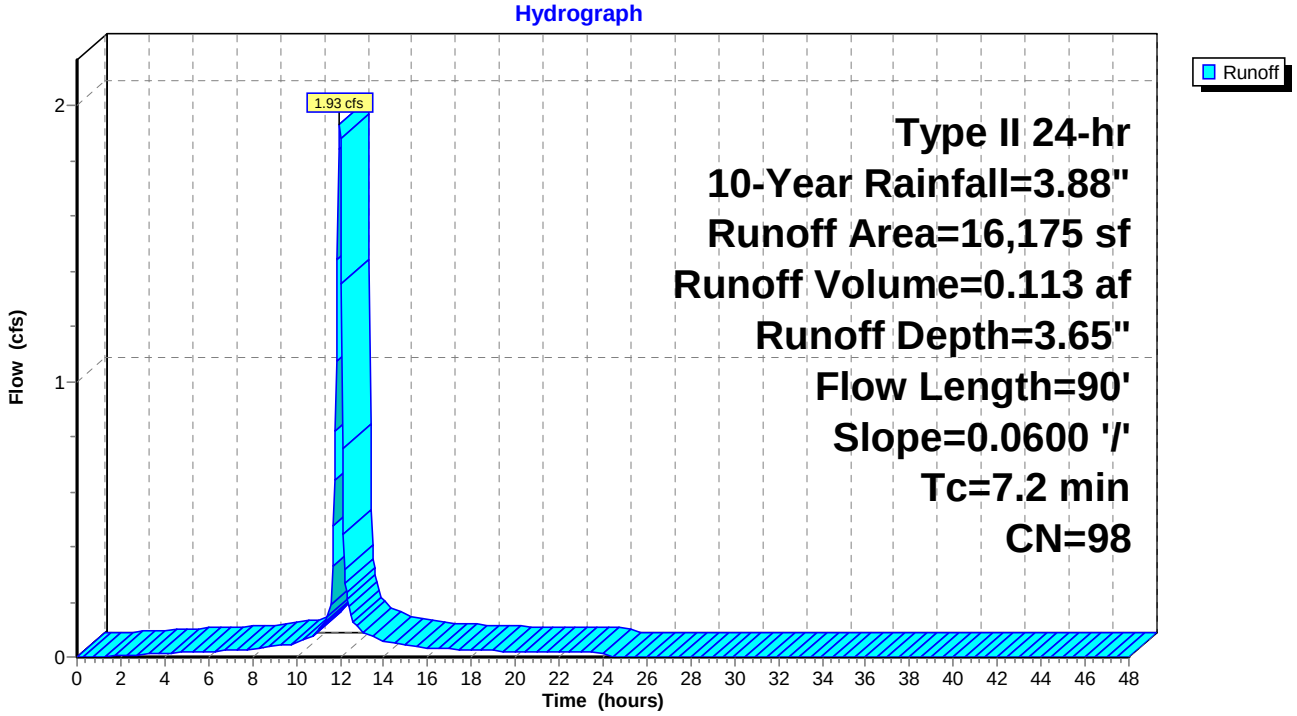
Runoff = 1.93 cfs @ 11.98 hrs, Volume= 0.113 af, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

	Area (sf)	CN	Description
	625	98	Paved parking, HSG C
*	15,550	98	Porous Pavement
	16,175	98	Weighted Average
	16,175		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Infiltration Through Porous Pavement**
1.2	90	0.0600	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
7.2	90	Total			

Subcatchment 32S: 1



Summary for Subcatchment 33S: 2

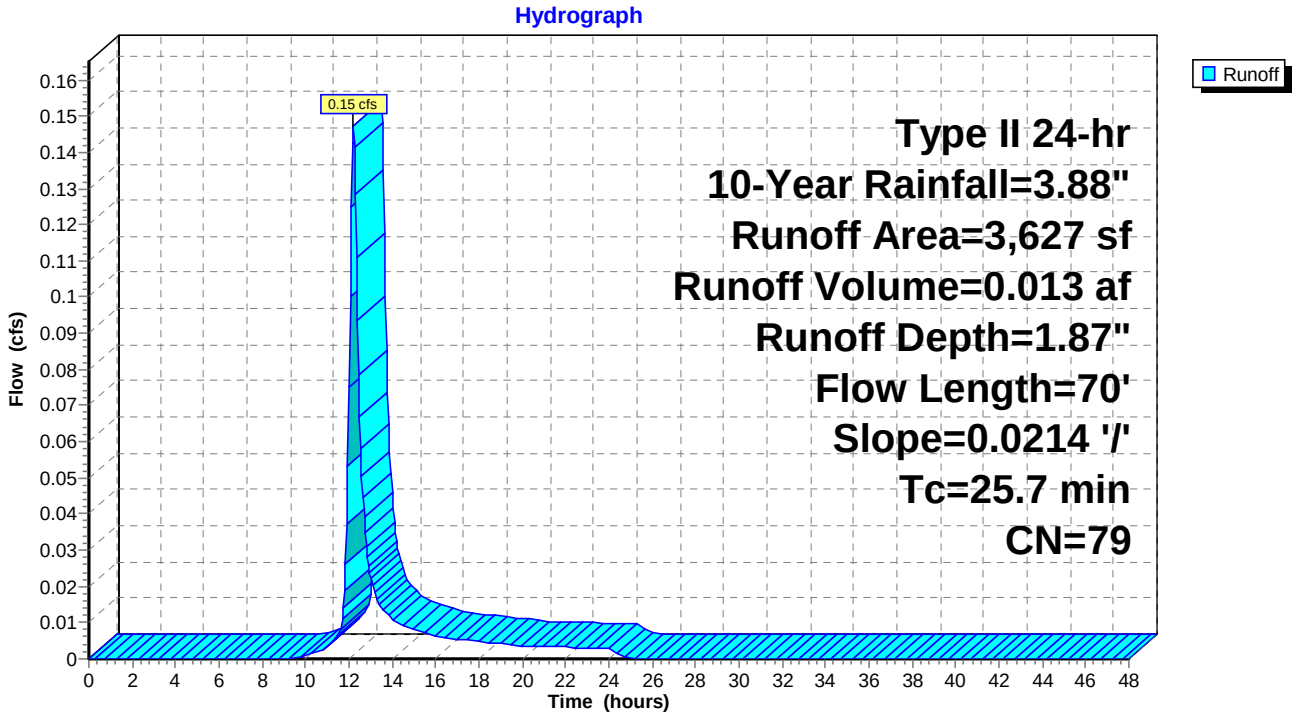
Runoff = 0.15 cfs @ 12.20 hrs, Volume= 0.013 af, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (sf)	CN	Description
2,213	82	Woods/grass comb., Poor, HSG C
1,414	74	>75% Grass cover, Good, HSG C
3,627	79	Weighted Average
3,627		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7	70	0.0214	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"

Subcatchment 33S: 2



Summary for Subcatchment 41S: 3

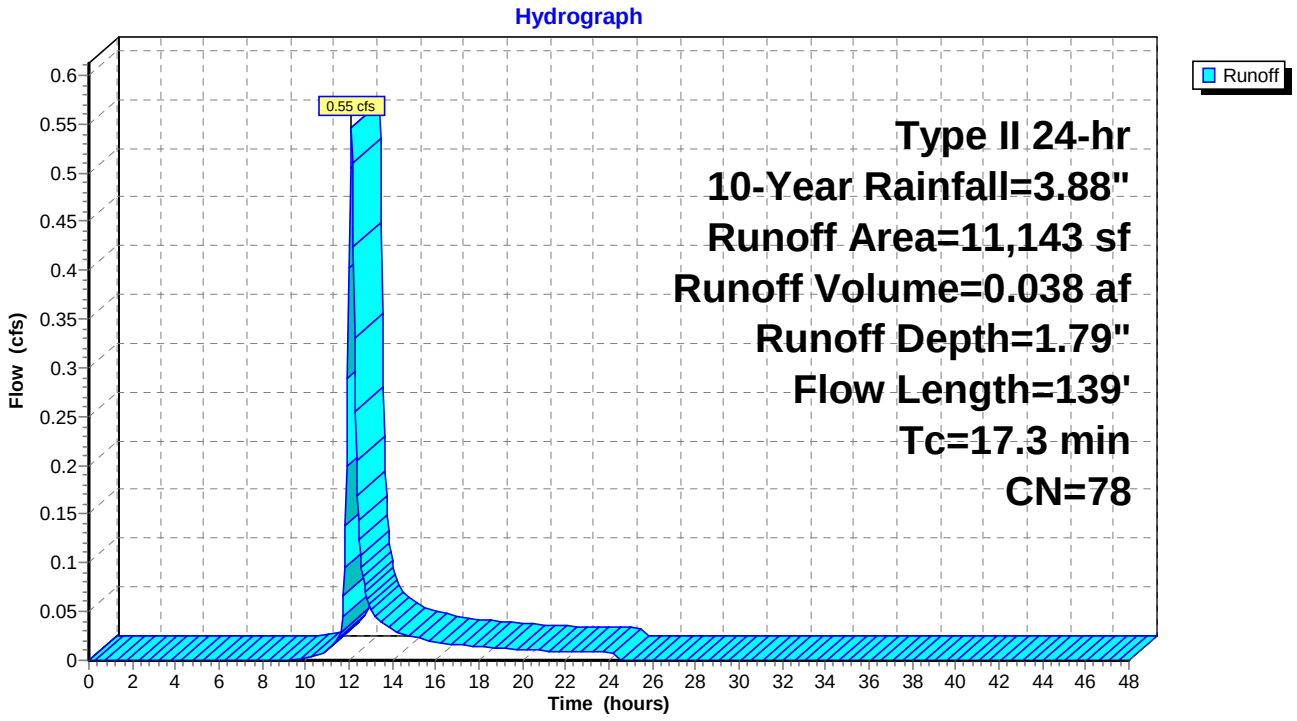
Runoff = 0.55 cfs @ 12.10 hrs, Volume= 0.038 af, Depth= 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.88"

Area (sf)	CN	Description
5,607	82	Woods/grass comb., Poor, HSG C
5,536	74	>75% Grass cover, Good, HSG C
11,143	78	Weighted Average
11,143		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	62	0.0480	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 1.20"
9.3	38	0.0790	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.3	39	0.2180	2.33		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
17.3	139	Total			

Subcatchment 41S: 3



Summary for Pond 40P: Porous Pavement Subsurface Stone

Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 3.65" for 10-Year event
Inflow = 1.93 cfs @ 11.98 hrs, Volume= 0.113 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 57.81' @ 24.45 hrs Surf.Area= 0.347 ac Storage= 0.113 af
Flood Elev= 61.65' Surf.Area= 0.347 ac Storage= 0.254 af

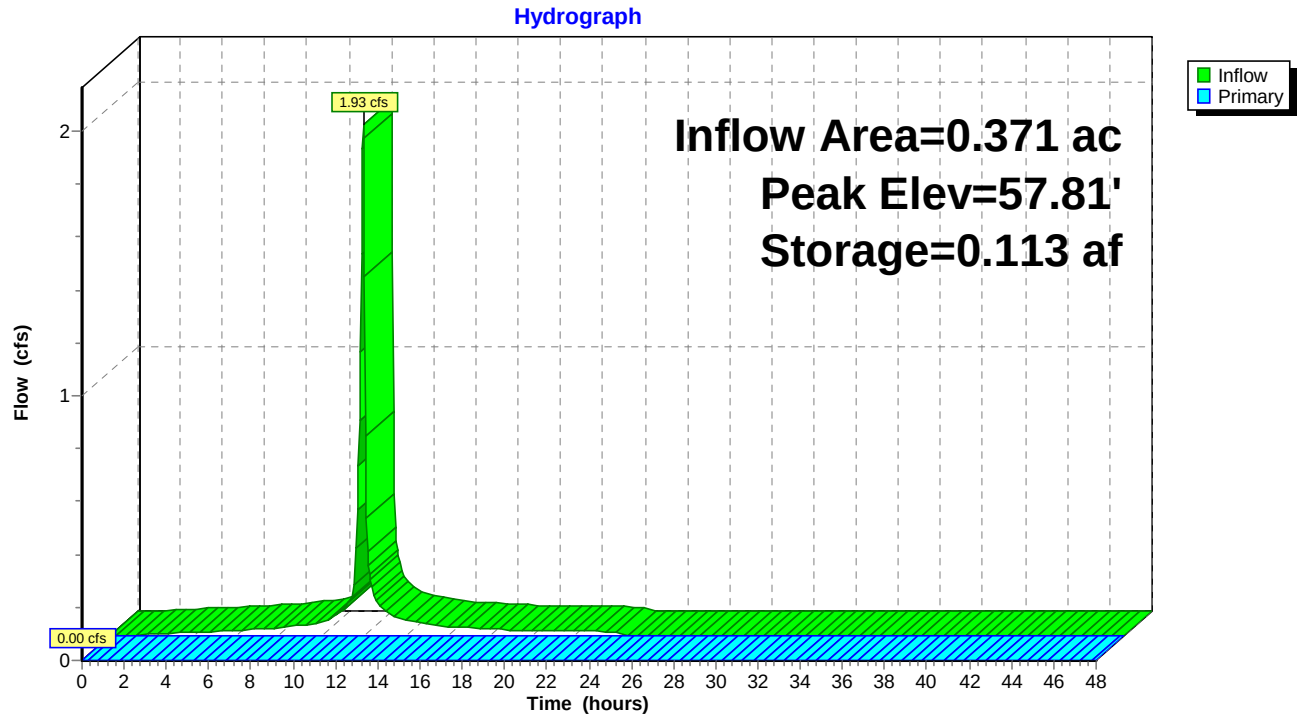
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	0.254 af	**53.00'W x 285.00'L x 1.83'H Prismatoid** 0.635 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	59.50'	**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=0.00 cfs @ 0.00 hrs HW=57.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 40P: Porous Pavement Subsurface Stone



Summary for Pond 41P: 12" Outlet Pipe

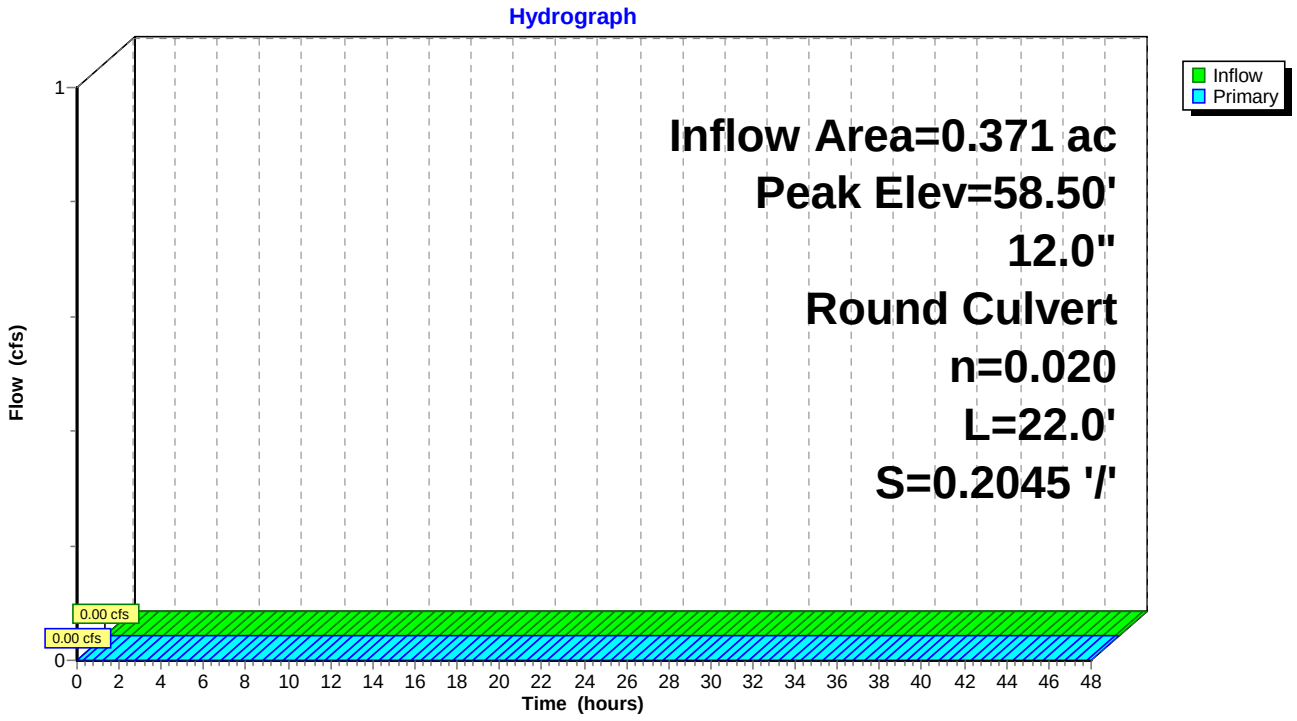
Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 58.50' @ 0.00 hrs
Flood Elev= 61.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.50'	**12.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.50' / 54.00' S= 0.2045 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.50' (Free Discharge)
1=Culvert (Controls 0.00 cfs)

Pond 41P: 12" Outlet Pipe

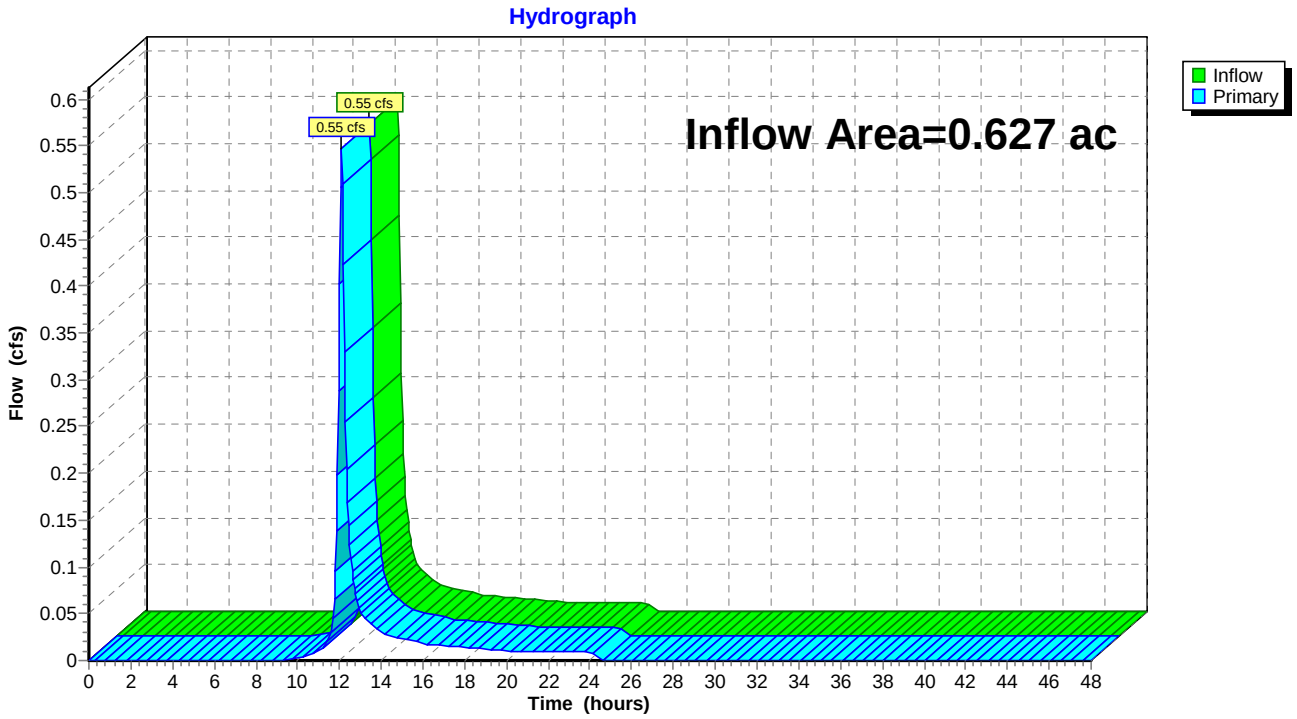


Summary for Link 37L: POD 1

Inflow Area = 0.627 ac, 59.21% Impervious, Inflow Depth = 0.73" for 10-Year event
Inflow = 0.55 cfs @ 12.10 hrs, Volume= 0.038 af
Primary = 0.55 cfs @ 12.10 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 37L: POD 1

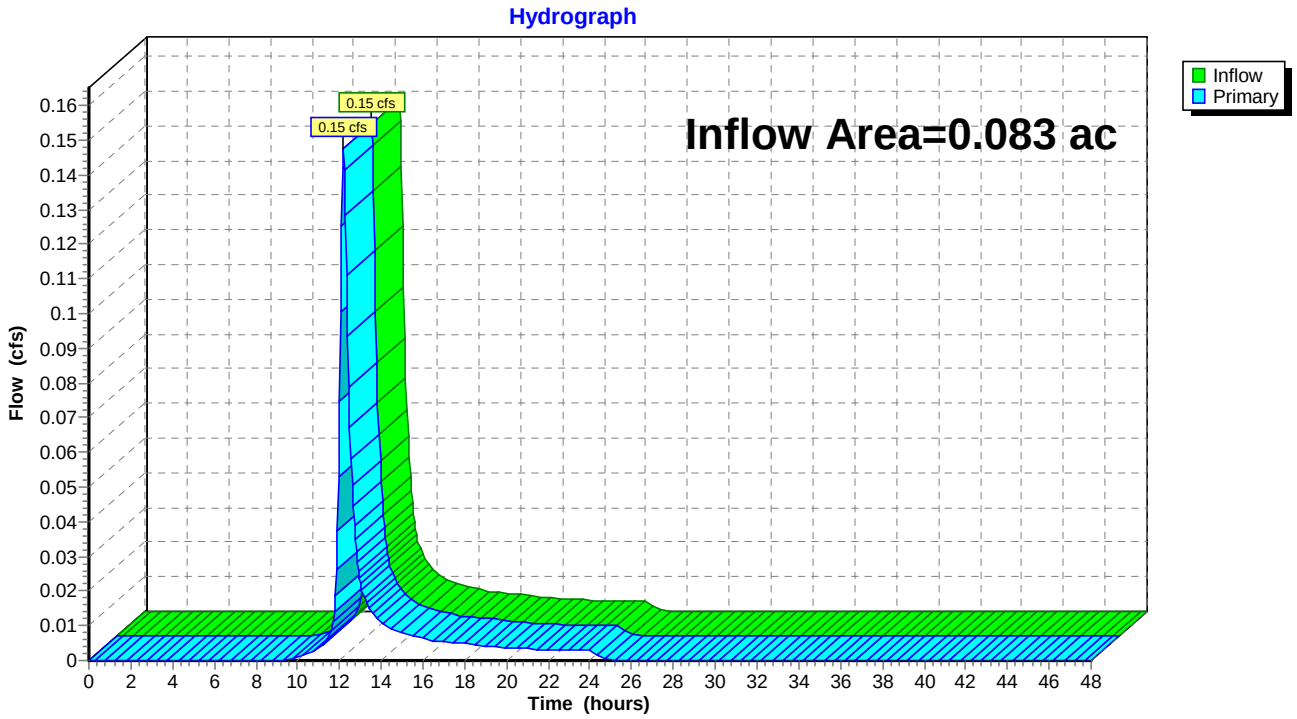


Summary for Link 38L: POD 2

Inflow Area = 0.083 ac, 0.00% Impervious, Inflow Depth = 1.87" for 10-Year event
Inflow = 0.15 cfs @ 12.20 hrs, Volume= 0.013 af
Primary = 0.15 cfs @ 12.20 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 38L: POD 2

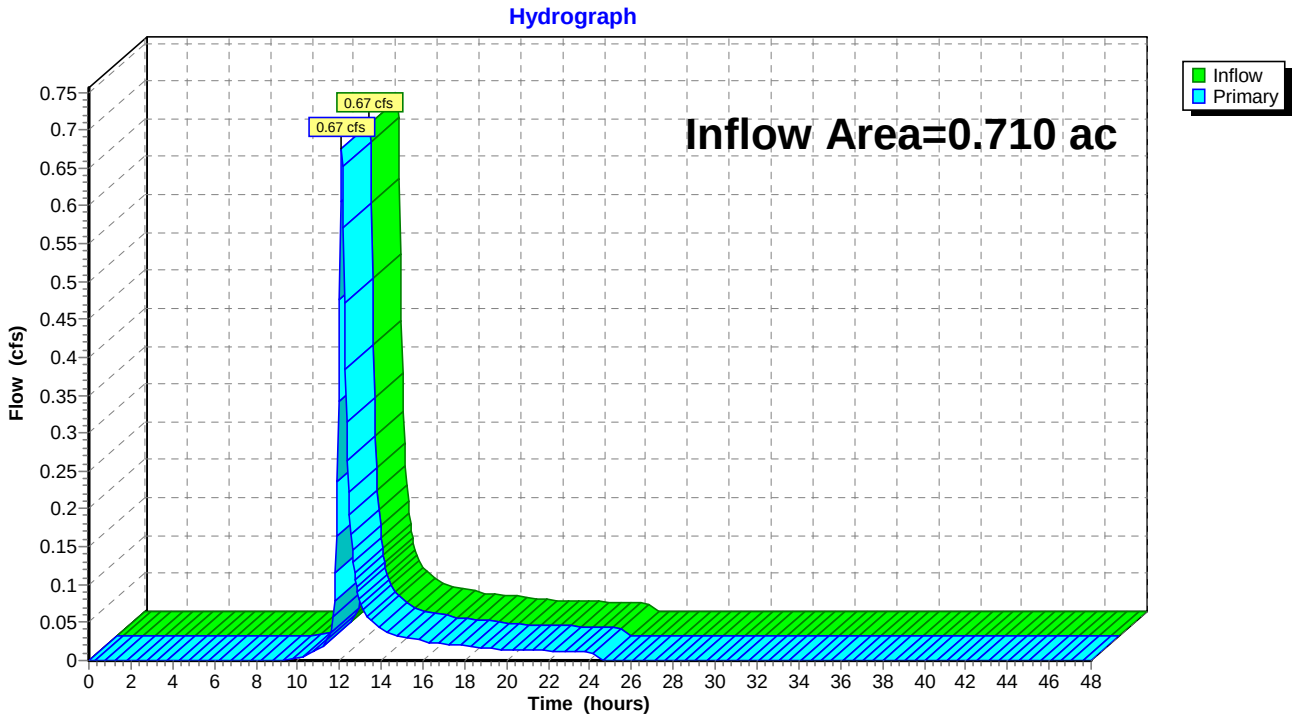


Summary for Link 39L: Proposed Overall

Inflow Area = 0.710 ac, 52.27% Impervious, Inflow Depth = 0.86" for 10-Year event
Inflow = 0.67 cfs @ 12.11 hrs, Volume= 0.051 af
Primary = 0.67 cfs @ 12.11 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 39L: Proposed Overall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 32S: 1 Runoff Area=16,175 sf 100.00% Impervious Runoff Depth=4.57"
Flow Length=90' Slope=0.0600 '/' Tc=7.2 min CN=98 Runoff=2.41 cfs 0.142 af

Subcatchment 33S: 2 Runoff Area=3,627 sf 0.00% Impervious Runoff Depth=2.64"
Flow Length=70' Slope=0.0214 '/' Tc=25.7 min CN=79 Runoff=0.21 cfs 0.018 af

Subcatchment 41S: 3 Runoff Area=11,143 sf 0.00% Impervious Runoff Depth=2.55"
Flow Length=139' Tc=17.3 min CN=78 Runoff=0.78 cfs 0.054 af

Pond 40P: Porous Pavement Subsurface Peak Elev=58.02' Storage=0.142 af Inflow=2.41 cfs 0.142 af
Outflow=0.00 cfs 0.000 af

Pond 41P: 12" Outlet Pipe Peak Elev=58.50' Inflow=0.00 cfs 0.000 af
12.0" Round Culvert n=0.020 L=22.0' S=0.2045 '/' Outflow=0.00 cfs 0.000 af

Link 37L: POD 1 Inflow=0.78 cfs 0.054 af
Primary=0.78 cfs 0.054 af

Link 38L: POD 2 Inflow=0.21 cfs 0.018 af
Primary=0.21 cfs 0.018 af

Link 39L: Proposed Overall Inflow=0.97 cfs 0.073 af
Primary=0.97 cfs 0.073 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.214 af Average Runoff Depth = 3.62"
47.73% Pervious = 0.339 ac 52.27% Impervious = 0.371 ac

Summary for Subcatchment 32S: 1

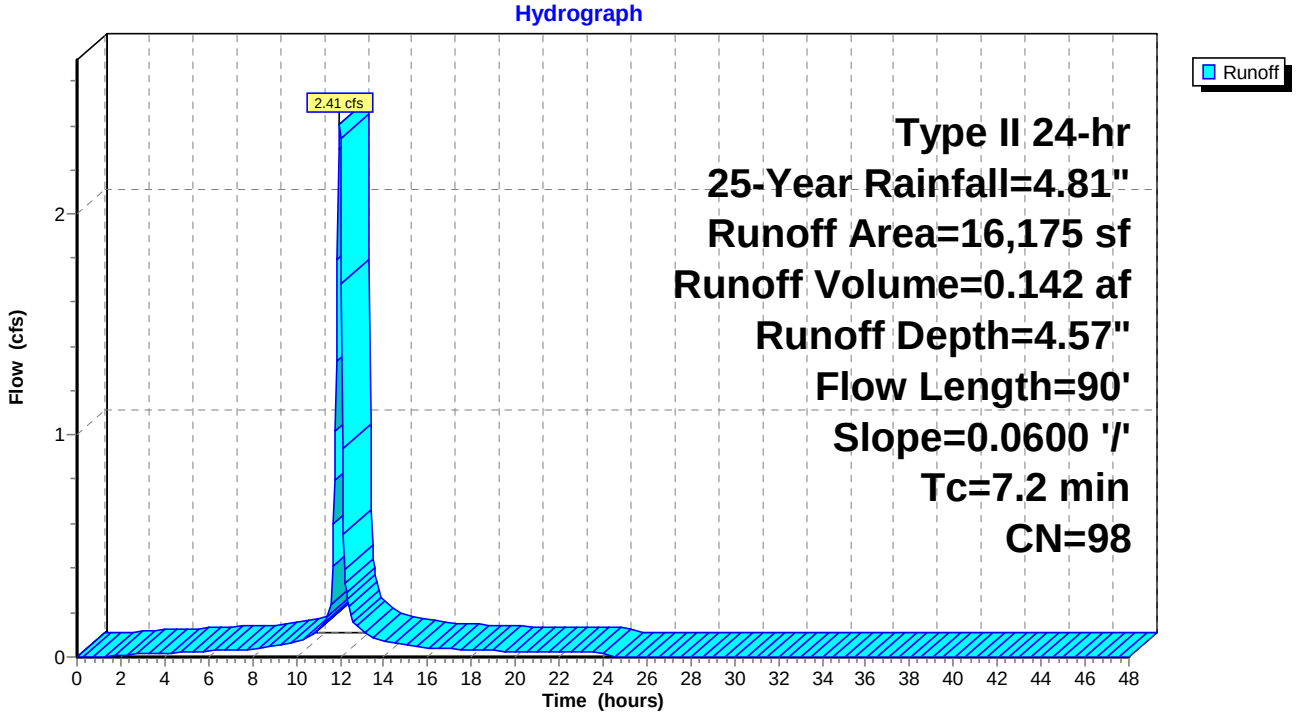
Runoff = 2.41 cfs @ 11.98 hrs, Volume= 0.142 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=4.81"

	Area (sf)	CN	Description
	625	98	Paved parking, HSG C
*	15,550	98	Porous Pavement
	16,175	98	Weighted Average
	16,175		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Infiltration Through Porous Pavement**
1.2	90	0.0600	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
7.2	90	Total			

Subcatchment 32S: 1



Summary for Subcatchment 33S: 2

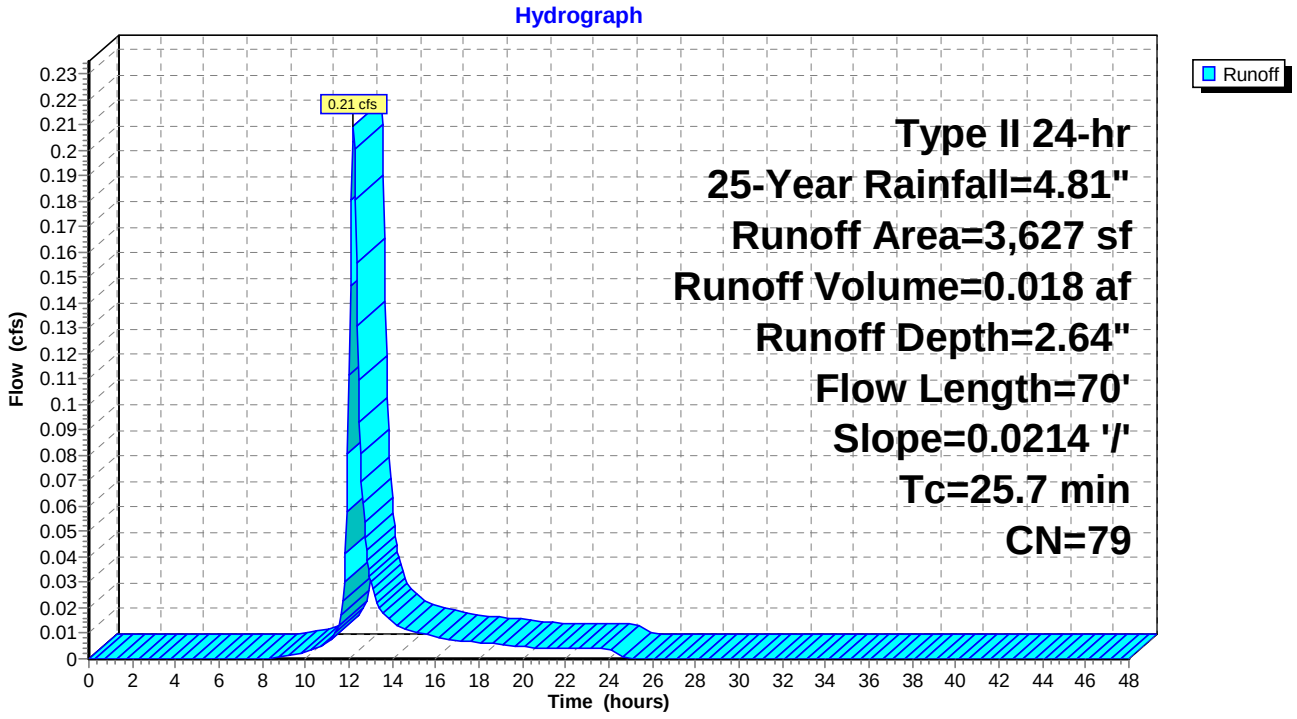
Runoff = 0.21 cfs @ 12.19 hrs, Volume= 0.018 af, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=4.81"

Area (sf)	CN	Description
2,213	82	Woods/grass comb., Poor, HSG C
1,414	74	>75% Grass cover, Good, HSG C
3,627	79	Weighted Average
3,627		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7	70	0.0214	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"

Subcatchment 33S: 2



Summary for Subcatchment 41S: 3

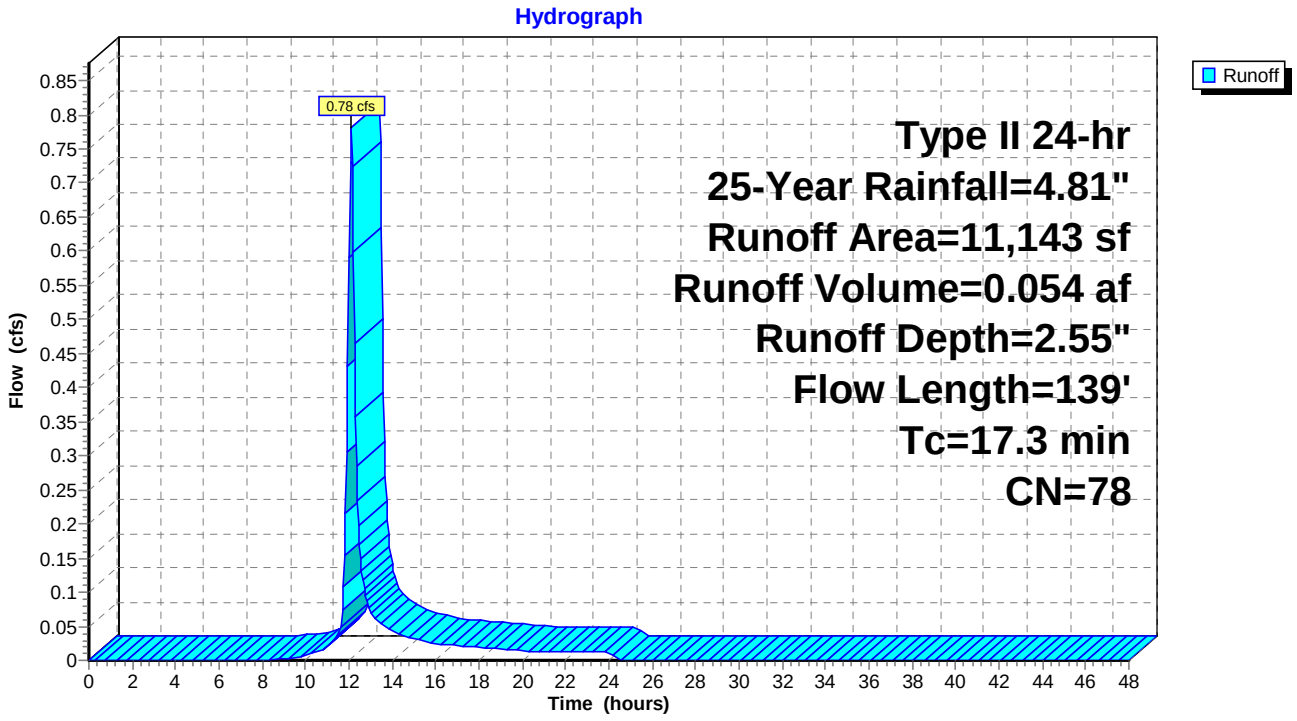
Runoff = 0.78 cfs @ 12.10 hrs, Volume= 0.054 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=4.81"

Area (sf)	CN	Description
5,607	82	Woods/grass comb., Poor, HSG C
5,536	74	>75% Grass cover, Good, HSG C
11,143	78	Weighted Average
11,143		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	62	0.0480	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 1.20"
9.3	38	0.0790	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.3	39	0.2180	2.33		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
17.3	139	Total			

Subcatchment 41S: 3



Summary for Pond 40P: Porous Pavement Subsurface Stone

Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 4.57" for 25-Year event
Inflow = 2.41 cfs @ 11.98 hrs, Volume= 0.142 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 58.02' @ 24.45 hrs Surf.Area= 0.347 ac Storage= 0.142 af
Flood Elev= 61.65' Surf.Area= 0.347 ac Storage= 0.254 af

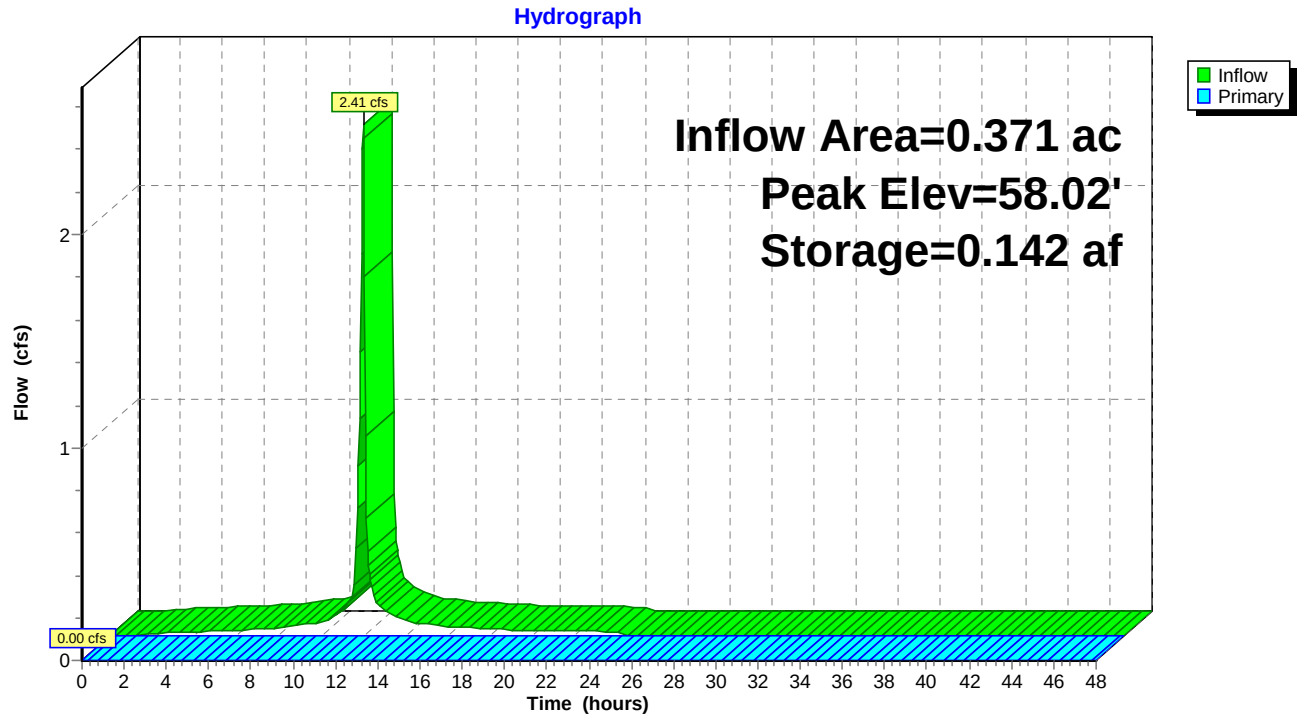
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	0.254 af	**53.00'W x 285.00'L x 1.83'H Prismatoid** 0.635 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	59.50'	**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=0.00 cfs @ 0.00 hrs HW=57.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 40P: Porous Pavement Subsurface Stone



Summary for Pond 41P: 12" Outlet Pipe

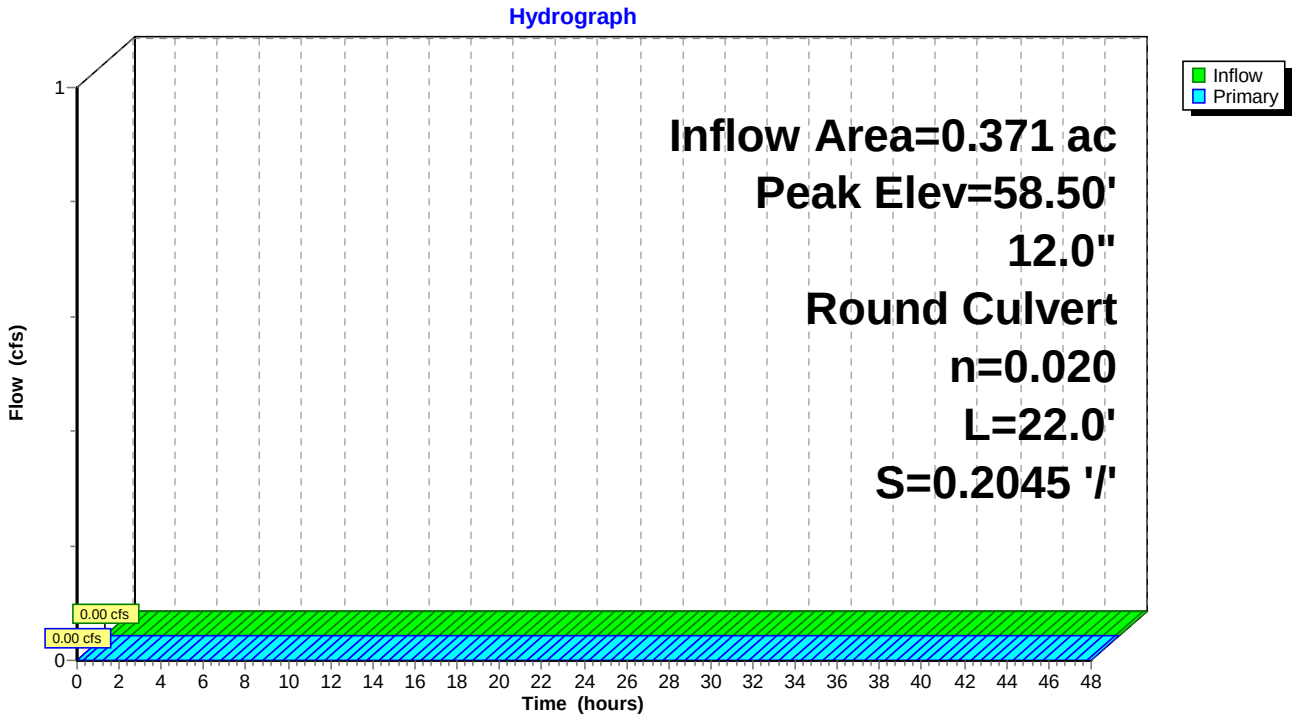
Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 0.00" for 25-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 58.50' @ 0.00 hrs
Flood Elev= 61.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.50'	**12.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.50' / 54.00' S= 0.2045 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.50' (Free Discharge)
1=Culvert (Controls 0.00 cfs)

Pond 41P: 12" Outlet Pipe

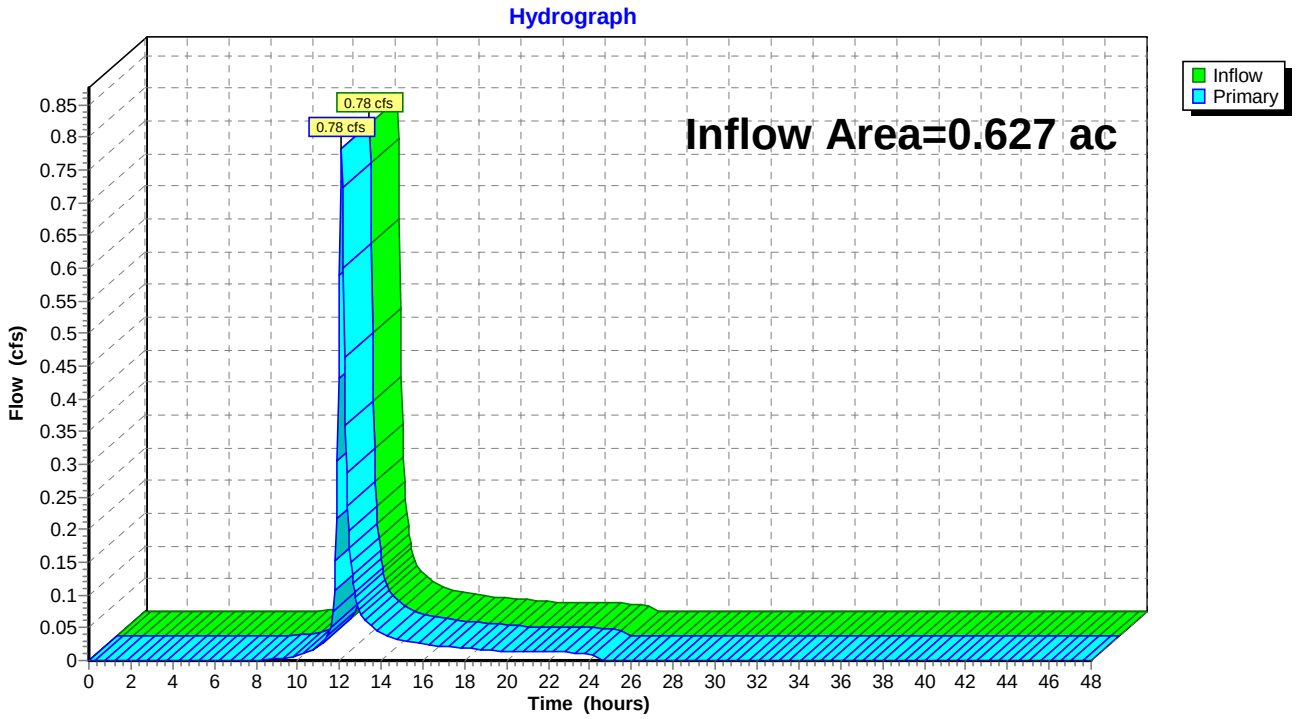


Summary for Link 37L: POD 1

Inflow Area = 0.627 ac, 59.21% Impervious, Inflow Depth = 1.04" for 25-Year event
Inflow = 0.78 cfs @ 12.10 hrs, Volume= 0.054 af
Primary = 0.78 cfs @ 12.10 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 37L: POD 1

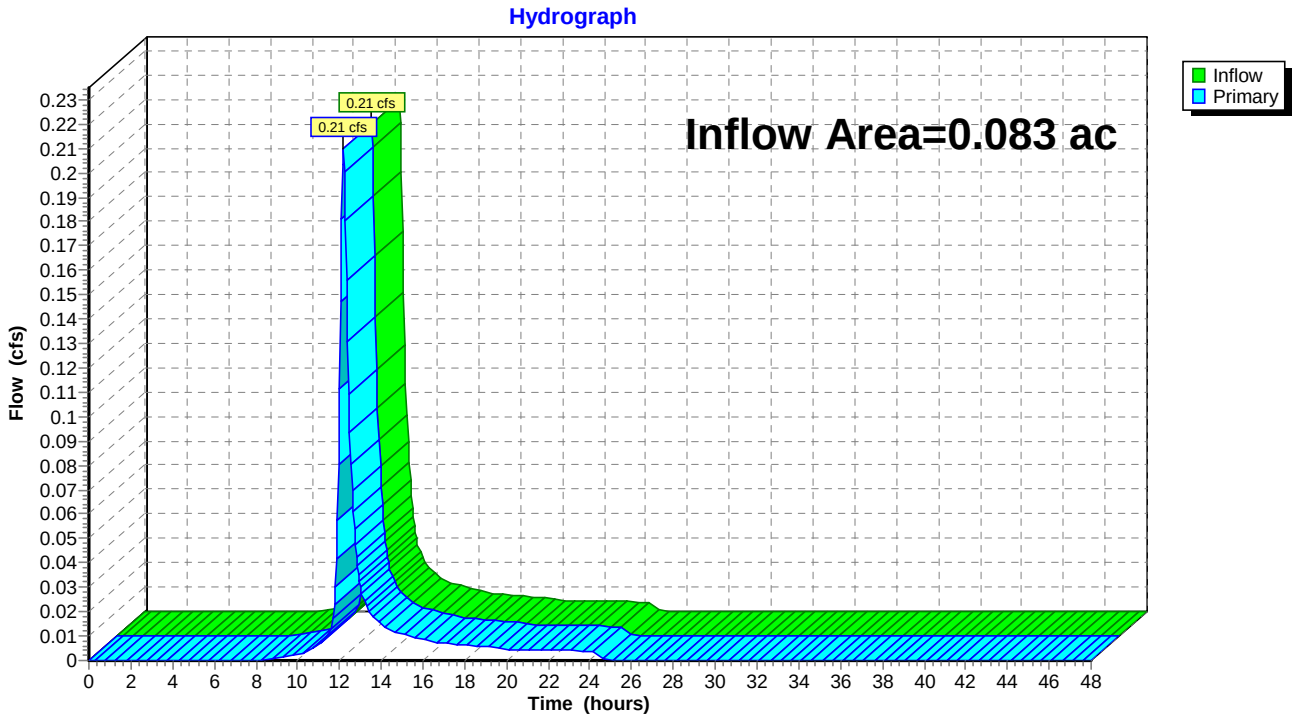


Summary for Link 38L: POD 2

Inflow Area = 0.083 ac, 0.00% Impervious, Inflow Depth = 2.64" for 25-Year event
Inflow = 0.21 cfs @ 12.19 hrs, Volume= 0.018 af
Primary = 0.21 cfs @ 12.19 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 38L: POD 2

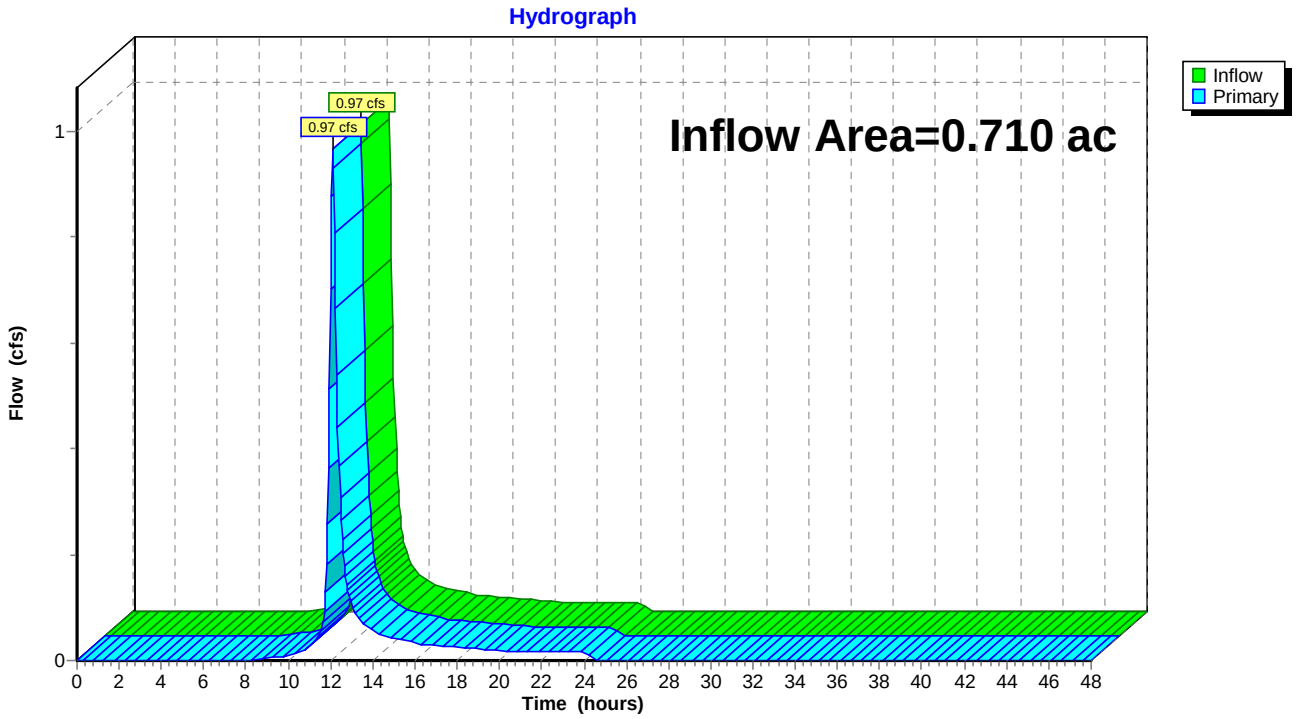


Summary for Link 39L: Proposed Overall

Inflow Area = 0.710 ac, 52.27% Impervious, Inflow Depth = 1.23" for 25-Year event
Inflow = 0.97 cfs @ 12.11 hrs, Volume= 0.073 af
Primary = 0.97 cfs @ 12.11 hrs, Volume= 0.073 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 39L: Proposed Overall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 32S: 1 Runoff Area=16,175 sf 100.00% Impervious Runoff Depth=6.44"
Flow Length=90' Slope=0.0600 '/' Tc=7.2 min CN=98 Runoff=3.35 cfs 0.199 af

Subcatchment 33S: 2 Runoff Area=3,627 sf 0.00% Impervious Runoff Depth=4.29"
Flow Length=70' Slope=0.0214 '/' Tc=25.7 min CN=79 Runoff=0.34 cfs 0.030 af

Subcatchment 41S: 3 Runoff Area=11,143 sf 0.00% Impervious Runoff Depth=4.19"
Flow Length=139' Tc=17.3 min CN=78 Runoff=1.28 cfs 0.089 af

Pond 40P: Porous Pavement Subsurface Peak Elev=58.44' Storage=0.199 af Inflow=3.35 cfs 0.199 af
Outflow=0.00 cfs 0.000 af

Pond 41P: 12" Outlet Pipe Peak Elev=58.50' Inflow=0.00 cfs 0.000 af
12.0" Round Culvert n=0.020 L=22.0' S=0.2045 '/' Outflow=0.00 cfs 0.000 af

Link 37L: POD 1 Inflow=1.28 cfs 0.089 af
Primary=1.28 cfs 0.089 af

Link 38L: POD 2 Inflow=0.34 cfs 0.030 af
Primary=0.34 cfs 0.030 af

Link 39L: Proposed Overall Inflow=1.58 cfs 0.119 af
Primary=1.58 cfs 0.119 af

Total Runoff Area = 0.710 ac Runoff Volume = 0.318 af Average Runoff Depth = 5.38"
47.73% Pervious = 0.339 ac 52.27% Impervious = 0.371 ac

Summary for Subcatchment 32S: 1

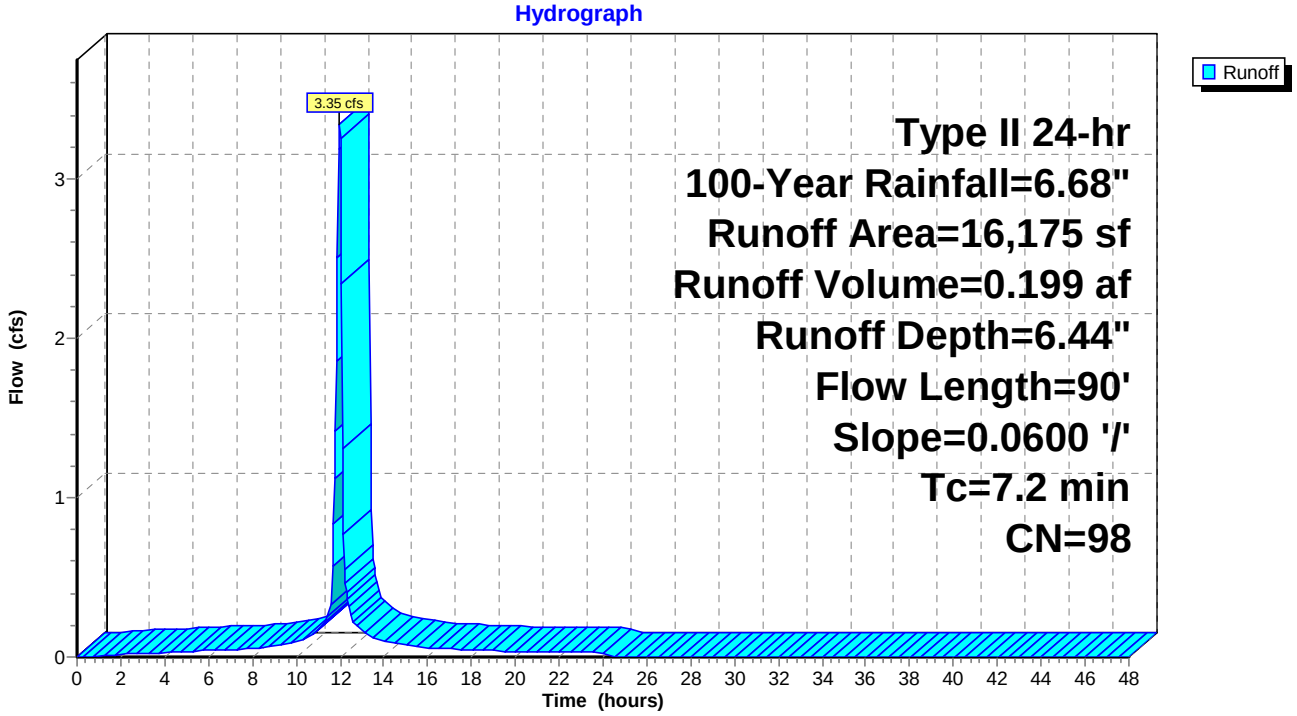
Runoff = 3.35 cfs @ 11.98 hrs, Volume= 0.199 af, Depth= 6.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

	Area (sf)	CN	Description
	625	98	Paved parking, HSG C
*	15,550	98	Porous Pavement
	16,175	98	Weighted Average
	16,175		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Infiltration Through Porous Pavement**
1.2	90	0.0600	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 1.20"
7.2	90	Total			

Subcatchment 32S: 1



Summary for Subcatchment 33S: 2

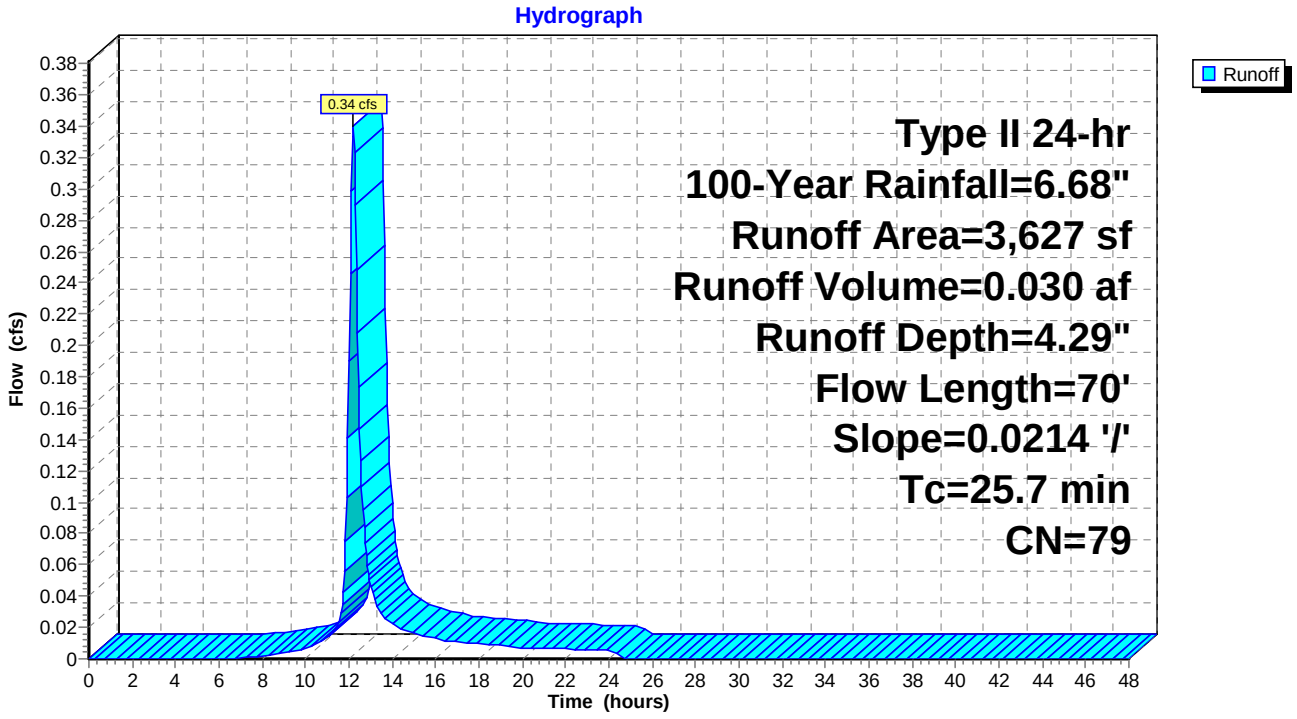
Runoff = 0.34 cfs @ 12.19 hrs, Volume= 0.030 af, Depth= 4.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (sf)	CN	Description
2,213	82	Woods/grass comb., Poor, HSG C
1,414	74	>75% Grass cover, Good, HSG C
3,627	79	Weighted Average
3,627		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7	70	0.0214	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"

Subcatchment 33S: 2



Summary for Subcatchment 41S: 3

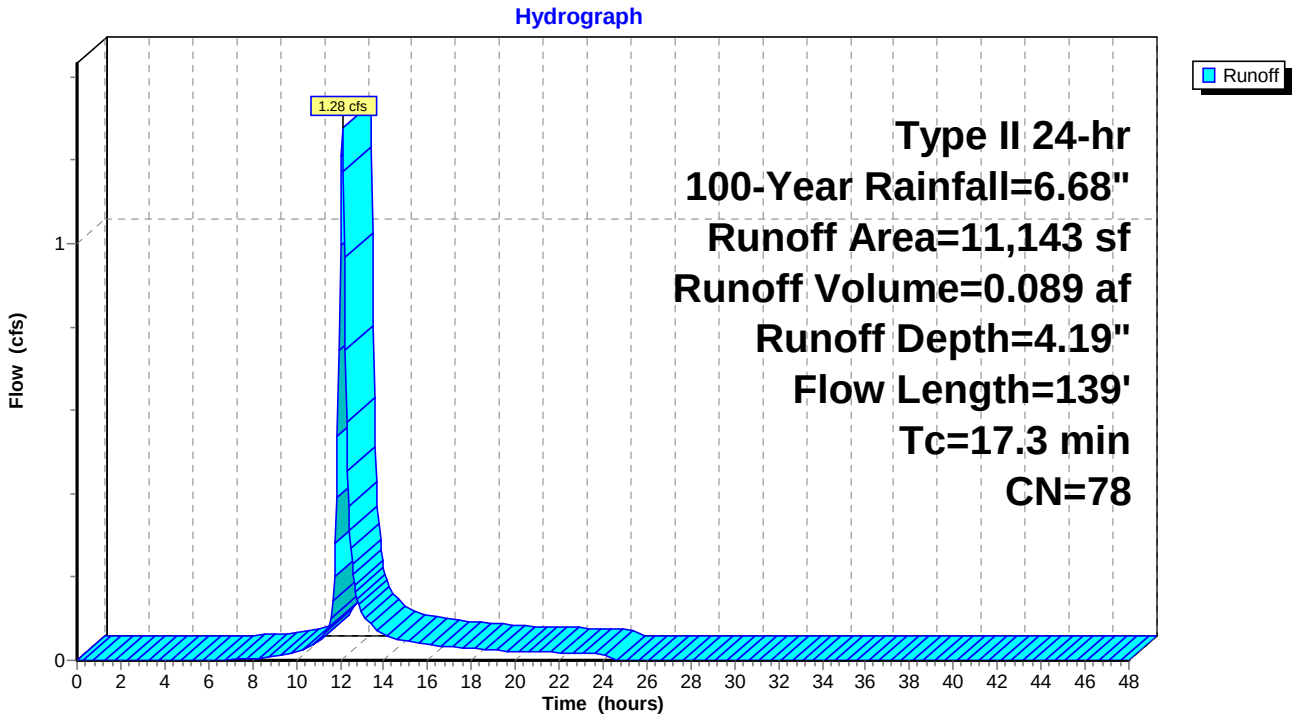
Runoff = 1.28 cfs @ 12.09 hrs, Volume= 0.089 af, Depth= 4.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=6.68"

Area (sf)	CN	Description
5,607	82	Woods/grass comb., Poor, HSG C
5,536	74	>75% Grass cover, Good, HSG C
11,143	78	Weighted Average
11,143		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	62	0.0480	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 1.20"
9.3	38	0.0790	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 1.20"
0.3	39	0.2180	2.33		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
17.3	139	Total			

Subcatchment 41S: 3



Summary for Pond 40P: Porous Pavement Subsurface Stone

Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 6.44" for 100-Year event
Inflow = 3.35 cfs @ 11.98 hrs, Volume= 0.199 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 58.44' @ 24.45 hrs Surf.Area= 0.347 ac Storage= 0.199 af
Flood Elev= 61.65' Surf.Area= 0.347 ac Storage= 0.254 af

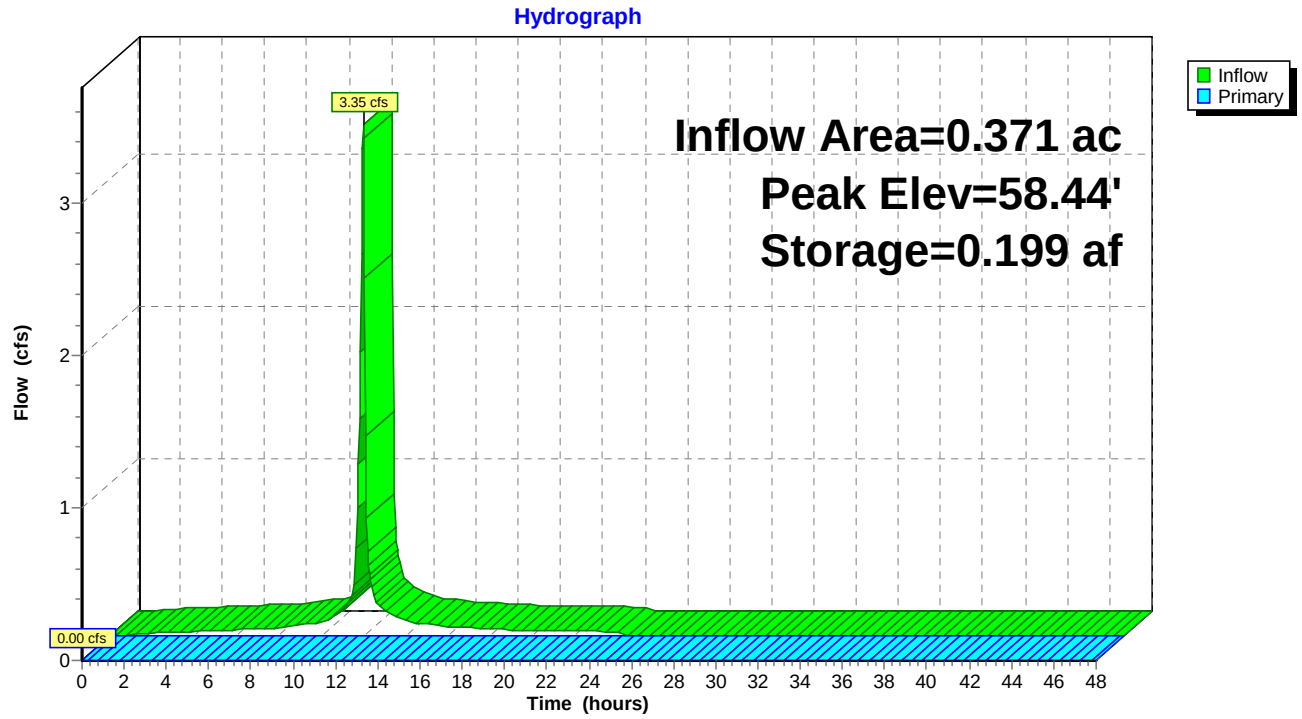
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	0.254 af	**53.00'W x 285.00'L x 1.83'H Prismatoid** 0.635 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	59.50'	**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=0.00 cfs @ 0.00 hrs HW=57.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 40P: Porous Pavement Subsurface Stone



Summary for Pond 41P: 12" Outlet Pipe

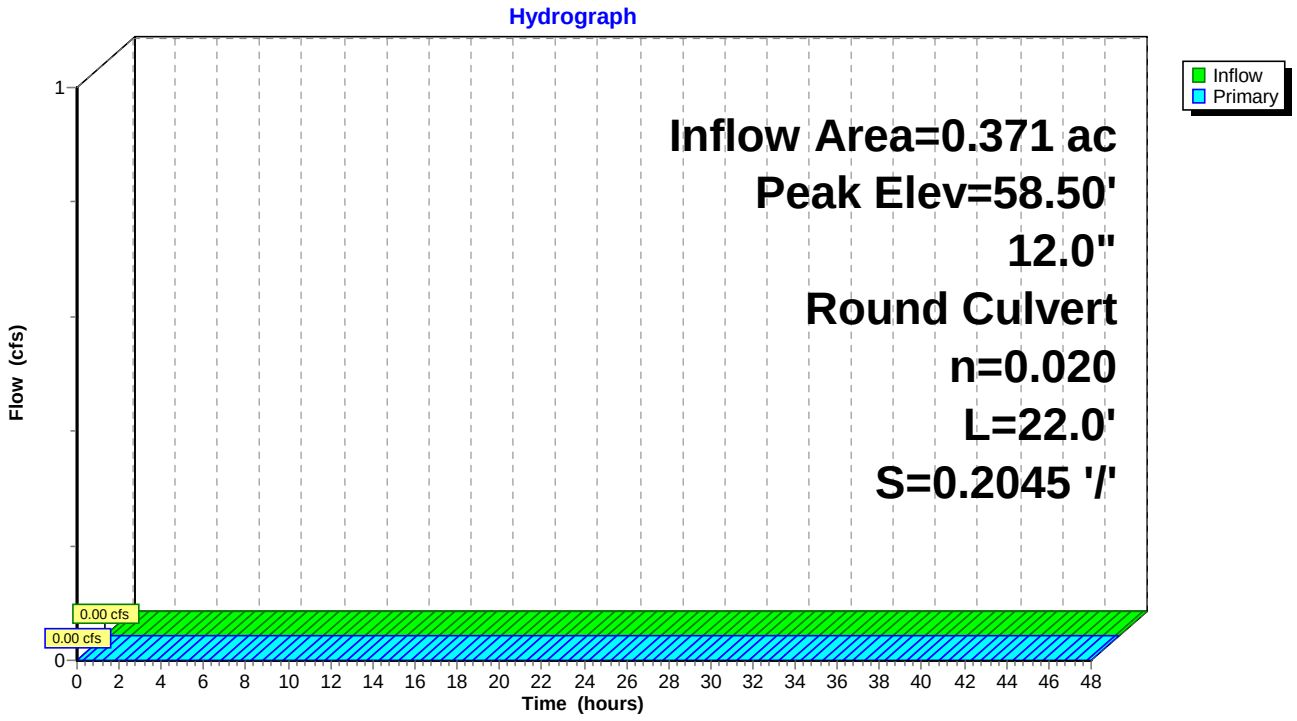
Inflow Area = 0.371 ac,100.00% Impervious, Inflow Depth = 0.00" for 100-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 58.50' @ 0.00 hrs
Flood Elev= 61.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.50'	**12.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.50' / 54.00' S= 0.2045 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=58.50' (Free Discharge)
1=Culvert (Controls 0.00 cfs)

Pond 41P: 12" Outlet Pipe

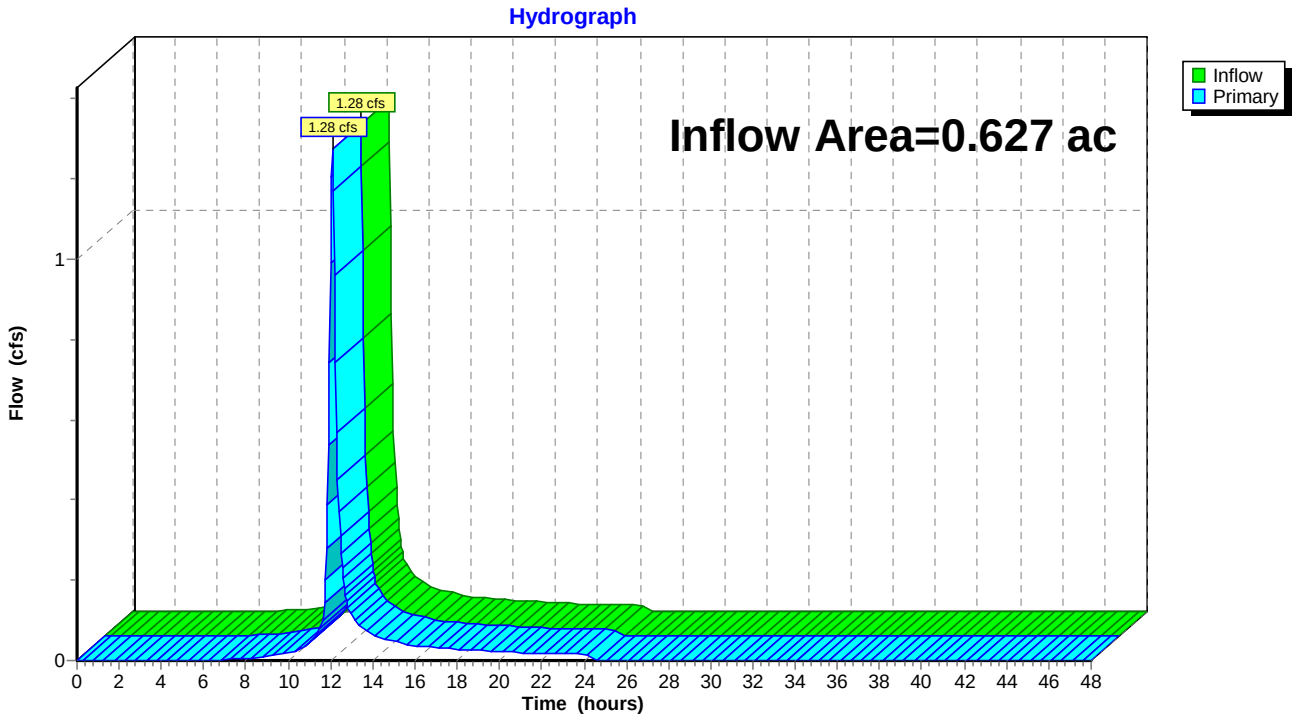


Summary for Link 37L: POD 1

Inflow Area = 0.627 ac, 59.21% Impervious, Inflow Depth = 1.71" for 100-Year event
Inflow = 1.28 cfs @ 12.09 hrs, Volume= 0.089 af
Primary = 1.28 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 37L: POD 1

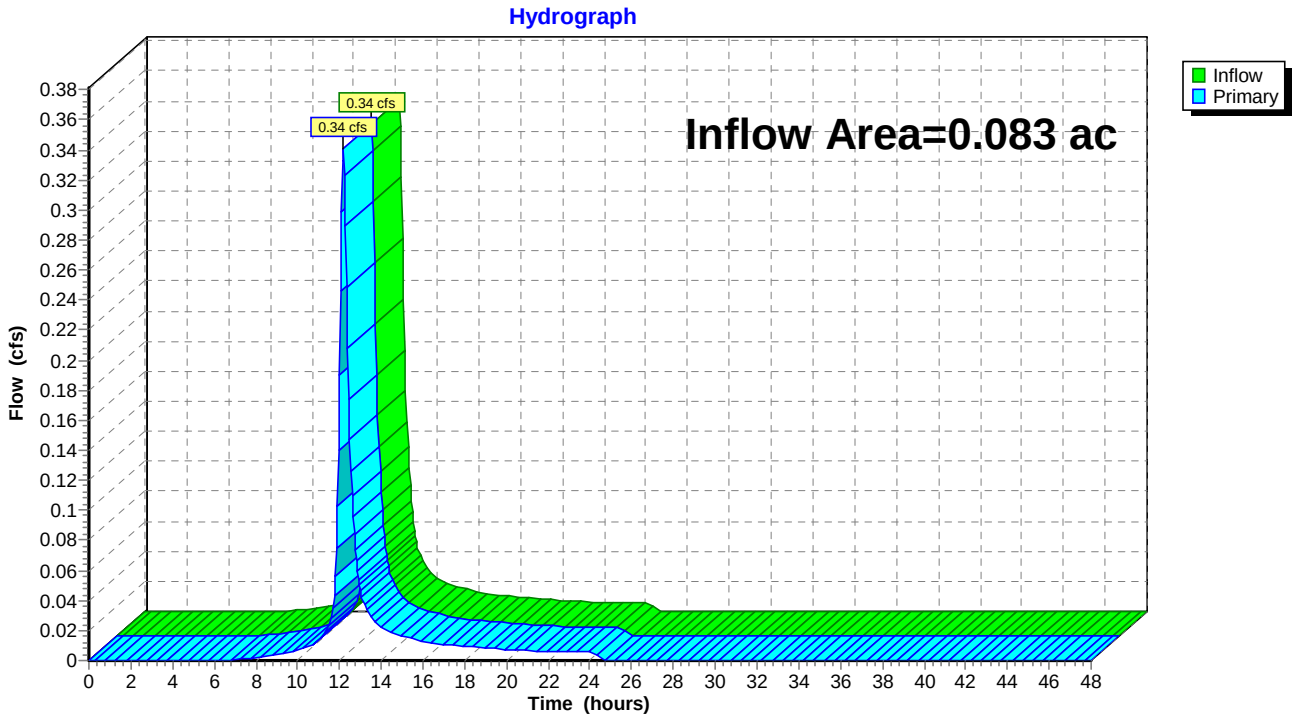


Summary for Link 38L: POD 2

Inflow Area = 0.083 ac, 0.00% Impervious, Inflow Depth = 4.29" for 100-Year event
Inflow = 0.34 cfs @ 12.19 hrs, Volume= 0.030 af
Primary = 0.34 cfs @ 12.19 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 38L: POD 2

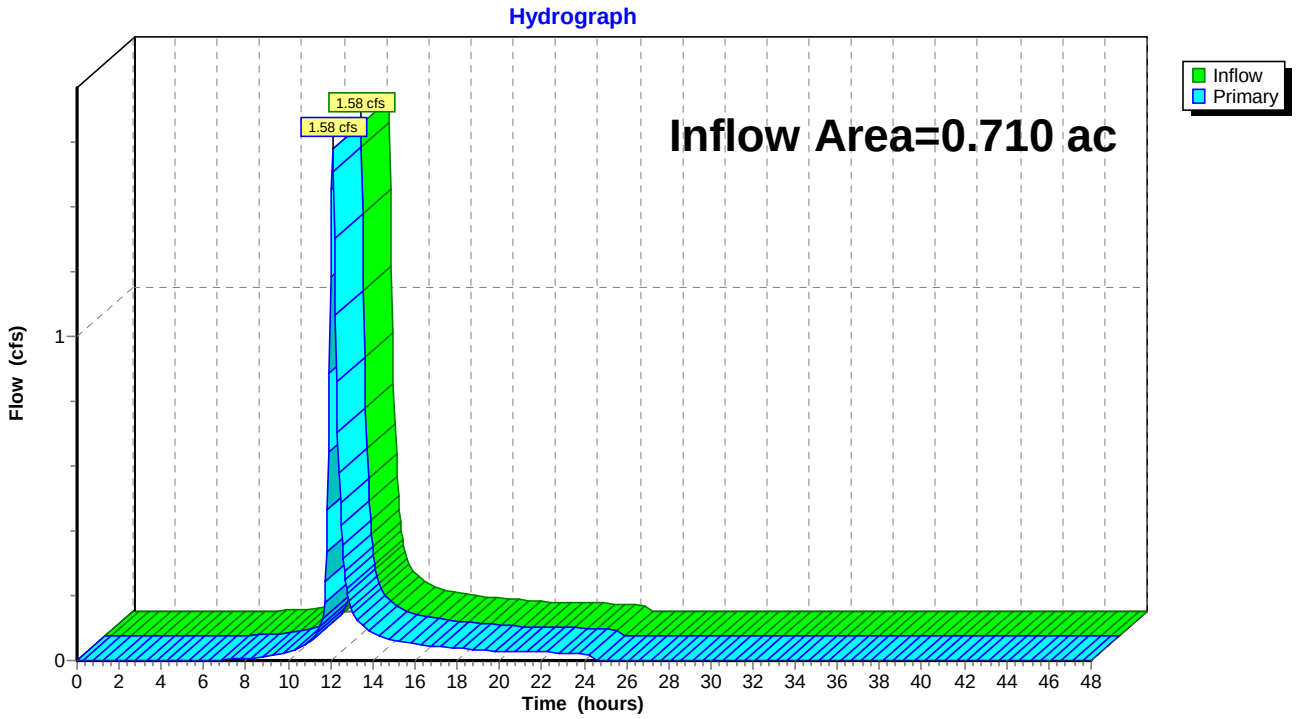


Summary for Link 39L: Proposed Overall

Inflow Area = 0.710 ac, 52.27% Impervious, Inflow Depth = 2.01" for 100-Year event
Inflow = 1.58 cfs @ 12.11 hrs, Volume= 0.119 af
Primary = 1.58 cfs @ 12.11 hrs, Volume= 0.119 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 39L: Proposed Overall



STORMWATER MANAGEMENT PLAN
WORKSHEET FOR NEW PROJECTS IN NON-IMPARIED WATERSHEDS

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

PLANNING

1 Plan to Perserve, Avoid, and Minimize:

Technique	Utilized (Y/N)
A. Preserve undisturbed, natural buffer, and critical envirnmental areas	Y
B. Employ open space, conservation, and clustering site design techniques	N
C. Avoid developing in environmentally sensitive areas: floodplains, steep slopes, habitat, ecosystems, bedrock, wetlands, shorelines, shallow groundwater, impervious soils, and unstable soils	Y
D. Minimize impervious surfaces: building footprints, parking lots, roads, sidewalks, and driveways	Y
E. Minimize clearing and grading	Y

BASE WATER QUALITY VOLUME

2a. Calculate the base water quality volume (WQv):

WQv = [(P) * (A) * (Rv)] / 12

Rv = 0.05 + [(0.009)*(i)]

Contributing Area (DA) =	0.00	acres
Impervious Area (AI) =	0.00	acres
i =	0.00	%
Rv =	0.20	
Redevelopment Reduction =	25.00	%
WQv =	*0.000*	*ac ft*
	0.00	*c.f.*

2b. Calculate the additional impervious water quality volume (WQv):

Contributing Area (DA) =	0.71	acres
Impervious Area (AI) =	0.37	acres
i =	51.41	%
Rv =	0.51	
WQv =	*0.036*	*ac ft*
	1,585.58	*c.f.*

STORMWATER MANAGEMENT PLAN
WORKSHEET FOR NEW PROJECTS IN NON-IMPARIED WATERSHEDS

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

2c. Total WQv *WQv =* *0.036* *ac ft*
1,585.58 *c.f.*

MINIMUM RUNOFF REDUCTION REQUIREMENTS

3 Calculate the minimum required runoff reduction volume (RRv) for use when 100% of the RRv can not be obtained:

RRv = [(P) * (.95) * (S) * (AI)] / 12

S = 0.55 (A soils) 0.3 (C soils)
0.4 (B soils) 0.2 (D soils)

or weighted using the average HSG for the DA

RRv = *0.010* *ac ft*

AREA REDUCTION PRACTICES

4 Incorporate area reduction practices for all applicable practices (area includes practice and contributing area):

A. Conservation of Natural Areas:	Contributing Area =	0.000	acres
	Contributing AI =	0.000	acres
B. Riparian buffers/filter Strips:	Contributing Area =	0.000	acres
	Contributing AI =	0.000	acres
C. Tree Planting/Preservation:	Contributing Area =	0.076	acres
	Contributing AI =	0.076	acres
D. Disconnection of Rooftop Runoff:	Contributing AI =	0.000	acres
E. Stream Daylighting:	Contributing AI =	0.000	acres

Total Area Reduction (DA_r)= 0.08 acres
Total Impervious Area Within Area Reduction (AI_r)= 0.08 acres

5 Subtract Total Area Reduction from original DA:

Remaining Drainage Area (#2 DA - #4 DA_r) = 0.63 acres
Remaining Impervious Area (#2 AI - #4 AI_r) = 0.29 acres

6 Recalculate WQv for site area remaining after area reductions:

Impervious Area of Remaining Areas = 45.60 %
Rv = 0.46
Reduced WQv = 0.029 ac ft

STORMWATER MANAGEMENT PLAN
WORKSHEET FOR NEW PROJECTS IN NON-IMPARIED WATERSHEDS

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

7 Calculate Runoff Reduction Volume (RRv) provided:
RRv provided = (#2 WQv - #6 Reduced WQv)
RRv prov'd = 0.007 ac ft

ROOFTOP DISCONNECTION

8 Incorporate rooftop area disconnection:
Total Disconnected Rooftop Area (AI_d) = 0.000 acres

9 Recalculate WQv resulting from Rooftop Area Disconnection:
DA = 0.63 acres Modified AI = 0.29 acres
Modified Rv = 0.46 **Rv Reduced WQv = 0.000 ac ft**

10 Runoff Reduction Volume Provided:
RRv prov'd = (#6 Reduced WQv) - (#9 Reduced WQv)
RRv prov'd = 0.000 ac ft

SOURCE CONTROL RRv TRERATMENT PRACTICES

These values were taken from the Source Control WQv Treatment Practices Worksheet

11 a	Subtotal DA tributary to Source Control RRv treatment practices =	0.71	acres
11 b	Subtotal AI tributary to Source Control RRv treatment practices =	0.37	acres
11 c	Subtotal Runoff Reduction Volume (RRv) provided =	0.252	ac ft

TOTAL RUNOFF REDUCTION VOLUME (RRv)

12 a	Total drainage area treated with area reduction and source control RRv practices (DA_t) =	0.79	acres
12 b	Total impervious area treated with area reduction and source control RRv practices (AI_t) =	0.45	acres
13	Total RRv provided (RRv_t) =	0.245	ac ft
14	Is provided RRv > original WQv ?	Yes	**
	** If Yes, skip to #19.		
15	Is Provided RRv > minimum RRv (#3) ?		***

STANDARD WQv TREATMENT

16 Provide additional treatment for any remaining untreated watershed DA with standard WQv

STORMWATER MANAGEMENT PLAN
WORKSHEET FOR NEW PROJECTS IN NON-IMPARIED WATERSHEDS

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

treatment practices:

Remaining untreated DA (Da_u) = #2 DA - RRv DA (#12a)

DA_u = -0.08 acres

Remaining untreated AI (AI_u) = #2 AI - RRv AI (#12b)

AI_u = 0.00 acres

These values were taken from the Source Control WQv Treatment Practices Worksheet

Ponds	Trib. DA =	acres	Treated AI =		acres
		WQv provided =		ac ft	
Wetlands	Trib. DA =	acres	Treated AI =		acres
		WQv provided =		ac ft	
Infiltration	Trib. DA =	acres	Treated AI =		acres
		WQv provided =		ac ft	
Filters	Trib. DA =	acres	Treated AI =		acres
		WQv provided =		ac ft	
Open Channels	Trib. DA =	acres	Treated AI =		acres
		WQv provided =		ac ft	
Total	**Trib. DA =**	**0 acres**	**Treated AI =**	**0**	**acres**
		WQv provided =	**0**	**ac ft**	

TOTAL WQv TREATMENT

Total Required WQv = **0.036 ac-ft**

Total WQv provided through RRv and Standard Practices = **0.245 ac-ft**

The provided WQv exceeds the required WQv, Design is good.

DRAINAGE AREA TREATED

17 A	Total DA treated with RRv practices (#12A) =	0.79	acres
17 B	Total DA treated with standard WQv practices (#16) =	0.00	acres
17 C	**Total DA treated =**	**0.79**	**acres**

18 Is all of the required watershed DA treated by either RRv practices or standard WQv treatment practices?**** Yes

**** If **No**, provide additional treatment and recalculate or provide justification

PEAK FLOW ATTENUATION

19 Calculate peak runoff rate for pre-development site conditions:

STORMWATER MANAGEMENT PLAN
WORKSHEET FOR NEW PROJECTS IN NON-IMPARIED WATERSHEDS

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

Q_1 =	15.64	cfs	Q_{25} =	58.88	cfs
	31.02	ac-ft/day		116.79	ac-ft/day
Q_{10} =	44.49	cfs	Q_{100} =	81.45	cfs
	88.25	ac-ft/day		161.56	ac-ft/day

20 Calculate peak runoff rate for post-development site conditions:

Q_1 =	13.12	cfs	Q_{25} =	55.62	cfs
	26.02	ac-ft/day		110.32	ac-ft/day
Q_{10} =	42.41	cfs	Q_{100} =	76.47	cfs
	84.12	ac-ft/day		151.68	ac-ft/day

STORMWATER MANAGEMENT PLAN
SOURCE CONTROL WQv TREATMENT PRACTICES WORKSHEET

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

STANDARD PRACTICES USED AS SOURCE CONTROL

A. Infiltration (for soils with k>0.5"/hr only):

DA tributary to Practice(s) =		acres		Area of footprint of system (sf)=	
AI tributary to Practice(s) =		acres		Ht. of storage w/in system (ft) =	
Rv =				Storage stone void space (%) =	
WQvRequired =		*ac-ft*		Storage volume w/in system =	
Allowable Runoff Reduction Volume, RRv =		**ac-ft**		**WQv Provided (ac-ft) =**	

B. Bioretention (BR):

DA tributary to Practice(s) =		acres		Area of BR device (sf) =	
AI tributary to Practice(s) =		acres		Ht of water above bed (ft) =	
Rv =				Filter bed depth (ft) =	
WQv Required =		*ac-ft*		Filter bed drain time (days) =	
Allowable Runoff Reduction Volume, RRv =	**0.000**	**ac-ft**		**WQv provided (ac-ft) =**	**0.000**

C. Dry Swale:

DA tributary to Practice(s) =		acres		Cross-sectional area of swale (sf)* =	
AI tributary to Practice(s) =		acres		Length of swale (ft) =	
Rv =				**WQv provided in swale (ac-ft) =**	**0.000**
WQv Required =		*ac-ft*		* Longitudinal slope of swale ≤ 4%	
Allowable Runoff Reduction Volume, RRv =	**0.000**	**ac-ft**			

GREEN INFRASTRUCTURE PRACTICES

A. Vegetated Swale:

DA tributary to Practice(s) =		acres		Cross-sectional area of swale (sf)* =	
AI tributary to Practice(s) =		acres		Length of swale (ft) =	
Rv =				**WQv provided in swale (ac-ft) =**	**0.000**
WQv Required =		*ac-ft*		* Longitudinal slope of swale ≤ 4%	
Allowable Runoff Reduction Volume, RRv =	**0.000**	**ac-ft**			

B. Green Roof:

Area of Green Roof =		sf		Depth of Drainage Layer (ft) =	
Depth of soil media =		ft		Porosity of drainage layer =	
Porosity of soil media =				Depth of Ponding above surface (ft) =	
Rv =				**WQv provided in green roof (cf) =**	**0.000**
Area feeding into practice =		sf		**(ac-ft) =**	**0.000**
WQv Required =		*cf*		**Allow. Runoff Red. Vol., RRv (ac-ft) =**	**0.000**
=		*ac-ft*			

STORMWATER MANAGEMENT PLAN
SOURCE CONTROL WQv TREATMENT PRACTICES WORKSHEET

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.20 inches DA: 0.71 acres HSG(s): C

C. Rain Garden:

DA tributary to Practice(s) =		sf	Rain Garden Surface Area (sf) =	
AI tributary to Practice(s) =		sf	Depth of Soil Media (ft) =	
Rv =			Depth of Drainage Layer (ft) =	
WQv Required =		*cf*	Porosity of Soil media =	
WQv Provided =	**0**	**cf**	Porosity of drainage layer =	
=	**0.000**	**ac-ft**	Ponding Depth (ft) =	
Allowable Runoff Reduction Volume, RRv =	**0.000**	**ac-ft**	Underdrains (Y/N)?	

D. Stormwater Planters:

DA tributary to Practice(s) =		acres	Area of stormwater planter (sf) =	
AI tributary to Practice(s) =		acres	Depth of soil media (ft) =	
Rv =			Hydraulic conductivity (ft/day) =	
WQv Required =		*ac-ft*	Avg. Ht above planter bed (ft) =	
			Filter time (days) =	
Allowable Runoff Reduction Volume, RRv =	**0.000**	**ac-ft**	**WQv provided (cf) =**	**0.00**

E. Cisterns / Rain Barrels:

DA tributary to Practice(s) =		sf	Storage volume of C/RB (gal.) =	
AI tributary to Practice(s) =		sf	Storage volume of C/RB (cf) =	
Rv =				
WQv Required =		*cf*	**WQv Provided (cf) =**	**0.00**
			(ac-ft) =	**0.000**
			Allowable Runoff Reduction Volume (ac-ft) =	**0.000**

F. Porous Pavement:

DA tributary to Practice(s) =	0.71	acres	Depth of Gravel Bed/Reservoir (ft) =	1.83
AI tributary to Practice(s) =	0.37	acres	Porosity of gravel bed/Reservoir =	0.40
Rv =	0.05		Area of Practice (sf) =	15,000.00
Area feeding into practice =	30,927.60	sf	**WQv provided (cf) =**	**10,980.00**
WQv Required =	*169.14*	*cf*	**(ac-ft) =**	**0.252**
=	*0.004*	*ac-ft*	**Allow. Runoff Red. Vol., RRv (ac-ft) =**	**0.252**

Total Tributary Drainage Area (DA) to Source Control Practices = 0.71 acres
Total Impervious Area (AI) treated by Source Control Practices = 0.37 acres

Total Allowable Runoff Reduction Volume from Source Control Practices, RRv = 0.252 ac-ft

STORMWATER MANAGEMENT PLAN
AREA REDUCTION PRACTICES WORKSHEET

PROJECT: 9 Dragons Parking Lot DATE: 12/28/2021
LOCATION: 329 North Pearl Street PERFORMED BY: ZAL

90% RAIN (P): 1.2 inches DA: 0.71 acres HSG(s): C

A. CONSERVATION OF NATURAL AREAS

Total Contributing Area (DA) =	0	acres
Total Contrib. Impervious Area (AI) =	0	acres
Area to be Protected as a Natural Conservation Area =	0	acres

B. RIPARIAN BUFFERS / FILTER STRIPS

Total Contributing Area (DA) =	0	acres
Total Contributing Impervious Area (AI) =	0	acres

C. TREE PLANTING / TREE PRESERVATION

Number of Existing Trees Preserved =	0	Number of Proposed Trees =	33
Contrib. Area (DA) to Each Preserved Tree (sf) =	0	DA to Each Proposed Tree =	100
Contrib. Impervious Area (AI) to Each Preserved Tree (sf) =	0	AI to Each Proposed Tree =	100

Total Contributing Area Reduced by Trees = 0.076 acres
Total Contributing AI Reduced by Trees = 0.076 acres

D. DISCONNECTION OF ROOFTOP RUNOFF

Resdiential or Commercial Use (R/C)? C Number of Houses =
Building Area to be Disconnected (sf) = 0
Net Impervious Area Reduction (sf) = 0 = 0.000 acres

E. STREAM DAYLIGHTING

Length of Culvert System to be Removed =	0.00	ft.
Width of Proposed Stream =		ft.
Avg. Width of Proposed Stream Bank =		ft.

Credited Impervious Area Reduction = 0.00 sf = 0.000 acres

APPENDIX G

SWPPP/ CONSTRUCTION INSPECTION FORMS

SWPPP INSPECTION FORM

PROJECT: Capital Rep (9 Dragons) Parking Lot DATE:

LOCATION: 329 North Pearl Street, Albany NY 12207 TIME:

OWNER/OPERATOR: Philip Morris TEMP.:

OWNER/OPERATOR ADDRESS: 251 North Pearl Street, Albany NY 12207 WEATHER:

SOIL CONDITIONS: PROJECT PHASE: PERMIT NO.:

GENERAL OBSERVATIONS

SITE SKETCH/LAYOUT

TOTAL SITE AREA: DISTURBANCE AREA:

EROSION & SEDIMENT CONTROL PRACTICES					
	Installed Correctly		Operating Correctly		
E&S Measure	Yes	No	Yes	No	Comments

PERMANENT STORMWATER MANAGEMENT PRACTICES					
	Installed Correctly		Operating Correctly		
Stormwater Practice	Yes	No	Yes	No	Comments

ADDITIONAL NOTES & COMMENTS

FOLLOW-UP ITEMS

Qualified Inspector:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

Qualified Professional:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

Owner's Representative:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

APPENDIX H

SWPPP MONTHLY INSPECTION FORMS

MONTHLY SWPPP INSPECTION SUMMARY

PROJECT: Capital Rep (9 Dragons) Parking Lot

LOCATION: 329 North Pearl Street, Albany, New York 12207

PROJECT PHASE: _____ TOTAL PHASES: _____

PERIOD: _____ to _____ WEEKLY REPORTS COVERED: _____

WEATHER CONDITIONS: _____ DATE: _____

INSPECTOR COMPANY: _____

GENERAL OBSERVATIONS			
Items	Yes	No	Comments
Are the SWPPP, NOI, NOI LOA, MS4 Acceptance Form, General Permit, and Contractor's Certifications Located on site?			
At the time of Inspection, are there any site discharges?			
Is there a significant difference in turbidity in the receiving waters?			
Are there any signs of sediment leaving the site?			
Are there any disturbed or stabilized areas/ items in need of repair?			
Are the public roadways clean at the site's entrance?			
Estimated Disturbed Area:		Total Site Acreage:	

EROSION AND SEDIMENT CONTROL PRACTICES					
	Installed Correctly		Operating Correctly		
Stormwater Practice	Yes	No	Yes	No	Comments

PERMANENT STORMWATER MANAGEMENT PRACTICES					
	Installed Correctly		Operating Correctly		
Stormwater Practice	Yes	No	Yes	No	Comments

ADDITIONAL NOTES & COMMENTS

Inspector:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

APPENDIX I

SWPPP MODIFICATION FORMS

SWPPP MODIFICATION REPORT

PROJECT: Capital Rep (9 Dragons) Parking Lot

LOCATION: 329 North Pearl Street, Albany, New York 12207

OWNER/OPERATOR: Philip Morris

OWNER/OPERATOR ADDRESS: 251 North Pearl Street, Albany, New York 12207

SWPPP MOD. NO.: _____ DATE: _____

Modification Submitted To: _____ Company: _____

Address: _____ Telephone: _____

Inspector: _____ Signature: _____

Inspector Qualifications: _____

CHANGES REQUIRED TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

REASONS FOR CHANGES

To Be Performed By:_____ Performed On or Before:_____

Contractor:_____ Signature:_____

Date:_____

Site Supervisor:_____ Signature:_____

Date:_____

Owner/Operator:_____ Signature:_____

Date:_____

APPENDIX J

HAZARDOUS MATERIAL SPILL LOGS

HAZARDOUS MATERIALS SPILL LOG

PROJECT: Capital Rep (9 Dragons) Parking Lot

LOCATION: 329 North Pearl Street, Albany, New York 12207

OWNER/OPERATOR: Philip Morris

OWNER/OPERATOR ADDRESS: 251 North Pearl Street, Albany New York 12207

Date of Spill:	
Entity Responsible for Spill (Spiller):	
Material Spilled:	
Quantity Spilled:	
Location of Spill:	
NYSDEC Notification Required (Yes or No):	
NYSDEC Notification Date and Time:	
On-Site Action Taken:	

Project/Construction Manager:

Name: Company:

Signature: Date:

Address: Phone:

Date of Spill:	
Entity Responsible for Spill (Spiller):	
Material Spilled:	
Quantity Spilled:	
Location of Spill:	
NYSDEC Notification Required (Yes or No):	
NYSDEC Notification Date and Time:	
On-Site Action Taken:	

Project/Construction Manager:

Name: Company:

Signature: Date:

Address: Phone:

Date of Spill:	
Entity Responsible for Spill (Spiller):	
Material Spilled:	
Quantity Spilled:	
Location of Spill:	
NYSDEC Notification Required (Yes or No):	
NYSDEC Notification Date and Time:	
On-Site Action Taken:	

Project/Construction Manager:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

Date of Spill:	
Entity Responsible for Spill (Spiller):	
Material Spilled:	
Quantity Spilled:	
Location of Spill:	
NYSDEC Notification Required (Yes or No):	
NYSDEC Notification Date and Time:	
On-Site Action Taken:	

Project/Construction Manager:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

Date of Spill:	
Entity Responsible for Spill (Spiller):	
Material Spilled:	
Quantity Spilled:	
Location of Spill:	
NYSDEC Notification Required (Yes or No):	
NYSDEC Notification Date and Time:	
On-Site Action Taken:	

Project/Construction Manager:

Name:_____ Company:_____

Signature:_____ Date:_____

Address:_____ Phone:_____

APPENDIX K

FINAL SWPPP INSPECTION FORM

FINAL SWPPP INSPECTION FORM

PROJECT: Capital Rep (9 Dragons) Parking Lot DATE:

LOCATION: 329 North Pearl Street, Albany, New York 12207 TIME:

OWNER/OPERATOR: Philip Morris TEMP.:

OWNER/OPERATOR ADDRESS: 251 North Pearl Street, Albany New York 12207 WEATHER:

SOIL CONDITIONS: PROJECT PHASE: PERMIT NO.:

Prior to the Owner/Operator submitting a Notice of Termination to the NYSDEC to terminate the permit coverage, a qualified inspector must perform a final site inspection to certify the completion of the following items:		
Item	Yes	No
Have all of the disturbed areas achieves final stabilization?		
Have all of the temporary erosion and sediment control measures been removed?		
Have all of the permanent stormwater management practices been installed?		
Have all of the practices been installed in accordance with the SWPPP?		
Have photographs been taken of the completed site?		

Qualified Inspector:

Name: Title:

Signature: Company:

Address: Phone:

Prior to issuing the Notice of Termination, the Owner/Operator must ensure one of the following permit requirements be met:		
Item	Yes	No
Projects in which Stormwater Management Practices will be owned & operated by the Municipality:		
Post construction Operations & Maintenance Plan established?		
Stormwater management parcels deeded to the Municipality?		
Are the R.O.W. and easements needed for access to the practices recorded?		
Projects in which Stormwater Management Practices will be maintained by the Municipality & owned by an HOA:		
Has a maintenance agreement been executed with the Municipality that will maintain the practices?		
If privately owned & maintained, has a deed restriction been established that requires operation & maintenance in accordance with the Operations & Maintenance Plan?		
If owned by a public/private institution or government agency, are there policies and procedures to ensure operation and maintenance in accordance with the Operations & Maintenance Plan?		

Owner/Operator/Authorized Representative:

Name: Title:

Signature: Company:

Address: Phone:

APPENDIX L

NOTICE OF TERMINATION (NOT)

ALBANY
NEW YORK | EST. 1686

CITY OF ALBANY
DEPARTMENT OF WATER & WATER SUPPLY
10 NORTH ENTERPRISE DRIVE
ALBANY, NEW YORK 12204
TELEPHONE (518) 434-5300
FAX (518) 434-5332

KATHY M. SHEEHAN
MAYOR

JOSEPH E. COFFEY, JR, P.E.
COMMISSIONER

(NOTE: Submit Completed Form To Address Above)

NOTICE OF TERMINATION

Please indicate your permit identification number: AWD

I. Owner or Operator Information:

1. Owner/Operator Name: Capital Repertory Theater, Inc

2. Street Address: 251 North Pearl Street

3. City/State/Zip: Albany/NY/12207

4. Contact Person: Phillip Morris | 5. Telephone: 518-382-3884

6. Contact Person E-Mail: pmorris@proctors.org

II. Project Site Information:

7. Project/Site Name: Capital Repertory Theater Parking Lot

8. Street Address: 329 North Pearl Street

9. City/Zip: Albany/12207

10. County: Albany

III. Reason for Termination:

11. All disturbed areas have achieved final stabilization in accordance with the permit and SWPPP.
    * **Date final stabilization completed** (month/year)_____

12. Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: AWD
    (Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

13. Other (Explain on Page 2)

IV. Final Site Information:

14. Did this construction activity require the development of a SWPPP that includes post construction stormwater management practices? yes no (If no, go to question 19.)

15. Have all post construction stormwater management practices included in the final SWPPP been constructed? yes no (If no, explain on Page 2)

16. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION

17. Has the entity responsible for longterm operation and maintenance been given a copy of the operation and maintenance plan required by the permit? yes no

18. Indicate the method used to ensure long term operation and maintenance of the post construction stormwater management practice(s):
Post construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
Executed maintenance agreement is in place with the municipality that will maintain the post construction stormwater management practice(s).
Post construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
For post construction stormwater management practices that are owned by a public or private institution (e.g. school, government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

19. Total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____
(acres)

20. Is the project subject to the requirements of a regulated, traditional land use control MS4? yes no
(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:
(Use this section to answer questions 13. and 15., if applicable)

VI. MS4 Acceptance - MS4 Official (City of Albany Stormwater Program Manager) or Duly Authorized Representative: (Note: Not required when 12. is checked - transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 7 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

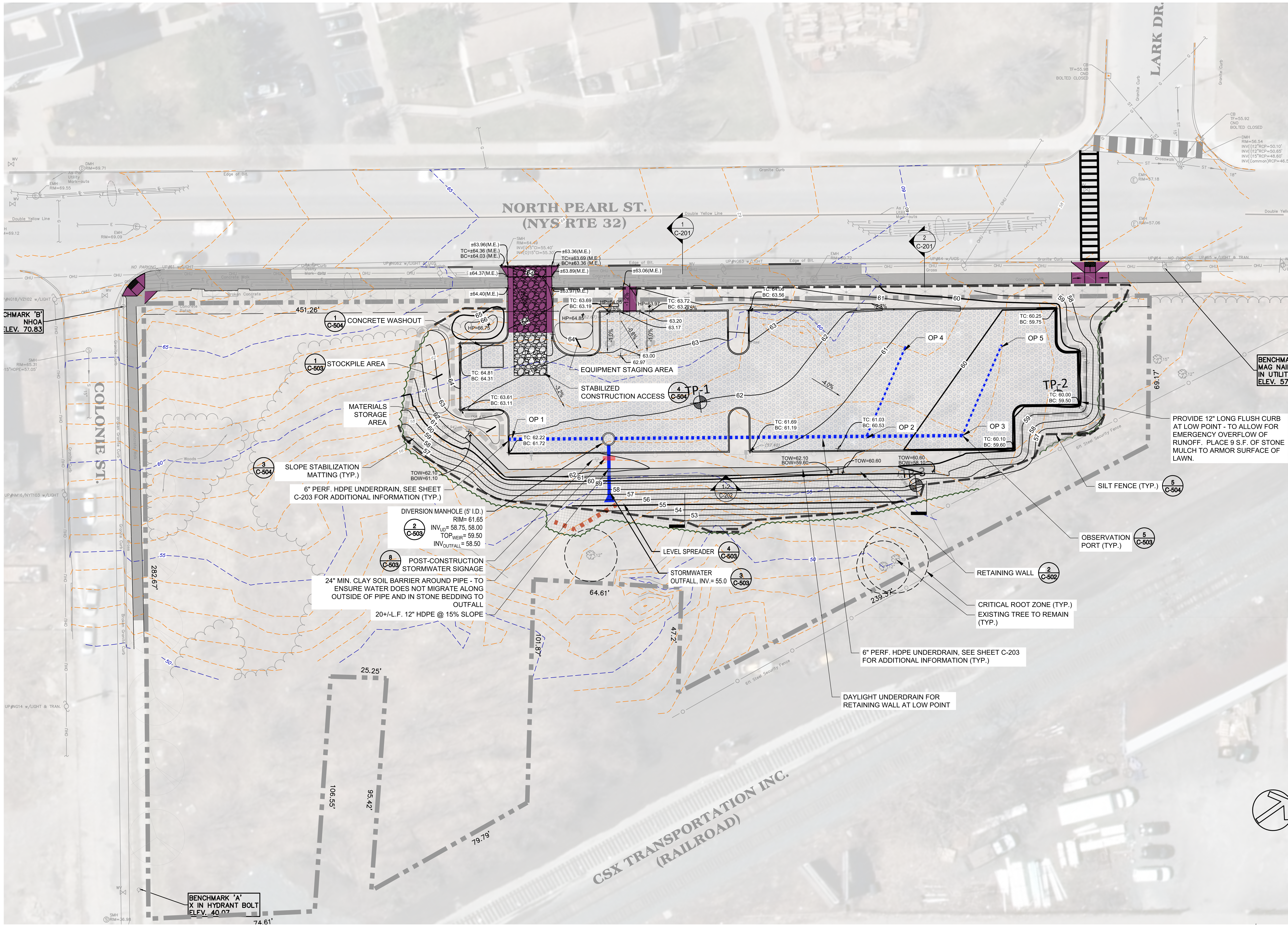
NOTICE OF TERMINATION

VII. Qualified Inspector Certification - Final Stabilization:	
I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
VIII. Qualified Inspector Certification - Post construction Stormwater Management Practice(s):	
I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
IX. Owner or Operator Certification:	
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:

(City of Albany Department of Water & Water Supply Notice of Termination - September 2017)

APPENDIX M

SOIL EROSION & SEDIMENT CONTROL PLANS



EXISTING CONDITIONS LEGEND

- EDGE OF WOODS
- DECIDUOUS TREE
- SIGN
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- WATER SHUTOFF
- GAS VALVE
- WATER VALVE
- MONUMENT
- IRON PIN / IRON ROD
- HAND HOLE
- ELEC. METER
- GAS METER
- PROPERTY LINE
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- FENCE
- CLEANOUT
- TEST PIT
- STORM SEWER LINE
- SANITARY SEWER LINE
- WATER LINE
- GAS LINE
- SIGNAL WIRE LINE
- CABLE LINE
- FIBER OPTIC LINE
- LOW PRESSURE SEWER LINE
- ELECTRIC LINE
- OVERHEAD UTILITIES
- TELEPHONE LINE
- SANITARY MANHOLE (SMH)
- DRAINAGE MANHOLE (DMH)
- CATCHBASIN (CB)
- ELECTRIC MANHOLE (MHE)
- UNKNOWN MANHOLE
- TELEPHONE MANHOLE (MHT)
- VENT PIPE
- COULD NOT OPEN
- FLOW DIRECTION
- ELECTRIC PEDESTAL
- GUY WIRE

PROPOSED LEGEND

- VEGETATION TO REMAIN
- DECIDUOUS TREE
- SIGN
- RETAINING WALL
- GUIDE RAIL
- LIGHT POLE
- LIMIT OF WORK
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- SNOW STORAGE AREA
- TOW — TOP OF WALL
- BOW — BOTTOM OF WALL
- TC — TOP OF CURB
- BC — BOTTOM OF CURB
- ME — MATCH EXISTING
- SPOT ELEVATION
- % SLOPE
- SILT FENCE
- UNDERDRAIN
- DIVERSION MANHOLE
- CONCRETE SURFACE
- POROUS ASPHALT PAVEMENT
- SLOPE STABILIZATION MATTING

1 **PROPOSED SITE PLAN - GRADING & UTILITIES**

SCALE:BAR SCALE

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION AND COORDINATE WITH OTHERS AS REQUIRED.
2. THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE FOR INFORMATION ONLY, AND ALL UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT U.F.P.O. (1-800-962-7962) AND THE PROPER LOCAL AUTHORITIES OR RESPECTIVE UTILITY COMPANY HAVING JURISDICTION TO CONFIRM THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CARE SHOULD BE TAKEN IN ALL SOIL DISTURBANCE DUE TO THE POSSIBLE EXISTENCE OF UNRECORDED UTILITIES. ANY COSTS INCURRED BY THE CONTRACTOR DUE TO FAILURE TO CONTACT THE PROPER AUTHORITIES SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING INFORMATION ON SITE. ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS SHALL BE IMMEDIATELY COMMUNICATED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING GRADES IN THE FIELD PRIOR TO THE COMMENCEMENT OF ANY WORK. FIELD VERIFICATIONS SHALL BE PERFORMED THROUGHOUT ALL AREAS OF NEW CONSTRUCTION. THIS FIELD VERIFICATION IS IMPERATIVE TO ENSURE THAT THERE ARE NO DISCREPANCIES BETWEEN THE SITE SURVEY AND WHAT HAS BEEN VERIFIED. IF DISCREPANCIES DO EXIST, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT/OWNER'S REPRESENTATIVE, IMMEDIATELY, AND PRIOR TO ANY CONSTRUCTION, SO NECESSARY ADJUSTMENTS AND/OR MODIFICATIONS CAN BE MADE TO ACCOMMODATE THESE DISCREPANCIES. ANY FAILURE TO VERIFY THE GRADES PRIOR TO CONSTRUCTION SHALL BE AT THE RISK AND COST OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL PROVIDE STAKED LAYOUT OF PROPOSED IMPROVEMENTS FOR THE ARCHITECT/OWNER'S REPRESENTATIVE REVIEW AND APPROVAL BEFORE COMMENCING WITH ANY GROUND DISTURBANCE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL PERMITS FOR THE WORK FROM ANY UTILITY COMPANIES OR OTHER GOVERNING BODIES HAVING JURISDICTION OVER THE WORK OUTLINED IN THESE DRAWINGS.
6. THE CONTRACTOR SHALL ESTABLISH PERMANENT SECONDARY BENCHMARKS PRIOR TO THE START OF CONSTRUCTION, I F NEEDED, TO ENSURE THAT THEY WILL NOT BE DISTURBED BY CONSTRUCTION.
7. THE CONTRACTOR SHALL MAINTAIN ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT TRACKING OR MOVEMENT OF SEDIMENT OR DEBRIS ONTO PUBLIC ROADS.
8. THE CONTRACTOR SHALL PROVIDE DUST AND EROSION/SEDIMENT CONTROL AS PER SPECIFICATIONS AND/OR AS APPROVED BY THE ARCHITECT/OWNER'S REPRESENTATIVE.
9. THE CONTRACTOR SHALL INSTALL SILT FENCE(S) PRIOR TO ANY SOIL DISTURBANCE. THE CONTRACTOR SHALL INSTALL AND REGULARLY MAINTAIN, AS REQUIRED, ANY AND ALL SILTATION CONTROL MEASURES AND MONITOR THE CONTROL DEVICES AT LEAST ONCE A WEEK TO ENSURE THEIR EFFECTIVENESS.
10. ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED FROM THE EXISTING SOIL SURFACE. DO NOT REMOVE TREE ROOTS OR DISTURB BELOW FINISHED GRADE. ITEMS NOT SPECIFICALLY IDENTIFIED THAT INTERFERE WITH NEW CONSTRUCTION MUST ALSO BE REMOVED. ALL REFUSE, DEBRIS AND MISCELLANEOUS ITEMS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
11. CONTRACTOR SHALL CUT AT GROUND SURFACE, ALL VEGETATION TO BE REMOVED FOR PROJECT – WITHIN CLEARING LIMITS. ALL EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED THROUGHOUT THE TIME OF CONSTRUCTION, AS SPECIFIED AND/OR DIRECTED BY THE OWNER'S REPRESENTATIVE. SEE CONSTRUCTION DETAIL SHEETS FOR MORE INFORMATION.
12. ALL FILL SLOPES 3:1 OR GREATER SHALL RECEIVE BIODEGRADABLE FABRIC OR APPROVED EQUIVALENT FOR EROSION CONTROL, UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ARCHITECT/OWNER'S REPRESENTATIVE.
13. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL AREAS DISTURBED AND/OR DAMAGED FROM CONSTRUCTION ACTIVITIES INCLUDING, BUT NOT LIMITED TO, LAWNS, WALKS, PAVEMENTS, ETC.. IT IS EXPECTED THAT THE CONTRACTOR SHALL MAKE PHOTO LOGS OF ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION FOR HIS/HER RECORDS.
15. CONSTRUCTION AND/OR DISTURBANCE SHALL NOT EXTEND BEYOND OWNER'S PROPERTY WITHOUT WRITTEN PERMISSION/PERMIT(S)/FROM ADJACENT LANDOWNERS.
16. DIGITAL CAD DOCUMENTS ARE AVAILABLE TO THE CONTRACTOR IN .DWG FORMAT UPON REQUEST FOR USE IN SITE LAYOUT.
17. 48 HOURS' NOTICE MUST BE GIVEN TO THE DEPARTMENT OF WATER AND WATER SUPPLY FOR INSPECTIONS.
18. CONTRACTOR SHALL PROVIDE SURVEYED PAPER AND DIGITAL AS-BUILT DRAWINGS TO THE DEPARTMENT OF WATER AND WATER SUPPLY. COORDINATE SYSTEM TO BE NAD83 HORIZONTAL AND NAVD88 VERTICAL.
19. A SITE ASSESSMENT THAT CERTIFIES EROSION AND SEDIMENT CONTROLS DESCRIBED IN THE SWPPP ARE IN PLACE PRIOR TO CONSTRUCTION COMMENCEMENT MUST BE COMPLETED BY A QUALIFIED PROFESSIONAL AND SUBMITTED TO THE MS4 COORDINATOR AT THE DEPARTMENT OF WATER WITHIN 24 HOURS OF INSPECTION COMPLETION.

PERMITTING NOTES

1. GRADING PERMIT AND BOND FOR SITE WORK IS REQUIRED. CONTACT PATRICK McCUTCHEON, ENGINEERING DIVISION, CITY OF ALBANY AT 518.434.2387.
2. WATER AND SEWER PERMITS ARE REQUIRED. CONTACT KURT CARMAN, DEPARTMENT OF WATER AND WATER SUPPLY, CITY OF ALBANY AT 518.275.5871.

WINTER STABILIZATION NOTES

1. THE REQUIREMENTS LISTED BELOW APPLY TO ALL CONSTRUCTION ACTIVITIES INVOLVED WITH ONGOING LAND DISTURBANCE AND EXPOSURE THAT OCCURS BETWEEN NOVEMBER 15TH TO THE FOLLOWING APRIL 1ST.
2. SNOW TO BE STORED IN A MANNER NOT AFFECTING ONGOING CONSTRUCTION ACTIVITIES.
3. ENLARGE AND STABILIZE ACCESS POINTS TO PROVIDE FOR SNOW MANAGEMENT AND STOCKPILING. SNOW MANAGEMENT ACTIVITIES MUST NOT DESTROY OR DEGRADE INSTALLED EROSION AND SEDIMENT CONTROL PRACTICES.
4. A MINIMUM 25 FOOT BUFFER SHALL BE MAINTAINED FROM THE SILT FENCE. MARK SILT FENCE WITH TALL STAKES THAT ARE VISIBLE ABOVE SNOW PACK.
5. DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS. ALL DEBRIS, ICE DAMS, OR DEBRIS FROM PLOWING OPERATIONS, THAT RESTRICT THE FLOW OF RUNOFF AND MELTWATER, SHALL BE REMOVED.
6. SEDIMENT BARRIERS MUST BE INSTALLED AT ALL APPROPRIATE PERIMETER AND SENSITIVE LOCATIONS. SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED BEFORE THE GROUND FREEZES.
7. SOIL STOCKPILES MUST BE PROTECTED BY THE USE OF ESTABLISHED VEGETATION, ANCHORED STRAW MULCH, ROLLED STABILIZATION MATTING, OR OTHER DURABLE COVERING. A BARRIER MUST BE INSTALLED AT LEAST 15 FEET FROM THE TOE OF THE STOCKPILE TO PREVENT SOIL MIGRATION AND TO CAPTURE LOOSE SOIL.
8. IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES SHOULD BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN THREE DAYS. ROLLED EROSION CONTROL BLANKETS MUST BE USED ON ALL SLOPES 3 HORIZONTAL TO 1 VERTICAL OR STEEPER.
9. IF STRAW MULCH ALONE IS USED FOR TEMPORARY STABILIZATION, IT SHALL BE APPLIED AT DOUBLE THE STANDARD RATE OF 2 TONS PER ACRE, MAKING THE APPLICATION RATE 4 TONS PER ACRE. OTHER MANUFACTURED MULCHES SHOULD BE APPLIED AT DOUBLE THE MANUFACTURER'S RECOMMENDED RATE.
10. TO ENSURE ADEQUATE STABILIZATION OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL SHOULD BE STABILIZED AT THE END OF THE WORK DAY UNLESS:
    A. WORK WILL RESUME WITHIN 24 HOURS IN THE SAME AREA AND NO PRECIPITATION IS FORECAST OR;
    B. THE WORK IS IN DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS OPEN UTILITY TRENCHES, FOUNDATION EXCAVATIONS, OR WATER MANAGEMENT AREAS.
11. USE STONE PATHS TO STABILIZE ACCESS PERIMETERS OF BUILDINGS UNDER CONSTRUCTION AND AREAS WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS SHOULD BE A MINIMUM 10 FEET IN WIDTH BUT WIDER AS NECESSARY TO ACCOMMODATE EQUIPMENT.
12. THE SITE SHALL BE INSPECTED FREQUENTLY TO ENSURE THAT THE EROSION AND SEDIMENT CONTROL PLAN IS PERFORMING ITS WINTER STABILIZATION FUNCTION.
13. COMPLIANCE INSPECTIONS MUST BE PERFORMED AND REPORTS FILED PROPERLY IN ACCORDANCE WITH THE SWPPP DURING A WINTER SHUTDOWN.

SEE SHEET C-504 FOR EROSION CONTROL SCHEDULE.

CSARCH
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Consultant
Weston & Sampson
1 Winners Circle, Suite 130,
Albany, New York 12205
Tel: (518) 463-4400
Fax: (518) 432-6741
(800) SAMPSON
www.westonandsampson.com

Project Title

CAPITAL REPERTORY THEATRE OVERFLOW PARKING LOT - NINE DRAGONS SITE -

329 N. Pearl Street, Albany, NY 12207

STATE OF NEW YORK · JEFFERY FRASER BUDROW · LICENSED PROFESSIONAL ENGINEER · 063680

	DATE	DESCRIPTION
1	10/8/2021	REVISED PER PB COMMENTS
2	11/23/2021	REVISED PER PB COMMENTS
3	1/28/2022	REVISED PER CITY DRT COMMENTS

Drawn By:	ALM
Checked By:	KSK/JFB
Proj.#	N280066
CSArch Project #	710-1901
Issued for Review:	AUGUST 13, 2021

Sheet Title

GRADING, UTILITIES AND SOIL EROSION SEDIMENT CONTROL PLAN

Sheet No.

C-102

CONCEPT DEVELOPMENT

APPENDIX N

OPERATION & MAINTENACE FORMS AND INFORMATION

Stormwater System Inspection Checklist

Site: _____

Inspector: _____

Company: _____

Component	Condition	Comments	Action	Date
Outlet Control Manhole				
OCS-1				

APPENDIX O

OPERATION & MAINTENACE MANUAL

Weston & Sampson

westonandsampson.com

1 Winners Circle, Suite 130
Albany, NY 12205
tel: 518.463.4400

REPORT

August 2021

City of Albany, New York

Capital Repertory Theater Parking Lot

SWPPP Operation & Maintenance Manual

TABLE OF CONTENTS

1.0 INTRODUCTION

This long-term Stormwater Management System Operations and Maintenance (O&M) Plan, shall be implemented at the Capital Repertory Theater Parking Lot at 329 North Pearl Street, Albany, NY 12207 to ensure that the stormwater management systems function as designed. The Owner possesses the primary responsibility for overseeing and implementing the O&M Plan and assigning the appropriate staff who will be responsible for the proper operation and maintenance of the stormwater structures. This manual identifies the key components of the stormwater system and a log for tracking inspections and maintenance. The stormwater management system protects and enhances the stormwater runoff water quality through the removal of sediment and pollutants. Preventive maintenance of the system will include a comprehensive source reduction program of regular vacuuming and litter removal.

2.0 RESPONSIBILITY

The purpose of the O&M Plan is to ensure inspection of the system, removal of accumulated sediments and debris, and implementation of corrective action and record keeping activities. The ongoing responsibility is of the Owner, its successors and assignees. Adequate maintenance is defined in this document as good working condition. Contact information is provided below:

Contact Information:

Philip Morris
251 North Pearl Street
Albany, NY 12207

3.0 DOCUMENTATION

An Inspection and Maintenance Record Log shall be retained by the Owner summarizing inspections, maintenance, repairs and any corrective actions taken. The log shall include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. Inspection & Maintenance Logs shall be kept on file at the Capital Repertory Theater.

4.0 OPERATION AND MAINTENANCE PLAN

The O&M Plan presents the operation and maintenance required for the installed stormwater system and provides guidelines for when the stormwater system should be cleaned and associated recordkeeping. Please note, this system is a passive system. Manual operation of the system is not required for any of its components during normal use. The site includes the following components:

- Storm Drain Piping
- Catch Basins
- Porous Pavement

Additional information is also provided in the attached appendices including as-built information for this project.

The maintenance staff of Capital Repertory Theater, Inc. will be responsible for the operation and maintenance of the above stormwater structures. Checklists shall be utilized during the inspection and cleaning process and kept on file at the Capital Repertory Theater.

4.1 Storm Drain Piping

Storm drain pipe are typically underground structures that connect drainage structures such as catch basins and storm manholes. The pipes range from 4-inches to 6-inches in diameter and are typically made of HDPE, PVC, or reinforced concrete.

Maintenance Requirements

- Storm drainage piping should be inspected quarterly and cleaned as necessary.
- Remove any sediment or debris buildup in the collection pipe by hand or hydraulic jet. Pipes can be accessed from the downstream catch basin for hydraulic jetting.
- Sediment and hydrocarbons should be properly handled and disposed of off-site, in accordance with local, state, federal guidelines, and regulations.
- Pipe outlets should be cleaned away from the stormwater basins to prevent discharge of sediment into the basin.

4.2 Catch Basins

Catch Basins are point source stormwater collection structures that allow the stormwater to enter the subsurface collection system. The catch basins are typically made of precast concrete with exposed removable cast iron grates. The catch basins have one-foot sumps for grit and sediment collection that must be cleaned periodically. To access the catch basin sump, the cast iron grate may be removed with a manhole cover puller, pick or magnetic manhole removal device.

Maintenance Requirements

- Sediment removal is required when sediment depths within the sump of the catch basin exceed 75% (9-inches) of capacity.
- Removal of sediment and debris can be achieved by shoveling by hand or use of a vacuum truck.

4.3 Porous Pavement:

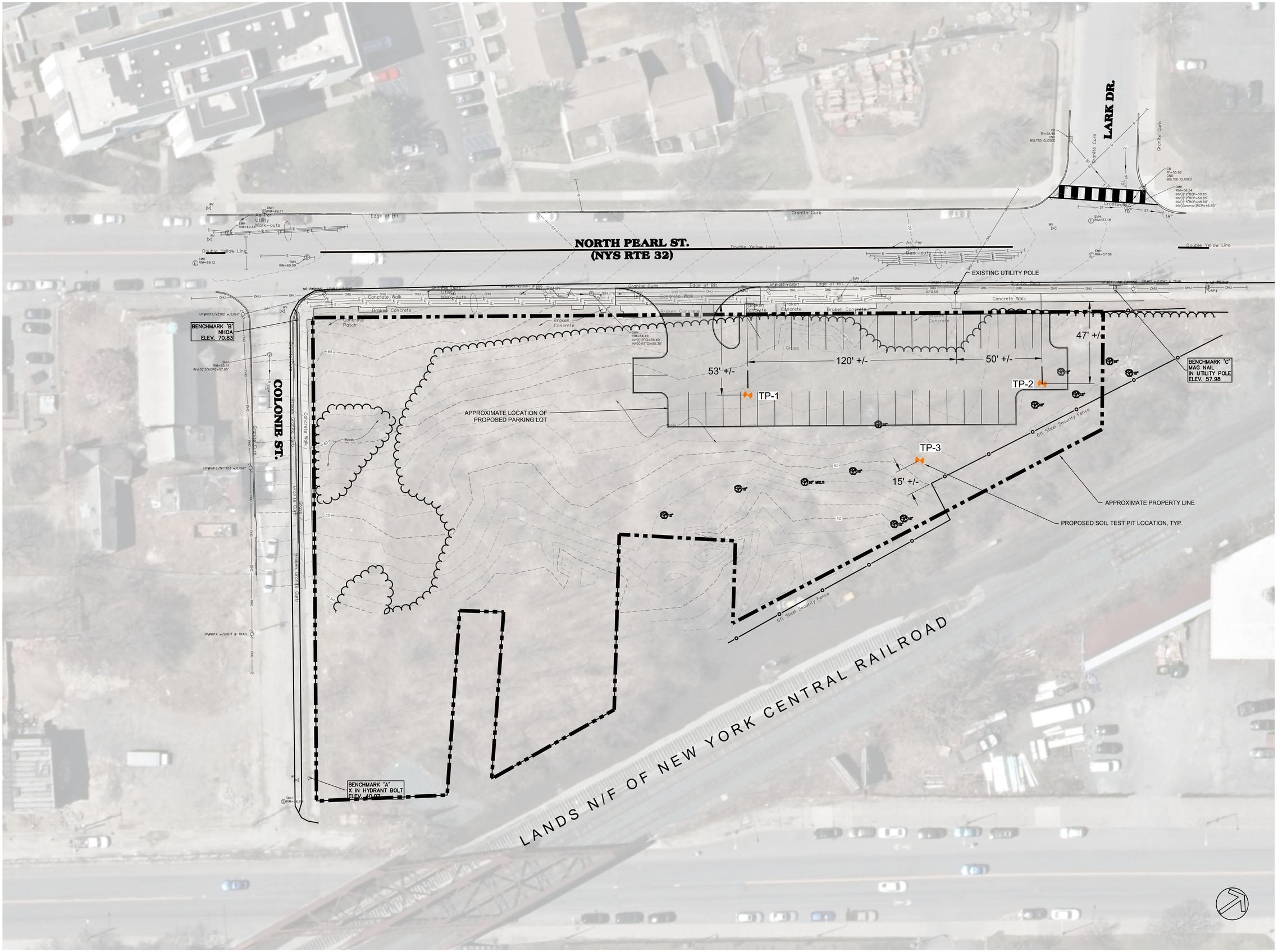
Porous pavement is a permeable asphalt or concrete surface that allows stormwater to quickly infiltrate to an underlying stone reservoir. Runoff then percolates directly into the underlying soil, which recharges groundwater and removes stormwater pollutants. Runoff can also be drained out of the stone reservoir through an underdrain system connected to the stormdrain system. Porous pavement looks similar to conventional pavement, but is formulated with larger aggregate and less fine particles, which leaves void spaces for infiltration.

Maintenance Requirements

- Ensure that paving area is clean of debris
- Ensure that paving dewaters between storms
- Ensure that the paving area is clean of sediments
- Mow upland and adjacent areas, and seed bare areas
- Vacuum sweep frequently to keep surface free of sediments

APPENDIX P

SOIL BORINGS/INFILTRATION TEST RESULTS



1 **EXISTING SITE CONDITIONS PLAN**
SCALE: BAR SCALE

40 Beaver St. · Albany · New York 12207-1511
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CSARCH

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Albany, New York 12205
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(800) SMPSON
www.westonandsampson.com

Project Title
CAPITAL REPERTORY THEATRE
NORTH PEARL AND LIVINGSTON AVENUE
ALTERATIONS AND SITE WORK

2-28-20

#	DATE	DESCRIPTION

Drawn By:	
Checked By:	
Proj.#	N280066
CSArch Project #	710-1701
Issued for Bid:	October 15, 2018

Sheet Title
EXISTING CONDITIONS & SOIL BORING PLAN

Sheet No.
C100

CONSTRUCTION DOCUMENTS

P:\NY\CSARCH\CAPITAL REP 25\ N. PEARL ST\PARKING\CAD\EXISTING CONDITIONS PLAN.DWG 2/28/2020 1:31 PM

Weston&Sampson Engineers, Inc. Innovative Solutions since 1899	PROJECT: CS Arch Cap Rep Parking lot N218.0066	DATE: 4-7-20	PAGE: 1
		BY:	
		CHKD. BY:	

PERC. TEST -

TP 2 - MOVED 8' TO SOUTH TO GET OUT OF RECENT TEST EXCAVATION AND INTO UNDISTURBED SOILS

- 12" ϕ, 18" DEEP INTO DIRT/ASH FILL

- PRE SOAK @ 3:01, MEASURED 8½" DEEP (5GAL)
  3:03 1½ 1" in 2 min

- PREC. 3:25 @ MARK 7" deep.
  3:36 1½" down 1½" in 11 min = 1"=7½
  3 37 REFILL
  3 51 DOWN 2" 14 min 2 ∴ 1" = 7 min

  Say 7½ min

TP-1 10" BROWN TOPSOIL/CLAY FILL W/ BRICKS
12"- BROWN CLAY - DENSE - SLOW DIGGING
12" ϕ 15" DEEP (ONLY 15" due to difficulty digging)

- PRESOAK 3:08 8" deep
  3:40 STILL 8"
- PERC 3:42 2ND MARK DOWN 10" DEEP
  4:01 1½" down
  1½" = 19 ∴ 1" = 13 min

Weston&Sampson Engineers, Inc. Innovative Solutions since 1899	PROJECT:	DATE:	PAGE: 2
		BY:	
		CHKD. BY:	

TP-3 - 12" x 18" ~~DEEP~~ - FILL BROWN TOP SOIL/CLAY BRICK
- MEASURE 15' DEFLEX IN FENCE & 10' SOUTH OF DEFLEX

PRE SOAK @ 3:15 TM - 6 1/4 ~~2~~
3:28 2 1/2

13 min 3 3/4"
1" = 3 1/2 min

PERC - 3:31 - MARKED & DROVE STAKE -
IN ONLY SOFT MATERIAL - SUDDENLY
ALL WATER DRAINED! empty. 5 sec.
3:46 PUT IN LAST OF WATER 4" DEEP
3:48 DROPPED 2"

VOID BELOW 2
1"/min

IF PER SOAK 1" = 3 1/2 min.
ESTIMATE PERC 1" = ~~8~~ min
10