STORMWATER POLLUTION PREVENTION PLAN:

FOR

OGS 46219-C

Provide APA Headquarters

Adirondack Park Agency

Village of Saranac Lake, Franklin County

State of New York

Draft: September 15, 2026

Submitted by:

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I. INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for construction activities related to the construction of the proposed Adirondack Park Agency (APA) Headquarters and redevelopment of the existing parking lot at 1-2 Main Street, Saranac Lake, NY. The principal objective of this SWPPP is to be compliant with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-25-001) by the design and implementation recommended standards for stormwater practices to address:

1. Reduction or elimination of erosion and sediment loading to waterbodies during construction activities,
2. Control of the impact of stormwater runoff on the water quality of any receiving waters,
3. Control of the increased volume and peak rate of runoff during and after construction, and
4. Maintenance of stormwater controls during and after completion of construction.

This plan has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity" (GP-0-25-001), the "New York Standards and Specifications for Erosion and Sediment Control" (NYSSESC), and the "New York Stormwater Management Design Manual" (NYSMDM).

All erosion and sediment control practices in this plan are designed in conformance with the most current version of the technical standard. Any requisite post-construction stormwater management practices are designed in conformance with the most current version of the technical standard available when this SWPPP was prepared. If the technical standards are revised during the term of this permit, the Owner or Operator will begin using the revised version of the technical standards for ongoing maintenance activities.

A. Project Description

A client agency of the NYS Office of General Services (OGS), the Adirondack Park Agency (APA) wishes to relocate their current headquarters to 1-2 Main Street in the Village of Saranac Lake, NY. This project will include the redevelopment of the existing parking lot, limited renovation of the existing powerhouse building and police station, construction of new building and maintenance garage, and utilities associated. A Notice of Intent (NOI) for the project is included in Appendix D, Item D-2.

As a redevelopment project, primary work activities include various means of pavement rehabilitation and reconstruction, replacement/realignment of curb, replacement and/or realignment of sidewalks, reconstruction of accessible curb ramps, construction of new building and maintenance garage, construction of soil nail retaining wall, and construction/relocation of utilities associated with new and existing buildings. This type of project is included in Table 2 of Appendix B of GP-0-25-001 and is not located within an enhanced phosphorous removal watershed, therefore all erosion and sediment controls and post-construction stormwater management measures listed herein are required. However, because the proposed project is redevelopment with an increase in impervious surfaces the plan proposes that 100% of the Water Quality Volume (WQv) is captured and treated for a minimum of 75% of the disturbed redevelopment impervious area and 100% of the WQv is captured and treated for any increases in impervious cover to the given design point.

This SWPPP plan achieves the redevelopment activity water quality treatment objective provided in accordance with the NYSSMDM, specifically section 9.2.1.A. IV. which is described by the following:

> *The plan proposes that 100% WQv is captured and treated, for a minimum of 75% of the disturbed, redevelopment impervious area, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm, as defined in Chapters 4 and 10. As with design of any practice, sizing of practices should be based on all areas contributing to the SMP. For guidance, the Water Quality Peak Flow*

Calculation is provided in Section 9.3. The flow capacity identified in the verification process for the specific alternative practice must be greater than or equal to the calculated peak runoff rate from the WQv design storm. For off-line practices, the installation must include flow diversion that protects the practice from exceeding the design criteria. However, in accordance with Chapter 4, 100% of the WQv must be provided for any ***increases in impervious*** *cover to a given design point using runoff reduction techniques and/or standard SMPs.*

B. Project Operator / Contact Person

Adirondak Park Agency Representative
New York State Adirondak Park Agency
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Ray Brook, NY 12977

C. SWPPP Project Engineer

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II. PRE-CONSTRUCTION CONDITIONS

A. Existing Land Use and Topography

The project site is located in the Village of Saranac Lake, NY. The site is composed of several buildings and their associated parking lot, including existing power house building and police station. The project area has light shrub/forested areas and the banks of the Saranac River. Elevations in areas of interest range from approximately 1,518 to 1,582 feet above mean sea level.

B. Soils and Sub-Surface Conditions

Soil information for the site and surrounding area was obtained from the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) is included in Appendix B, Item B-2. Results are summarized in Table 1. The area of proposed development is classified with Adams soils.

Table 1 – NRCS Soils Information

Soil Name	Percent of Area	Hydrologic Soil Group	Depth to Water Table (in)	Depth to Bedrock (in)
Adams loamy fine sand, 0 to 3 percent slopes	100%	A	> 80	> 80

C. Impaired Watershed Designation

The project site is not located in a restricted watershed identified in Appendix C of GP-0-25-001, thus enhanced phosphorus removal standards are not required. Moreover, the type of work proposed is included in Table 2 of Appendix B in GP-0-25-001. Considering these designations, both erosion and sediment controls as well as post-development stormwater management measures listed herein are required.

D. Receiving Waters

Runoff from the proposed site will be discharged into a proposed infiltration basin, infiltration stormwater planters, or the Saranac River. A portion of the existing storm water infrastructure will be utilized in the proposed site construction, with some anticipated in-kind pipe replacement. There are no NYSDEC waterbodies in the project area, and there are no nearby waterbodies included on the list of impaired waters found in Section 303(d) of Appendix D of GP-0-25-001. Impaired waters are identified by NYSDEC as waters that do not support appropriate uses and require the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of specific pollutant(s) that restrict water uses.

E. Aquifer Designation

The site is not located above a Sole Source Aquifer as listed in the Environmental Protection Agency Map of Sole Source Aquifer Locations referenced in Chapter 3 of the NYSSMDM.

F. Wetlands

There are no jurisdictional wetlands on site, but a non-jurisdictional wetland was flagged. A Wetlands Map of the proposed site from the U.S. Fish and Wildlife Services National Wetlands Inventory is included in Appendix B, Item B-3.

G. Flood Plains

According to the National Flood Hazard Layer Flood Insurance Rate Map (FIRM), the Village of Saranac Lake sits inside zone X and AE and the project site sit inside Zone AE, where the chance of an annual flood is 1%, with a published Base Flood Elevation of 1523. A copy of the Flood Insurance Rate Map is included in Appendix B, Item B-5.

H. Listed, Endangered or Threatened Species

Both the NYSDEC and the United States Fish & Wildlife Service (USFWS) online databases were utilized to determine the presence of potential endangered species in the project area. The NYSDEC Mapper did not indicate any listed endangered, threatened species, or critical habitats in the project area. The USFWS database indicates the Monarch Butterfly as a threatened species; although, no critical habitats are within the proposed project area.

I. Historic Places

A review of the State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS) Mapper indicates that the project is within an "archaeological buffer area." The redevelopment project does include new permanent buildings and there are new buildings immediately adjacent to property listed or determined to be eligible for listing on the National or State Registers of Historic Places. As well as the renovation of existing buildings listed on the National or State Register of Historic Places. Consultation with SHPO is ongoing. A copy of the CRIS Map is included in Appendix B, Item B-4.

A Phase 1A report was completed in September 2026. To our knowledge the Phase 1A report has not been sent to SHPO yet since it was recently completed and therefore NYS OPRHP "sign-off" has not been received yet.

J. Test Pits and Percolation Tests

Contained within the post-development sub catchment map there are multiple test pits and falling head test performed. The test pits and feasibility test were performed within the proposed stormwater management areas. Per the test pit results, the test pit went down 5-7 feet in depth from existing grade. The proposed bottom of infiltration systems varies upon the site location.

Per NYSSMDM an infiltration basin is required to have 2-foot separation between SHGW elevation and bottom of infiltration system. The table below summarizes those results shown. Falling head test in conformance with the NYSSMDM next to the test pits.

Table 2 – Test Pit and Feasibility Testing Results

Test Pit #	*Approximate EG Elevation*	Depth to Mottleing Layer (in)	Total Depth (in)	Infiltration Rate Observed (in/hr)
1	*1534.1*	40	84	1
2	*1533.6*	36	60	1.3

III. CONSTRUCTION PHASING

Construction of this project will be undertaken in a single phase. In general, the following sequence of activities will occur:

A. Phase 1 – Site Construction

1. Delineation of work area by contractor.
2. Prepare temporary staging areas.
3. Installation of silt fencing as required to protect work area/staging areas.

4. Installation of stabilized construction entrances.
5. Installation of infiltration basin and silt fence around basin.
6. Removal of asphalt/excavation as needed to facilitate redevelopment activities.
7. Excavation as needed to facilitate the placement of utilities, retaining wall, and new building foundation.
8. Construction of new proposed APA Headquarters and retaining wall and utilities associated.
9. Reconstruction of parking lots and roadways.
10. Restoration of work area where required.
11. After restoration, removal of erosion and sediment controls.

IV. CONSTRUCTION EROSION AND SEDIMENT CONTROL

Erosion and sediment control measures consistent with the "New York Standards and Specifications for Erosion and Sediment Control" (NYSSESC), latest edition, will be implemented. Erosion and sediment control measures for the proposed work are provided in the project drawings Appendix C, Item C-1, along with erosion and sediment control plans (Appendix C, Item C-1) that have been specifically designed for this application.

B. Overview of Construction Erosion and Sediment Control Measures

This SWPPP and accompanying plans identify the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction to minimize soil erosion and control sediment transport off-site, and after construction to control the quality and quantity of stormwater runoff at the construction site.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been developed in accordance with the following documents:

1. NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-25-001 (effective January 29, 2025, through January 28, 2030)
2. New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (November 2016)

This SWPPP and accompanying plans outline the construction schedule for implementing the proposed erosion and sediment control measures. These documents include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures. Temporary and permanent erosion and sediment control structures should be installed prior to construction when possible. These generally include:

1. Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction site discharges.
2. Preservation of existing vegetation to the greatest extent practical. Following the completion of construction activities in any portion of the site, permanent vegetation shall be established on all exposed soils.
3. Site preparation activities to minimize the area and duration of soil disruption. This includes reducing the exposure time of bare or disturbed areas by properly sequencing construction activities, verifying that all needed materials are available to complete a specific task without delays, installing erosion and sediment controls prior to construction, inspecting and maintaining all erosion and sediment controls on a regular basis and immediately repairing any identified defects, and stabilizing areas prior to disturbing new ones.
4. Establishment of permanent traffic corridors to ensure that "routes of convenience" are avoided.

Soil erosion and sediment controls are to be used at all locations where construction disturbances will take place. Locations are shown in the project drawings included in Appendix C.

C. Temporary Measures

The temporary erosion and sediment control measures described in the following section are to be used during construction of the project and removed after final stabilization of the site. These measures are included in the project drawings in Appendix C. Additional measures may be required based on site conditions. Proposed temporary measures include:

Stabilized Construction Entrances – Prior to construction, stabilized construction entrance(s) will be installed to reduce the tracking of sediment onto public roadways. Construction traffic must enter and exit the site at the stabilized construction entrance(s). The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic. The entrance should be maintained in a condition which will control tracking of sediment onto public rights-of-way or streets. When necessary, the placement of additional aggregate atop the filter fabric should be done to assure the minimum thickness is maintained. All sediments and soils spilled, dropped, or washed onto the public rights-of-way must be removed immediately. Periodic inspection and necessary maintenance shall be provided after each substantial rainfall event.

Concrete Truck Washout – After concrete truck mixers and equipment have discharged their loads, they will utilize the concrete truck washout to prevent runoff from entering the storm sewer system. The washout area shall be sized based on the expected frequency of concrete pours and shall be a minimum of 10-feet long by 10-feet wide by 3-feet deep at the bottom. A plastic liner will be anchored to the bottom of the pit and should be without rips or holes. To facilitate the effectiveness of the concrete washout area, daily inspections shall be conducted, including of the plastic liner and anchor material. Maintenance of the washout area and liner will be performed as needed.

Silt Fence – Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) shall be established downgradient of all disturbed areas. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands. Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To facilitate the effectiveness of the silt fencing, daily inspections and inspections immediately following significant storm events shall be performed by the Contractor and the Engineer. Maintenance of the fence will be performed as needed.

Catch Basin Inlet Protection – A sediment control barrier must be used prior to the initiation of and during construction activities. No bypasses of the sediment control barriers around the sides or below the inlet protection shall occur. A compost filter sock shall surround the perimeter of all stormwater catch basins and should be secured by wooden stakes or other means. Daily inspections and inspections immediately following significant storm events shall be performed by the Contractor and the Engineer.

Compost Filter Sock – Prior to the initiation of and during construction activities, a tubular geotextile filter fabric filled with a specific compost (or compost filter sock) shall be established along the downslope perimeter of areas to be disturbed (as a result of the construction) which are located upgradient of watercourses or adjacent properties. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands. Clearing and grubbing shall be performed only as necessary for the installation of the sediment control barrier. To facilitate effectiveness of the compost filter sock, daily inspections and inspections immediately following significant storm events shall be performed by the Contractor and the Engineer. Maintenance of the compost filter sock will be performed as needed.

Temporary Soil Stockpile – Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles should be located in areas away from storm drainage, water bodies, and/or courses, and will be properly protected from erosion by a surrounding silt fence. Stockpiles shall be covered with plastic in times of strong winds.

Vegetative Stabilization – Seeding and mulching for temporary stabilization shall be performed as necessary. In order to obtain temporary stabilization status, 2 tons per acre (or 3 bales per 1,000 square feet) of straw mulch shall be applied by an approved method. All disturbed areas shall require vegetation and/or a mulch blanket.

Minimizing Exposure – The contractor shall minimize the amount of disturbed area exposed at any one time by sequencing construction activities or temporarily stabilizing areas when construction is not occurring.

D. Permanent Measures

The erosion and sediment control measures listed below are to be used during construction of the project and shall remain in place after the project is completed. Permanent erosion and sediment control measures, including specific locations, sizes, and lengths, are included in the construction drawings in Appendix C. Proposed permanent measures include:

Vegetative Stabilization – Seeding and mulching for permanent stabilization shall be performed as necessary. To obtain temporary stabilization status, 2 tons per acre (or 3 bales per 1,000 square feet) of straw mulch shall be applied by an approved method. All disturbed areas shall require vegetation and/or a mulch blanket. Permanent soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has permanently ceased. Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

Rock Outlet Protection – Rock outlet protection shall be installed as indicated and detailed on the accompanying plans. The installation of rock outlet protection will reduce the velocity and energy of water such that the flow will not erode the existing streambank of the Saranac River.

E. Additional Pollutant Controls

In addition to the control of sediments, other aspects covered by this SWPPP are listed below.

Solid Waste/Trash Containers – Trash disposal will be strategically located to control site litter and minimize windblown construction debris. All site litter will be placed in trash containers daily. No solid or liquid waste materials, including building materials, are allowed to be discharged from the site with storm water. All solid waste, including disposable materials incidental to the major construction activities, must be collected and placed in containers. The containers shall be emptied periodically and hauled away from the site. Substances that have the potential for pollution surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site.

Sanitary Facilities – Temporary sanitary facilities shall be provided by the Contractor throughout the construction phase. Facilities must be utilized by all construction personnel and temporary facilities will be serviced by a licensed commercial Contractor. These facilities must comply with state and local sanitary regulations. The Contractor may utilize the existing sanitary facilities as authorized by the Owner.

F. Construction Housekeeping Practices

Good housekeeping measures for spill containment and countermeasures to maintain a minimum amount of exposure of materials to erosion and sedimentation are to be implemented. Pursuant to the NYSDEC Stormwater Standards at construction sites, the following pollution prevention measures are to be implemented at the site:

Fuel Tanks – Temporary on-site fuel tanks for construction vehicles shall meet all state and federal regulations. Tanks shall have approved spill containment meeting the capacities required by the applicable regulations including secondary containment. The tank shall be in sound condition free of rust or other damage, which might compromise containment. Hoses, valves, fittings, caps, filler nozzles, and associated hardware shall be maintained in proper working condition, and as specified by the manufacturer, at all times.

Source Water Protection – The contractor shall take all necessary measures to protect surface water and groundwater from pollution. Spills shall be reported as required under New York State Law. The contractor shall have the necessary spill recovery equipment to contain and recover any spill associated with any piece of construction equipment.

Dust Control – Construction traffic must enter and exit the site at stabilized construction entrances / exits. Water trucks or other dust control agents are to be used as needed during construction to reduce dust generated on the site. After construction, any disturbed areas shall be stabilized as described in the construction drawings. During wet conditions measures will be taken to minimize the tracking soil and mud on to off-site roadways.

Equipment Cleaning and Maintenance – The contractor shall wash all equipment in an area where runoff will be filtered through a compost filter sock or retained to infiltrate into the ground. To prevent spills of fuel or oil the general Contractor and subcontractors shall not service equipment at the site or shall provide protections to collect spills and dispose of them in accordance with local, State and Federal regulations.

Emergency Phone Numbers – Contact information for emergency response services shall be kept on-site and easily accessible for the duration of construction.

V. STORMWATER MANAGEMENT

A. Overview

As outlined in the SPDES General Permit for Stormwater Discharges for Construction Activity (GP-0-25-001), a key component of the SWPPP is the comparison of the post-construction stormwater runoff conditions with the pre-construction conditions. This project is considered a redevelopment project with an increase in impervious cover. In addition, water quality objectives will be meet in accordance with Section 9.2 Option IV of the NYSMDM, which reads:

> *The plan proposes that 100% WQv is captured and treated, for a minimum of 75% of the **disturbed, redevelopment impervious area**, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm, as defined in Chapters 4 and 10. As with design of any practice, sizing of practices should be based on all areas contributing to the SMP. For guidance, the Water Quality Peak Flow Calculation is provided in Section 9.3. The flow capacity identified in the verification process for the specific alternative practice must be greater than or equal to the calculated peak runoff rate from the WQv design storm. For off-line practices, the installation must include flow diversion that protects the practice from exceeding the design criteria. However, in accordance with Chapter 4, 100% of the WQv must be provided for any **increases in impervious** cover to a given design point using runoff reduction techniques and/or standard SMPs.*

Each of the five water quality and water quality criteria that the NYSMDM requires each project to meet and how this project meets them are described further below.

1. **Water Quality Volume (WQv)**: is defined in the NYSMDM as *"The storage needed to capture and treat 90% of the average annual stormwater runoff volume."* For this project, the WQv requirement will be met utilizing hydrodynamic units for disturbed redevelopment impervious surface, an infiltration basin, and stormwater planters implemented for any increase in impervious cover to meet Option IV of Section 9.2 of the NYSMDM.
2. **Runoff Reduction Volume (RRv)**: is defined in the NYSMDM as Per section 3.2 of the NYSMDM, *"Although encouraged, meeting the RRv criteria is not required for redevelopment activities that meet the criteria in Chapter 9 of this manual."* The proposed project involves the rehabilitation of existing parking lots with existing storm sewer systems and is thus considered a redevelopment project with an increase in impervious surfaces.
3. **Channel Protection Volume (CPv)**: 24-hour extended detention of the 1-year, 24-hour design storm volume to protect downstream channels from erosion. The proposed project has a 1-year post development peak discharge rate of less than 2.0 CFS without detention or velocity controls. As such, this project is not required to meet the Channel Protection Requirements.
4. **Overbank Flood (Qp)**: Control of the 10-year storm peak flow to pre-development rates to prevent an increase in the frequency of flooding and magnitude of out-of-bank flooding downstream of the management practice. Overbank control requires the post-development 10-year storm 24-hour peak discharge rate to be reduced to the pre-development rate.
5. **Extreme Flood (Qf)**: Control of the 100-year storm peak flow to pre-development rates to a) prevent the increased risk of flood damage from large storm events, b) maintain the boundaries of the pre-development 100-year floodplain, and c) protect the physical integrity of the stormwater management practices.

The design and evaluation of the stormwater controls for the redevelopment activity at 1-2 Main Street, Village of Saranac Lake, NY meet the above requirements and are detailed in the following sections.

B. Pre-Development Conditions

Based upon the existing conditions, a single design point of the Saranac River was selected for analysis. The contributing pre-development area can be compromised of two sub-catchments, labeled in the pre-development stormwater modeling calculations as Pre-1S and Pre-2S. Sub-catchment Pre-1S has been delineated and the watershed discharges directly to the Saranac River through overland flow. The watershed is approximately 1.66 acres in size. The watershed contains a mixture of woods and grass, gravel surface, and pavement. Sub-catchment Pre-2S has been delineated and the watershed discharges to the existing storm system on site and ultimately discharges to the Saranac River through an existing 15-inch corrugated metal pipe. The watershed is approximately 0.39 acres in size. An additional 20-acres of off-site area is tributary to the existing storm system and enters the existing storm system prior to the site. The watershed contains a mixture of woods, grass, and pavement.

C. Post-Development Conditions

Based upon the proposed conditions the contributing post-development area, a single design point of the Saranac River was selected for analysis. The contributing post-development area can be comprised of five sub-catchments labeled in the post-development stormwater modeling calculations as Post-1S, Post-2S, SP-1, SP-2, and IB-1. After construction the project site will be covered with additional paved parking areas, the proposed APA headquarters, existing forested and grassed areas, and gravel surfaces. The analysis of the post-development conditions considered proposed drainage patterns, soil types, ground cover to remain, planned site improvements, site grading, proposed stormwater management facilities, and proposed stormwater conveyance system proposed as part of the construction.

D. Modeling

1. Methods

Hydrologic and hydraulic analysis of the project site were performed to demonstrate that the proposed stormwater management systems meet the WQv requirements for redevelopment projects with an increase in impervious cover and meet peak volume and discharge requirements. The analysis used the Natural Resources Conservation Service Technical Release 20 (TR-20) and Technical Release 55 (TR-55) methodologies. HydroCAD software was used to create a hydrologic and hydraulic model of site conditions, which is attached in Appendix E.

The analysis was performed by dividing the project site into sub-catchments dictated by surface conditions, surface topography, stormwater collection system, conveyance systems, and points of discharge. Surface features for each sub-catchment were then assessed from the following sources: aerial photographs of the site from publicly available sources, site investigations, site survey, and proposed site plans. The hydrologic and hydraulic analysis considered the Soil Conservation Service (SCS) Type II 24-hour storm events. Rainfall amounts were taken from the 1-Year, 10-Year, 25-Year, 50-Year, and 100-Year events recorded in the Northeast Regional Climate Center (NRCC) Extreme Precipitation Tables.

2. Watershed/Discharge Points

The study area consists of approximately 2.05 acres of overall drainage area and contains a total of 0.84 acres of impervious cover. The site was evaluated by segmentation into five (5) smaller

watersheds with specific sub-catchments for each watershed. Both pre-development and post-development sites ultimately discharge to the Saranac River.

E. Drainage Areas

1. Pre-Development Drainage Areas

The overall drainage area for the project site is approximately 2.05 acres and is broken into two (2) sub-catchments that drain to the Saranac River. See Table 3 for information on areas, time of concentration, and CN values used for modeling. See Appendix E-2 for the boundary of the drainage areas. Narrative descriptions follow:

a. **Area Pre-1S:** is approximately 1.66 acres in size and encompasses the portion of the existing site that discharges to the Saranac River via overland flow.

b. **Area Pre-2S**: is approximately 0.39 acres in size and encompasses the portion of the existing site that discharges to the Saranac River via the on-site existing storm network.

Table 3 – Pre-Development Sub-Catchment Information

Drainage Area	Area (ac)	Time of Concentration (min)	CN Value
Pre-1S	1.66	6.0	54
Pre-2S	0.39	6.0	80
Total	2.05	N/A	N/A

2. Post-Development Drainage Areas

The overall post-development drainage area for the project site is approximately 2.05 acres and is broken into five (5) distinct drainage areas See Table 4 for information on areas, time of concentration, and CN Values used for modeling. See appendix E-3 for the boundary of the drainage area. Narrative descriptions follow:

a. **Area Post-1S:** is approximately 1.48 acres in size and encompasses the northwest portion of the proposed site that discharges to the Saranac River via overland flow or the proposed storm network. The sub-catchment includes the existing forested and grassed areas, northwestern portion of the parking lot and associated sidewalk, the proposed building, and expanded gravel trail.

b. **Area Post-2S**: is approximately 0.39 acres in size and encompasses the southeast portion of the proposed site that discharges to the Saranac River via the on-site existing storm network. The sub-catchment includes the existing forested and grassed areas, southeastern portion of the proposed parking lot and associated sidewalks, and the existing building.

c. **Area SP-1**: is approximately 0.013 acres in size and encompasses proposed stormwater planter 1 and the proposed sidewalk that ultimately discharges to the infiltration stormwater planter.

d. **Area SP-2:** is approximately 0.008 acres in size and encompasses proposed stormwater planter 2 and the proposed sidewalk that ultimately discharges to the infiltration stormwater planter.

e. **Area IB-1:** is approximately 0.16 acres in size and encompasses the proposed infiltration basin, a portion of the existing residential home, proposed parking lot and sidewalk

associated, and proposed gravel areas that ultimately discharge to the proposed infiltration basin.

Table 4 – Post-Development Sub-Catchment Information

Drainage Area	Area (ac)	Time of Concentration (min)	CN Value
Post-1S	1.48	7.8	59
Post-2S	0.39	6.0	71
SP-1	0.013	6.0	53
SP-2	0.008	6.0	59
IB-1	0.16	8.7	48
Total	2.05	N/A	N/A

F. Water Quality Treatment

1. Calculation of Disturbed Redevelopment Impervious Area WQv

Following incorporation of techniques, the WQv was calculated for the disturbed redevelopment impervious area and the increase in impervious cover in accordance with Section 9.2 Option IV of the NYSMDM. This helps identify which sub-catchments are best for implementation of the Cascade Separators to ensure 75% WQv treatment for disturbed redevelopment impervious area and which sub-catchments are best for implementation of runoff reduction techniques or standard SMPs so that 100% of the WQv will be provided for any **increases in impervious** cover. See Appendix E Item E-1 for analysis on redevelopment impervious surface. The formula for determining WQv per the NYSMDM is below:

$$WQv = \frac{(P)(Rv)(A)}{12}$$

Where:

WQv = Water quality volume in acre-feet
P = 90% rainfall value: 1.5 inches (from Figure 4.1 in the NYSMDM)
Rv = $0.05 + 0.009(I)$, where I is percent impervious cover
A = Contributing area in acres

The total sitewide disturbed redevelopment existing impervious surface WQv required to be treated is calculated as follows:

Table 5 – Disturbed Redevelopment WQv Required

Area (ac)	Impervious Cover (%)	Rv	WQv (ac-ft)	75% of the WQv (Redevelopment)
0.61	100	0.95	0.048	0.036

As a redevelopment activity, the goal of this project is to meet water quality treatment objective IV in Section 9.2 of the NYSMDM using alternative SMPs to treat 75% of the calculated WQv for disturbed redevelopment impervious areas. Areas to be treated and a summary of compliance status is included in Table 6:

Table 6 – Disturbed Redevelopment WQv Provided

Sub-catchment	Area (ac)	Impervious Cover (%)	Rv	Method of WQv Treatment	WQv Treated (ac-ft)
HY-SEP-01	0.19	85	0.82	Hydrodynamic Separator (CS-4)	0.013
HY-SEP-02	0.4	90	0.86	Hydrodynamic Separator (CS-4)	0.029
HY-SEP-03	0.25	59	0.58	Hydrodynamic Separator (CS-4)	0.012
Total	0.84	80	0.77	Hydrodynamic Separator (CS-4)	0.054

Based on the above information, the WQv objectives for the disturbed redevelopment impervious surface area are met via treatment from the above referenced hydrodynamic separators. The project provides a total of 0.054 ac-ft of WQv treatment vs. 0.036 ac-feet required.

2. Calculation of Increase in Impervious Cover WQv

Following incorporation of techniques, the WQv volumes were calculated for the increase in impervious cover to the given design point in accordance with Section 9.2 Option IV of the NYSMDM. The calculated water quality volumes will be treated by application of Runoff Reduction techniques or SMP with RRv capacity to provide treatment. The formula for determining WQv per the NYSMDM is below:

$$WQv = \frac{(P)(Rv)(A)}{12}$$

Where:

WQv = Water quality volume in acre-feet

P = 90% rainfall value: 1.5 inches (from Figure 4.1 in the NYSMDM)

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

A = Contributing area in acres

The following table contains the calculated water quality volume for the increase to impervious cover to the given design point (Saranac River).

Table 7 – Increase in Impervious Cover WQv Required

Area (ac)	Impervious Cover (%)	Rv	WQv (ft^3)
0.04	100	0.95	166

3. Application of Runoff Reduction Techniques

The following Runoff reduction techniques were evaluated for use to reduce the contributing area and WQv. A summary of the technique and justification for the use of the practice is included below. For practices that were applied, the reduction in area and subsequently water quality volume is listed in Table 8.

a. **Conservation of Natural Areas** - This green infrastructure measure involves permanent preservation of natural areas.

A majority of the site is currently mixed forest and lightly developed land with several dispersed structures. Although the undisturbed natural features have been identified and disturbances to them minimized, placement of existing natural features into permanent conservation areas is not considered feasible due to the intended use of the facility and possibility of use in the future. ***This practice was not used****.*

b. **Sheet flow to Riparian Buffers or Filter Strips** - This measure involves the use of vegetative filter strips or riparian buffers and stream buffers for stormwater quality treatment.

This practice will not be used due to the curbed parking lot and use of a stormwater conveyance system. ***This practice was not used.***

c. **Vegetated Open Swales** - This measure involves use of natural turf lined drainage paths or engineered channels in lieu of closed conduits or paved channels to increase the time of concentration, reduce peak discharge, and provide infiltration.

This practice is not feasible for this site due to lack of space available for vegetated swales and existing steep slopes outside the parking lot area. ***This practice was not used.***

d. **Tree Plantings/Tree Boxes** - This practice involves conservation of existing trees and, or planting of new trees in concentrated groupings and individual trees in tree boxes or pits near impervious areas to reduce runoff, promote evapotranspiration, increase nutrient uptake, provide shading and thermal reductions, and encourage wildlife habitat.

Preservation of trees was performed to the extent possible; however, credits will not be taken as infiltration areas are provided. ***This practice was not used.***

e. **Disconnection of Rooftop Runoff** - This measure involves disconnection of direct runoff from residential rooftop areas and upland runoff flow to designated pervious areas to reduce runoff volumes and rates.

Use of this practice is not feasible at the site as there is minimal area to treat the rooftop runoff separately at the site. ***This practice was not used.***

f. **Stream Daylighting for Redevelopment Projects** - This practice involves removal of existing culverts and piped networks to restore streams to their natural condition for better attenuation of runoff by increasing storage size, promoting infiltrations, reducing velocity, and to help mitigate pollutant loads where feasible and practical.

This practice is not applicable, as the proposed project does not contain piping that can be removed. ***This practice was not used.***

g. **Rain Garden** - The intent of this practice is to manage and treat small volumes of runoff by use of a planted shallow depressed area overlying a conditioned soil bed for filtration of runoff.

The existing topography and site conditions would require clearing of forested areas to install rain gardens. Additionally, maintenance of these systems for winter operations would be difficult. ***This practice was not used***

h. **Green Roof** - This measure is used to capture and treat runoff via a layer of vegetation and soil installed on flat or sloping roofs. It utilizes evaporation and evapotranspiration process to reduce runoff volume and provides filtration for stormwater quality treatment.

This practice is not applicable, as the proposed project does not involve construction of structures suitable for green roofs. ***This practice was not used.***

i. **Stormwater Planter** - This measure consists of small landscaped vessels designed to filter and infiltrate stormwater to decrease stormwater quantity and improve quality.

These planters are uniquely suited for urban redevelopment sites. The site includes two stormwater planters in front of the proposed building. ***This practice was used.***

j. **Rain Barrel/Tank/Cistern** - These types of practices are used to capture and store stormwater runoff for watering of lawn and landscaped areas or other non-potable water use activities such as washing vehicles or filling swimming pools.

These items could be implemented for treatment of stormwater, but because of the lack of use will result in maintenance issues; therefore, this practice is not considered a viable option. ***This practice was not used***

k. **Porous Pavement** - This practice is an alternative to conventional paved surfaces for infiltration of rainfall to achieve a reduction in runoff and some treatment of pollutants through filtration by the underlying soils.

Porous pavements will not be suitable for the proposed construction as the mechanical and hydraulic properties cannot be guaranteed to be suitable at this site. It is anticipated that winter operations shall require significant sanding operations, which have been shown to impact pervious pavements long-term viability. Therefore, this practice is not considered a viable option. ***This practice was not used.***

Table 8 – Runoff Reduction Techniques Summary

Drainage Area	Is RRv applied?	Type of Technique	Total Area Reduction (Acres)	Imp. Area Reduction (Acres)	WQv Reduction (ft^3)
SP-1	Yes	Stormwater Planter	0.013	0.003	12.4
SP-2	Yes	Stormwater Planter	0.08	0.003	10.6
Total					**23**

4. Application of Standard SMP's with RRV Capacity

Following application of Runoff Reduction techniques, remaining watersheds were evaluated for the use of SMP's with RRv capacity. The application of these techniques is preferred before SMP's without RRv. A summary of the technique and justification for the use of the practice is included below. For practices that were applied, the reduction in area and subsequently water quality volume is listed in Table 9.

a. **Infiltration Trench** - This practice is an infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.

Infiltration trenches would be a suitable practice at this location; treatment can be provided more effectively with an infiltration basin. ***This practice was not used.***

b. **Infiltration Basin** - An infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated into the ground

The site has soils suitable for infiltration and the necessary portion of the site can be directed to a single location for infiltration. ***This practice was used.***

c. **Infiltration Dry Well** - An infiltration practice similar in design to the infiltration trench, and best suited for treatment of rooftop runoff.

Dry wells would be a suitable practice at this location; treatment can be provided more effectively with an infiltration basin. ***This practice was not used.***

d. **Bioretention** - A shallow depression that treats stormwater as it flows through a soil matrix and is infiltrated into the soil or returned to the storm drain system.

Bioretention areas would be suitable for the site; however, they are less effective at retaining water than an infiltration basin. To conserve natural spaces an infiltration basin was preferred over bioretention areas. ***This practice was not used.***

e. **Dry Swale** - An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.

Dry swales are a part of the overall stormwater system; however, they are not used to calculate WQv or Runoff reduction as other practices are employed. ***This practice was not used.***

Table 9 – Standard SMP's with RRv Capacity

Drainage Area	Is SMP with RRv Capacity applied?	Type of Technique	Water Quality Treated (ft^3)
IB-1	Yes	Infiltration Basin	143
Total			**143**

5. WQv Compliance

The combination of Runoff Reduction Techniques and application of SMP with RRv capacity is able to meet the WQv compliance requirement for the increase in impervious cover in accordance with Section 9.2 Option IV of the NYSMDM for redevelopment project with an increase in impervious cover. A summary of the compliance status is included in Table 10.

Table 10 – Standard SMP's with RRv Capacity

Drainage Area	WQv (ft^3)	Method of WQv Treatment	WQv Reduced or Treated (ft^3)
IB-1	143	Infiltration Basin	143
SP-1	12.4	Stormwater Planter	12.4
SP-2	10.6	Stormwater Planter	10.6
Total			**166**

G. Water Quantity

Following the WQv and RRv treatment design, the 2024 edition of the NYSMDM requires the control of the volume and peak discharge of runoff from the CPv, Qp, and Qf storms as outlined above. The following sections outline compliance with these standards. See Appendix E for HydroCAD models of the various storm events.

1. Channel Protection

24-hour extended detention of the 1-year, 24-hour design storm volume to protect downstream channels from erosion. The proposed project has a 1-year post development peak discharge rate of less than 2.0 CFS without detention or velocity controls. As such, the Channel Protection requirements for this project may be waived.

2. Overbank Flood Control

Overbank Flood control is provided by detaining and infiltrating stormwater from new impervious surfaces in the proposed infiltration basin and stormwater planters. Some areas discharge to the Saranac River and will generate runoff during the 10-year design storm; however, overall discharge of post-development conditions is less than pre-development conditions. Peak runoff from the 10-Year, 24-Hour storm event in the pre-development condition was calculated to be 1.02 CFS. Post-development peak runoff from the 10-Year, 24-Hour storm was calculated to be 0.97 CFS. The post-development value is below the pre-development peak runoff rate; therefore, the site is in compliance with the Qp requirement. A summary table is provided below:

Table 11 – Qp Compliance Summary

Design Point	Pre-Development 10-Year 24-Hour Runoff (CFS)	Post-Development 10-Year 24-Hour Runoff (CFS)
Saranac River	1.02	0.99

3. Extreme Flood Protection

Extreme flood protection is provided by detaining and infiltrating stormwater from new impervious surfaces in the proposed infiltration basin and stormwater planters; with overflows sheet flowing to the proposed stormwater system. Peak discharge from the 100-Year, 24-Hour storm event in the pre-development condition was calculated to be 4.38 CFS. Post-development peak runoff forms the 100-Year, 24-Hour was calculated to be 4.12 CFS. Post-development peak flow is less than pre-development peak runoff rate; therefore, the site is in compliance with the Qf requirement. A summary table is provided below:

Table 12 – Qf Compliance Summary

Design Point	Pre-Development 100-Year 24-Hour Runoff (CFS)	Post-Development 100-Year 24-Hour Runoff (CFS)
Saranac River	4.38	4.31

VI. COMMUNITY RISK AND RESILIENCY ACT (CRRA)

Community Risk and Resiliency Act (CRRA) was reviewed during the design of the project and considerations of CRRA were evaluated.

A. Physical Risks Due to Climate Change

1. Increased Temperature - The increase in the temperature of stormwater runoff entering heat-vulnerable environments is not applicable based upon the proposed infiltration practice.

2. Increased Precipitation - The proposed extra storage in system and safety factor utilized in calculations account for the intensity and frequency of precipitation events are projected to increase, resulting in significant increases in stormwater runoff and the potential for stormwater management and conveyance systems to be overwhelmed, leading to exacerbated or new sources of water quality pollution, and more frequent and severe flooding.

3. Increase Chance of Drought - The proposed stormwater practice is not affected by drought, and vegetation is not required as part of WQv/RRv considerations for this practice.

4. Increased Flood - The site is located adjacent to a flood plain, and all practices were located above the ordinary high-water mark of the Saranac River. Stormwater pipe outlet area was designed to protect the integrity of the existing bank of the Saranac River, and all other permanent features are located significantly above the flood elevation provided in the Flood Insurance Rate Map.

5. Rise in Sea Level - Not applicable for this location as site is located +/- 1550 feet above sea level.

6. Storm Surge - Not applicable for this location.

7. Shifting Ecology- The proposed stormwater practice is not affected by change in ecology as vegetation is not required for this practice.

VII. SWPPP IMPLEMENTATION RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved in compliance with the NYSDEC SPDES General Permit GP-0-25-001 conditions is outlined in the subsequent section. For a complete listing of the definitions, responsibilities, and obligations, refer to the SPDES General Permit GP-0-25-001 presented in Appendix D, Item D-3.

A. Definitions

1. "Owner" or "Operator" means the person, persons, or legal entity which owns or leases the property on which the construction activity is occurring, and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications. There may be occasions during the course of a project in which there are multiple Operators, all of which will need to file and maintain the appropriate SWPPP documents and plans, including without limitation, the Notice of Intent (NOI) and Notice of Termination (NOT) forms.
2. "Operator's Engineer" means the person or entity retained by an Operator to design and oversee the implementation of the SWPPP.
3. "Contractor" means the person or entity identified as such in the construction contract with the Operator. The term "Contractor" shall also include the Contractor's authorized representative, as well as any and all subcontractors retained by the Contractor.
4. "Qualified Inspector" means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed Landscape Architect, or other Department endorsed individual(s).

   It also means someone working under the direct supervision of the licensed Professional Engineer or licensed Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control (herein referred to as "Trained Inspector.") Training in the principles and practices of erosion and sediment control means that an individual performing a site inspection has received four (4) hours of training, endorsed by the Department, from a Soil and Water Conservation District, or other Department endorsed entity in proper erosion and sediment control principles. After receiving the initial training, an individual working under the direct supervision of the licensed Professional Engineer or licensed Landscape Architect shall receive four (4) hours of training every three (3) years. Note: Inspections of any post-construction storm water management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.
5. "Qualified Professional" means a person that is knowledgeable in the principles and practices of storm water management and treatment, such as a licensed Professional Engineer, licensed Landscape Architect, or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction storm water management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics in order to prepare a SWPPP that conforms to the Department's technical standards. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

B. Operator's Responsibilities

1. Retain the services of a "Qualified Professional," as defined in Section VI-A in this document, to provide the services outlined in Section VI-C of this document, "Operator's Engineer's Responsibilities."
2. Have an authorized corporate officer sign a completed NOI. A copy of the completed NOI is included in Appendix D, Item D-2.
3. Submit the completed NOI to the following: https://dec.ny.gov/maps/nysdec-nform
4. Pay the required initial and annual fees upon receipt of invoices from NYSDEC. These invoices are generally issued in the fall of each year. The initial fee is calculated as $100.00 per acre disturbed plus $600.00 per acre of net increase in impervious cover, and the annual fee is $100.00.
5. Prior to the commencement of construction activity, identify the contractor(s) and subcontractor(s) that will be responsible for implementing the erosion and sediment control measures and storm water management practices described in the SWPPP.
6. Schedule a pre-construction meeting which shall include the Operator's Engineer, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of the SWPPP.
7. Require the Contractor to fully implement the SWPPP prepared for the site by the Operator's Engineer to ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to NYSDEC.
8. Forward a copy of the NOI Acknowledgement Letter received from the regulatory agency to the Operator's Engineer for project records, and to the Contractor for display at the construction site.
9. Maintain a copy of the General Permit (GP-0-25-001), NOI, NOI Acknowledgement Letter, SWPPP, inspection reports, inspection records, and other required records at the construction site, until all disturbed areas have achieved final stabilization and the NOT has been submitted to NYSDEC. Place documents in a secure location that must be accessible during normal business hours to an individual performing a compliance inspection.
10. Post at the site, in a publicly accessible location, a copy of the General Permit (GP-0-25-001), a signed copy of the NOI, the NOI Acknowledgement Letter, and on a monthly basis a summary of the site inspection activities.
11. Submit the Notice of Termination (NOT) forms (see Appendix D, Item D-5) within 48 hours of receipt of the Operator's Engineer's certification of final site stabilization to the following:

    NOTICE OF TERMINATION
    NYS DEC, Bureau of Water Permits
    625 Broadway, 4th Floor
    Albany, New York 12233-3505

12. Request and receive all SWPPP records from the Operator's Engineer and archive those records for a minimum of five (5) years after the NOT is filed.

C. Operator's Engineer's Responsibilities

1. Prepare the SWPPP using standard engineering practices, best management practices, and in compliance with all federal, state, and local regulatory requirements.
2. Prepare the Notice of Intent (NOI) form (see Appendix D, Item D-2), sign the "SWPPP Preparer Certification" section of the NOI, and forward to Operator for signature.

3. Participate in a pre-construction meeting with the Operator, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of the SWPPP.
4. Enter Contractor's information in "SWPPP Participants" once a Contractor is selected by the Operator.
5. Conduct an initial assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment control measures described within the SWPPP have been adequately installed and implemented to ensure overall preparedness of the site.
6. Provide on-site inspections to determine compliance with the SWPPP. Site inspections shall occur at an interval of at least once every seven calendar days. A written inspection report shall be provided to the Operator and general contractor within one business day of the completion of the inspection, with any deficiencies identified. Include color photographs, with date stamp, taken with a digital camera that clearly shows the condition of all practices that have been identified as needing corrective actions. Paper copies of photographs shall be attached to the inspection report within seven calendar days of inspection. Color photographs, with date stamp, must also be taken with a digital camera that clearly shows the condition of practice(s) after the corrective action has been completed. Paper copies of the digital photographs that document completion of the corrective action work shall be attached to inspection report. A sample inspection form is provided in Appendix D, Item D-4.
7. Prepare the Notice of Termination (NOT), sign the NOT Certifications VI for Final Stabilization, SMPs, and Owner or Operation, and submit all forms electronically.
8. Transfer the SWPPP documents, along with all NOIs, permit certificates, and NOTs required by the General Permit to the Operator for archiving. The Operator's Engineer shall retain a copy of these records for archiving.

D. Contractor's Responsibilities

1. Sign the SWPPP Contractor's Certification Form contained within and forward to the Operator's Engineer for inclusion in the SWPPP.
2. Provide the names and addresses of all subcontractors working on the project site. Require all subcontractors who will be involved with construction activities that will result in soil disturbance to sign a copy of the Contractor's Certification Form and forward it to the Operator's Engineer for inclusion in the SWPPP. This information must be retained as part of the SWPPP.
3. Participate in a pre-construction meeting which shall include the Operator, Operator's Engineer, and all sub-contractors to discuss responsibilities as they relate to the implementation of the SWPPP.
4. Implement site stabilization, erosion and sediment control measures, soil restoration measures including the requirements of "Deep-Ripping and Decompaction" (see Appendix), and other requirements of the SWPPP.
5. In accordance with the requirements in the most current version of the NYS Standards and Specifications for Erosion and Sediment Control, conduct inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating condition at all times. Prepare and retain written documentation of inspections as well as of all repairs/maintenance activities performed. This information must be retained as part of the SWPPP.

6. Maintain a record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated, until such time as the NOT is filed.
7. Begin implementing corrective actions within one (1) business day of receipt of notification by the Operator's Engineer that deficiencies exist with the erosion and sedimentation control measures employed at the site. Corrective actions shall be completed within a reasonable time frame.

E. SWPPP Participants

Operator:	Name and Title:	APA Representative
	Company Name:	New York State APA
	Mailing Address:	1133 NYS Route 86 Ray Brook, NY 12977
	Phone:	(518) xxx-xxxx
	Fax:	
Operator's Engineer:	Name and Title:	Sean Doty, PE
	Company Name:	SDA, PLLC
	Mailing Address:	4607 Lake Shore Drive Bolton Landing, NY 12814
	Phone:	518-240-6293
	Email:	sdoty@sdapllc.com
Contractor:	Name and Title:	
(To be entered when selected)	Company Name:	
	Mailing Address:	
	Phone:	
	Fax:	

F. Owner/Operator Certification

The following certification, applicable to the Owner/Operator, is in accordance with the requirements of the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who are directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Name: APA Representative

Organization: New York State Adirondak Park Agency

Telephone: (518) xxx-xxxx

Signature: _____

Date: _____

G. Contractor Certification

The following certification, applicable to either contractor or subcontractor, is in accordance with the requirements of the current New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-25-001). The Contractor shall copy and update this form for each of the consultants and subconsultants responsible for land grading, clearing, implementation of erosion and sediment control activities and stormwater management system.

"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 most current version of the New York State Pollutant 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."

Signee:

Name: _____

Organization: _____

Telephone: _____

Signature: _____

Date: _____

Trained Individual:

Name: _____

Title: _____

Firm Information:

Name: _____

Address: _____

Telephone: _____

Areas under SWPPP Contractor Responsible for:

_____

_____

_____

H. 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 the GP-0-25-001. 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."

Name:	Sean Doty, PE, LEED AP, CPMSM
Organization:	Suozzo, Doty & Associates Professional Engineering, PLLC
Telephone:	(518) 240-6293
Signature:	
Date:	09/16/2026

VIII. EPSC CONSTRUCTION INSPECTION

A. Site Inspections

1. Overview

All erosion and sediment control site inspections must be conducted by a Qualified Inspector, defined as a person knowledgeable in the principles and practice of erosion and sediment controls, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed Landscape Architect, or other endorsed individual(s) as defined by the NYSDEC. Qualified Inspector can also be someone working under the direct supervision of a licensed Professional Engineer or licensed Landscape Architect, provided that person has training on the principles and practices of erosion and sediment control. There are four types of inspections that are required by GP-0-25-001:

1. Initial Inspection (Pre-Construction)
2. Regular Inspections (During Construction)
3. Temporarily Suspended Work Inspections (During Suspension)
4. Final Inspection (End of Construction)

Inspection form templates are included in Appendix D. The Owner's Qualified Inspector will be responsible for initial, regular, temporarily suspended work, and final inspections and shall maintain a record of all inspection reports in a site logbook along with the SWPPP and other required documentation. All required information shall be kept at the project site and made available for review according to the requirements in GP-0-25-001.

2. Initial Site Inspection

Prior to the start of construction, an initial assessment of the erosion and sediment controls shall be performed by a Qualified Inspector. The following items shall be completed and verified before soil- disturbing activities may commence:

1. Mark out all protected resources,
2. Identify the drainage areas and adjacent water bodies, and
3. List and describe erosion and sediment control measures in place to protect disturbed areas and water bodies.

3. Regular Inspections

All erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP must be maintained in effective operating condition at all times during construction. To verify proper functioning of the erosion and sedimentation control measures described in this SWPPP, two types of regular site inspections should be conducted utilizing the following schedule and reporting requirements, as discussed below.

Regular inspections construction will be required as residual materials from rain events will accumulate in the erosion control measures. It is estimated that the silt fences and catch basin protection will have to be cleaned approximately once every two weeks under normal construction operations. However, during certain instances with large inflows into the project site or activities which disturb soil, the measures will have to be cleaned more frequently. All silt fencing, swales, catchment structures and outlets must be kept free of debris and sediment build up.

The project has been designed to be constructed in a manner that will result in less than five (5) acres to be disturbed at any one time. Should the contractor wish to disturb more than five (5) acres

for operational reasons, then a waiver request should be submitted by the contractor, prior to initiating the disturbance.

At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

1. The owner or operator shall have a qualified inspector conduct at least two (2) site inspections 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.
2. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005.
3. The owner or operator shall prepare a phasing plan that defines the maximum disturbed area per phase and shows required cuts and fills.
4. The owner or operator shall install any additional site-specific practices needed to protect water quality.

a. Maintenance Inspections

The first type of regular inspection is the maintenance inspection, which must be conducted every day. At the end of each workday, the designated trained Contractor will walk the site and ensure that all erosion and sediment control practices and post-construction stormwater management practices are operational and effective. If any deficiencies are observed, they shall be corrected prior to leaving the site. No records or reporting requirements are associated with this inspection.

b. Full Inspections

The second type of regular inspection is referred to as the full inspection. The full inspection must be conducted by a Qualified Inspector designated by the Construction Manager (CM) or Resident Engineer (RE) in accordance with the following schedule:

1. If soil disturbances and construction activities are ongoing, at least one inspection must be conducted every seven (7) calendar days.
2. If more than five (5) acres of the site are to be disturbed at one time, with approval from the MS4 (as appliable), site inspections must be conducted two (2) times every seven (7) calendar days, with inspections separated by two (2) full calendar days.
3. If soil disturbances have been temporarily suspended and the site is temporarily stabilized, inspections should be conducted at least once every thirty (30) days, with the appropriate entities being notified of the reduction in inspection frequency.

Maintenance of erosion and sedimentation control measures should be conducted as needed and should include removal of sediment and debris from roadways. The inspection should, at a minimum, include the following:

1. All disturbed areas of the construction site that have not been stabilized.
2. The staging areas and material storage areas that are exposed to precipitation and have not been finally stabilized.

3. All stabilization practices, soil erosion and sediment control measures, and other controls.
4. All post-construction stormwater management practices under construction.
5. Stockpiles of soil, sand, or any other erodible material.
6. A description of the condition of the runoff at all points of discharge from the construction site, including discharge to natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site.
7. Areas where vehicles enter and exit the construction site.

If the inspections reveal the need for additional control devices to prevent erosion and sedimentation, additional protection devices shall be installed. Records of the inspections and repairs will be prepared and maintained on the site by the CM or RE.

The inspection reports will be submitted weekly and shall be signed by the Qualified Inspector. The inspection reports shall contain at a minimum:

1. Date and time of the inspection.
2. Scope of the inspection.
3. Names and qualifications of personnel conducting the inspection.
4. A description of the weather and soil conditions at the time of inspection.
5. A description of the condition of the runoff at all points of discharge from the construction site.
6. A description of the condition of all natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface water body.
7. Incidents of non-compliance, including:
    a. All erosion and sediment control practices in need of maintenance.
    b. All erosion and sediment control practices that were not installed properly and need to be reinstalled or replaced.
8. A description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary or final) since the last inspection.
9. Current phase of construction on all post-construction stormwater management practices including all work that is not in compliance with the SWPPP and technical standards.
10. Corrective actions and/or maintenance that needs to be performed on erosion and sediment control.
11. Digital photographs with date stamp that clearly show:
    a. The condition of all practices that have been identified as needing corrective actions.
    b. The condition of the practice(s) after the corrective action has been completed.

c. Paper color copies of the digital photographs will be attached to the inspection report being maintained on-site within seven (7) calendar days of the date of the inspection when the corrective action was identified.

Within one business day of the inspection completion, the inspector shall notify the Owner/Operator and the appropriate contractor of any corrective actions that need to be taken. The corrective actions will be addressed within one business day of notification and completed in a reasonable amount of time.

4. Temporarily Suspended Work Inspections (During Suspension)

For construction sites where soil disturbance activities have been temporarily suspended (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the Qualified Inspector shall conduct a site inspection at least once every thirty (30) calendar days. For construction sites where soil disturbance activities have been shut down with partial project completion, the Qualified Inspector can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. If soil disturbance activities are not resumed within two years from the date of shutdown, the Owner or Operator shall have the Qualified Inspector(s) perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post- Construction Stormwater Management Practice" certification statements on the Notice of Termination (NOT).

5. Final Inspection

Prior to filing the NOT, or at the end of the permit term, the Qualified Inspector shall perform a final site inspection. The inspector shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods. Final stabilization means that all soil-disturbing activities at the site have ceased and a uniform, perennial vegetative cover with a density of 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. A final site inspection must be performed and documented prior to submitting a Notice of Termination (NOT) to terminate permit coverage under GP-0-25-001.

B. Maintenance Procedures During Construction

The contractor is required to maintain all erosion and sedimentation controls during construction and prior to final site stabilization in accordance with NYSDEC requirements. The contractor shall maintain all temporary controls installed as well as vegetative measures across the site. All controls shall be repaired or replaced as necessary and as noted on the inspection reports as prepared by the Owner's Representative. During construction, maintenance of these stabilization measures shall be the responsibility of the General Contractor or appropriate Subcontractors.

Vegetative plantings must not be allowed to become overgrown. Silt fences must be inspected regularly to ensure that they are still effective and their capability to reduce the transportation of sediment beyond the construction site has not been reduced due to prolonged sun exposure, rip and tears or sediment accumulation. Silt fence shall be replaced if torn and sediment shall be removed prior to reaching 1/3 the height of the silt fence. Storm piping and catch basin sumps shall be cleaned out periodically to prevent the collection of sediment that will reduce the maximum flow. Sediment must be removed from sediment basins, infiltration basins or traps whenever their capacity has been reduced by 50 percent of their design

capacity. Any sediment removed from these measures shall be placed within interior fill sections of the site that are protected from future sedimentation.

The stabilized construction entrance pad stone shall be replaced and/or re-shaped whenever the entrance fails to reduce mud from being tracked off-site.

The contractor shall comply with the guidelines and recommendations for installation and maintenance practices found in the "New York State Standards and Specifications for Erosion and Sediment Control Handbook."

C. Maintenance Procedures Post-Construction

A Long-Term Operation and Maintenance Plan to support the continuous operation of the stormwater management practices on the site is presented in a separate section.

IX. POST–CONSTRUCTION INSPECTION AND MAINTENANCE

A. Purpose

This Operation and Maintenance Plan (O&M Plan) for the project has been prepared for long-term operation and shall be used as a reference document by the Owner's personnel, consultant, and contractor staff as guidance for the proper operation and maintenance of permanent stormwater controls. The information provided in this O&M Plan is compiled from several sources, listed below, and shall supplement the Long-Term O&M Plan.

1. The New York State Stormwater Management Design Manual (Current Edition).
2. The New York State Guidelines for Urban Erosion and Sediment Control (Blue Book, Current Edition).
3. Cascade Separator Operation & Maintenance Manual prepared by Contech Engineered Solution (see Appendix)

B. Organization of the O&M Plan

Stormwater management facilities will be installed as required by the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity – Permit No. GP-0-25-001 (General Permit). This O&M Plan is broken down into two sections, as described below:

1. **Permanent Stormwater Management Practices.** This section includes descriptions of all permanent stormwater management practices installed at the site.
2. **Long-Term Operation and Maintenance Requirements.** This section will instruct the maintenance crew on the requirements for proper operation of permanent stormwater controls, including:
   a. **Maintenance Requirements.** This section provides the maintenance crew with details of the required methods for maintenance of the permanent stormwater controls.
   b. **Inspection and Recordkeeping Requirements.** This section provides the maintenance crew with details of the required methods and documentation for inspection of the stormwater controls.

C. Permanent Stormwater Management Practices

Post-construction Stormwater Management Practices (SMPs) are used to minimize the long-term effects of stormwater runoff from developed sites and to meet stormwater quality and quantity objectives. The following section describes the permanent stormwater control measures to be used and maintained.

1. **Cascade Separator:** Precast or cast-in-place concrete structure installed below grade that captures and separates stormwater runoff and debris from storm events. Structures installed on-line discharge stormwater back into the system.
2. **Infiltration Basin:** Constructed stormwater infiltration basin that has a non-permanent water surface. Water enters during storm events and infiltrates into the ground.
3. **Infiltration Stormwater Planters:** Constructed stormwater infiltration planters that have a non-permanent water surface. Water enters during storm events and infiltrate into the ground through the soil media.

D. Inspection and Recordkeeping Requirements

The proper design and construction of permanent stormwater controls provides for their initial performance. Proper inspection and maintenance are essential to ensure the long-term performance of the controls. The following sections outline Inspection and Recordkeeping requirements respectively.

1. **Inspection:** To ensure long-term performance, the Cascade units shall be inspected routinely. In the first year of operation, frequent inspections will occur at each installation to gather pollutant loading data and to set inspection/maintenance intervals for subsequent years. Detailed inspection guidance and the Inspection and Maintenance Report template are provided in the Cascade Separator O&M Manual included in Appendix F, Item F-1.
2. **Recordkeeping:** Records of each inspection event (Inspection and Maintenance Reports) shall be maintained in the Recordkeeping Section of this SWPPP and retained by the Owner.

E. Funding Mechanism

The Owner shall be responsible for payment of routine maintenance repairs as required by the Cascade Separator O&M Manual. The Owner shall be responsible for payment of routine maintenance repairs as required by Level 1-3 Inspections.

X. RECORD KEEPING REQUIREMENTS

The following section details additional record keeping and reporting requirements associated with construction activities on the site.

A. Record of Construction Activities

The following section details additional record keeping and reporting requirements associated with construction activities on the site.

- The dates when major grading activities occur in a particular area,
- The dates when major construction activities cease in an area, temporarily or permanently, and
- The dates when an area is stabilized.

B. SWPPP and Inspection Reports

Inspection/maintenance reports shall be prepared prior to and during construction in accordance with the schedule outlined herein and the SPDES General Permit GP-0-25-001. The reports shall be prepared to identify and document the maintenance of the erosion and sediment control measures. A sample inspection form is provided in Appendix D, Item D-4. Each inspection shall record the following information:

1. Date and time of inspection.
2. Name and title of person(s) performing inspection.
3. A description of the weather and soil conditions (e.g., dry, wet, saturated, etc.) at the time of the inspection.
4. A description of the condition of the runoff at all points of discharge from the construction site. This shall include the identification of any discharges of sediment from the construction site, discharges from conveyance systems (i.e., pipes, culverts, ditches, etc.), and overland flow.
5. A description of the condition of all natural surface waterbodies located within or immediately adjacent to the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface water body.
6. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance.
7. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced.
8. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection.
9. Indication of the current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards.
10. Corrective action(s) that must be taken to install, repair, or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s).
11. Identification and status of all corrective actions that were required by the previous inspection.
12. Color photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The Qualified Inspector shall attach paper color copies of

the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The Qualified Inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The Qualified Inspector shall attach the paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

All inspection reports shall be signed by the Qualified Inspector. The Operator shall retain a copy of the SWPPP required by GP-0-25-001 at the construction site from the date of initiation of construction to the date of final stabilization.

During construction, the Operator's Engineer shall maintain a record of all SWPPP inspection reports at the site in the Site Log Book. The Site Log Book shall be maintained onsite and made available to the permitting authority, if necessary. The Site Log Book will include:

- SWPPP with amendments (if any),
- Construction drawings with amendments (if any),
- Site inspection reports,
- NOI,
- NOI Acknowledgement from NYSDEC, and
- All documents pertaining to the Project that have been signed and certified as required by GP-0-25-001

Following construction, the Operator shall retain copies of the SWPPP, the complete construction Site Log Book, and records of all data used to complete the NOI to be covered by this permit, for a period of at least five (5) years from the date that the site is finally stabilized. This period may be extended by the NYSDEC, at its sole discretion at any time upon written notification. Records shall be maintained of all post-construction inspections and maintenance work performed in accordance with the requirements outlined in Appendix F.

C. Notice Forms

1. Notice of Intent (NOI)

A revised NOI must be completed, signed, and submitted to the NYSDEC at least five (5) business days before the planned start of soil-disturbing activities on the project site. Since no MS4 covers the project area a "MS4 SWPPP Acceptance Form" is not required. By submitting the NOI to the NYSDEC, the Owner is certifying that a SWPPP has been prepared that is in compliance with the requirements of GP-0-25-001. Prior to submitting the NOI, the Contractor shall provide a detailed construction sequence, identify necessary modifications to the SWPPP, and sign all required certifications. The NOI will be signed and mailed to the NYSDEC by the Owner or filed electronically. Once received, the NYSDEC Acknowledgement Letter along with the completed NOI will be updated in Appendix D, Item D-2.

2. Notice of Termination (NOT)

When the site has been substantially stabilized, the Contractor must submit a certification of final stabilization and certification for SMPs. After the Owner or Owner's Qualified Inspector has inspected the site and accepted the certification, NOT forms shall be submitted by the Owner to the NYSDEC electronically. The Contractor shall be responsible for the operation, maintenance, and restoration of the site until the NOT is filed. At that time, the Contractor shall remove any remaining temporary erosion and sedimentation controls. A copy of the NOT forms to be filled out by the

Qualified Inspector and Owner and electronically submitted to the NYSDEC is included in Appendix D, Item D-7.

D. Revising the SWPPP

The SWPPP must always be kept current so that it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. The SWPPP will be revised if any of the following occur:

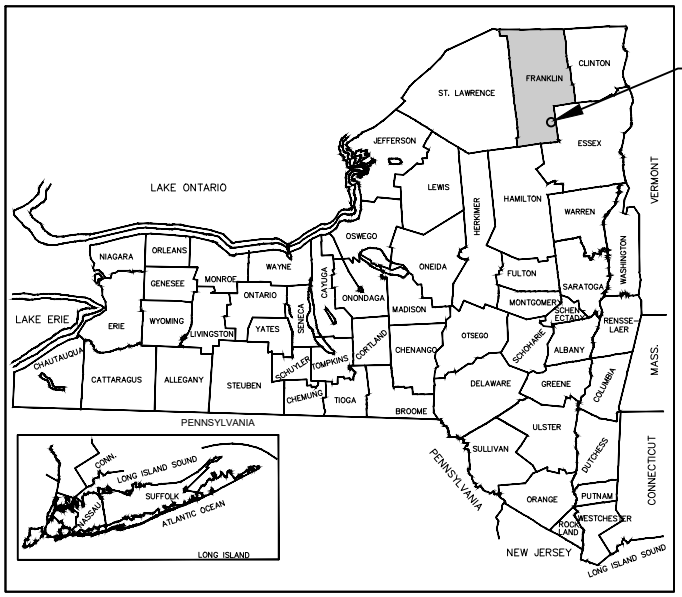
- Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the site.
- Whenever there is a change in design, construction, or operation at the site that has or could have an effect on pollutants in stormwater discharges.
- To address issues or deficiencies identified.

It is anticipated that for the duration of the project, multiple contractors will be involved with work on the site. All site contractors will need to be signed onto the SWPPP and will be required to coordinate their responsibilities pertaining to the respective project's scope of work. Once substantial completion is obtained, the General Site Contractor shall be responsible for closeout activities related to the SWPPP.

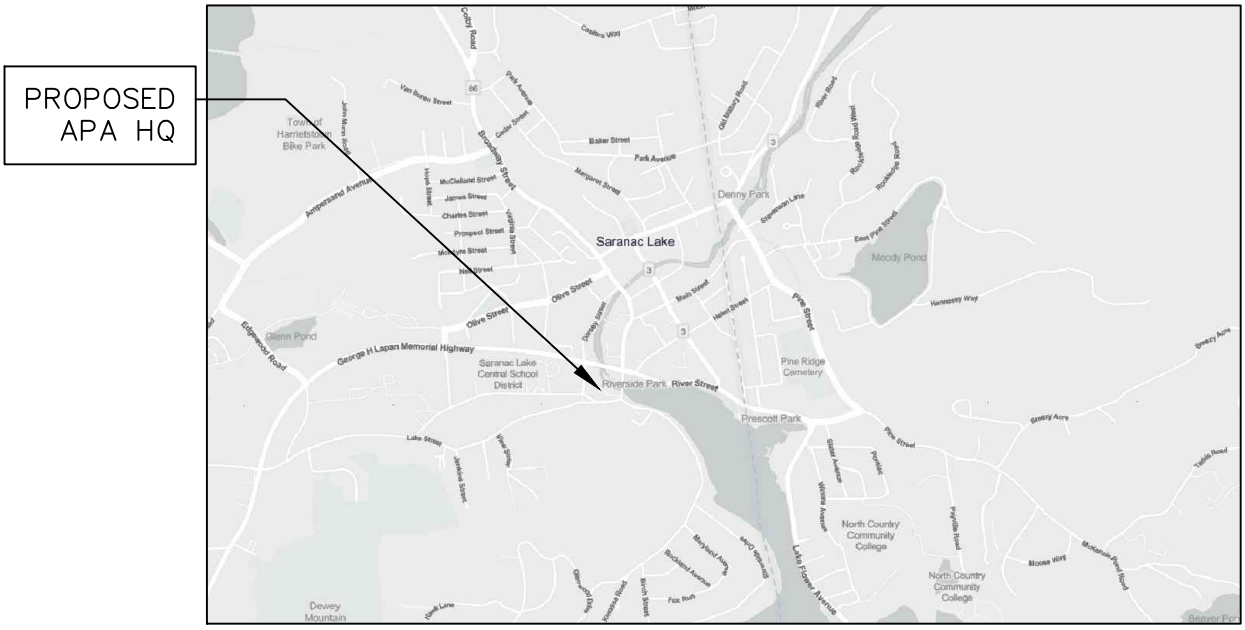
SWPPP Modifications should be stored in Appendix G – SWPPP Modifications.

Appendix A (Reserved)

Appendix B-1



1 / B–1 LOCATION MAP
N.T.S



2 / B–1 PROXIMITY MAP
N.T.S

LOCATION MAP

APA HQ SWPPP

COPYRIGHT (C) SDA PLLC
ALL RIGHTS RESERVED

B–1

PROJECT INFORMATION:	
DATE:	09/15/2026
SCALE:	N.T.S
PROJECT #:	25–059

SUOZZO, DOTY & ASSOCIATES, PLLC
4607 LAKE SHORE DRIVE, P.O. BOX 653
BOLTON LANDING, NY 12814.
(P) 518.240.6293
CONTACT@SDAPLLC.COM
WWW.SDAPLLC.COM

Appendix B-2



AnA – ADAMS SOILS

1
B–2

SOIL MAP
N.T.S

SOIL MAP

APA HQ SWPPP

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B–2

PROJECT INFORMATION:	
DATE:	09/15/2026
SCALE:	N.T.S
PROJECT #:	25–059

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Appendix B-3

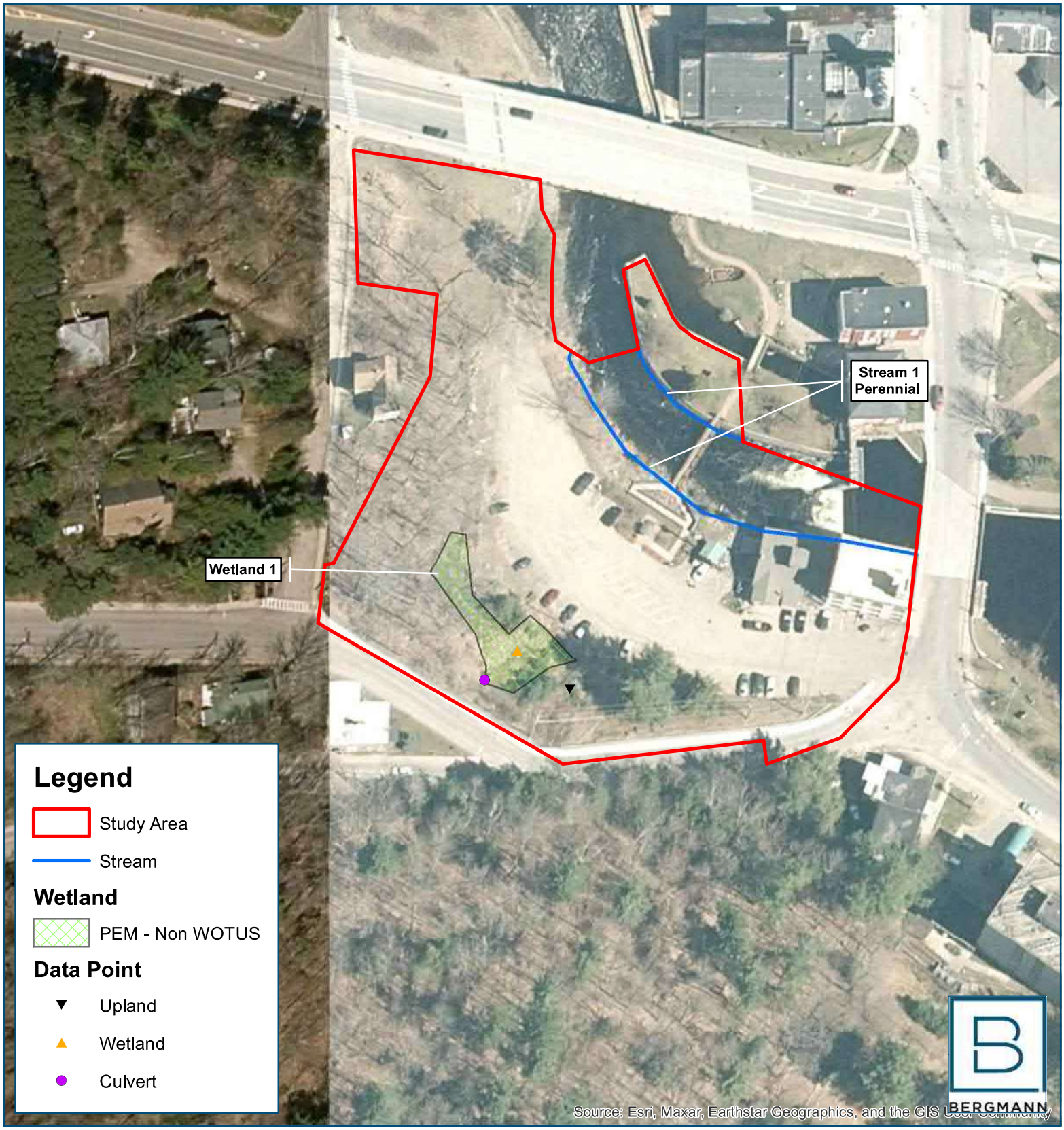
Adirondack Park Agency Headquarters Feasibility Study Project

DELINEATED RESOURCES MAP | Fig. 7

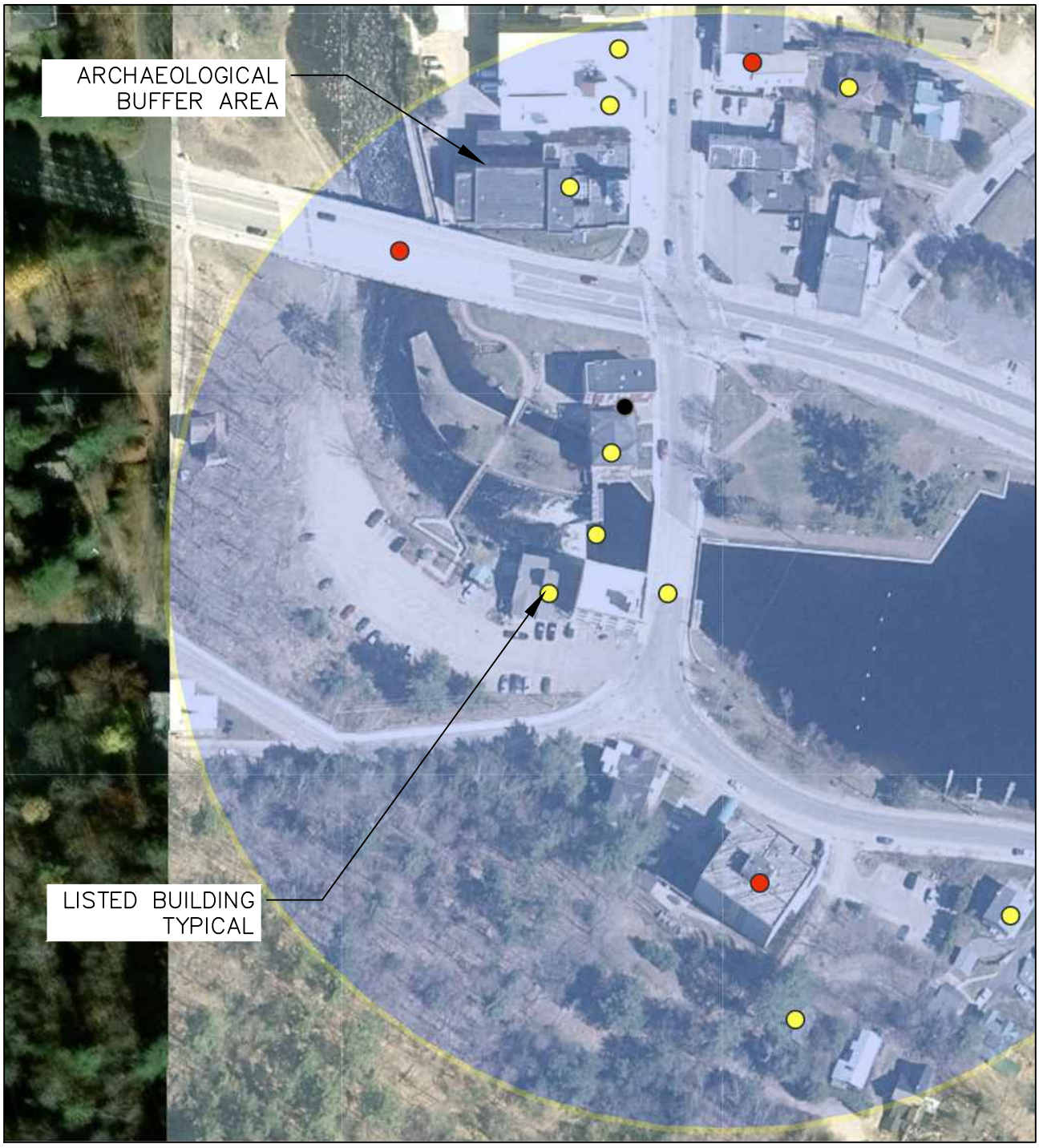
100 Feet

N

Village of Saranac Lake, Franklin County, New York



Appendix B-4



1 / B-5 HISTORIC MAP
N.T.S

HISTORIC MAP

APA HQ SWPPP

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B-5

PROJECT INFORMATION:	
DATE:	09/15/2026
SCALE:	N.T.S
PROJECT #:	25-059

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Appendix B-5

To determine if flood insurance is availabl
insurance agent or call the National Flood In

APPROXIMATE

500 0

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP and STREET INDEX

VILLAGE OF
SARANAC LAKE,
NEW YORK
ESSEX AND
FRANKLIN COUNTIES

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
360273 0001 C

MAP REVISED:
JANUARY 2, 1992

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

FLOOD PRONE STREET

NOTE TO USER

Appendix C-1

GENERAL NOTES:

1. THE CONTRACTOR, SUBCONTRACTOR, OR THEIR ASSIGN(S) SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. MONUMENTATION THAT IS DISTURBED OR DESTROYED, AS DETERMINED BY THE ENGINEER, SURVEYOR, OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR, SUBCONTRACTOR, OR THEIR ASSIGN(S)' EXPENSE AND UNDER THE SUPERVISION OF A NEW YORK STATE CERTIFIED LICENSED LAND SURVEYOR.
2. REFERENCE TO THE "CONTRACTOR" IS GENERAL AND SHALL ALSO ALWAYS INCLUDE SUBCONTRACTORS AND THEIR ASSIGNS - EVEN IF THEY ARE NOT EXPLICITLY STATED.
3. ENGINEER SHALL RECEIVE 72 HOURS NOTICE PRIOR TO START OF ANY WORK ON SITE.
4. CONTRACTOR IS RESPONSIBLE FOR SECURING THE SITE AND SITE SAFETY THROUGHOUT DURATION OF CONSTRUCTION.
5. PROVIDING, EMPLOYING, AND MAINTAINING ALL TRAFFIC CONTROL AND SAFETY MEASURES, DURING ALL PHASES OF CONSTRUCTION, ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR, IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND REQUIREMENTS, TO PROPERLY & SAFELY MAINTAIN THE AREA BETWEEN ALL ADJOINING PROPERTIES, FACILITIES, AND FEATURES.
7. ALL EXISTING LAWN AREA, PAVING, WALKWAYS, UTILITY INFRASTRUCTURE, OR OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED BY THE CONTRACTOR SHALL BE REPLACED OR REPAIRED (BY THE CONTRACTOR) TO A CONDITION AT LEAST EQUAL TO EXISTING, AS DESCRIBED IN CONTRACT DOCUMENTS OR AS ORDERED BY ENGINEER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SURFACE RUNOFF OR DRAINAGE AND TEMPORARY CONVEYANCE TO RETURN THE DRAINAGE TO IT NATURAL CONDITION IN AN NON-EROSIVE MANNER SO AS TO NOT VIOLOATE ANY WATER QUALITY STANDARD.
9. AT THE END OF EACH WORK DAY, EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GRADE UNLESS DIRECTED BY THE OWNER OR ENGINEER.
10. GENERALLY, THE CONTRACTOR IS RESPONSIBLE FOR THE TRANSPORTATION OF MATERIAL ON TO AND OFF SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS AND DISPOSE OF MATERIALS AS SITES APPROVED TO ACCEPT THOSE MATERIALS.

GENERAL UTILITY NOTES:

1. PLEASE NOTE THAT THE EXISTING CONDITIONS SURVEY, NOTES, AND MAP REFERENCES ARE PROVIDED IN THE PLAN SET. EXISTING CONDITIONS SURVEY NOTES 4, 5, AND 6 STATE:
   - 1.1. UNDERGROUND UTILITIES AS SHOWN HEREON ARE FROM FIELD LOCATION, RECORD PLANS, AND UNDERGROUND UTILITY MARK OUT, THEIR LOCATION IS APPROXIMATE, OTHERS MAY EXIST, AND ALL ARE SUBJECT TO VERIFICATION BY OTHERS.
   - 1.2. UNDERGROUND UTILITY DEPTH LABELS THAT ARE SHOWN IN A BOX ARE FROM SUBSURFACE UTILITY INVESTIGATION. THESE DEPTHS ARE APPROXIMATE.
   - 1.3. UNDERGROUND UTILITY DEPTH LABELS AT STRUCTURES SHOWING THE SIZE AND TYPE OF PIPES ARE MEASURED IN THE FIELD.
2. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION OR CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY THE PRESENCE OF AND EXACT LOCATION OF ALL UTILITIES PRIOR TO COMMENCING ANY EXCAVATION WORK AS THE EXACT LOCATION OF UTILITIES MAY DIFFER FROM THE LOCATION SHOWN, AND ADDITIONAL UTILITIES MAY EXIST.
4. TEST PITS MAY BE REQUIRED BY THE CONTRACTOR TO VERIFY ACTUAL UTILITY AND FEATURE LOCATIONS INCLUDING THE DEPTH OF THE UTILITY AND THE MATERIAL AND CONDITION. CONTRACTOR SHALL PERFORM TEST PITS IN ACCORDANCE WITH ALL APPLICABLE STATE, FEDERAL, OR LOCAL REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS TO PERFORM TEST PITS. TEST PITS MAY BE REQUIRED FOR THE CONTRACTOR TO REVIEW FIELD UTILITY MARKOUT. IF THE CONTRACTOR FINDS ANY CONFLICTS, THE CONTRACT SHALL BRING THE INFORMATION TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
5. PRIOR TO PERFORMING WORK AND PRIOR TO SUBMITTALS AND PRODUCT/MATERIAL ORDERING, THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATIONS AT ALL UTILITY CONNECTIONS AND AS NEEDED TO VERIFY EXISTING CONDITIONS. PRIOR TO PERFORMING EXPLORATORY EXCAVATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER AT LEAST 72 HOURS IN ADVANCE.
6. ANY DAMAGE TO EXISTING ABOVEGROUND OR BELOWGROUND STRUCTURES/APPURTENANCES/UTILITIES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AND THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY PROVIDER AND ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REPAIR AND REINSTATEMENT OF SERVICE.
7. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY(IES) TO PROVIDE TEMPORARY SUPPORT OF UTILITY POLES OR FEATURES REQUIRED FOR INSTALLATION OF SITE UTILITIES AND FEATURES SO AS TO PROTECT THEM AGAINST DAMAGE.
8. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND COORDINATING 811 DIG SAFE.
9. CONTRACTOR SHALL MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL CONSTRUCTION WORK SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE NYS DEC SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY GP-0-25-001 (CGP). EARTHWORK AND LAND DISTURBANCE ACTIVITIES CANNOT COMMENCE UNTIL THE CGP IS OBTAINED AND VALID.
2. THE EROSION AND SEDIMENT CONTROLS DEPICTED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL EROSION AND SEDIMENT CONTROLS, INSTALLED BY THE CONTRACTOR, MAY BE REQUIRED TO COMPLY WITH THE CGP AS THE SEVERITY OF PRECIPITATION AND EROSION EVENTS ARE IMPOSSIBLE TO PREDICT.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED AND MAINTAINED IN STRICT COMPLIANCE WITH "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", NOVEMBER 2016 OR LATEST VERSION.
4. INSTALL HEAVY DUTY SILT FENCE DOWNHILL OF ALL DISTURBANCE AREAS AND AROUND SOIL STOCKPILES.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE EMPLOYED SUCH THAT SEDIMENT IS NOT CONVEYED DIRECTLY OR INDIRECTLY TO SURFACE WATER BODIES, STREAMS, RIVERS, WETLANDS, ETC.
6. SEEDED AREAS SHALL BE MULCHED WITH HAY MULCH IN ACCORDANCE WITH VEGETATIVE COVER SPECIFICATIONS.
7. DUST CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

GRADING AND SITE WORK NOTES:

1. AS APPLICABLE, LAND DISTURBANCE SHALL NOT OCCUR UNTIL THE ENGINEER/OWNER PROVIDES ANY LOCAL OR STATE DISTURBANCE PERMITS. THE CONTRACTOR MAY BE REQUIRED TO CO-SIGN PERMITS (ANY POTENTIAL CONDITIONS) PRIOR TO LAND DISTURBANCE.
2. CONTRACTOR SHALL INSTALL EROSION & SEDIMENT CONTROL MEASURES PRIOR TO LAND DISTURBANCE.
3. STRIP ALL TOPSOIL PRIOR TO COMMENCING LAND DISTURBANCE OPERATIONS. TOPSOIL SHALL BE STORED ON SITE AND REUSED IN AFFECTED AREAS. CONTRACTOR SHALL RE-VEGETATE AFFECTED AREAS TO THEIR EXISTING CONDITION.
4. CONTRACTOR TO PROTECT EXISTING TREES. IF DAMAGED DURING CONSTRUCTION, THE TREES SHALL REPLACE BY THE CONTRACTOR.
5. NO WORK, EARTHWORK, STORAGE, OR TRESPASSING SHALL BE ALLOWED BEYOND THE BOUNDARIES OF THE PROPERTY LINE OR LIMITS OF WORKS.
6. ALL GRADING SHALL BE SMOOTHLY AND EVENLY BLENDED INTO THE EXISTING GRADE.
7. SINCE ROCK BLASTING IS NOT PERMITTED, ROCK REMOVAL, IF REQUIRED, SHALL BE PERFORMED MECHANICALLY.
8. PAVEMENT RESTORATION ADJACENT TO EXISTING PAVEMENT SHALL MATCH EXISTING GRADE.

DIFFERING CONDITIONS THAN THE PLAN:

1. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN WRITING OF ANY CONDITION(S) THAT DIFFERS FROM THE CONDITIONS SHOWN ON THE PLAN(S) PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND DURING CONSTRUCTION. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT PRIOR REVIEW FROM THE ENGINEER OR THE OWNER.

INSTALLED UTILITY / FEATURE MEASUREMENTS:

1. FIELD MEASUREMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. GENERALLY, THE CONTRACTOR SHALL TAKE MEASUREMENTS AND PROVIDE THE MEASUREMENTS DIGITALLY ON A FULL SIZE DIGITAL COPY OF THE PLANS. GENERALLY, THE MEASUREMENTS SHALL BE SUFFICIENT TO LOCATE ALL INSTALLED FEATURES HORIZONTALLY AND VERTICALLY. ALL MEASUREMENTS SHALL BE TO THE CENTER OF THE NEW FEATURE AND CENTER OF THE EXISTING SWING TIE FEATURE. FOR SANITARY SEWER AND STORMWATER ELEMENTS, INVERT ELEVATIONS SHALL BE PROVIDED TO THE NEAREST TENTH OF A FOOT. MEASUREMENTS SHALL BE PROVIDED FOR ALL ABOVEGROUND AND UNDERGROUND FEATURE. MEASUREMENTS SHALL ALSO BE PROVIDED FOR CONNECTIONS AND APPURTENANCES (E.G. VERTICAL/HORIZONTAL BENDS, VALVING, HYDRANTS, MANHOLES, CLEAN-OUTS, COVERS, AIR RELIEF VALVES, ETC.).
2. THE FIELD MEASUREMENTS SHALL BE PROVIDED TO THE ENGINEER, OWNER, AND ANY ON-SITE CONSTRUCTION OBSERVER FOR REVIEW. THE CONTRACTOR SHALL PERFORM/PROVIDE ANY CORRECTION OR RE-MEASUREMENT AS DIRECTED BY THE OWNER, ENGINEER, OR ON-SITE CONSTRUCTION OBSERVER PRIOR TO ACCEPTANCE.
3. INSTALLED UTILITY / FEATURE MEASUREMENTS SHALL MEET THE TECHNICAL SPECIFICATION AS WELL.

GENERAL MAINTENANCE AND PROTECTION OF FLOWS:

1. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING FLOWS SO THERE IS NOT INTERRUPTION IN THE NORMAL OPERATION OF THE SUBJECT UTILITY. TO MAINTAIN NORMAL OPERATION, THE METHOD OF MAINTAINING AND PROTECTING FLOWS SHALL BE COORDINATED WITH THE ENGINEER AND UTILITY OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ALL EQUIPMENT, INCLUDING REDUNDANT PUMPING, TO PROTECT AND MAINTAIN EXISTING FLOWS.
2. BYPASS PUMPING SHALL CONSIDER THE INFLUENCE OF INFILTRATION AND INFLOW ON THE SUBJECT SANITARY SEWER SYSTEM.

SITE REMOVAL NOTES:

1. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL READ THE EROSION AND SEDIMENT CONTROL REQUIREMENTS. ALL QUESTIONS SHALL BE PROVIDED IN WRITING TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR TO INSTALL EROSION AND SEDIMENT CONTROLS PRIOR TO SITE REMOVALS, IF APPLICABLE.
2. ENSURE ALL REMOVALS, DUST PREVENTION AND CONTROL, SAFETY, HAULING, DUMPING, AND STORAGE OF WASTE/DEBRIS, SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, OR FEDERAL CODES, PROCEDURES, AND ENVIRONMENTAL PROTECTION REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OPERATIONS AND WASTE REMOVAL.
3. ALL TEMPORARY BARRIERS AND SECURITY FEATURES SHALL BE PROVIDED, BUILT, AND MAINTAINED (PER THE MANUFACTURER'S SPECIFICATIONS).
4. PROTECT AND MAINTAIN EXISTING UTILITIES AND FEATURES DURING OPERATIONS. EXISTING UTILTIES SHALL REMAIN IN SERVICE AND SHALL NEVER BE INTERRUPTED. THE ONLY EXCEPTION TO THIS RULE IS WHEN IT IS AUTHORIZED IN A LETTER (E-MAIL NOT ACCEPTED) BY THE OWNER OF THE UTILITY/FEATURE AND THE AHJ. TO EMPHASIZE, THE AUTHORIZATION CANNOT BE IN AN E-MAIL OR VERBAL.
5. ADJACENT OR NEIGHBORING PEOPLE, OWNERS, BUSINESSES, OR FACILITIES SHALL BE NOTIFIED OF ANY WORK THAT MAY AFFECT THEM. SITE REMOVALS WORK SHALL BE PERFORMED TO PREVENT INJURY TO THE PUBLIC AND THE CONTRACTOR SHALL PROVIDE SAFE ACCESSWAYS AROUND WORK AREAS.
6. CEASE WORK IMMEDIATELY IF ANY STRUCTURE(S) APPEAR TO BE IN DANGER. THE CONTRACTOR SHALL IMMEDIATELY, WITHOUT FAIL, NOTIFY EMERGENCY RESPONDERS, AFFECTED PUBLIC, AND THE AHJ.
7. AS APPLICABLE, PERFORM ALL REQUIRED TESTING OF WASTE/DEBRIS MATERIAL AND RESULTS SHALL BE PROVIDED TO THE OWNER AND ENGINEER. DEBRIS AND WASTE SHALL BE PROMPTLY DISPOSED OF AT A FACILITY OFFSITE AND A COPY OF THE BILL OF LADING SHALL BE PROVIDED TO THE OWNER AND ENGINEER. ALL TESTING, REMOVAL AND DISPOSAL SHALL BE AT THE CONTRACTOR'S EXPENSE.
8. AFTER THE WASTE/DEBRIS IS TAKEN OFFSITE, ALL NEIGHBORING AREAS AND FEATURES SHALL BE CLEANED TO ITS EXISTING CONDITION.

WATER SERVICE PIPE NOTE:

1. THE WATER UTILITY AND DETAILS IN THE CIVIL SET SHALL CONFORM TO THE NEW YORK STATE PLUMBING CODE (2025 OR MORE RECENT) REQUIREMENTS FOR WATER SERVICE PIPE. THE WATER DISTRIBUTION SYSTEM, OR GENERALLY THE PIPE WITHIN THE STRUCTURE, IS FOUND IN THE PLUMBING DISCIPLINE.
3. THE WATER SERVICE PIPE SHALL CONFORM TO NSF 61. WATER SERVICE PIPE, INSTALLED UNDERGROUND AND OUTSIDE OF THE STRUCTURE, SHALL HAVE A WORKING PRESSURE RATING OF NOT LESS THAN 160 PSI (1100 kPA) AT 73.4F. WHERE THE WATER PRESSURE EXCEEDS 160 PSI, PIPING MATERIAL SHALL HAVE A WORKING PRESSURE RATING NOT LESS THAN THE HIGHEST AVAILABLE PRESSURE. WATER SERVICE PIPING MATERIALS NOT THIRD-PARTY CERTIFIED FOR WATER DISTRIBUTION SHALL TERMINATE AT OR BEFORE THE FULL-OPEN VALE LOCATED AT THE ENTRANCE TO THE STRUCTURE.
4. THE WATER SERVICE PIPE MATERIAL SHALL BE DUCTILE IRON PIPE MEETING THE AWWA C115/A21.15; AWWA C151/A21.51.
5. DUCTILE IRON WATER SERVICE PIPING SHALL BE CEMENT MORTAR LINED IN ACCORDANCE WITH AWWA C104/A21.4 IN ACCORDANCE WITH THE 2025 NYS PLUMBING CODE.
6. SEPARATION DISTANCES FROM THE WATER SERVICE PIPE AND THE BUILDING SEWER SHALL MEET THE REQUIREMENTS OF SECTION 603.2 OF THE 2025 NYS PLUMBING CODE.
7. PIPE FITTINGS SHALL COMPLY WITH SECTION 605.5 OF THE 2025 NYS PLUMBING CODE. PIPE FITTINGS SHALL BE APPROVED FOR INSTALLATION WITH THE PIPING MATERIAL INSTALLED AND SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN TABLE 605.5. PIPE FITTINGS UTILIZED IN WATER SUPPLY SYSTEM SHALL COMPLY WITH NSF 61. DUCTILE AND GRAY IRON PIPE AND PIPE FITTINGS UTILIZED IN WATER SERVICE PIPING SYSTEMS SHALL BE CEMENT MORTAR LINED IN ACCORDANCE WITH AWWA C104/A21.4
8. IN ACCORDANCE WITH 605.11 OF THE 2025 NYS PLUMBING CODE, JOINTS FOR GRAY AND DUCTILE IRON PIPE AND FITTINGS SHALL COMPLY WITH AWWA C111/A21.11 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
9. WATER SERVICE PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 6 FEET.
10. INSTALLATION MEANS, METHODS, AND PROCEDURES SHALL MEET THE DIPRA GUIDELINES FOR INSTALLATION OF DUCTILE IRON PIPE APRIL 2024 OR MOST RECENT VERSION.
11. FORCE RESTRAINT SHALL BE BY RESTRAINED MECHANICAL JOINTS MEETING THE REQUIREMENTS OF THE DIPRA THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE SEVENTH EDITION OR MOST RECENT

WATER NOTES:

1. THE CONTRACTOR SHALL OBTAIN NECESSARY WORK PERMIT(S) FROM THE VILLAGE OF SARANAC LAKE DPW PRIOR TO PROCEEDING WITH ANY WORK ON THE VILLAGE WATER SYSTEM AND WITHIN THE VILLAGE'S RIGHT-OF-WAY, WHICH INCLUDES EXPLORATORY EXCAVATIONS TO VERIFY UTILITY LOCATIONS. THE CONTRACTOR'S WORK SHALL COMPLY WITH ALL REQUIREMENTS OF THE WORK PERMIT(S).
2. THE CONTRACTOR SHALL COORDINATE WITH THE VILLAGE OF SARANAC LAKE FOR ANY COORDINATED SHUTDOWNS AND ANY COORDINATED SHUT DOWN SHALL BE PERFORMED IN COOPERATION WITH THE VILLAGE OF SARANAC LAKE. THE CONTRACTOR TO PROVIDE THE VILLAGE WITH AT LEAST 72 HOURS ADVANCE NOTICE FOR COORDINATED SHUTDOWNS, WATER LINE CONNECTIONS, OR EXPLORATORY WORK NEAR THEIR WATER INFRASTRUCTURE.
3. PRIOR TO SUBMITTALS OR ORDERING OF MATERIALS, THE CONTRACT SHALL VERIFY THE EXISTING CONDITION OF THE VILLAGE'S WATER MAIN AT THE PROPOSED CONNECTION POINT AND ANY OTHER NECESSARY AREA TO VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK.

GENERAL DEWATERING NOTES:

1. DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, DEWATERING TRENCHES, EXCAVATIONS, AND SURFACE AREAS FOR THE DURATION OF WORK.
2. PUMPED WATER SHALL BE DE-WATERED INTO A DEWATERING BAG SURROUNDED BY SILT FENCE, STRAW BALES, AND ANY NECESSARY EROSION AND SEDIMENT CONTROL FEATURES SUCH THAT FILTER WATER WOULD NOT CAUSE A VIOLATION OF ANY WATER QUALITY STANDARDS. THE DEWATERING BAG AND SURROUNDING FILTER MATERIAL SHALL BE DISPOSED AT AN APPROVED LOCATION.

SHEETING, SHORING, AND BRACING:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING SHEETING, SHORING, AND/OR BRACING IN ACCORDANCE WITH OSHA REQUIREMENTS. THE CONTRACTOR SHALL PREVENT MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES. THE CONTRACTOR SHALL DETERMINE, EMPLOY, AND INSTALL SHEETING, SHORING, OR BRACING IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS AND REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SHEETING, SHORING, AND/OR BRACING.

EGRESS AND ACCESS:

1. EGRESS AND ACCESS SHALL BE COORDINATED WITH THE AHJ PRIOR TO THE ACTUAL CONSTRUCTION DATE. EGRESS AND ACCESS PLANS SHALL CONFORM TO ALL LOCAL, STATE, OR FEDERAL REQUIREMENTS OR REGULATIONS. THE CONTRACTOR SHALL MAINTAIN EGRESS AND ACCESS AT ALL TIMES. DO NOT CLOSE OR OBSTRUCT ROADWAYS OR SIDEWALKS WITHOUT PERMITS. THE CONTRACTOR SHALL COORDINATE EGRESS AND ACCESS PLANS WITH SCHOOL DISTRICTS AND EMERGENCY SERVICES PRIOR TO THE ACTUAL CONSTRUCTION DATE.
2. CONTRACTOR SHALL MAKE ALL EFFORTS TO MAINTAIN ACCESS TO EXISTING PROPERTIES WHENEVER POSSIBLE.
3. CONTRACTOR SHALL COORDINATE WITH THE VILLAGE OF SARANAC LAKE TO NOTIFY PEDESTRIANS AND PROVIDE SAFE AND ADEQUATE ACCESS TO EXISTING NEARBY PEDESTRIAN FACILITIES.

COMPACTION REQUIREMENTS

LOCATION	COMPACTION	TESTING FREQUENCY
PIPE TRENCH BACKFILL (ROADWAYS)	95% MODIFIED PROCTOR LATEST VERSION OF ASTM D1557	1 TEST AT LEAST 100 FEET APART.
PIPE TRENCH BACKFILL (ALL NON-TRAFFIC SITUATIONS)	90% MODIFIED PROCTOR LATEST VERSION OF ASTM D1557	2 TESTS AT LEAST 50 FEET APART.
PIPE BEDDING AND BACKFILL	95% MODIFIED PROCTOR LATEST VERSION OF ASTM D1557	3 TESTS SPREAD EVENLY APART.
AROUND NEW TANK	95% MODIFIED PROCTOR LATEST VERSION OF ASTM D1557	1 TEST ON EACH SIDE OF THE TANK

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE, PAY, AND SCHEDULE FOR COMPACTION TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE DENSITY LIMITS OF THE MATERIAL(S) PRIOR TO TESTING SUCH THAT THE PERCENT COMPACT CAN BE OBSERVED IN THE FIELD AT THE TIME OF TESTING. COMPACTION TESTING SHALL BE PERFORMED UNTIL A PASSING DENSITY IS ACHIEVED.

ASPHALT PAVING GENERAL NOTES:

1. ALL MATERIALS AND METHODS SHALL BE IN STRICT CONFORMANCE WITH THE CURRENT VERSION OF THE NYS DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS INCLUDING ALL ADDENDA.

GENERAL ROCK BLASTING NOTES:

1. ROCK BLASTING IS NOT ANTICIPATED FOR THIS PROJECT. THE CONTRACTOR IS NOT PERMITTED TO BLAST ROCK.

LEGEND

- PROPERTY EASEMENT
- PROPERTY LINE
- PROPERTY MONUMENTATION
- PROPERTY RIGHT-OF-WAY
- PROPERTY SETBACK LINE
- WORK LIMITS
- REMOVALS
- SOIL BORINGS
- EROSION AND SEDIMENT CONTROL FEATURES
- SILT FENCE
- STOCK PILE
- STRAW FIBER ROLL
- FENCE
- STOCKADE FENCE
- FENCE - ORANGE CONSTRUCTION
- BUILDING
- CONCRETE PAD
- ROAD CENTERLINE
- CURB
- EDGE OF PAVEMENT
- GUIDE RAIL
- GRAVEL ROAD
- ASPHALT PAVING
- EDGE OF PAVED DRIVEWAY
- PAVEMENT MARKINGS
- CONCRETE SIDEWALK
- PLANTS
- SHRUB LINE
- TREE
- TREE LINE
- STAIRS
- RETAINING WALL
- WATERWAY
- C-ROAD-SAWCUT
- MAJOR CONTOUR
- MINOR CONTOUR
- SANITARY PIPE
- SANITARY PIPE - FORCE MAIN
- SANITARY PIPE - LOW PRESSURE
- SANITARY STRUCTURES
- STORM PIPE
- STORM PIPE - PERFORATED
- RIPRAP
- STORMWATER STRUCTURES
- WATER MAIN
- WATER SERVICE
- WATER SHUT OFF VALVE
- WATER VALVE
- HYDRANT
- WATER WELL
- OVERHEAD WIRE
- ELECTRIC STRUCTURES
- UNDERGROUND ELECTRIC
- LIGHT POLE
- TELECOM STRUCTURES
- UNDERGROUND TELECOM
- GAS
- GAS STRUCTURE
- TRAFFIC SIGNAL CONTROLS
- SIGNS AND MAILBOXES
- UNDERGROUND UTILITIES
- UTILITY POLE

SUBMITTED FOR VILLAGE DEVELOPMENT BOARD REVIEW ONLY - NOT FOR CONSTRUCTION

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DESIGN AND CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

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REGISTRATION EXPIRES:

CONTRACT: CONSTRUCTION

TITLE: PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION: 1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT: ADIRONDACK PARK AGENCY

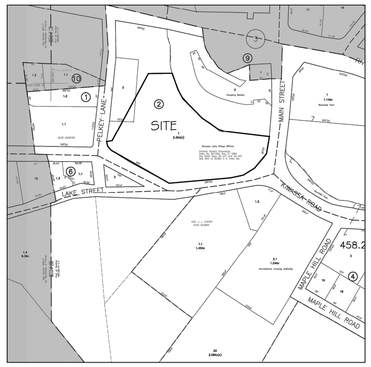
MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: NOTES & LEGEND

DRAWING NUMBER: C-002

DRAWING OF



LOCATION PLAN
1" = 200'

"MEAN HIGH WATER ELEVATION" AS STATED IN ORDER VARIANCE 95-56A, DATED OCTOBER 2, 1995 AND VERIFIED BY JOHN M. BURTH OF THE NYS ADIRONDACK PARK AGENCY IS: 1517.43 FEET ABOVE SEA LEVEL.

NO POINT OBSERVED DURING THIS SURVEY REACHED THE "MEAN HIGH WATER ELEVATION" OF 1517.43 FEET. NO TOPOGRAPHIC INFORMATION WAS TAKEN PAST THE EDGE OF WATER, INTO THE SARANAC RIVER.

NOTES:

1. MAPPING PREPARED BY RYAN BIGGS | DAVIS ENGINEERING & SURVEYING, D.P.C., FROM A FIELD SURVEY COMPLETED MAY 8, 2023.
2. NORTH REFERENCE USED HEREON IS NAD 83 NEW YORK EAST ZONE PLANE COORDINATE SYSTEM.
3. VERTICAL REFERENCE USED HEREON IS NAVD 88.
4. UNDERGROUND UTILITIES AS SHOWN HEREON ARE FROM FIELD LOCATION, RECORD PLANS, AND UNDERGROUND UTILITY MARK OUT, THEIR LOCATION IS APPROXIMATE, OTHERS MAY EXIST, AND ALL ARE SUBJECT TO VERIFICATION BY OTHERS.
5. UNDERGROUND UTILITY DEPTH LABELS THAT ARE SHOWN IN A BOX ARE FROM SUBSURFACE UTILITY INVESTIGATION. THESE DEPTHS ARE APPROXIMATE.
6. UNDERGROUND UTILITY DEPTH LABELS AT STRUCTURES SHOWING THE SIZE AND TYPE OF PIPES ARE MEASURED IN THE FIELD.
7. PARCEL SURVEYED MAY BE ALONG WITH RIGHTS, TITLE AND/OR INTERESTS IN AND TO LANDS WITHIN THE BED OF THE ADJACENT ROADS LYING BETWEEN THE HIGHWAY BOUNDARIES SHOWN HEREON AND THE CENTERLINES THEREOF.
8. PARCEL SURVEYED IS FURTHER REFERENCED TO THE VILLAGE OF SARANAC LAKE TAX MAP PARCEL ID NO. 458.21-2-1.
9. PARCEL SURVEYED WITHOUT BENEFIT OF, AND IS SUBJECT TO A COMPLETE AND UP-TO-DATE ABSTRACT OF TITLE.
10. REFERENCE IS MADE TO A MOTION MADE IN THE STATE OF NEW YORK SUPREME COURT, COUNTY OF FRANKLIN, DATED DECEMBER 29, 1986; "VILLAGE OF SARANAC LAKE, INC. AGAINST NIAGARA MOHAWK POWER CORPORATION AND JOHN DOE AND JANE DOE. INDEX NO. 86-586.
11. MEAN HIGH WATER ELEVATION AS STATED IN ORDER VARIANCE 95-56A, DATED OCTOBER 2, 1995 AND VERIFIED BY JOHN M. BURTH OF THE NYS ADIRONDACK PARK AGENCY IS: 1517.43 FEET ABOVE SEA LEVEL. NO POINT OBSERVED DURING THIS SURVEY REACHED THE MEAN HIGH WATER ELEVATION OF 1517.43 FEET.
12. THE OBSERVED "ORDINARY HIGH WATER MARK" IS REFERENCED TO THE U.S. ARMY CORPS OF ENGINEERS, NATIONAL ORDINARY HIGH WATER MARK FIELD DELINEATION MANUAL FOR RIVERS AND STREAMS AND IS: 1522 FEET ABOVE SEA LEVEL. THIS WAS OBSERVED ON MAY 2, 2023.

MAP REFERENCES:

1. "ACQUISITION MAP, SHOWING PROPERTY TO BE ACQUIRED BY, THE VILLAGE OF SARANAC LAKE, PURSUANT TO THE EMINENT DOMAIN PROCEDURE LAW.", SITUATE IN TOWN OF HARRIETSTOWN, COUNTY OF FRANKLIN,STATE OF NEW YORK, DATED AUGUST & SEPTEMBER, 1986 AS PREPARED BY BERT K. HOUGH AND FILED IN THE FRANKLIN COUNTY CLERKS OFFICE AS MAP NUMBER 1171.
2. "ACQUISITION MAP, SHOWING PROPERTY TO BE ACQUIRED BY, THE VILLAGE OF SARANAC LAKE, PURSUANT TO THE EMINENT DOMAIN PROCEDURE LAW.", SITUATE IN TOWN OF HARRIETSTOWN, COUNTY OF FRANKLIN,STATE OF NEW YORK, DATED APRIL, 1985, AS PREPARED BY BERT HOUGH, L.S.

LEGEND:

SURVEY SYMBOLS:
CONTROL BASELINE POINT
BENCHMARK
PROPERTY MARKER
DRILL HOLE

LANDSCAPE SYMBOLS:
SINGLE POST SIGN
DOUBLE POST SIGN

UTILITY SYMBOLS:
COMMUNICATIONS MANHOLE
DRAINAGE MANHOLE
CATCH BASIN
ROUND CATCH BASIN
ELECTRIC MANHOLE
LIGHT POLE
UTILITY POLE
UTILITY POLE WITH LIGHT
GUY WIRE
SANITARY SEWER MANHOLE
FIRE HYDRANT
WATER VALVE
WATER SHUT OFF
CLEAN OUT

SURVEY LINES:
MINOR PROPERTY LINE
MAJOR PROPERTY LINE
PROPOSED PROPERTY LINE
PROPERTY SETBACK LINE
PROPERTY SUBDIVISION LINE
POLITICAL BOUNDARY
BUILDING RESTRICTION LINE
EASEMENT LINE
MAJOR CONTOUR LINE
MINOR CONTOUR LINE
ORDINARY HIGH WATER

LANDSCAPE LINES:
BUILDING
BUILDING OVERHANG
FENCE
STONEWALL
WOODS LINE
GUIDERAIL
ROAD CENTERLINE
EDGE OF WATER

UTILITY LINES:
OVERHEAD CABLE T.V. LINE
UNDERGROUND CABLE T.V. LINE
OVERHEAD COMMUNICATIONS LINE
UNDERGROUND COMMUNICATIONS LINE
UNDERGROUND DRAINAGE LINE
OVERHEAD ELECTRIC LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND GAS LINE
UNDERGROUND SANITARY SEWER LINE
UNDERGROUND STEAM LINE
UNDERGROUND WATER LINE

SUI LABELS
SEE NOTES 4, 5, AND 6
WATER 5'± DEEP
3'± DEEP

GRAPHIC SCALE
50' 0 15' 30' 60' 120'

NORTH

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LICENSED LAND SURVEYOR
STATE OF NEW YORK
QUACKENBUSH
MATTHEW

TOPOGRAPHIC/BOUNDARY SURVEY

3 MAIN STREET
SARANAC LAKE, NEW YORK

NO.	ITEM	DATE
1	ADDED UNDERGROUND UTILITIES, EDITED NOTE 9, ADDED NOTE 10 - ERQ	2023-08-08
2	ADDED ORDINARY HIGH WATER LINE - ERQ	2023-08-08
3	ADDED BOXES AROUND SUI TEXT - ERQ	2023-08-08
4	ADDED EDGE OF WATER ELEVATIONS...	2023-08-17
4	ADDED "MEAN HIGH WATER ELEVATION" NOTE	2023-08-17

CHK. BY: ERQ | DWG. BY: CJY | DATE: May 26, 2023

SHEET TITLE:
EXISTING CONDITIONS SURVEY

SHEET NO.
V101

14282-2

PLOTTED ON Aug 17, 2023 AT 9:25 AM BY EQuackenbush
FILE LOCATION: F:\SHARE\14\14282-2\Dwg\SamtBergmann 2023-08-17\14282-2.dwg



1 C-121 **REMOVALS PLAN**
SCALE: 1" = 20'

SUBMITTED FOR VILLAGE DEVELOPMENT BOARD REVIEW ONLY - NOT FOR CONSTRUCTION

3/3/2026 1:26:04 PM
4/28/2026 1:19:13 PM

NEW YORK STATE **Office of General Services**
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CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

Colliers Engineering & Design

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REGISTRATION EXPIRES:

CONTRACT: CONSTRUCTION

TITLE: PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION: 1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT: ADIRONDACK PARK AGENCY

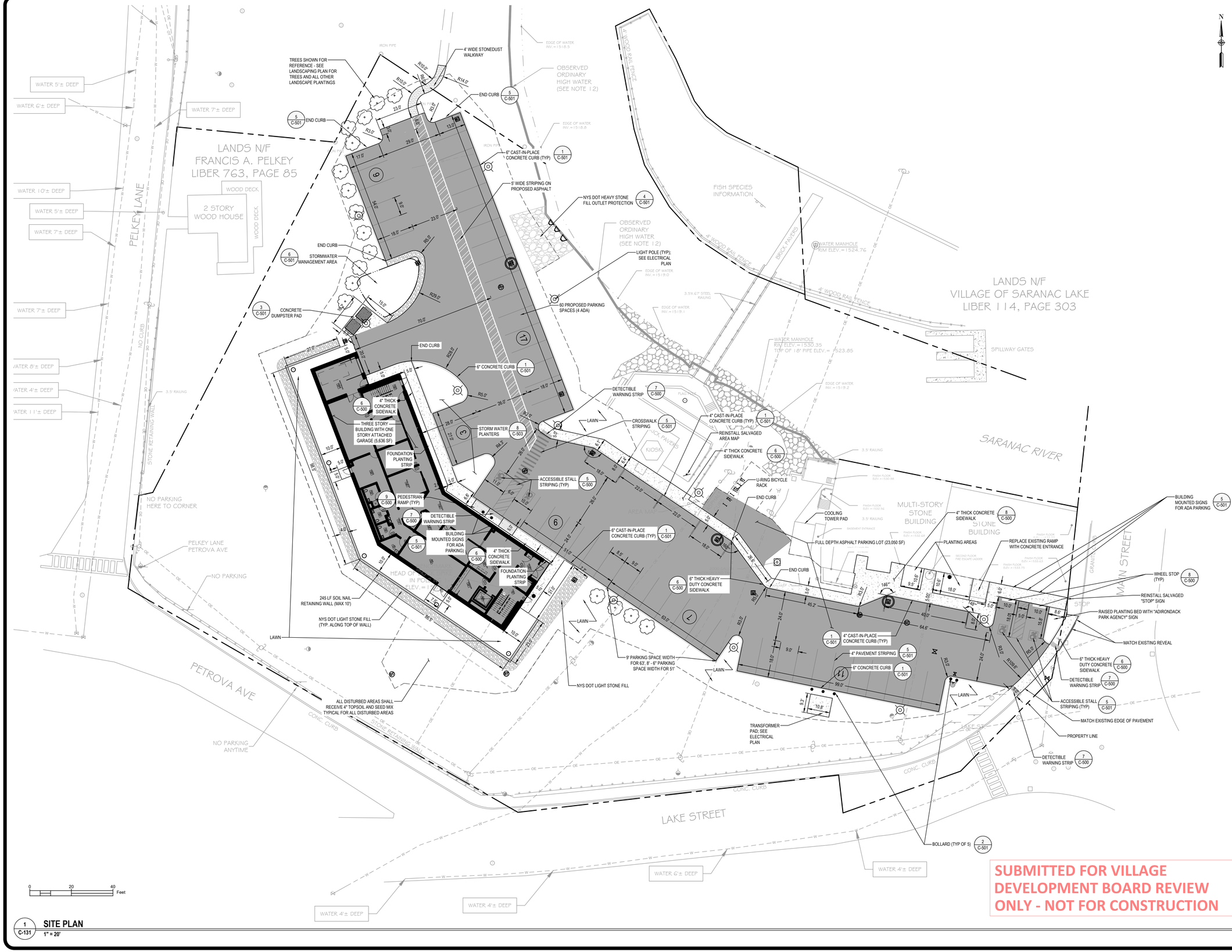
MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: REMOVALS PLAN

DRAWING NUMBER: C-121

DRAWING OF



1 C-131 **SITE PLAN**
1" = 20'

3/3/2026 1:26:04 PM
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REGISTRATION EXPIRES:

CONTRACT: CONSTRUCTION

TITLE: **PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY**

LOCATION: **1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY**

CLIENT: **ADIRONDACK PARK AGENCY**

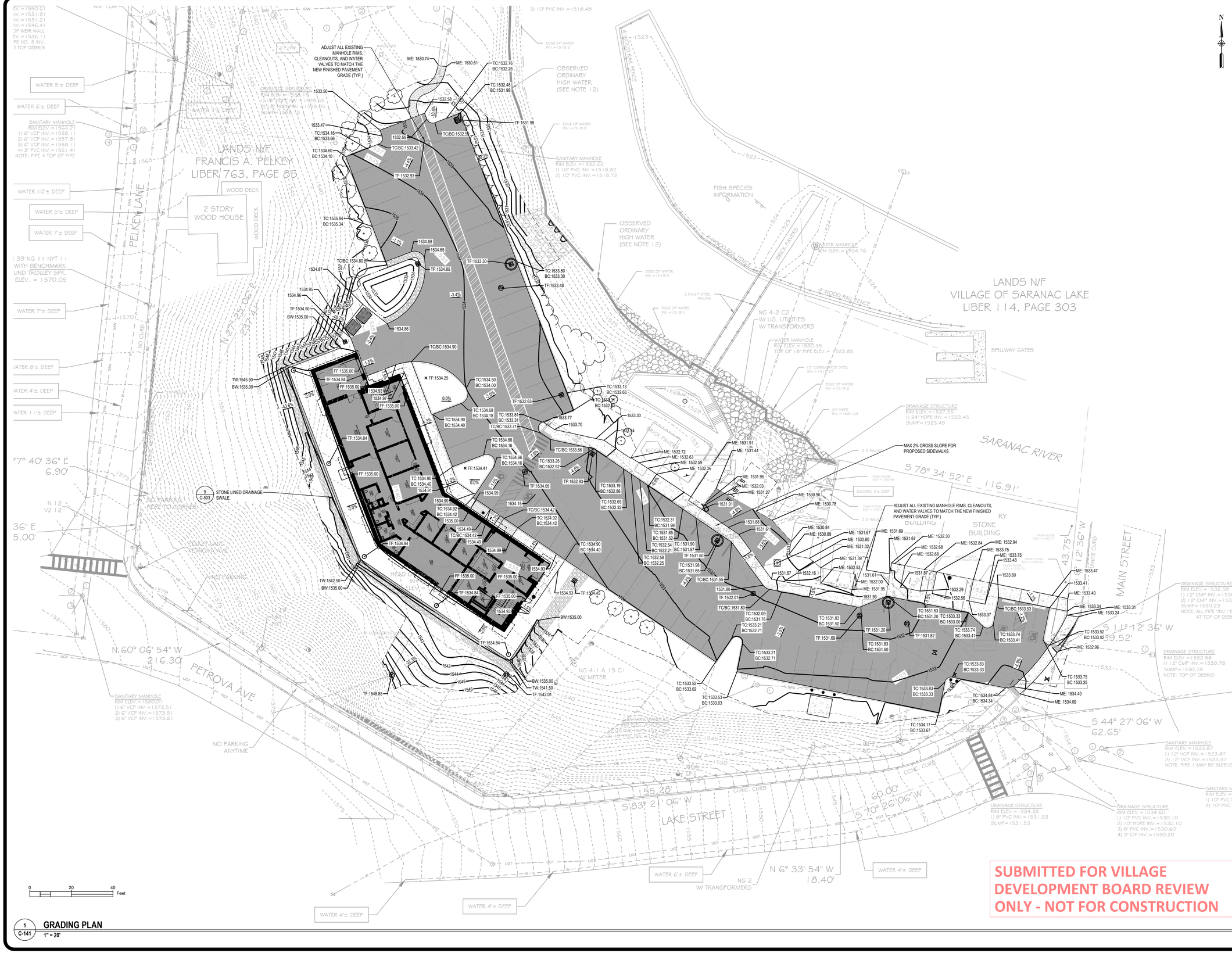
MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: **SITE PLAN**

DRAWING NUMBER: **C-131**

DRAWING OF



1 C-141 **GRADING PLAN**
1" = 20'

3/3/2026 1:26:04 PM
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REGISTRATION EXPIRES:

CONTRACT: CONSTRUCTION

TITLE: PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION: 1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT: ADIRONDACK PARK AGENCY

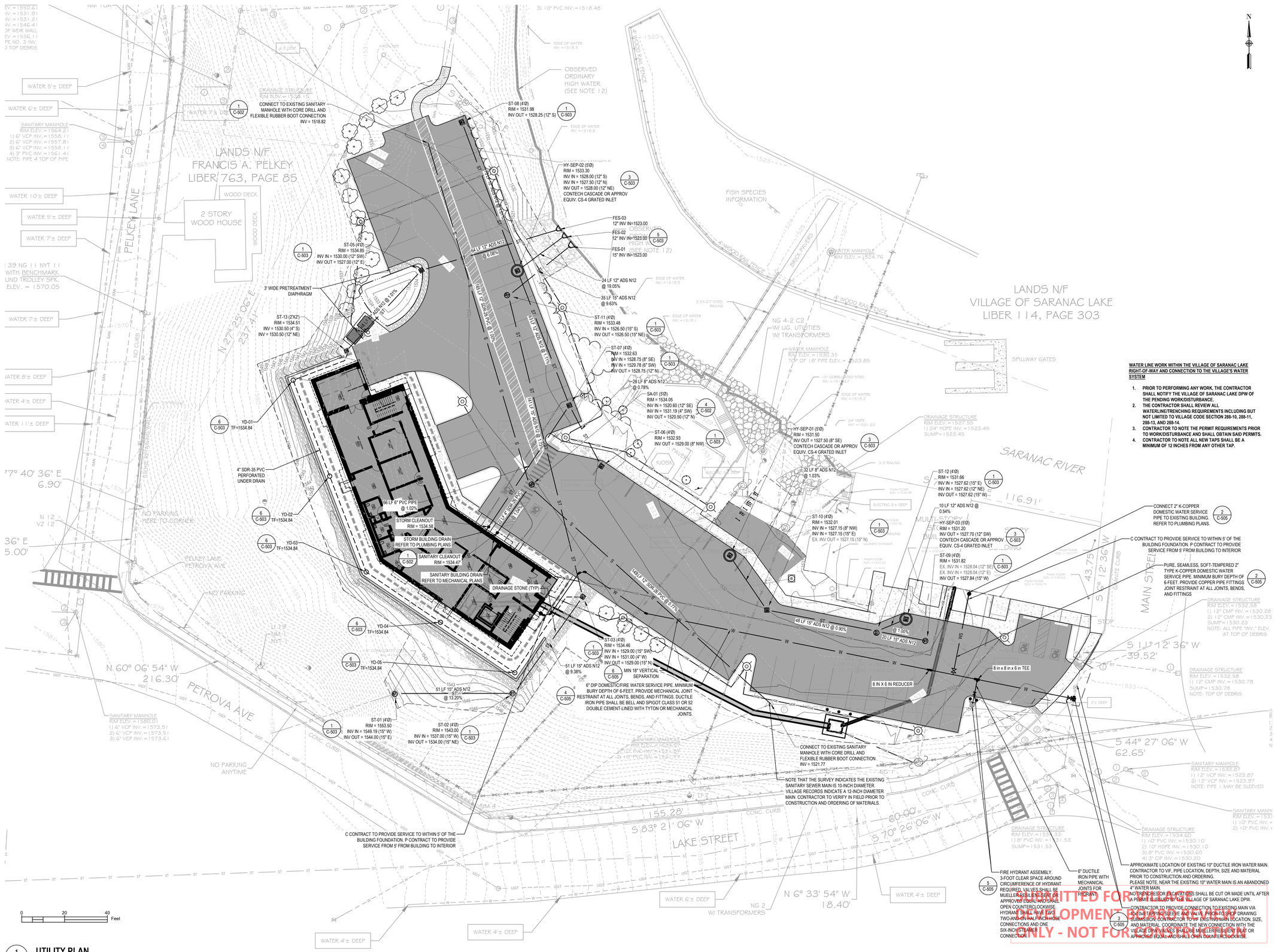
MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: **GRADING PLAN**

DRAWING NUMBER: **C-141**

DRAWING OF



WATER LINE WORK WITHIN THE VILLAGE OF SARANAC LAKE RIGHT-OF-WAY AND CONNECTION TO THE VILLAGE'S WATER SYSTEM

1. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL NOTIFY THE VILLAGE OF SARANAC LAKE DPW OF THE PENDING WORK/DISTURBANCE.
2. THE CONTRACTOR SHALL REVIEW ALL WATERLINE/TRENCHING REQUIREMENTS INCLUDING BUT NOT LIMITED TO VILLAGE CODE SECTION 288-10, 288-11, 288-13, AND 288-14.
3. CONTRACTOR TO NOTE THE PERMIT REQUIREMENTS PRIOR TO WORK/DISTURBANCE AND SHALL OBTAIN SAID PERMITS.
4. CONTRACTOR TO NOTE ALL NEW TAPS SHALL BE A MINIMUM OF 12 INCHES FROM ANY OTHER TAP.

1 C-151 **UTILITY PLAN**
1" = 20'

3/3/2026 1:26:04 PM
4/28/2026 1:19:13 PM

NEW YORK STATE **Office of General Services**

DESIGN AND CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

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1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT:
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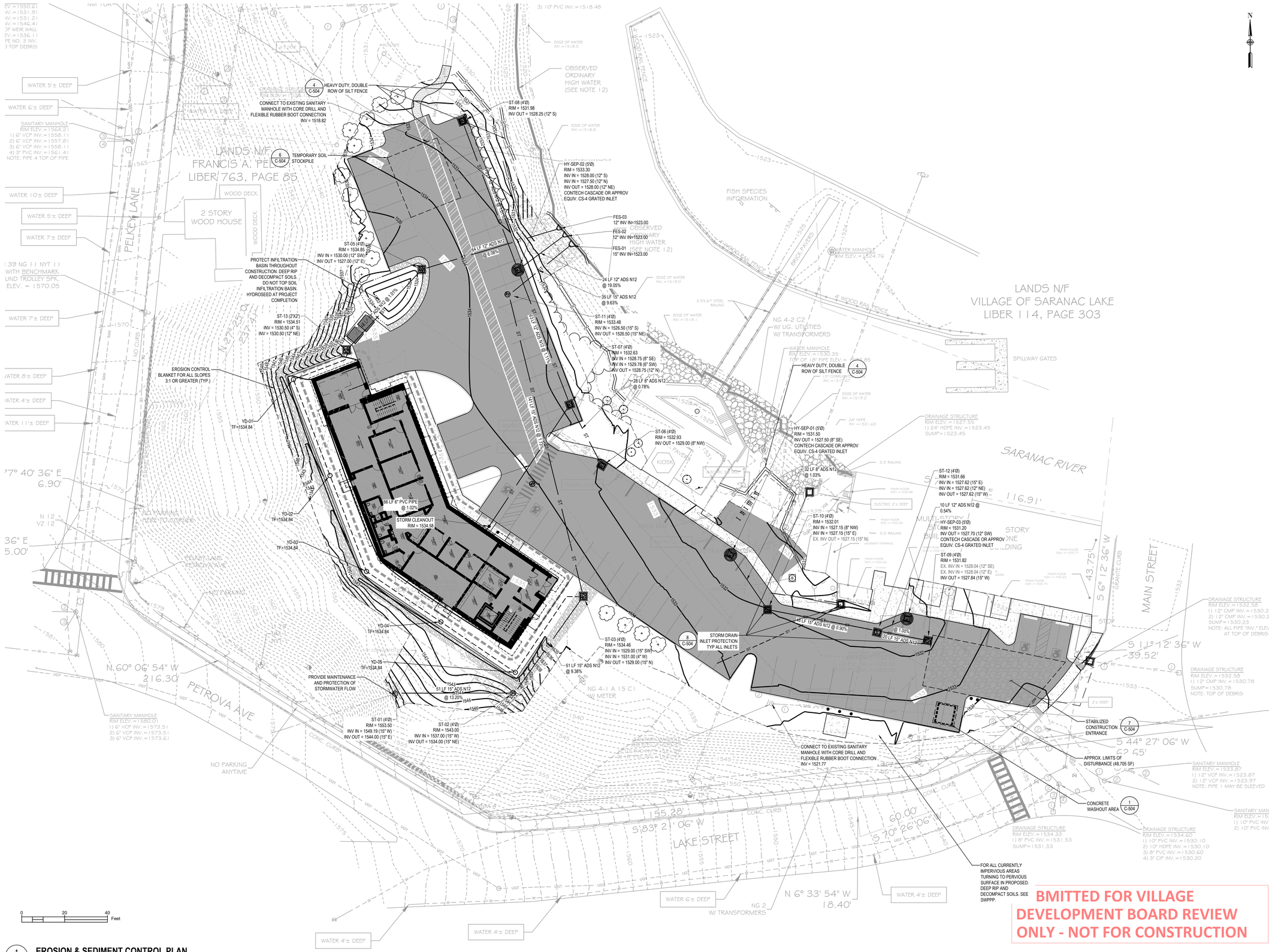
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DRAWING TITLE:
UTILITY PLAN

DRAWING NUMBER:
C-151

DRAWING OF



1 C-161 **EROSION & SEDIMENT CONTROL PLAN**
1" = 20'

3/3/2026 1:26:04 PM
4/28/2026 1:19:13 PM

N

NEW YORK STATE | Office of General Services

DESIGN AND CONSTRUCTION

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REGISTRATION EXPIRES:

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CONSTRUCTION

TITLE:
PROVIDE APA HEADQUARTERS
ADIRONDACK PARK AGENCY

LOCATION:
1-2 MAIN STREET
VILLAGE OF SARANAC LAKE, NY

CLIENT:
ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
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APPROVED:	SDA

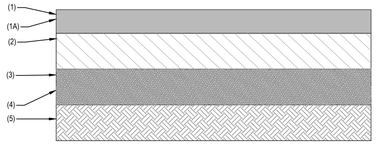
DRAWING TITLE:
EROSION & SEDIMENT CONTROL PLAN

DRAWING NUMBER:
C-161

DRAWING OF

BMITTED FOR VILLAGE DEVELOPMENT BOARD REVIEW ONLY - NOT FOR CONSTRUCTION

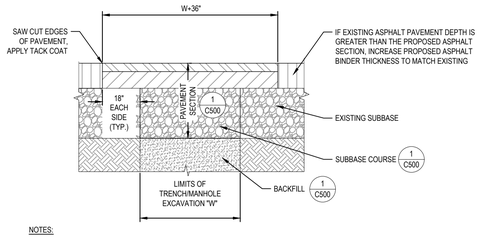
TYPE-A PAVEMENT SECTION (PARKING LOT)



1. 4" NYSDOT 404.0973 - 9.5F3 TOP COURSE HMA, 70 SERIES COMPACTION
1A. TACK COAT - NYSDOT ITEM 407.0102 DILUTED TACK COAT
2. 6" NYSDOT 404.3779 - 37.5 F9 BASE COURSE HMA, 70 SERIES COMPACTION.
3. 6" NYSDOT 304.12 - SUBBASE COURSE, TYPE 2 COMPACTED TO 95% MODIFIED PROCTOR
4. GEOTEXTILE FABRIC; MIRAFI 160N, PROPEX 4551, GEOTEX 601 OR OTHER APPROVED EQUAL
5. PROOF ROLLED SUBGRADE, OR COMPACTED SELECT GRANULAR FILL

1 C-500 SITE - PAVEMENT AND ASPHALT RESTORATION DETAIL

N.T.S.

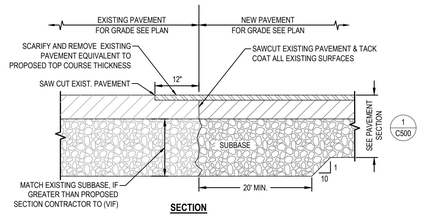


NOTES:

1. SAW CUT AS INDICATED, 18" BEYOND EXCAVATION.
2. FURNISHED, PLACE AND COMPACT SURFACE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED

3 C-500 SITE - TRENCH-MANHOLE SURFACE RESTORATION IN ASPHALT PAVEMENT

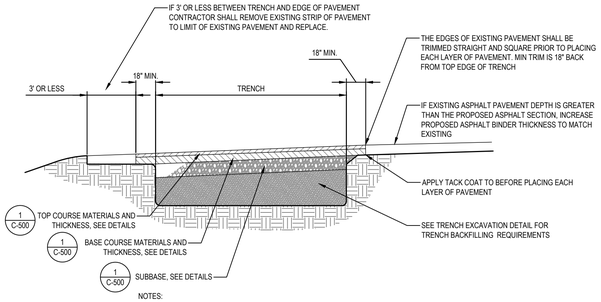
N.T.S.



SECTION

2 C-500 SITE - PAVEMENT TRANSITION

N.T.S.

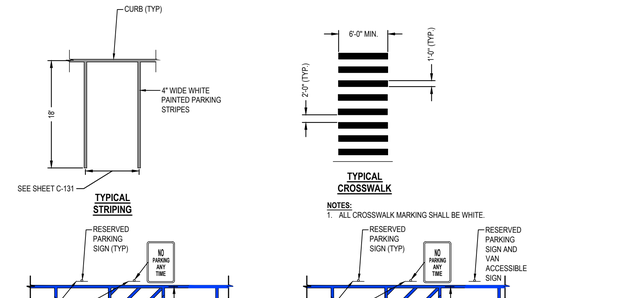


NOTES:

1. COMPACTION OF FILL AND BEDDING SHALL BE TO 95% MIN. OF MAX. DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST.
2. ALL PAVEMENT SHALL HAVE A COMPACTED THICKNESS TO MATCH EXISTING.
3. ALL EXISTING ROAD LINES SHALL BE REMARKED AS NECESSARY.

4 C-500 SITE - TRENCH PAVEMENT REPAIR DETAIL

N.T.S.



NOTES:

1. ALL DIMENSIONS SHALL BE IN ACCORDANCE WITH ADA STANDARD AND CURRENT ZONING AND SITE REGULATIONS.
2. PAINTED ACCESSIBLE LOGO TO BE IN ACCORDANCE W/ NEW YORK STATE LAW.
3. SLOPE OF PAVEMENT SURFACE IN ACCESSIBLE PARKING AREA SHALL NOT EXCEED 2% IN ANY DIRECTION.
4. SEE PLAN FOR ACTUAL LOCATION OF SIGNAGE

SIGNAGE AND PAVEMENT MARKING NOTES:

STRIPING NOTES:

1. ALL STRIPING SHALL CONFORM TO THE LATEST EDITION OF THE NYSDOT STANDARD SPECIFICATIONS, SECTION 640 AND THE "NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" - 2009 EDITION AND THE "NYS SUPPLEMENT."
2. STRIPE PAVEMENT AS INDICATED ON THE PLANS AND/OR IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
3. STRIPING WORK WILL BE REVIEWED AND ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.
4. COLOR: DRIVE LANE DIVIDERS - WHITE OR AOBE
   NO PARKING ZONE WARNINGS - WHITE OR AOBE
   PARKING DIVIDERS - WHITE OR AOBE
   WALKING LINES - WHITE OR AOBE
   ACCESSIBLE PARKING LINES & SYMBOL - BLUE

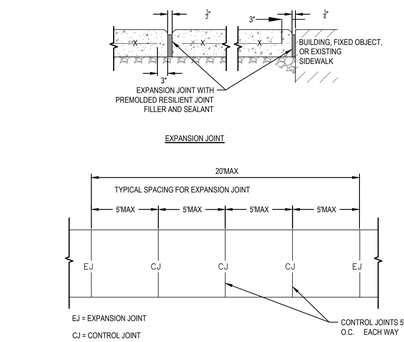
SIGNAGE NOTES:

1. ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE NYSDOT STANDARD SPECIFICATIONS, SECTION 645 AND THE "NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" - 2023 EDITION AND THE "NYS SUPPLEMENT."
2. SIGN MOUNTING HEIGHT SHALL BE A MINIMUM OF 7'. MINIMUM MOUNTING HEIGHT MAY BE ADJUSTED ONLY IN ACCORDANCE WITH PROVISIONS OUTLINED IN THE "NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" - 2023 EDITION AND THE "NYS SUPPLEMENT."
3. SIGNS SHALL BE BUILDING MOUNTED

PARKING	R7-8	12"x18"	WHITE/ BLUE	GREEN/ WHITE
NO PARKING ANY TIME	R7-1	12"x18"	WHITE	RED
VAN ACCESSIBLE	R7-8A	6"x12"	WHITE	GREEN

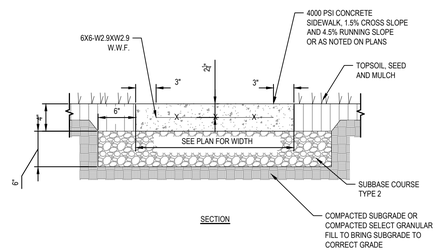
5 C-500 SITE - PAVEMENT MARKING

N.T.S.



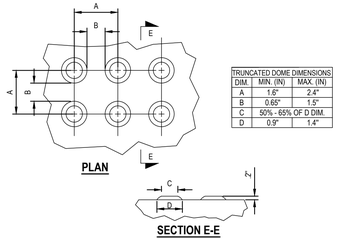
NOTES:

1. ALL CONCRETE SHALL BE 4000 PSI CONCRETE. CONCRETE MATERIALS, PLACEMENT, AND CONSTRUCTION SHALL CONFORM WITH SPECIFICATION SECTION 321623.
2. ALL EXPOSED SURFACE SHALL HAVE A BROOM TEXTURED FINISH & TOOLED EDGES. TOOL SHALL BE PROVIDED MAX 1-1/2" WIDE SMOOTH TROWEL FINISH AT JOINT.
3. EXPANSION JOINTS SHALL BE LOCATED A MINIMUM OF 20' ON CENTER, OR AS INDICATED ON PLANS.
4. JOINTS SHALL NOT BE SAW CUT.
5. SUBBASE MATERIAL SHALL CONFORM WITH SPECIFICATION SECTION 312000.
6. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSE OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 312000.
7. IN AREAS WHERE THE SIDEWALK CROSSES DRIVEWAYS OR OTHER POINTS OF INGRESS AND EGRESS, OR IS NOTED ON THE PLANS AS 6" THICK HEAVY DUTY SIDEWALK THE SIDEWALK WIDTH SHALL BE INCREASED TO 6" WITH 6X6-W2.9XW2.9 W.W.F WITH 3" OF TOP COVER.



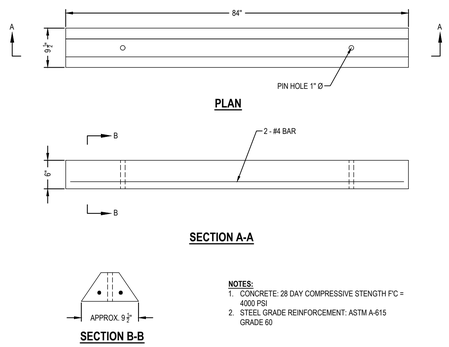
6 C-500 SITE - CONCRETE SIDEWALK

N.T.S.



7 C-500 SITE - DECTECTABLE WARNING SURFACE TRUNCATED DOME

N.T.S.

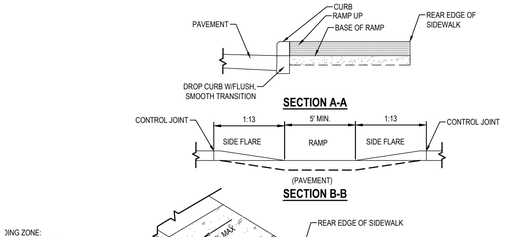


NOTES:

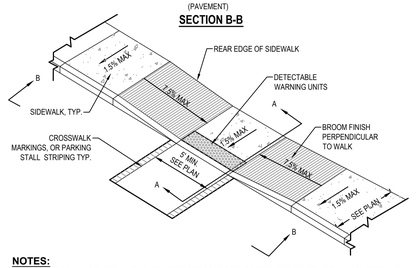
1. CONCRETE: 28 DAY COMPRESSIVE STENGTH F'C = 4000 PSI
2. STEEL GRADE REINFORCEMENT: ASTM A-615 GRADE 60

8 C-500 SITE - WHEEL STOP DETAIL

N.T.S.



JING ZONE:
WIDE, BLUE AND
P.



NOTES:

1. ALL WORK SHALL CONFORM WITH THE NYSDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS DATED, "CURRENT VERSION", AND ALL ADDENDA THERE TO; SPECIFICALLY SECTION 608- SIDEWALKS, DRIVEWAYS, AND BICYCLE PATHS.
2. SLOPE RAMP AND SIDE FLARES AS INDICATED IN THE PLANS OR AS ORDERED BY THE ENGINEER.
3. DETECTABLE WARNING UNITS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE W/ ADA REQUIREMENTS.

9 C-500 SITE - CURB RAMP

N.T.S.

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1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT:

ADIRONDACK PARK AGENCY

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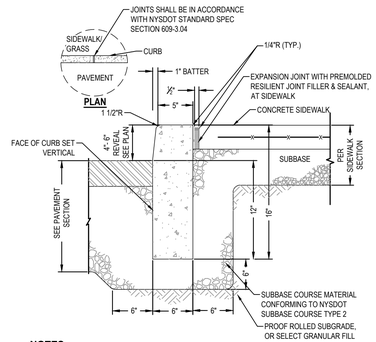
DRAWING TITLE:

CIVIL DETAILS
SITE

DRAWING NUMBER:

C-500

DRAWING OF

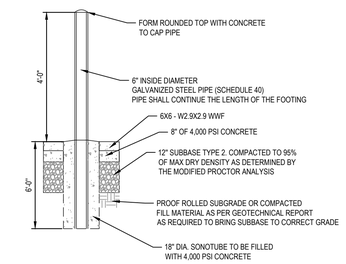


NOTES:

1. CONCRETE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT STANDARD SPECIFICATION SECTION 609.
2. PRECAST CONCRETE CURB MAY BE SUBSTITUTED, WHEN ALTERNATE CONSTRUCTION DETAILS ARE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. ALTERNATE CURB SHALL BE INSTALLED IN ACCORDANCE WITH NYSDOT SPEC SECTION 609.

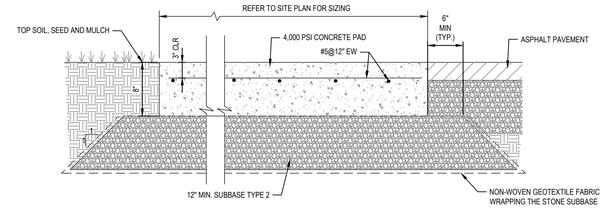
1 C-501 SITE - CAST IN PLACE CONCRETE CURB

N.T.S.



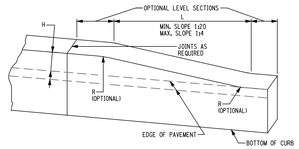
2 C-501 SITE - BOLLARD DETAIL

N.T.S.



3 C-501 SITE - CONCRETE DUMPSTER PAD

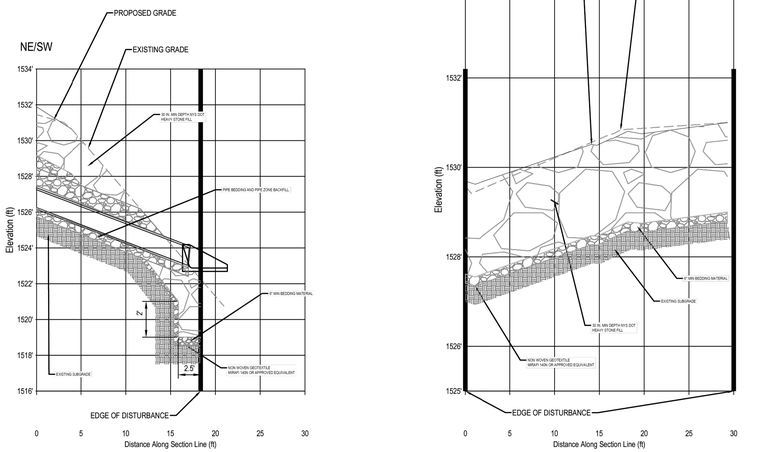
N.T.S.



CURB TRANSITION LENGTHS (L)			
H / SLOPE	1:4	1:12	1:20
4"	16"	48"	80"
6"	24"	72"	120"

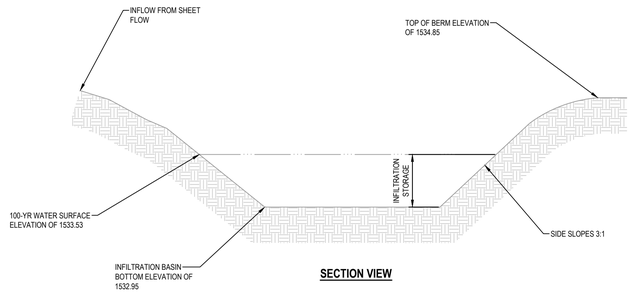
5 C-501 SITE - CURB TRANSITION DETAIL

N.T.S.



4 C-501 SITE - STORMWATER OUTLET XS

N.T.S.



SECTION VIEW

NOTES:

1. SEE SHEET C-141 FOR PLAN VIEW LAYOUT OF BASIN

6 C-501 SITE - INFILTRATION BASIN DETAIL

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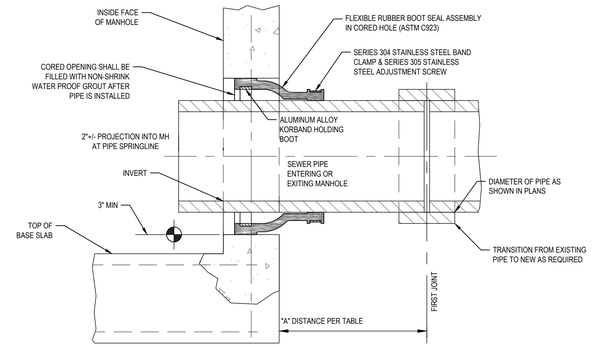
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CIVIL DETAILS
SITE 2

DRAWING NUMBER:

C-501

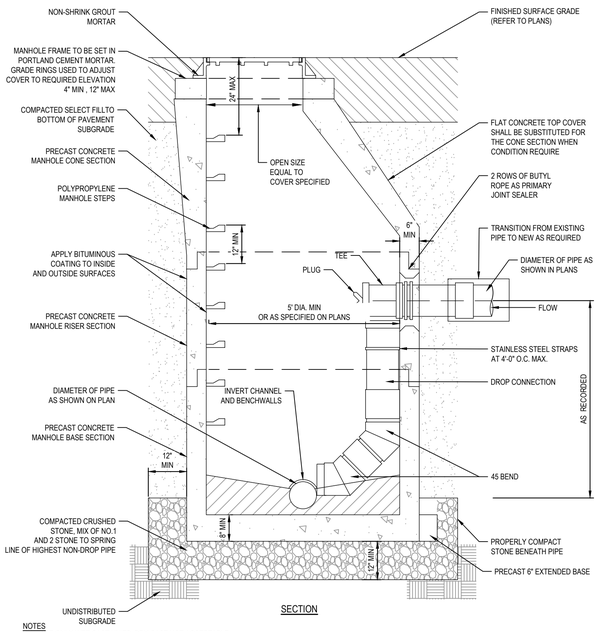
DRAWING OF



NOTE:
1. REFERENCE MANHOLE DETAIL(S) FOR REQUIRED INVERT CHANNEL CONFIGURATION

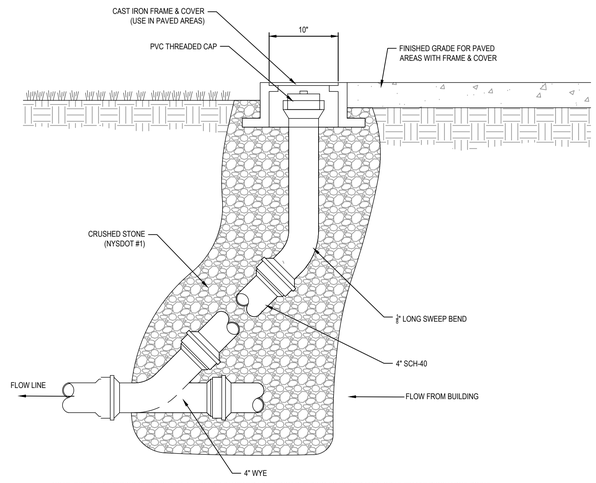
FLEXIBLE JOINT REQUIREMENT		
SEWER PIPE TYPE	FLEXIBLE JOINT TYPE IN & OUT	"A" DISTANCE (FEET)
PVC	STANDARD RUBBER GASKET PIPE JOINT ONLY	3' MAX

1 C-502 SAN - RUBBER GASKET PIPE JOINT
N.T.S.



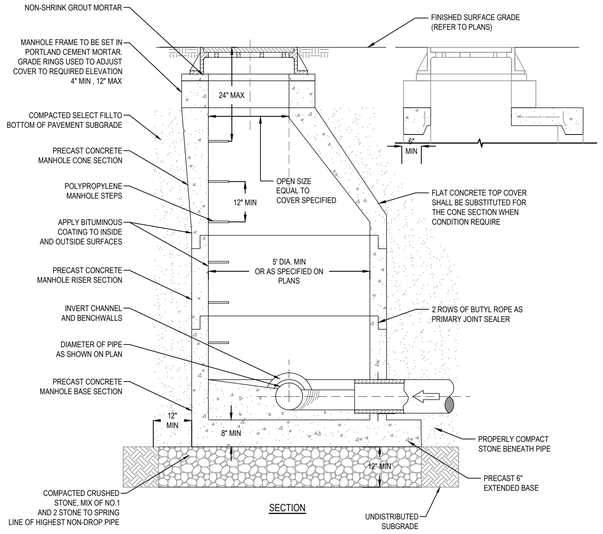
NOTES
1. USE ONLY WET-CAST UNITS. DRY-CAST NOT ACCEPTABLE
2. INVERT SHALL BE FILLETED.
3. REINFORCEMENT FOR MANHOLE COMPONENTS SHALL BE DESIGNED BY A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. STRUCTURE SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING PLUS 25% IMPACT.
4. CONCRETE TO TEST 4,500 PSI AT 28 DAYS IN CONFORMANCE WITH A.S.T.M. C-478
5. BENCH SHALL BE BUILT FOR FLOW BETWEEN INLET AND OUTLET.
6. EACH MANHOLE EXTERIOR SHALL RECEIVE TWO BITUMINOUS COATS.

4 C-502 SAN - PRECAST CONCRETE INSIDE DROP MANHOLE
N.T.S.



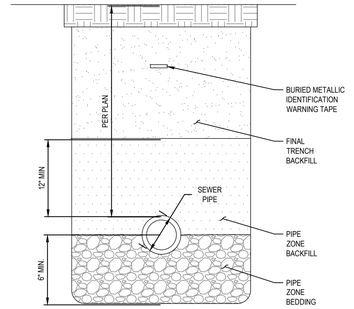
NOTE: INSTALL EXTERIOR CLEANOUT AT ALL BENDS IN SEWER LINE FROM BUILDING TO SEWER MAIN OR ULTIMATE DISCHARGE POINT.

2 C-502 SAN - CLEANOUT
N.T.S.



NOTES
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2. INVERT SHALL BE FILLETED.
3. REINFORCEMENT FOR MANHOLE COMPONENTS SHALL BE DESIGNED BY A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. STRUCTURE SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING PLUS 25% IMPACT.
4. CONCRETE TO TEST 4,500 PSI AT 28 DAYS IN CONFORMANCE WITH A.S.T.M. C-478
5. BENCH SHALL BE BUILT FOR FLOW BETWEEN INLET AND OUTLET.
6. EACH MANHOLE EXTERIOR SHALL RECEIVE TWO BITUMINOUS COATS.

5 C-502 SAN - PRECAST CONCRETE MANHOLE
N.T.S.



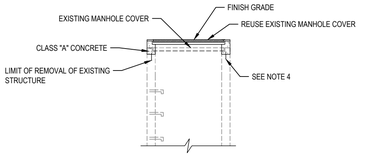
ITEM	DEPTH	MATERIAL
PIPE ZONE BEDDING	6" MIN	ANGULAR CRUSHED STONE
PIPE ZONE BACKFILL	12" MIN. COVER	CLEAN SAND OR GRAVEL
FINAL TRENCH BACKFILL	VARIES	SEE NOTE

NOTES:
1. FINAL TRENCH BACKFILL
   1.1. IN NON-PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE EXCAVATED MATERIAL WHEN DETERMINED SUITABLE BY THE ENGINEER OF RECORD; OTHERWISE IT SHALL BE NYSDOT TYPE 1 (ITEM NO. 304.02). MIN. MOD. PROCTOR DENSITY SHALL BE 85 PERCENT.
   1.2. IN PAVED AREAS, FINAL TRENCH BACKFILL SHALL BE NYSDOT TYPE 1 (ITEM NO. 304.02). MIN MODIFIED PROCTOR DENSITY SHALL BE 95 PERCENT.
2. ALL PIPE ZONE BEDDING, PIPE ZONE BACKFILL, AND FINAL TRENCH BACKFILL SHALL BE PLACED IN MAXIMUM 6" LIFTS. ALL BEDDING AND BACKFILL MATERIALS SHALL BE MECHANICALLY COMPACTED AS DIRECTED BY THE ENGINEER.
3. EXCAVATION SHALL BE KEPT DRY AND DEWATERED AT ALL TIMES.

3 C-502 SAN -SEWER PIPE TRENCH
N.T.S.

INLET AND OUTLET OF PIPES SHOWN ON PLAN VIEW OF BASE ARE NOT NECESSARILY TYPICAL OF ALL MANHOLES.

6 C-502 SAN - PIPE INVERT CHANNEL AND BENCHWALLS
N.T.S.



NOTES:
1. ALL CAST-IN-PLACE CONCRETE TO BE CLASS "A".
2. DRILL AND GROUT #4 BAR DOWELS 12" C-C WITH 6" MIN EMBEDMENT INTO OLD SURFACES AND NEW CONCRETE. ALL EXISTING CONCRETE SURFACES THAT WILL BE IN CONTACT WITH NEW CONCRETE SHALL BE COATED WITH EPOXY POLYSULFIDE GROUT PER NYSDOT STANDARD SPECIFICATIONS.
3. ALL EXISTING MORTAR AND MASONRY ADJUSTMENTS SHALL BE REMOVED PRIOR TO INSTALLATION OF CONCRETE ADJUSTMENT RINGS.
4. WHEN THE DEPTH OF THE ALTERATION IS MORE THAN 33", AND WHEN SOUND EXISTING CONCRETE IS ENCOUNTERED, 12" #4 BARS AT 12" C-C SHALL BE DRILLED AND GROUTED.
5. IF A STRUCTURE IS SEVERELY DETERIORATED, THE ENTIRE STURCTURE MAY REQUIRE REPLACEMENT WITH A PRECAST CONCRETE UNIT, ONLY AS APPROVED BY THE ENGINEER.

7 C-502 SAN - ADJUST CASTING TO GRADE DETAIL
N.T.S.

SUBMITTED FOR VILLAGE DEVELOPMENT BOARD REVIEW ONLY - NOT FOR CONSTRUCTION

3/3/2026 1:26:04 PM
4/29/2026 1:19:13 PM

NEW YORK STATE Office of General Services
DESIGN AND CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

Colliers Engineering & Design

Suozzo, Doty & Associates
PROFESSIONAL ENGINEERING, PLLC

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REGISTRATION EXPIRES:

CONTRACT: CONSTRUCTION

TITLE: PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION: 1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT: ADIRONDACK PARK AGENCY

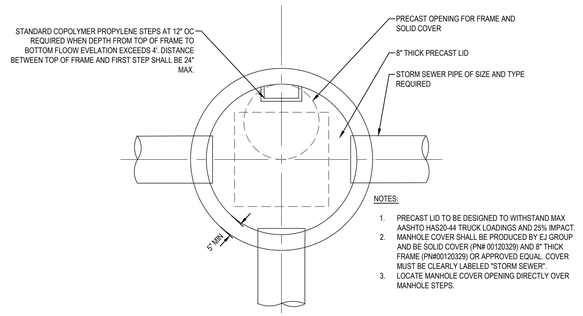
MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

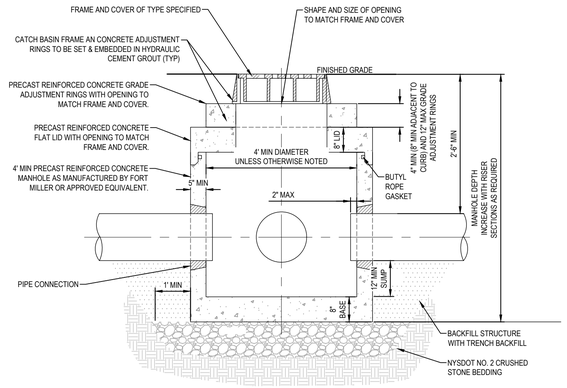
DRAWING TITLE: CIVIL DETAILS SEWER

DRAWING NUMBER: C-502

DRAWING OF



PLAN VIEW



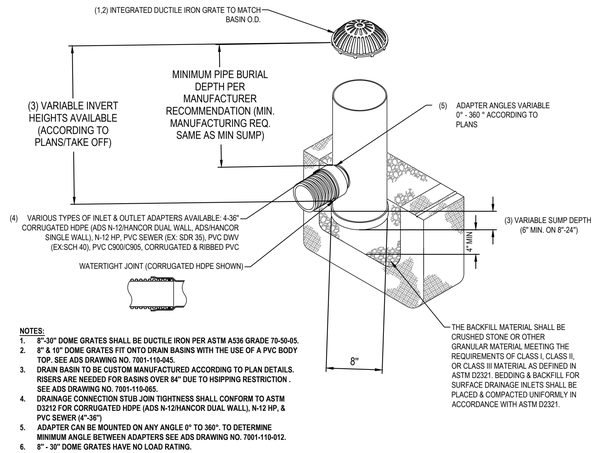
SECTION VIEW

NOTES:

1. MANHOLES SHALL BE PRECAST CONCRETE DESIGNED FOR HS20-44 VEHICULAR LOADING AND 25% IMPACT.
2. FRAME AND COVER SHALL BE DESIGNED FOR HS20-44 VEHICULAR LOADING AND 25% IMPACT.
3. MANHOLES HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE FLOOR OF THE CONCRETE BASE SHALL BE PROVIDED WITH STEPS.
4. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.
5. SUMPS FOR CATCH BASINS SHALL BE 12".
6. ECCENTRIC CONE TOP CAN BE USED FOR MANHOLES WITH DEPTHS GREATER THAN 84".
7. ALL PRECAST CONSTRUCTION IN ACCORDANCE WITH ASTM C478.

1 C-503 ST - PRECAST CONCRETE DRAINAGE MANHOLE

N.T.S.

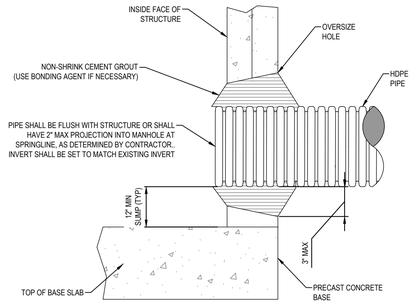


NOTES:

1. 8"-30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. 8" & 10" DOME GRATES FIT ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE ADS DRAWING NO. 7001-110-045.
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO HSIPPING RESTRICTION . SEE ADS DRAWING NO. 7001-110-065.
4. DRAINAGE CONNECTION STUB JOIN TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4"-36").
5. ADAPTER CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE ADS DRAWING NO. 7001-110-012.
6. 8" - 30" DOME GRATES HAVE NO LOAD RATING.

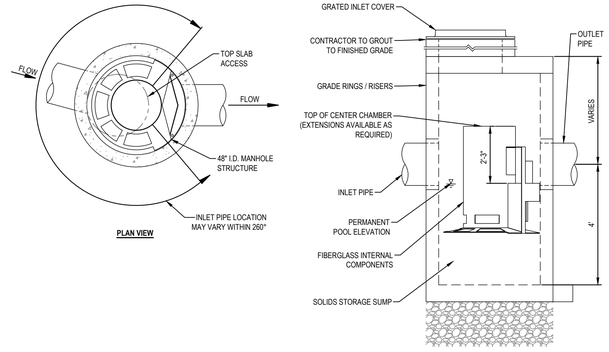
6 C-503 ST- ADS NYLOPLAST DRAIN BASIN

N.T.S.



2 C-503 ST - PIPE CONNECTION SEAL JOINT DETAIL

N.T.S.

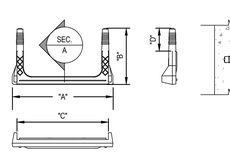


PLAN VIEW

SECTION VIEW

3 C-503 ST - CASCADE SEPARATOR

N.T.S.



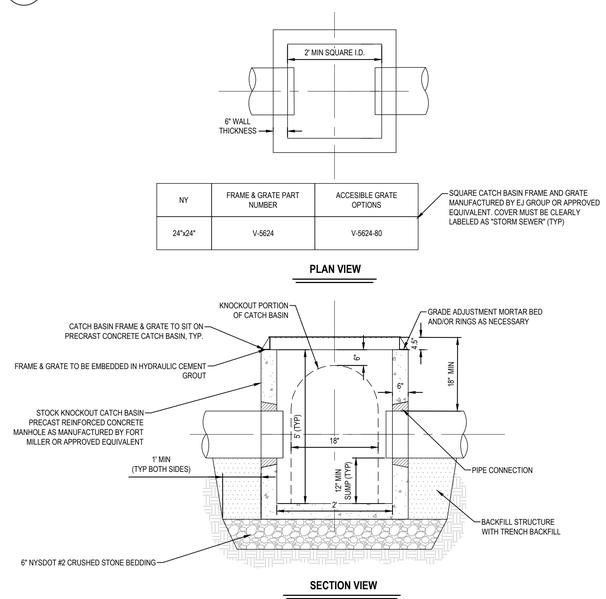
ACCEPTABLE MANHOLE STEPS						
MANUFACTURER	PATTERN NUMBER	"A" STEP WIDTH	"B" LEG LENGTH	"C" RUNG CLEAR	"D" EMBEDMENT	"E" RUNG CLEAR
M.A. INDUSTRIES INC*	PS2-PF	14 3/4	9 1/4	13 3/4	3 3/8	5 7/8
M.A. INDUSTRIES INC*	PS2-PF	14 3/4	8 1/4	13 3/4	3 3/8	4 7/8

NOTES:

1. *OR APPROVED EQUIVALENT
2. MANHOLE STEP DESIGN AND INSTALLATION SHALL COMPLY WITH ALL OSHA REGULATIONS.
3. CAST-IN-PLACE OR PRESS FIT ACCEPTABLE.

4 C-503 ST - COPOLYMER POLYPROPYLENE MH STEP

N.T.S.



NY	FRAME & GRATE PART NUMBER	ACCESIBLE GRATE OPTIONS
24"x24"	V-5624	V-5624-80

PLAN VIEW

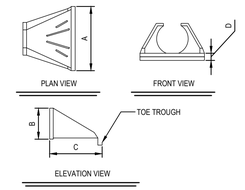
SECTION VIEW

NOTES:

1. ALL PRECAST CONSTRUCTION SHALL BE IN ACCORDANCE WITH ASTM C478.
2. CATCH BASIN INLET BASINS SHALL BE PRECAST CONCRETE DESIGNED FOR HS20-44 VEHICULAR LOADING + 25% IMPACT AS MANUFACTURED BY FORT MILLER OR APPROVED EQUAL.
3. CATCH BASIN SHALL NOT HAVE A DEPTH GREATER THAN 60" FROM FINISHED SURFACE.
4. BACKFILL USING TRENCH BACKFILL. COMPACTED IN 6" LIFTS.

7 C-503 ST - 2x2 PRECAST CONCRETE SHALLOW CATCH BASIN

N.T.S.



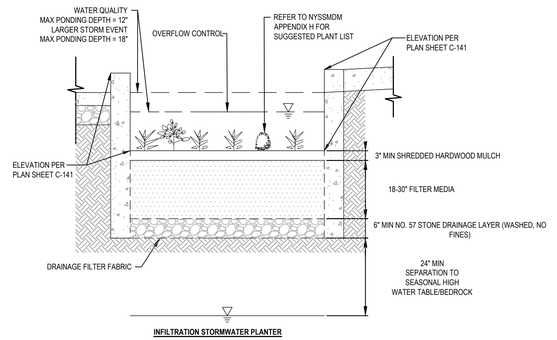
TYPICAL HDPE END SECTION				
PIPE DIA.	END SECTION DIMENSIONS			
	A	B	C	D
12"	42"	14"	34"	6"
15"	42"	17"	34"	6"
18"	59"	21"	48"	6"
24"	59"	27"	48"	6"
30"	82"	34"	58"	6"
36"	82"	41"	58"	6"

NOTES:

1. THIS SPECIFICATION DESCRIBES 12" THROUGH 36" ADS FLARED END SECTIONS FOR USE IN CULVERT AND DRAINAGE OUTLET APPLICATIONS. FES LARGER THAN 36" SHALL USE CIRCULAR CORRUGATED METAL FLARED END SECTIONS.
2. THE INVERT OF THE PIPE AND THE END SECTION SHALL BE AT THE SAME ELEVATION. THE ADS FLARED END SECTION SHALL BE HIGH DENSITY POLYETHYLENE MEETING ASTM D3350 MINIMUM CELL CLASSIFICATION 213320C; CONTACT MANUFACTURER FOR ADDITIONAL CELL CLASSIFICATION INFORMATION. WHEN PROVIDED, THE METAL THREADED FASTENING ROD SHALL BE STAINLESS STEEL.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH ADS INSTALLATION INSTRUCTIONS AND WITH THOSE ISSUED BY STATE OR LOCAL AUTHORITIES. CONTACT YOUR LOCAL ADS REPRESENTATIVE OR VISIT WWW.ADS-PIPE.COM FOR THE LATEST INSTALLATION INSTRUCTIONS.
4. PROVIDE TRASH RACK ONLY WHERE SPECIFIED ON SITE PLANS.

5 C-503 ST - FLARED END SECTION

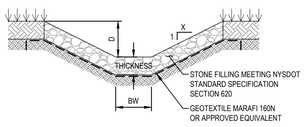
N.T.S.



INFILTRATION STORMWATER PLANTER

8 C-503 ST - STORMWATER PLANTER (RR7)

N.T.S.



CHANNEL TYPE	D (FT)	X (FT)	BW (FT)	d50 (IN)	dMAX (IN)	NYS STANDARD DOT	THICKNESS (IN)
B	0.5	3	1	6"	6"-9"	LIGHT	12

9 C-503 ST - STONE LINED SWALE

N.T.S.

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NEW YORK STATE Office of General Services

DESIGN AND CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

Colliers Engineering & Design

Suozzo, Doty & Associates
PROFESSIONAL ENGINEERING, PLLC

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REGISTRATION EXPIRES:

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE APA HEADQUARTERS
ADIRONDACK PARK AGENCY

LOCATION:
1-2 MAIN STREET
VILLAGE OF SARANAC LAKE, NY

CLIENT:
ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

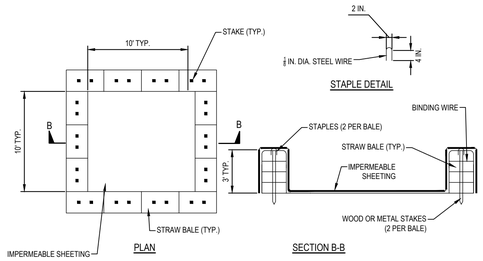
PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE:
CIVIL DETAILS
STORM

DRAWING NUMBER:
C-503

DRAWING OF

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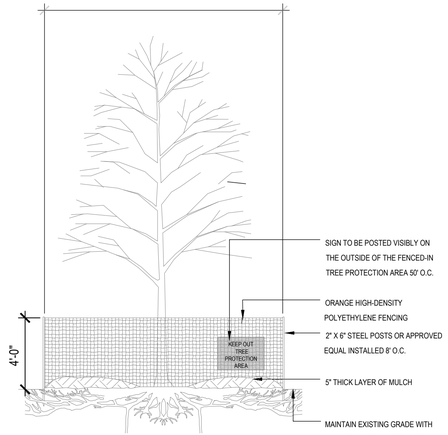


NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

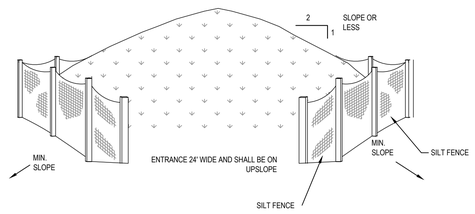
NOTES
1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

1 C-504 ESC - CONCRETE WASHOUT DETAIL
N.T.S.

NOTES:
1. SEE REMOVAL PLANS FOR LOCATION OF ALL TREE PROTECTION FENCES.
2. TREE PROTECTION FENCING SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETED.
3. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITIES SHALL BE PRUNED OFF FLUSH WITH THE EXPOSED SOIL FACE. CUT ROOTS BACK TO UNBROKEN, HEALTHY STOCK WITH A SHARP CLEAN SAW. BACKFILL EXPOSED ROOT AREA WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE AFTER THE CUT IS MADE. NO PARKING, MATERIAL STORAGE, OR
4. CONSTRUCTION ACTIVITIES ARE TO BE PERMITTED WITHIN THE DRIP LINE OF ANY TREE, INCLUDING DURING FENCE INSTALLATION AND REMOVAL.

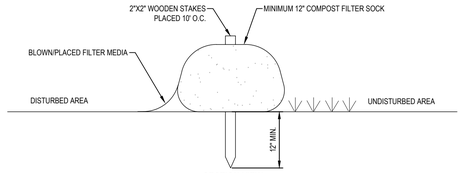


3 C-504 ESC - TREE PROTECTION DETAIL
N.T.S.



NOTES:
1. AREA CHOSEN FOR STOCKPILING OPERATION SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2 HORIZONTAL ON 1 VERTICAL
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR HAY BALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. NO CONSTRUCTION MATERIALS MAY BE STOCKPILED UPON THE ROADWAY

6 C-504 ESC - TEMPORARY SOIL STOCKPILE
N.T.S.

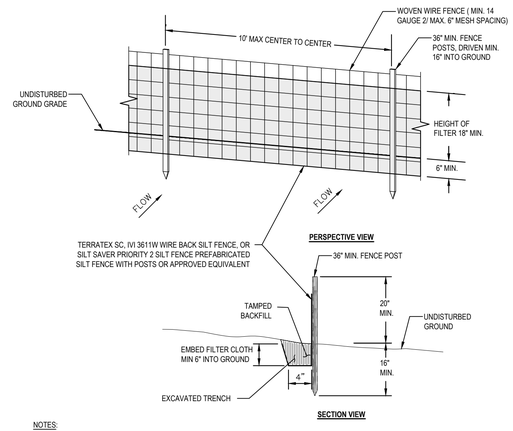


COMPOST FILTER SOCK MAXIMUM SLOPE LENGTH TABLE							
DIA. (IN.)	SLOPE %						
	2	5	10	20	25	33	50
8	225	200	100	50	20	-	-
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
* LENGTH IN FEET							

COMPOST FILTER SOCK STANDARDS TABLE	
ORGANIC MATTER CONTENT	25% – 100% (DRY WEIGHT)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	6.0 -8.0
MOISTURE CONTENT	30% – 60%
PARTICLE SIZE	100% PASSING A 1" SCREEN AND 10 – 50% PASSING A 3/8" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

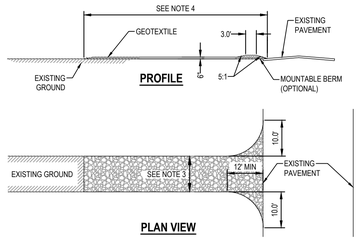
COMPOST FILTER SOCK FABRIC MINIMUM SPECIFICATION TABLE					
MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI–FILAMENT POLYPROPYLENE (MFPP)	HEAVY DUTY MULTI– FILAMENT POLYPROPYLENE (HDMFPP)
MATERIAL CHARACTERISTICS	PHOTODEGRADABLE	PHOTODEGRADABLE	BIODEGRADABLE	PHOTODEGRADABLE	PHOTODEGRADABLE
SOCK DIAMETERS	12"	12"	12"	12"	12"
		18"	18"	18"	18"
	18"	24"	24"	24"	24"
		32"	32"	32"	32"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI	202 PSI
"ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)"	23% AT 1000 HR.	23% AT 1000 HR.		"100% AT 1000 HR."	100% AT 1000 HR.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

2 C-504 ESC - COMPOST FILTER SOCK
N.T.S.



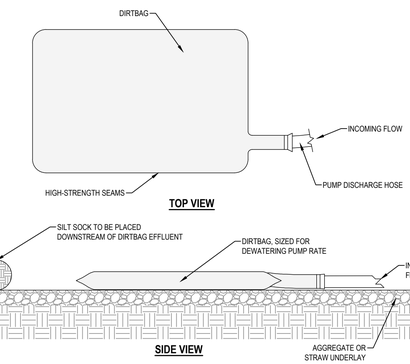
NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAX. MESH OPENING
3. WHEN TOW SECTION OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. MAXIMUM DRAINAGE AREA FOR OVERLAND FLOW TO A SILT FENCE SHALL NOT EXCEED 1 ACRE PER 100 FEET OF FENCE.
6. SILT FENCE SHALL BE USED WHERE EROSION COULD OCCUR IN THE FORM OF SHEET EROSION.
7. SILT FENCE SHALL NOT BE USED WHEN A CONCENTRATION OF WATER IS FLOWING TO THE BARRIER.

4 C-504 ESC - SILT FENCE
N.T.S.

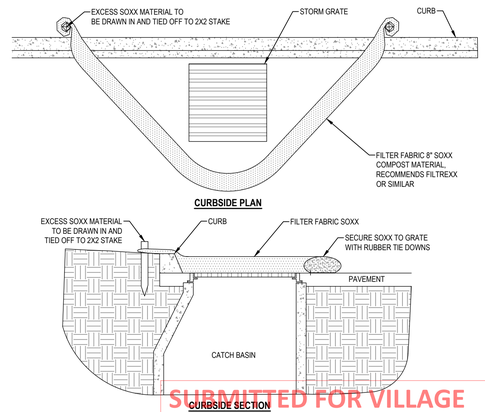


CONSTRUCTION ENTRANCE SPECIFICATIONS:
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. THICKNESS - NOT LESS THAN SIX (6) INCHES.
3. WIDTH - FOURTEEN (14) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY FOUR (24) FEET IF SINGLE ENTRANCE TO SITE.
4. LENGTH - NOT LESS THAN 50'.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

7 C-504 ESC - STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.



5 C-504 ESC - DEWATERING BAG
N.T.S.



8 C-504 ESC - STORM DRAIN PROTECTION DETAILS
N.T.S.

SUBMITTED FOR VILLAGE DEVELOPMENT BOARD REVIEW ONLY - NOT FOR CONSTRUCTION

NEW YORK STATE Office of General Services
DESIGN AND CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 083208

Colliers Engineering & Design
Suozzo, Doty & Associates
PROFESSIONAL ENGINEERING, PLLC

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REGISTRATION EXPIRES:

CONTRACT: CONSTRUCTION

TITLE: PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION: 1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT: ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

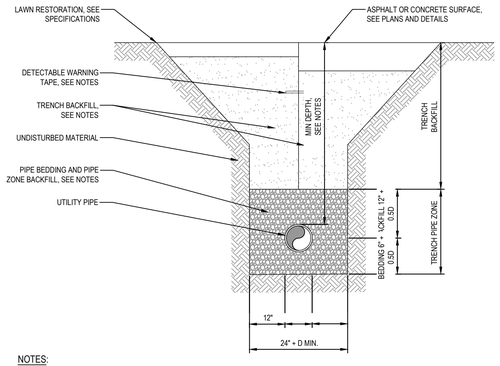
PROJECT NUMBER:	46219–C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: CIVIL DETAILS ESC

DRAWING NUMBER: C-504

DRAWING OF

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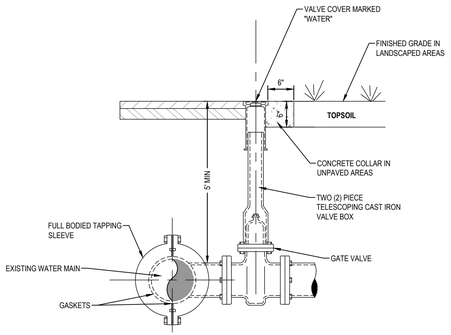


NOTES:

1. DETECTABLE WARNING TAPE SHALL BE PLACED NO LESS THAN 12" BUT NO GREATER THAN 24" ABOVE ALL PIPELINES. NON-METALLIC PIPELINES SHALL USE METALLIC WARNING TAPE.
2. ALL PLASTIC PIPELINES SHALL BE INSTALLED WITH STAINLESS STEEL, HDPE JACKETED TRACER WIRE FOR LOCATING PURPOSES.
3. ON-SITE EXCAVATED MATERIAL MAY BE USED FOR TRENCH BACKFILL IF MEETING THE REQUIREMENTS OF SELECT FILL MATERIAL.
4. ALL TRENCHING SHALL ADHERE TO OSHA STANDARDS.
5. UNLESS OTHERWISE INDICATED MINIMUM BURY DEPTH SHALL BE 6'-0" FOR POTABLE WATER PIPE.
6. D = OUTSIDE PIPE DIAMETER

	SIEVE	PASSING	DESCRIPTION
TRENCH BACKFILL	3"	100%	TRENCH BACKFILL SHALL MEET GRADATION STATED HEREIN, AND SHALL BE FREE OF SOFT NON-DURABLE PARTICLES, ORGANIC MATERIAL, AND SHALL BE WELL GRADED. TRENCH BACKFILL SHALL BE A PROCESSED GRAVEL, NATURAL R.O.B. MATERIAL, OR EXCAVATED MATERIALS MEETING THE REQUIREMENTS HEREIN. TRENCH BACKFILL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR.
	¾"	30-100%	
	NO. 40	0-50%	
	NO. 200	0-10%	
PIPE BACKFILL & PIPE BEDDING	¾"	100%	PIPE BACKFILL AND BEDDING SHALL MEET THE GRADATION STATED HEREIN, AND SHALL BE FREE OF SOFT NON-DURABLE PARTICLES, ORGANIC MATERIAL, AND SHALL BE WELL GRADED. PIPE BACKFILL AND BEDDING MATERIAL SHALL BE AN IMPORTED MATERIAL AND SHALL BE A R.O.B. SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL.
	NO. 40	0-70%	
	NO. 200	0-10%	

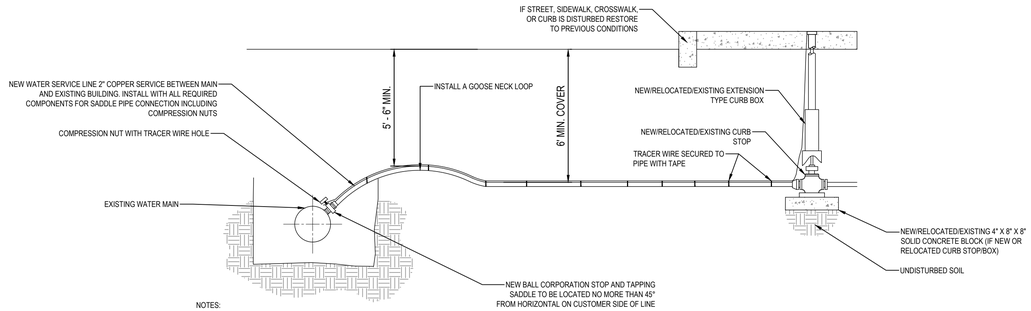
1 C-505 TRENCH DETAIL
N.T.S.



NOTES:

1. NO ONE, EXCEPT THE DEPARTMENT OF PUBLIC WORKS, SHALL TAP OR CAUSE TO BE TAPPED ANY WATER MAIN, EITHER PRIVATE OR VILLAGE-OWNED, THROUGH WHICH WATER PASSES.
2. NO CONNECT TO ANY WATER SERVICE LINE SHALL BE MADE WITHOUT THE EXPRESS PERMISSION AND CONSENT OF THE VILLAGE, AND ANY PERMITTED CONNECTION SHALL BE MADE IN ACCORDANCE WITH THE PROVISIONS OF THIS ARTICLE.
3. NO TAP OR CONNECTION FOR WATER SERVICE SHALL BE MADE UNTIL A PERMIT SHALL HAVE BEEN OBTAINED AND THE TAPPING FEE IS PAID.
4. NO EXCAVATION SHALL COMMENCE UNTIL AFTER A PERMIT IS ISSUED AND NOTIFICATION OF INTENTION TO EXCAVATE HAS BEEN GIVEN TO THE PUBLIC WORKS DEPARTMENT AT LEAST ONE WORKDAY PRIOR, AND DIG SAFE NY TWO FULL DAYS IN ADVANCE, EXCLUDING WEEKENDS AND HOLIDAYS, TO THE COMMENCEMENT OF ANY SUCH EXCAVATION.
5. ONLY ONE TAP SHALL BE MADE FOR EACH SERVICE LINE, AND THE FEES FOR TAPPING SHALL BE ESTABLISHED ANNUALLY BY RESOLUTION OF THE VILLAGE BOARD OF TRUSTEES.
6. ALL NEW TAPS SHALL BE A MINIMUM OF 12 INCHES FROM ANY OTHER TAP.
7. TAPPING SLEEVE AND VALVE SUPPORT SHALL BE COORDINATED WITH THE ENGINEER TO SUIT FIELD CONDITIONS
8. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE 3 FEET
9. VALVE OPERATING DIRECTION SHALL BE COUNTERCLOCKWISE TO OPEN (TURNING LEFT)
10. TAPPING SLEEVE SHALL BE SELECTED TO FIT EXISTING PIPE MATERIAL (CI , DI , AC) AND OUTSIDE DIAMETERS
11. THRUST BLOCK IS REQUIRED WHERE THE BRANCH OF THE TAPPING SLEEVE DOES NOT HAVE RESTRAINED JOINT

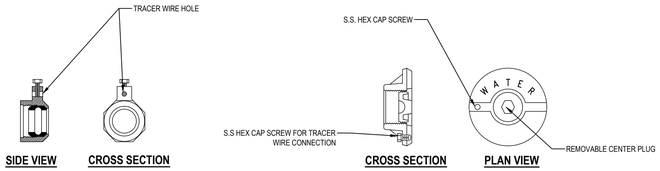
3 C-505 TAPPING SLEEVE AND VALVE
N.T.S.



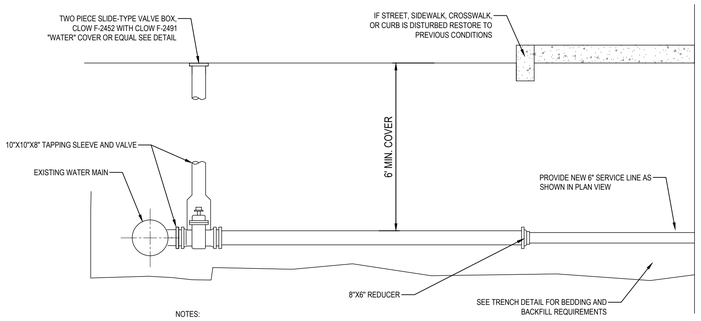
NOTES:

1. CURB BOX LOCATED IN GRASS SHALL BE 1" ABOVE GRADE, IN PAVEMENT/CONCRETE CURB BOX SHALL BE FLUSH WITH SURFACE.
2. TIGHTEN ALL COMPONENTS TO MANUFACTURER'S RECOMMENDATIONS.
3. VALVE ROD AND PINS SHALL BE STAINLESS STEEL.
4. WARNING TAPE MUST BE INSTALLED WITH ALL OPEN CUT TRENCHED WATER SERVICE PIPE INSTALLATIONS.
5. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE MAINTAINED IN ACCORDANCE WITH REGULATORY AGENCY.

2 C-505 EXISTING BUILDING WATER SERVICE DETAIL
N.T.S.



2A C-505 COMPRESSION NUT DETAIL
N.T.S.

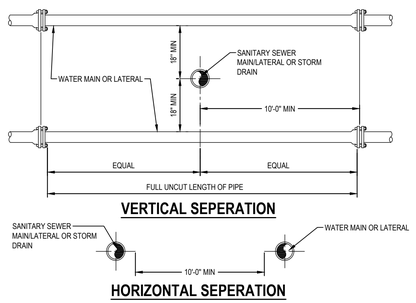


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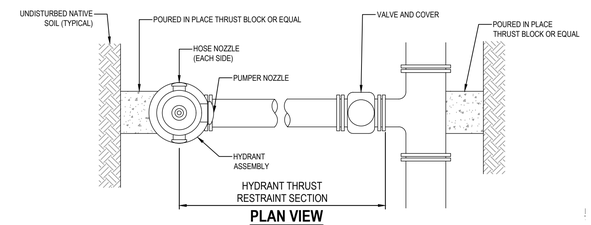
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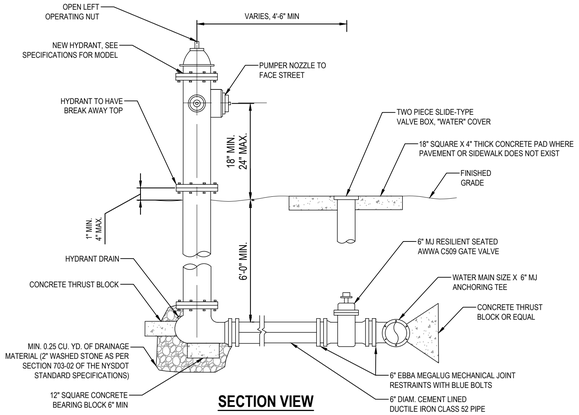
2B C-505 CURB BOX LID DETAIL
N.T.S.

4 C-505 PROPOSED BUILDING COMBINED DOMESTIC AND FIRE SERVICE DETAIL
N.T.S.



6 C-505 SANTIARY/STORM SEWER AND WATERMAIN SEPERATION DETAIL
N.T.S.





NOTES:

1. VERIFY WITH WATER DEPARTMENT AND FIRE DISTRICT PRIOR TO HYDRANT INSTALLATION.
2. ALL MJ JOINT SHALL BE ASSEMBLED WITH EBBA MEGALUG MECHANICAL JOINT RESTRAINTS WITH BLUE BOLTS, ASSEMBLIES SHALL HAVE BREAK OFF TORQUE CONTROL NUTS.

5 C-505 HYDRANT ASSEMBLY DETAIL
N.T.S.

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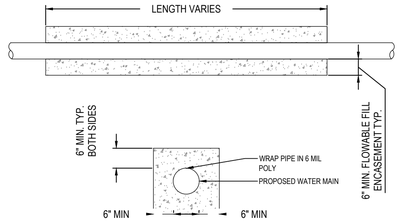
MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: CIVIL DETAILS WATER

DRAWING NUMBER: C-505

DRAWING OF

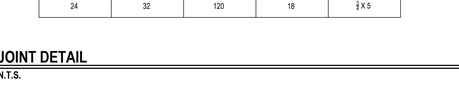


SECTION VIEW

NOTES:
1. USE PIPE ENCASEMENT AS NEEDED WHERE WATER MAIN CANNOT MAINTAIN A 10' SEPARATION FROM STORM OR SANITARY SEWER UNLESS THE WATER MAIN IS ABOVE THE SEWER FROM EDGE TO EDGE BY 18".

1 C-506 FLOWABLE FILL ENCASEMENT DETAIL

N.T.S.



PUSH-ON JOINT FOR DUCTILE IRON PIPE AND FITTINGS

RESTRAINED MECHANICAL JOINT FOR DUCTILE IRON PIPE AND FITTINGS

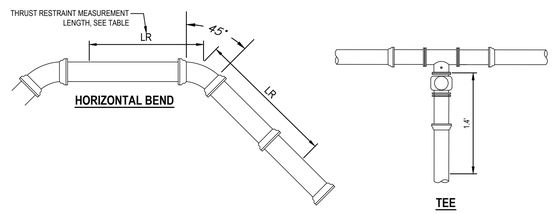
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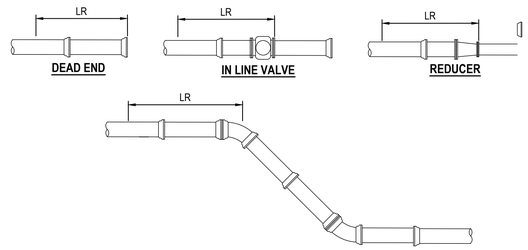
EBBA MEGALUG MECHANICAL JOINT RESTRAINTS WITH BLUE BOLTS, ASSEMBLIES SHALL HAVE BREAK OFF TORQUE CONTROL NUTS.

SIZE (IN)	NO. SET SCREWS	SET SCREW TORQUE	NO. TEE BOLTS	SIZE TEE BOLTS (DIAM X L)
3	4	80	4	¾ X 3
4	4	80	4	¾ X 3.5
6	6	80	6	¾ X 3.5
8	9	80	6	¾ X 4
10	12	80	8	¾ X 4
12	16	80	8	¾ X 4
14	20	100	10	¾ X 4
16	24	100	12	¾ X 4.5
18	24	100	12	¾ X 4.5
20	28	120	14	¾ X 4.5
24	32	120	18	¾ X 5

3 C-506 JOINT DETAIL

N.T.S.





MINIMUM RESTRAINED LENGTH OF PIPE (LR)

VERTICAL UPWARD BENDS (FT)

FITTING	4" NPS	6" NPS	8" NPS	10" NPS	12" NPS	14" NPS	16" NPS	18" NPS	20" NPS	24" NPS
11 ¼° BEND	1.5	2.0	3.0	3.0	4.0	4.0	5.0	5.0	6.0	6.5
22 ½° BEND	1.5	2.0	3.0	3.0	4.0	4.0	5.0	5.0	6.0	7.0
45° BEND	3.0	4.0	5.5	6.5	8.0	9.0	10.0	10.5	11.5	13.5
90° BEND	7.0	10.0	12.5	15.5	18.5	20.5	23.5	26.0	28.0	32.5
VERTICAL DOWNWARD BENDS (FT)										
FITTING	4" NPS	6" NPS	8" NPS	10" NPS	12" NPS	14" NPS	16" NPS	18" NPS	20" NPS	24" NPS
11 ¼° BEND	3.5	5.0	6.5	8.0	9.5	10.5	12.0	13.0	14.5	17.0
22 ½° BEND	7.0	10.0	13.0	15.5	18.5	21.0	24.0	26.5	29.0	34.0
45° BEND	14.5	20.5	27.0	32.5	38.5	44.0	49.0	54.5	60.0	70.0
90° BEND	35.0	49.5	64.0	78.0	92.0	105.0	118.5	131.5	144.5	169.0

MINIMUM RESTRAINED LENGTH OF PIPE (FT-IN) LR

FITTING	4" NPS	6" NPS	8" NPS	10" NPS	12" NPS	14" NPS	16" NPS	18" NPS	20" NPS	24" NPS
11 ¼° BEND	1'-3"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-3"
22 ½° BEND	1'-3"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-6"
45° BEND	3'-0"	4'-0"	5'-3"	6'-3"	7'-6"	8'-6"	9'-6"	10'-6"	11'-6"	13'-6"
90° BEND	7'-0"	9'-9"	12'-6"	15'-6"	18'-0"	20'-0"	23'-0"	23'-6"	28'-0"	32'-6"
DEAD END	8'-6"	12'-6"	16'-0"	19'-3"	23'-0"	26'-0"	29'-6"	33'-0"	36'-0"	42'-0"

NOTE: PVC PIPE WILL TYPICALLY HAVE SLIGHTLY GREATER RESTRAINED LENGTH

NOTE: FOR POLYETHYLENE WRAPPED PIPE, MULTIPLY VALUES IN TABLE BY 1.45

2 C-506 THRUST RESTRAINT MEASUREMENT DETAIL

N.T.S.

MINIMUM GRAVITY BLOCK VOLUME FOR VERTICAL BENDS (FT^3)

FITTING	4" NPS	6" NPS	8" NPS	10" NPS	12" NPS	14" NPS	16" NPS	18" NPS	20" NPS	24" NPS
11 ¼° BEND	4	11	18	25	35	46	60	74	92	131
22 ½° BEND	11	18	32	49	67	92	120	148	184	261
45° BEND	18	35	64	95	134	180	233	293	360	512
90° BEND	32	67	117	177	247	332	431	540	664	950

SIZE PIPE	11° A	11° B	22° A	22° B	45° A	45° B	90° A	90° B	TEE/PLUG A	TEE/PLUG B
4"	12"	6"	15"	9"	24"	9"	27"	15"	24"	12"
6"	15"	9"	24"	9"	30"	15"	39"	21"	36"	15"
8"	21"	9"	27"	15"	39"	21"	51"	27"	39"	24"
10"	24"	12"	36"	15"	48"	24"	63"	30"	51"	27"
12"	27"	15"	39"	21"	54"	27"	72"	39"	63"	30"
14"	36"	15"	42"	24"	63"	30"	87"	42"	66"	39"
16"	39"	21"	54"	27"	66"	39"	96"	48"	78"	42"
18"	42"	21"	60"	30"	87"	39"	111"	54"	90"	48"
20"	42"	24"	60"	36"	87"	48"	126"	60"	102"	51"
24"	54"	27"	75"	39"	105"	54"	150"	72"	123"	63"

SIZE	REDUCER A	REDUCER B	SIZE	REDUCER A	REDUCER B
6 X 4	12"	6"	16 X 8	42"	24"
8 X 4	15"	9"	16 X 10	54"	27"
8 X 6	21"	9"	16 X 12	54"	27"
10 X 6	24"	12"	20 X 12	54"	27"
10 X 6	27"	15"	20 X 16	54"	27"
12 X 6	36"	15"	24 X 12	54"	27"
12 X 8	39"	21"	24 X 16	54"	27"
12 X 10	42"	21"	24 X 20	54"	27"

ANCHOR ROD SCHEDULE FOR GRAVITY BLOCKS

PIPE SIZE	RODS	MIN EMBEDMENT LENGTH
4 NPS	1 - #3 BAR	6"
6 NPS	1 - #3 BAR	6"
8 NPS	2 - #4 BAR	6"
10 NPS	2 - #4 BAR	6"
12 NPS	2 - #5 BAR	7"
14 NPS	2 - #6 BAR	8"
16 NPS	2 - #6 BAR	8"
18 NPS	2 - #7 BAR	10"
20 NPS	2 - #8 BAR	11"
24 NPS	2 - #9 BAR	12"

4 C-506 CONCRETE THRUST BLOCK

N.T.S.

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NEW YORK STATE Office of General Services

DESIGN AND CONSTRUCTION

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TITLE: PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION: 1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT: ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
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	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE: CIVIL DETAILS WATER 2

DRAWING NUMBER: C-506

DRAWING OF

Appendix D-1

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:

    a. one or more acres; or

    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or

    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.

        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or

        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or

        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or

        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:

    a. already covered by a different SPDES permit; or

    b. covered under a different SPDES permit that was denied, terminated, or revoked; or

    c. identified in an expired individual SPDES permit that was not renewed; or

    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or

    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

        i. 1-5 acres of disturbance - 20 feet; or

        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

    a. obtain all such necessary permits; or

    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

    a. For linear transportation and linear utility project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb two or more acres of *steep slope*.

    b. For all other project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

    a. Wastewater from washout of concrete; and

    b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

    c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

    d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

    e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

    a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

    i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

    ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

    iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

    i. meets all other eligibility requirements of Part I.A.; and

    ii. will occur in NYSDEC's Regions 3-9; and

    iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

    iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

    a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

    b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

        i. for all eNOIs:

            1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

b. The written Request to Disturb Greater Than Five Acres must include:

i. The SPDES permit identification number (Permit ID); and

ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

    a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

    b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

    c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

    d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

    e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

    f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

        i. the revised area of disturbance and/or *impervious area(s)*; and

        ii. the revised SMP information, if applicable; and

        iii. a narrative description of what has changed; and

        iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

    Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

    a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

        i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s; and

        ii. Control *stormwater discharge*s, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

        iii. *Minimize* the amount of soil exposed during *construction activity*; and

        iv. *Minimize* the disturbance of *steep slope*; and

        v. *Minimize* sediment *discharge*s from the site; and

        vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharge*s, unless *infeasible*; and

        vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

   In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

   1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

   2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

   3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

    a. The owner or operator must consider:

        i. the following physical risks due to climate change:

            (i) increasing temperature; and

            (ii) increasing precipitation; and

            (iii) increasing variability in precipitation, including chance of drought; and

            (iv) increasing frequency and severity of flooding; and

            (v) rising sea level; and

            (vi) increasing storm surge; and

            (vii) shifting ecology.

        ii. for each of the following:

            (i) overall site planning; and

            (ii) location, elevation, and sizing of:

                a. control measures and practices; and

                b. conveyance system(s); and

                c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements 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 requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) 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 am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

   a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

   b. SMPs must be designed in conformance with the *performance criteria*:

      i. in the DM; or

      ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

      iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

(i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

(ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

(iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

(iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

    i. begin implementing corrective actions within one business day; and

    ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

    i. begin the engineering design process within five business days; and

    ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

    a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

iii. Total area that has achieved *temporary stabilization*; and

iv. Total area that has achieved *final stabilization*; and

k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

m. Identification and status of all corrective actions that were required by previous inspection; and

n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

   i. all soil disturbance activities have ceased; and

   ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

   iii. all temporary, structural erosion and sediment control measures have been removed; and

   iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

   v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

    a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

    b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

    c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism 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; or

    d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

    a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

g. the *discharge* is in violation of section 17-0501 of the ECL; and

h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

   i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

   ii. the size of the *discharge(s)*; and

   iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

   iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

    a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

        (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

        Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

    b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

    1. the chief executive officer of the agency; or

    2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

    c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

    I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a 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.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

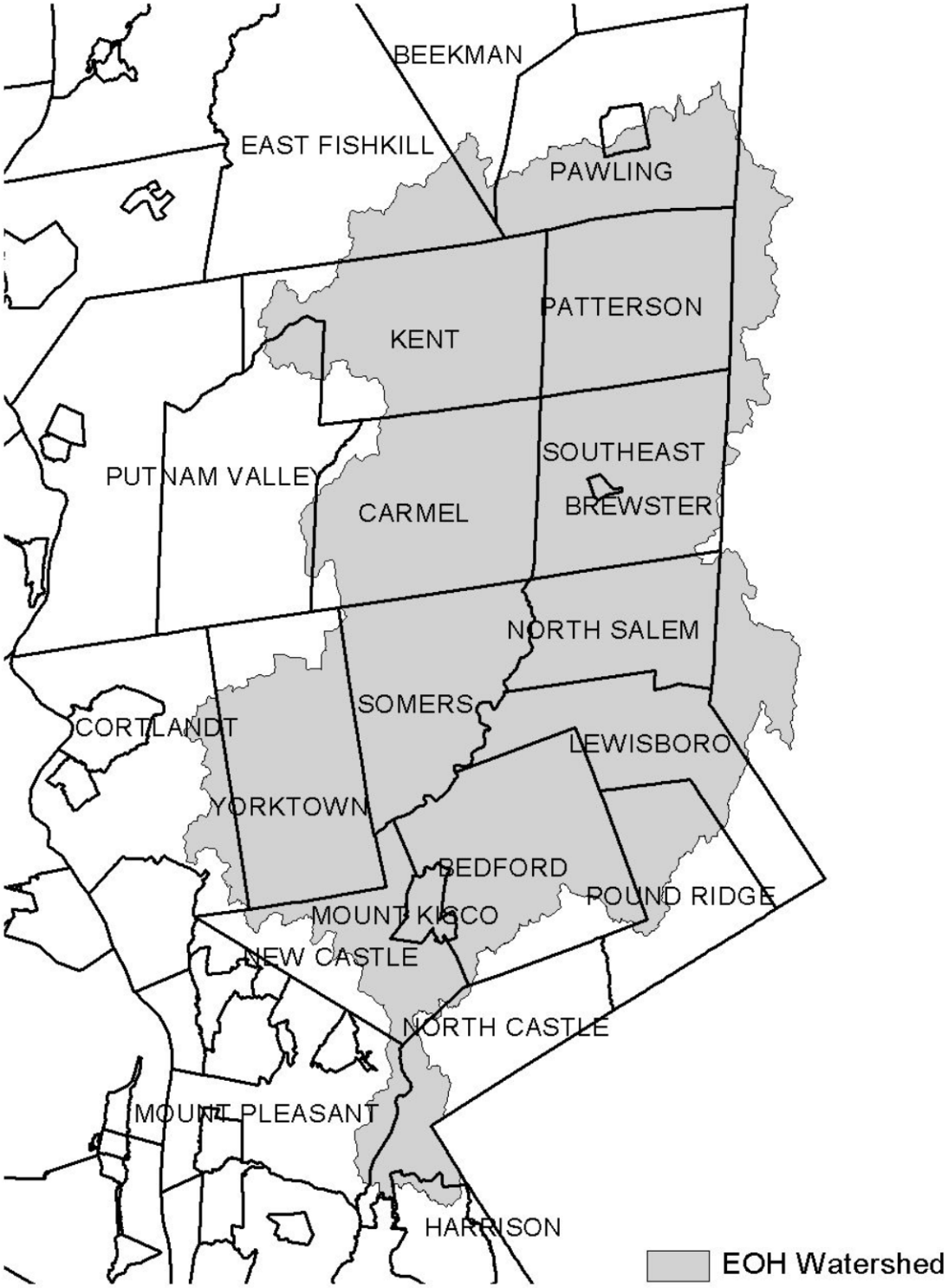


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed

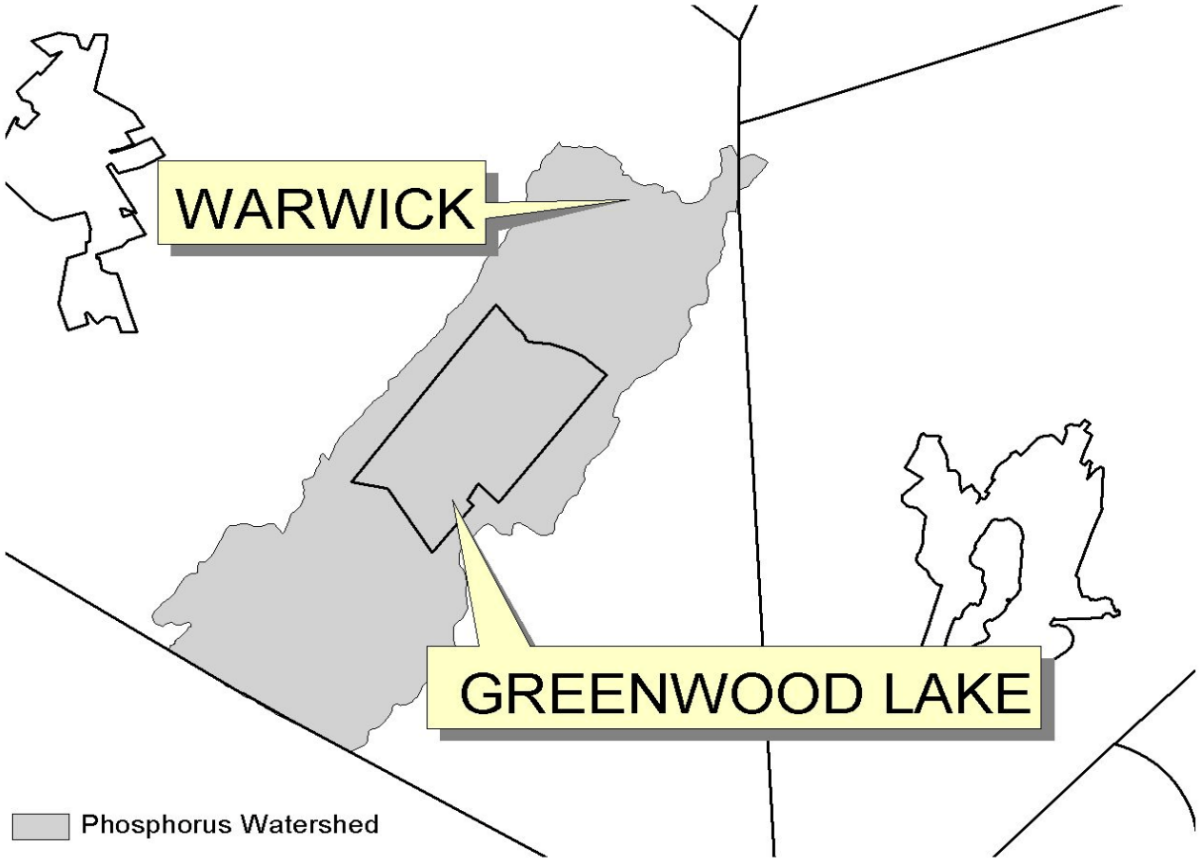


Figure 4 - Oscawana Lake Watershed

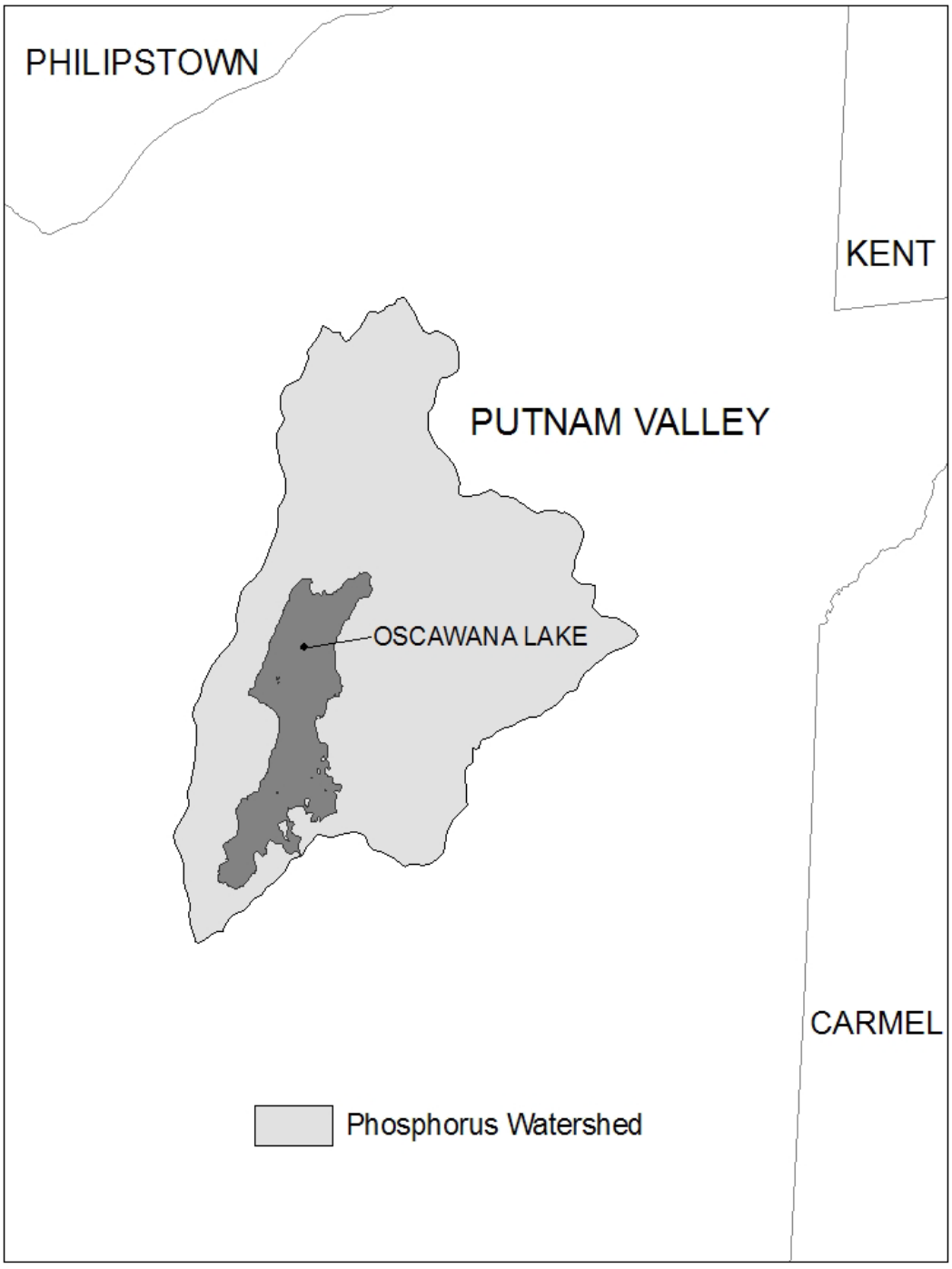
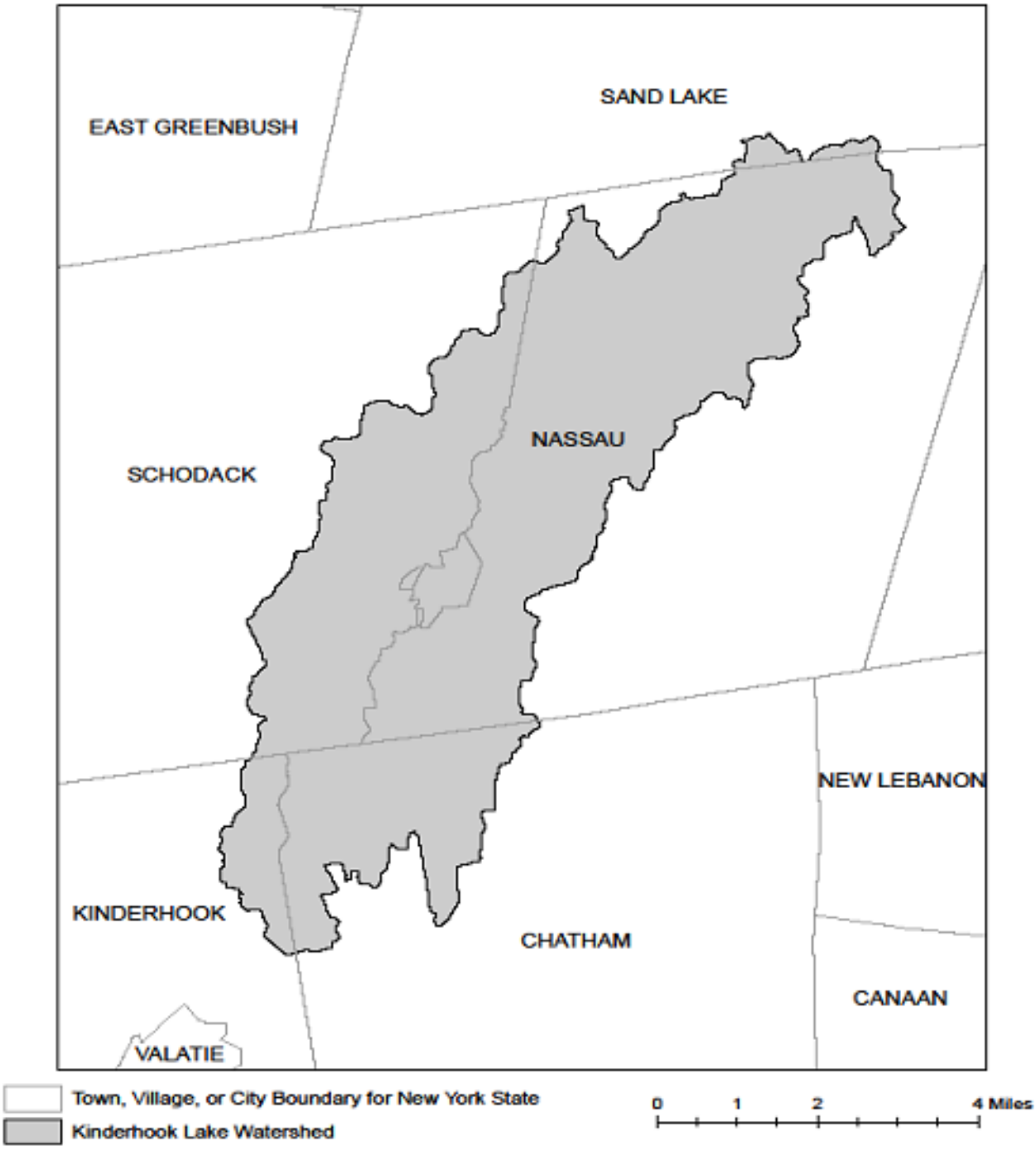


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature

Date

Revised: January 2025

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information

1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:
6. Street Address:
7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval

8. SWPPP Reviewed by:
9. Title/Position: /
10. Date Final SWPPP Reviewed and Accepted:
11. Acceptance/Approval Expiration Date:

IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity

12. Name of MS4: *CITY OF NEW YORK*
13. MS4 SPDES Permit Identification Number: *NY-0287890*
14. Contact Person:
15. Street Address: *59-17 Junction Blvd. 9th Floor*
16. City/State/Zip: *Flushing, NY 11373*
17. Telephone Number:

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).

Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Conditions of Acceptance/Approval and Additional Information

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

Appendix D-2

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

Appendix D-3

CONTRACTOR & SUBCONTRACTOR CERTIFICATION(S)

"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 Pollutant 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. "

General Contractor

Company Name: _____ Phone No: _____

Company Address: _____

Signature: _____ Date: _____

Print Name & Title

Subcontractor

Company Name: _____ Phone No: _____

Company Address: _____

Company Address: _____

Signature: _____ Date: _____

Print Name & Title

Subcontractor

Company Name: _____ Phone No: _____

Company Address: _____

Signature: _____ Date: _____

Print Name & Title

Subcontractor

Company Name: _____ Phone No: _____

Company Address: _____

Signature: _____ Date: _____

Print Name & Title

Subcontractor

Company Name: _____ Phone No: _____

Company Address: _____

Signature: _____ Date: _____

Print Name & Title

Signature-

a. For a corporation: by (1) president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person authorized to and who performs similar policy or decisions making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more

than 250 persons or having gross annual sales or expenditures exceeding $250,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency: by either a principal executive office or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive office or the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA)

Appendix D-4

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature

Date

Revised: January 2025

Appendix D-5

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

Appendix D-6

SWPPP Inspection Form

OGS PN 47421 - Repave Parking Lots Buildings 26, 47, 56, 69, 70, 71, and 72
WEEKLY SWPPP INSPECTION REPORT

Inspector Name:	Date:
Signature (required):	Time:
Weather:	Inspection #
Soil Conditions (dry, saturated, etc): Dry	

Note: Digital photos, with date stamp required for all practices requiring corrective action, before and after, to be attached to the inspection report.

	YES	NO	N/A		
1.	☐	☐	☐	Routine Inspection.	Date of last inspection:_____
2.	☐	☐	☐	Inspection following rain event.	Date/time of storm ending:_____ Rainfall amount:_____ Recorded by:_____
3.	☐	☐	☐	Is this a final site inspection?	
4.	☐	☐	☐	Has site undergone final stabilization?	
	☐	☐	☐	If so, have all temporary erosion and sediment controls been removed?	

Site Disturbance (Indicate Locations on Plan)

	YES	NO	N/A	
1.	☐	☐	☐	Areas previously disturbed, but have not undergone active site work in the last 7 days?
2.	☐	☐	☐	Areas disturbed within last 7 days?
3.	☐	☐	☐	Areas expected to be disturbed in next 7 days?
4.	☐	☐	☐	Do areas of steep slopes or complex stabilization issues exist? If "YES" explain:
5.	☐	☐	☐	Are there currently more than 5 acres of disturbed soil at the site? If so make sure there is an approval letter from NYS DEC.

Additional Comments:_____

Inspection of Erosion and Sediment Control Devices

	Type of Control Device	Accumulation (if any) in %	Repairs/Maintenance Needed
1.			
2.			
3.			
4.			
5.			
6.			

Stabilization/Runoff

	YES	NO	N/A	
1.	☐	☐	☐	Are all existing disturbed areas contained by control devices? Type of devices:
2.	☐	☐	☐	Are there areas that require stabilization within the next 7 days? Specify Area:
3.	☐	☐	☐	Have stabilization measures been initiated in inactive areas?
4.	☐	☐	☐	Is there current snow cover or frozen ground conditions?
5.	☐	☐	☐	Rills or gullies?
6.	☐	☐	☐	Slumping/deposition?
7.	☐	☐	☐	Loss of vegetation?
8.	☐	☐	☐	Lack of germination?
9.	☐	☐	☐	Loss of mulching?

Receiving Structures/Water Bodies (Indicate locations where runoff leaves the project site on the site plan)

	YES	NO	N/A	
1.	☐	☐	☐	Surface water swale or natural surface waterbody?

If natural waterbody:

Is waterbody located ☐ onsite, or ☐ adjacent to property boundary?

Description of condition:_____

2.	☐	☐	☐	Municipal or community system?

Inspect locations where runoff from project site enters the receiving waters and indicate if there is evidence of:

a.	☐	☐	☐	Rills or gullies?
b.	☐	☐	☐	Slumping/deposition?
c.	☐	☐	☐	Loss of vegetation?
d.	☐	☐	☐	Undermining of structures?
e.	☐	☐	☐	Was there a discharge into the receiving water on the day of inspection?
f.	☐	☐	☐	Is there evidence of turbidity, sedimentation, or oil in the receiving waters?

Additional Comments:_____

Inspection of Post-Construction Stormwater Management Control Devices

	Type of Control Device	Phase of Construction	Repairs/Maintenance Needed
1.			
2.			
3.			
4.			

General Site Condition

	YES	NO	N/A	
1.	☐	☐	☐	Have action items from previous reports been addressed?
2.	☐	☐	☐	Does routine maintenance of protection components occur on a regular basis?
3.	☐	☐	☐	Does cleaning and/or sweeping affected roadways occur, at minimum, daily?
4.	☐	☐	☐	Is debris and litter removed on a monthly basis, or as necessary?
5.	☐	☐	☐	Is the site maintained in an orderly manner?

Describe the condition of all natural waterbodies within or adjacent to the Project that receive runoff from the site:

Contractors progress over last 7 days:_____

Anticipated work to be begun in the next 7 days:_____

Additional Comments:_____

Visual Observations

	YES	NO	N/A	
1.	☐	☐	☐	All erosion and sediment control measures have been installed/constructed?
2.	☐	☐	☐	All erosion and sediment control measures are being maintained properly?

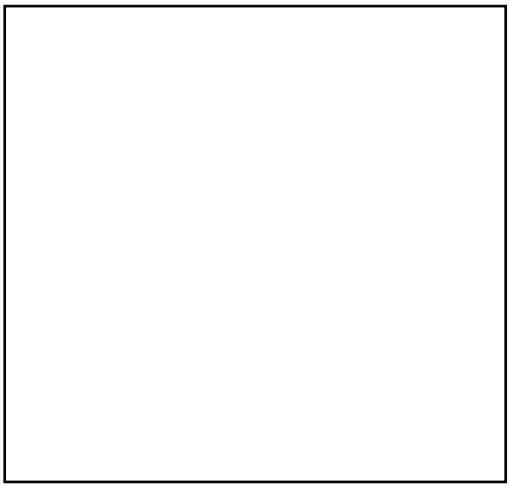
SUMMARY OF ACTION ITEMS TO REPAIR/REPLACE/MAINTAIN/CORRECT DEFICIENCIES

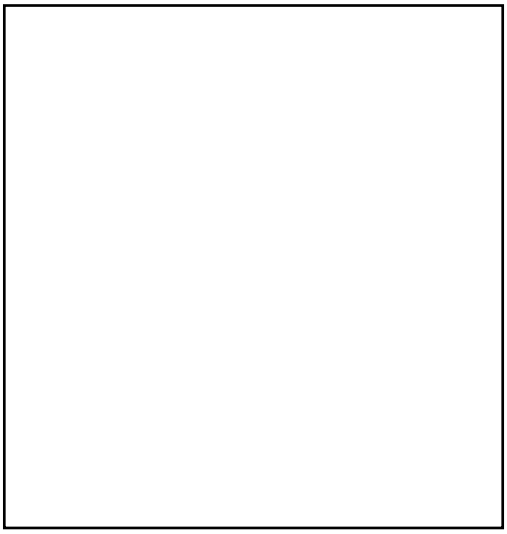
Action Reported To (no signature required): _____

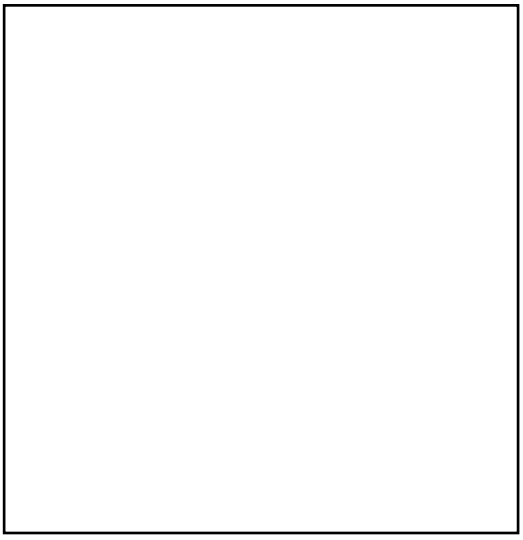
Company: _____

*** See attached for inspection pictures & description**

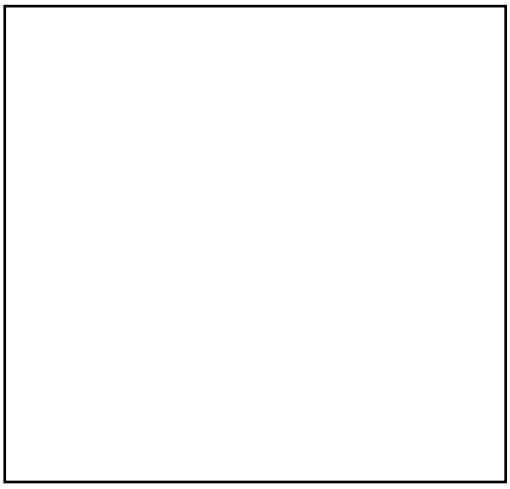
INSPECTION PICTURES AND DESCRIPTION

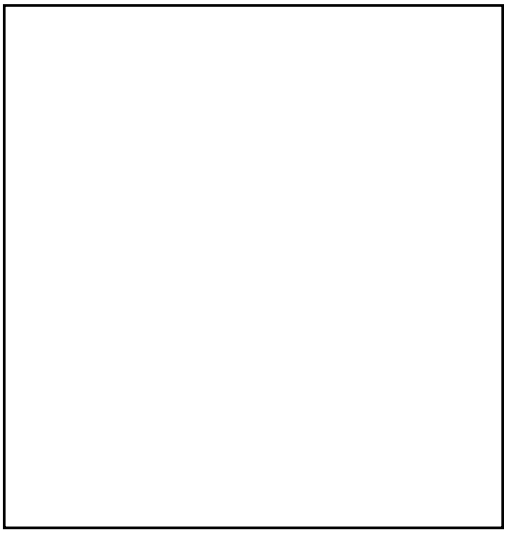


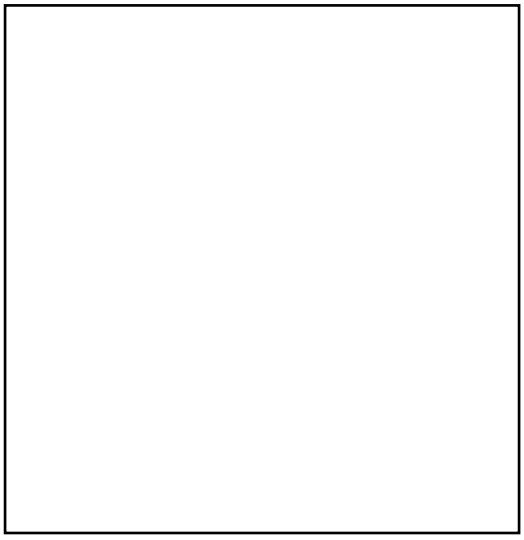




INSPECTION PICTURES AND DESCRIPTION







Appendix D-7

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

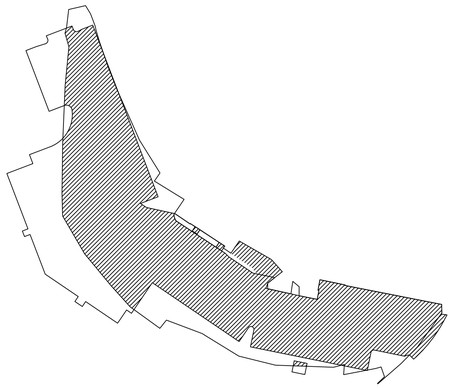
b. Title/Position:

c. Signature:

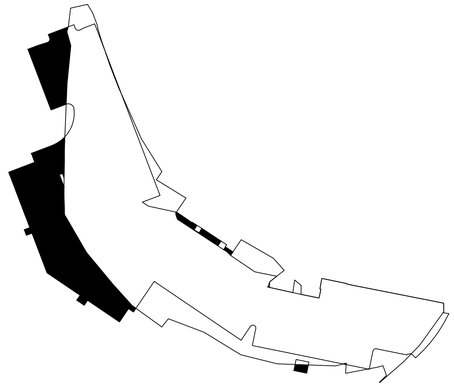
d. Date:

Appendix E-1

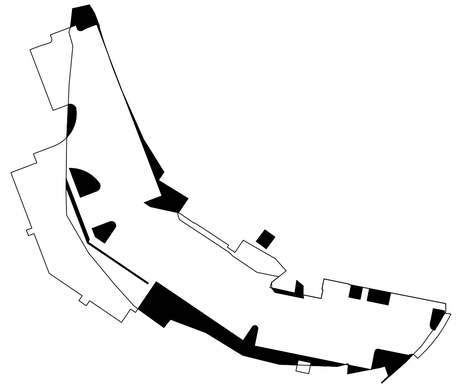
A
DISTURBED REDEVELOPMENT
IMPERVIOUS AREA
26567 SQFT



B
IMPERVIOUS AREA ADDED
7064 SQFT



C
IMPERVIOUS AREA REMOVED
5507 (Net impervious added = 1557 sqft)



1 / E-1 IMPERVIOUS AREA ANALYSIS
N.T.S.

3/3/2026 1:26:04 PM
4/28/2026 1:19:13 PM

NEW YORK STATE | Office of General Services
DESIGN AND CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

Colliers Engineering & Design

Suozzo, Doty & Associates
PROFESSIONAL ENGINEERING, PLLC

WARNING:
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REGISTRATION EXPIRES:

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE APA HEADQUARTERS
ADIRONDACK PARK AGENCY

LOCATION:
1-2 MAIN STREET
VILLAGE OF SARANAC LAKE, NY

CLIENT:
ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
	--	--
	--	--
	--	--
	05/29/2026	60% SUBMISSION

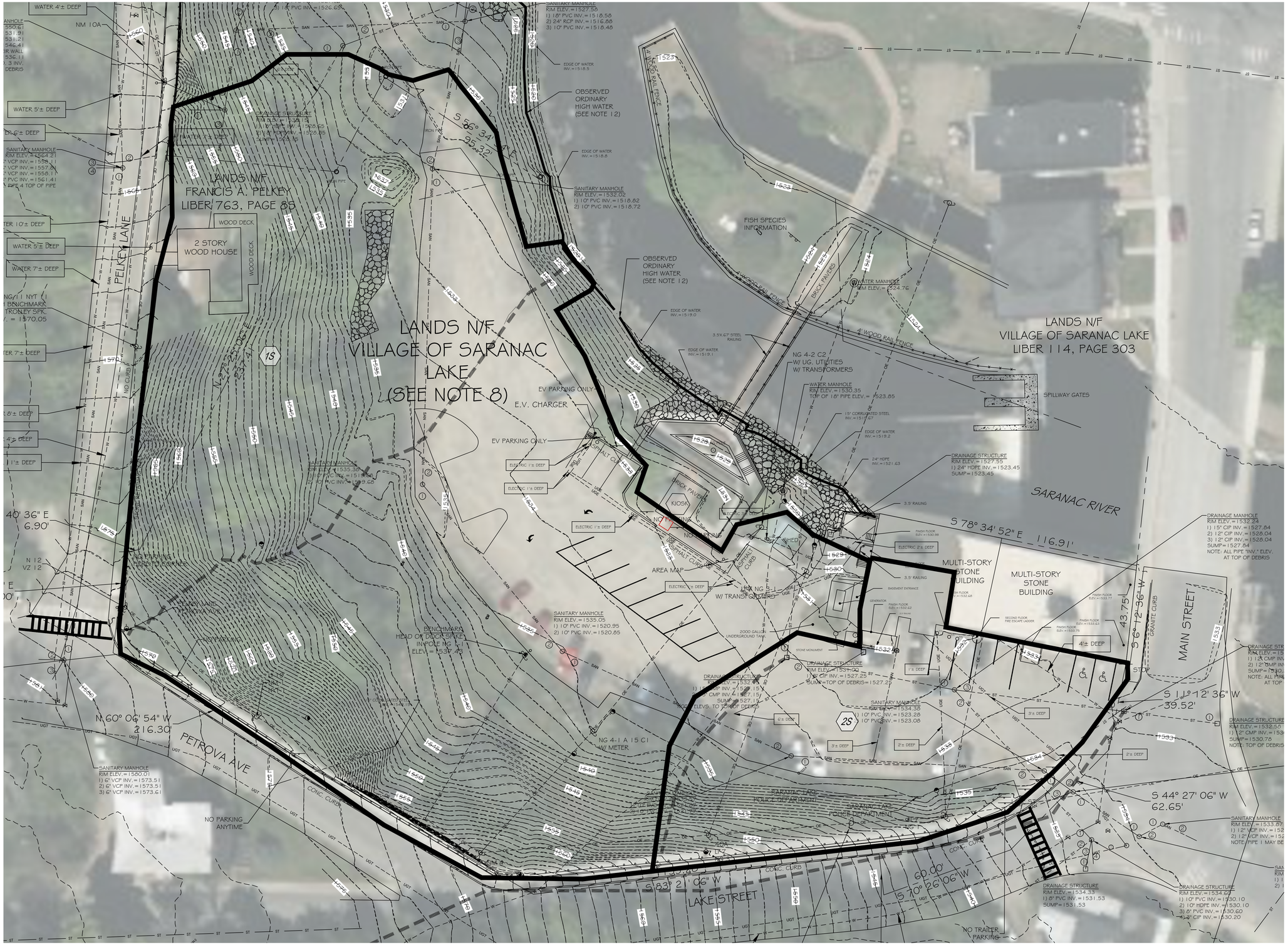
PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE:
IMPERVIOUS AREA ANALYSIS

DRAWING NUMBER:
E-1

DRAWING OF

Appendix E-2



1 / E-2 **PRE DEVELOPMENT SUBCATCHMENT MAP**

1" = 20'

3/3/2026 1:26:04 PM
4/28/2026 1:19:13 PM

New York State Office of General Services

DESIGN AND CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 083208

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REGISTRATION EXPIRES:

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE APA HEADQUARTERS ADIRONDACK PARK AGENCY

LOCATION:
1-2 MAIN STREET VILLAGE OF SARANAC LAKE, NY

CLIENT:
ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
	--	--
	--	--
	--	--
	05/29/2026	60% SUBMISSION

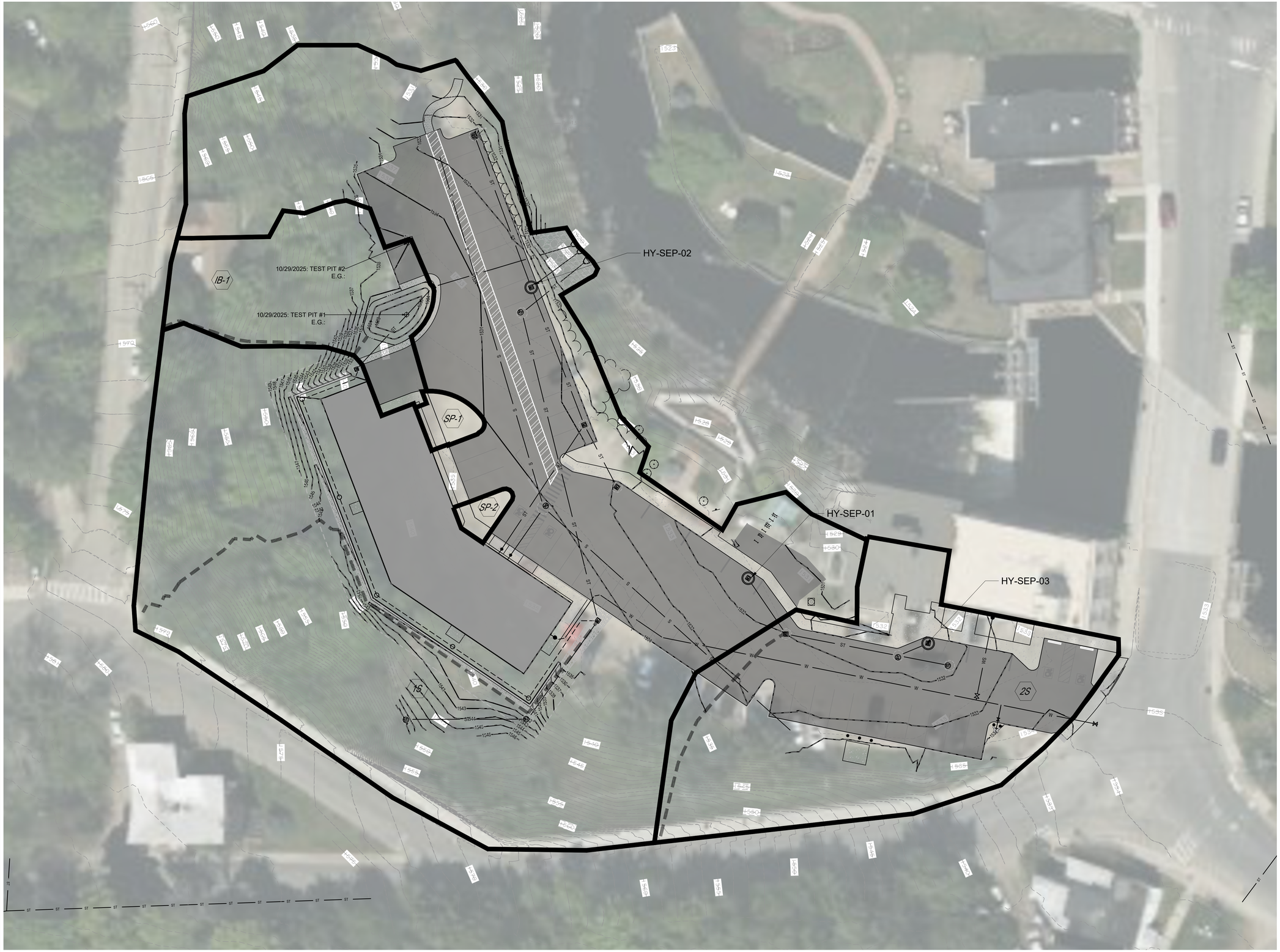
PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE:
PRE-DEVELOPMENT SC MAP

DRAWING NUMBER:
E-2

DRAWING **OF**

Appendix E-3



1 E-3 **POST DEVELOPMENT SUBCATCHMENT MAP**
1" = 20'

3/3/2026 1:26:04 PM
4/28/2026 1:19:13 PM

NEW YORK STATE **Office of General Services**

DESIGN AND CONSTRUCTION

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REGISTRATION EXPIRES:

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE APA HEADQUARTERS
ADIRONDACK PARK AGENCY

LOCATION:
1-2 MAIN STREET
VILLAGE OF SARANAC LAKE, NY

CLIENT:
ADIRONDACK PARK AGENCY

MARK	DATE	DESCRIPTION
	--	--
	--	--
	--	--
	05/29/2026	60% SUBMISSION

PROJECT NUMBER:	46219-C
DESIGNED BY:	RMA
DRAWN BY:	MWB
FIELD CHECK:	-
APPROVED:	SDA

DRAWING TITLE:

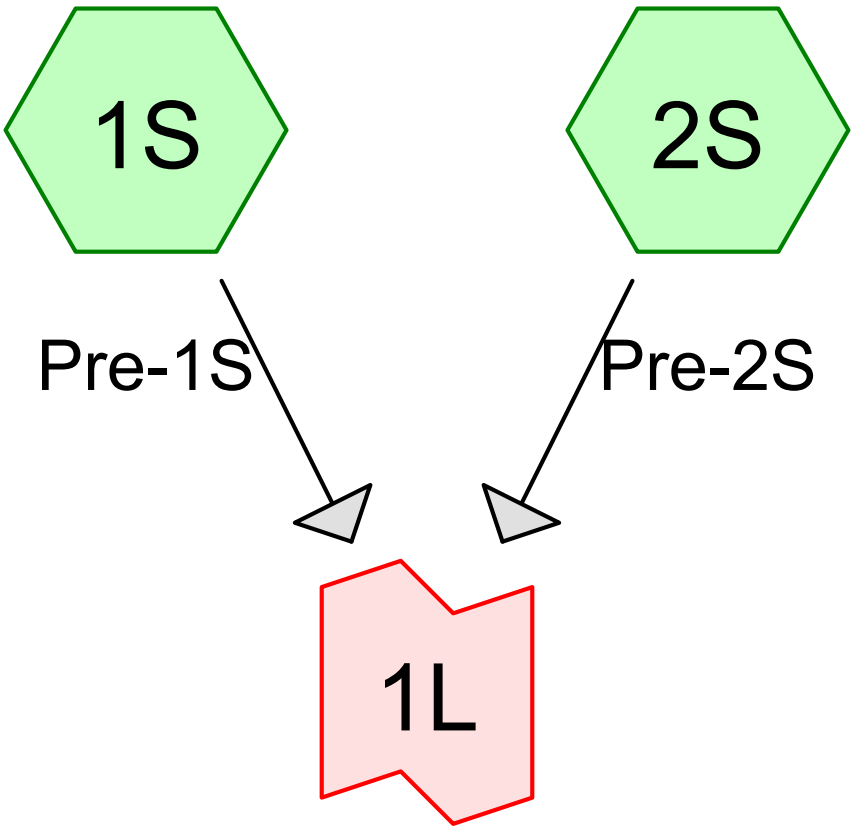
POST-DEVELOPMENT SC MAP

DRAWING NUMBER:

E-3

DRAWING OF

Appendix E-4



Design Point 1

Subcat Reach Pond Link

Routing Diagram for 25-059_APAOGS_ExistingCondit
Prepared by Suozzo, Doty, & Associates, Printed 9/11/2026
HydroCAD® 10.10-7a s/n 11444 © 2021 HydroCAD Software Solutions LLC

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-1S Runoff Area=72,155 sf 31.90% Impervious Runoff Depth=0.01"
Flow Length=275' Tc=6.0 min CN=54 Runoff=0.00 cfs 32 cf

Subcatchment 2S: Pre-2S Runoff Area=17,166 sf 69.12% Impervious Runoff Depth=0.51"
Flow Length=105' Tc=6.0 min CN=80 Runoff=0.34 cfs 736 cf

Link 1L: Design Point 1 Inflow=0.34 cfs 768 cf
Primary=0.34 cfs 768 cf

Total Runoff Area = 89,321 sf Runoff Volume = 768 cf Average Runoff Depth = 0.10"
60.95% Pervious = 54,437 sf 39.05% Impervious = 34,884 sf

Summary for Subcatchment 1S: Pre-1S

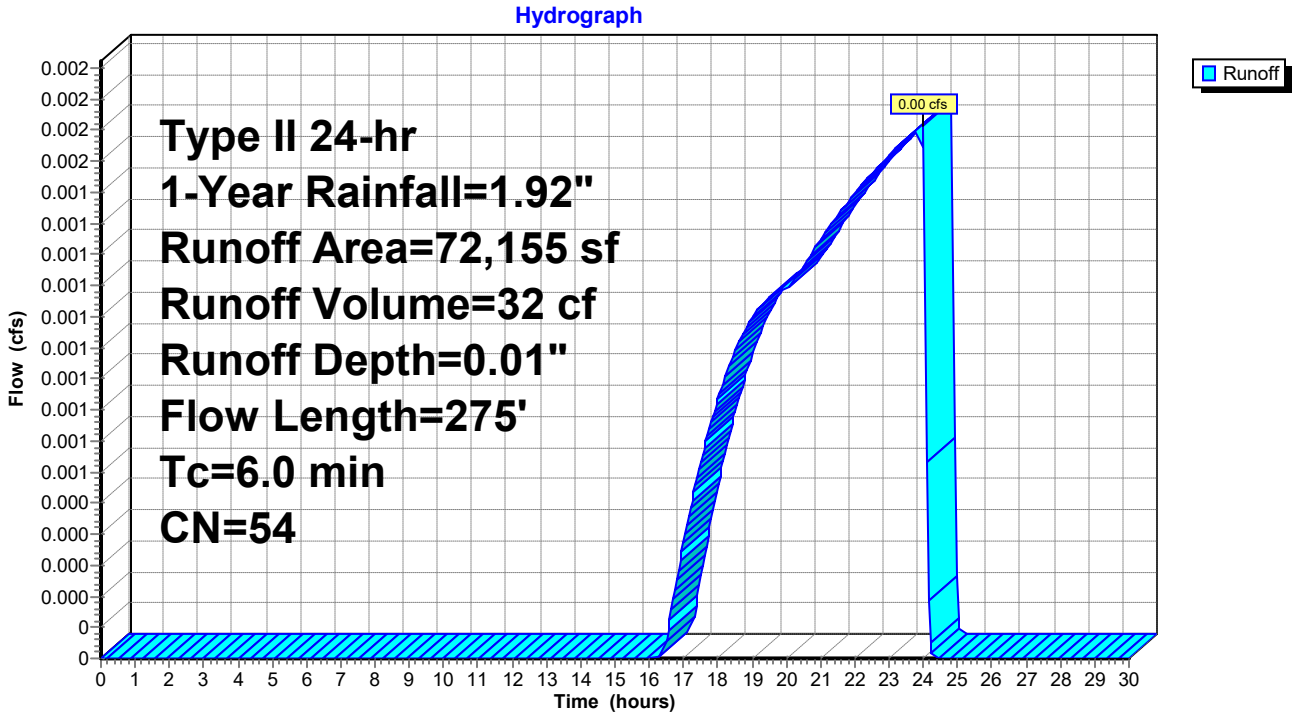
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 32 cf, Depth= 0.01"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Description
23,019	98	Paved roads w/curbs & sewers, HSG A
46,397	32	Woods/grass comb., Good, HSG A
2,139	39	>75% Grass cover, Good, HSG A
600	76	Gravel roads, HSG A
72,155	54	Weighted Average
49,136		68.10% Pervious Area
23,019		31.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow, Upper Bank Sheet** Woods: Light underbrush n= 0.400 P2= 2.18"
0.9	138	0.2890	2.69		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	87	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	25	0.5000	3.54		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4					**Direct Entry, Round up to 6min**
6.0	275	Total			

Subcatchment 1S: Pre-1S



Summary for Subcatchment 2S: Pre-2S

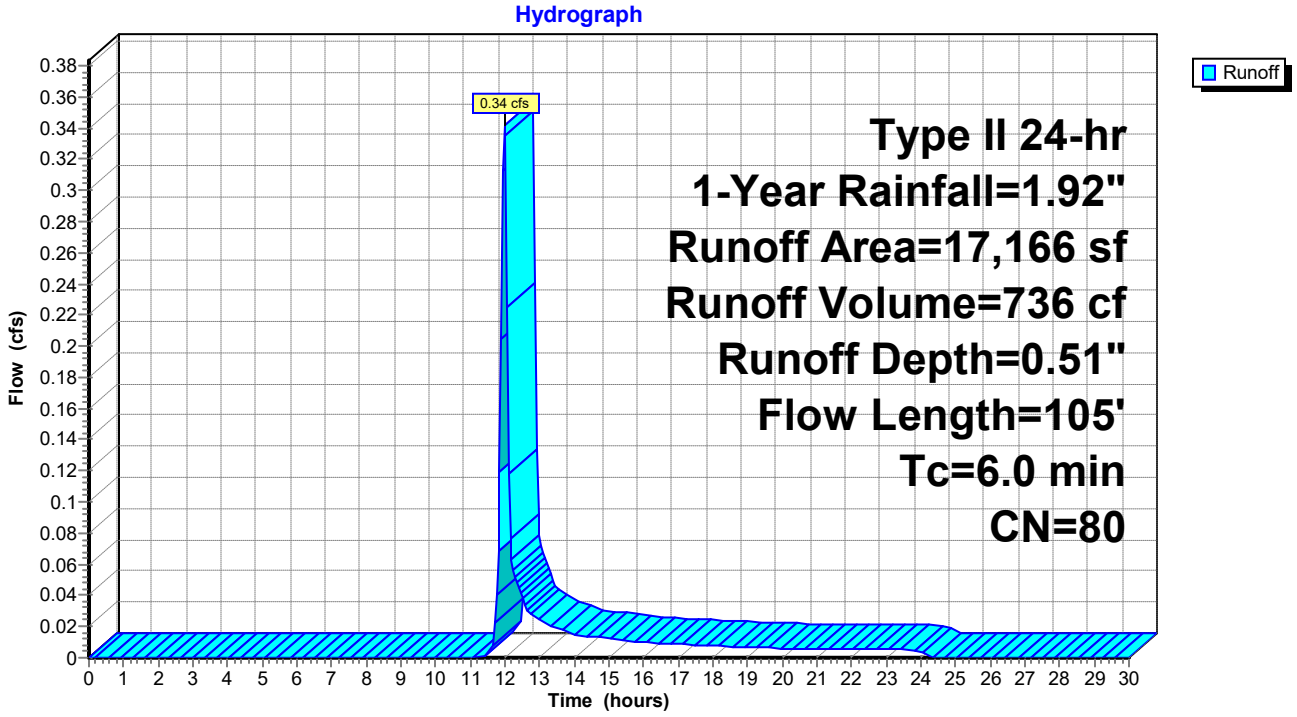
Runoff = 0.34 cfs @ 11.98 hrs, Volume= 736 cf, Depth= 0.51"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Description
11,865	98	Roofs, HSG A
5,301	39	>75% Grass cover, Good, HSG A
17,166	80	Weighted Average
5,301		30.88% Pervious Area
11,865		69.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.6000	0.28		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.2	30	0.1500	2.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1					**Direct Entry, Round Up to 6min**
6.0	105	Total			

Subcatchment 2S: Pre-2S

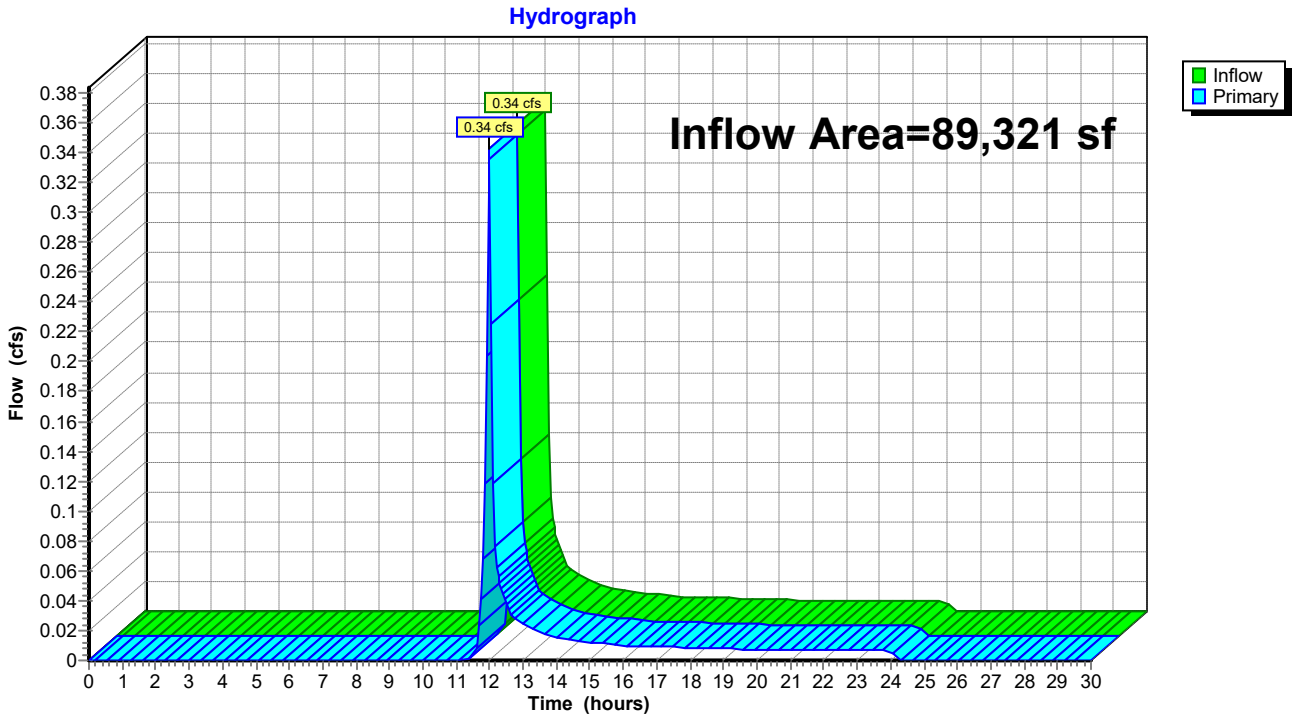


Summary for Link 1L: Design Point 1

Inflow Area = 89,321 sf, 39.05% Impervious, Inflow Depth = 0.10" for 1-Year event
Inflow = 0.34 cfs @ 11.98 hrs, Volume= 768 cf
Primary = 0.34 cfs @ 11.98 hrs, Volume= 768 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 1L: Design Point 1



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-1S Runoff Area=72,155 sf 31.90% Impervious Runoff Depth=0.03"
Flow Length=275' Tc=6.0 min CN=54 Runoff=0.00 cfs 152 cf

Subcatchment 2S: Pre-2S Runoff Area=17,166 sf 69.12% Impervious Runoff Depth=0.68"
Flow Length=105' Tc=6.0 min CN=80 Runoff=0.46 cfs 966 cf

Link 1L: Design Point 1 Inflow=0.46 cfs 1,118 cf
Primary=0.46 cfs 1,118 cf

Total Runoff Area = 89,321 sf Runoff Volume = 1,118 cf Average Runoff Depth = 0.15"
60.95% Pervious = 54,437 sf 39.05% Impervious = 34,884 sf

Summary for Subcatchment 1S: Pre-1S

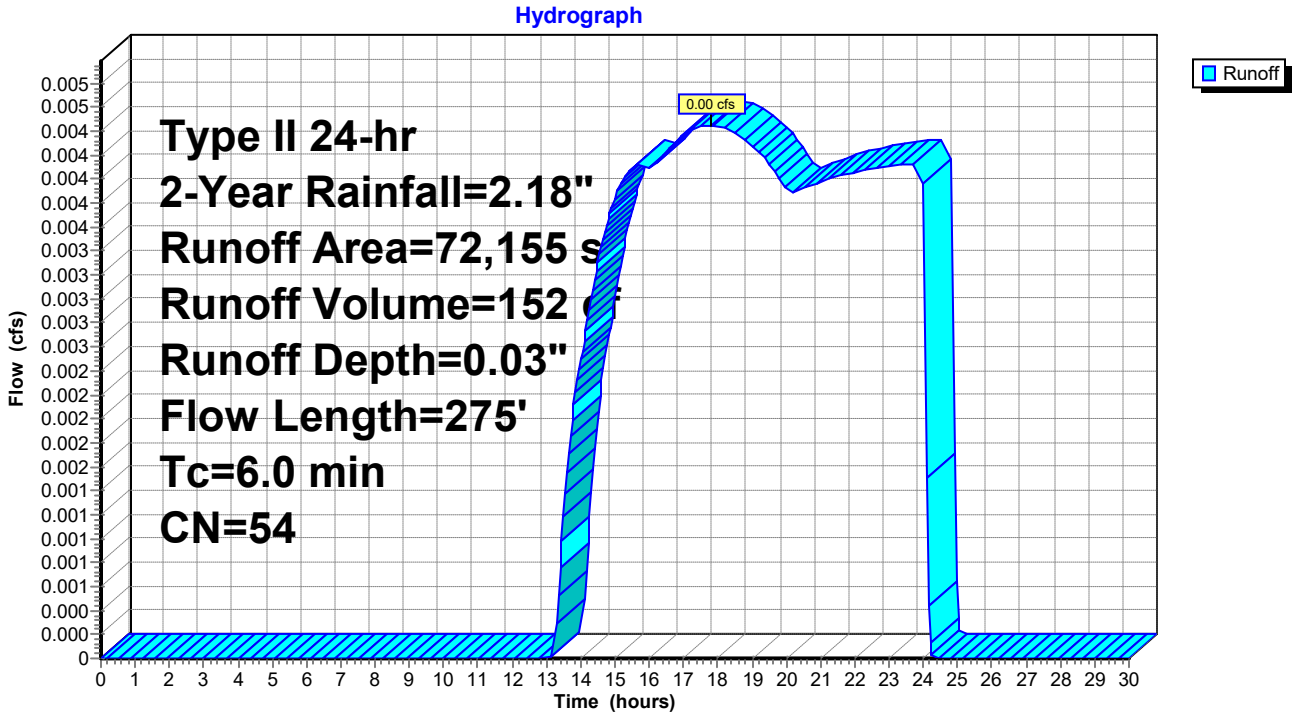
Runoff = 0.00 cfs @ 17.79 hrs, Volume= 152 cf, Depth= 0.03"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Description
23,019	98	Paved roads w/curbs & sewers, HSG A
46,397	32	Woods/grass comb., Good, HSG A
2,139	39	>75% Grass cover, Good, HSG A
600	76	Gravel roads, HSG A
72,155	54	Weighted Average
49,136		68.10% Pervious Area
23,019		31.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow, Upper Bank Sheet** Woods: Light underbrush n= 0.400 P2= 2.18"
0.9	138	0.2890	2.69		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	87	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	25	0.5000	3.54		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4					**Direct Entry, Round up to 6min**
6.0	275	Total			

Subcatchment 1S: Pre-1S



Summary for Subcatchment 2S: Pre-2S

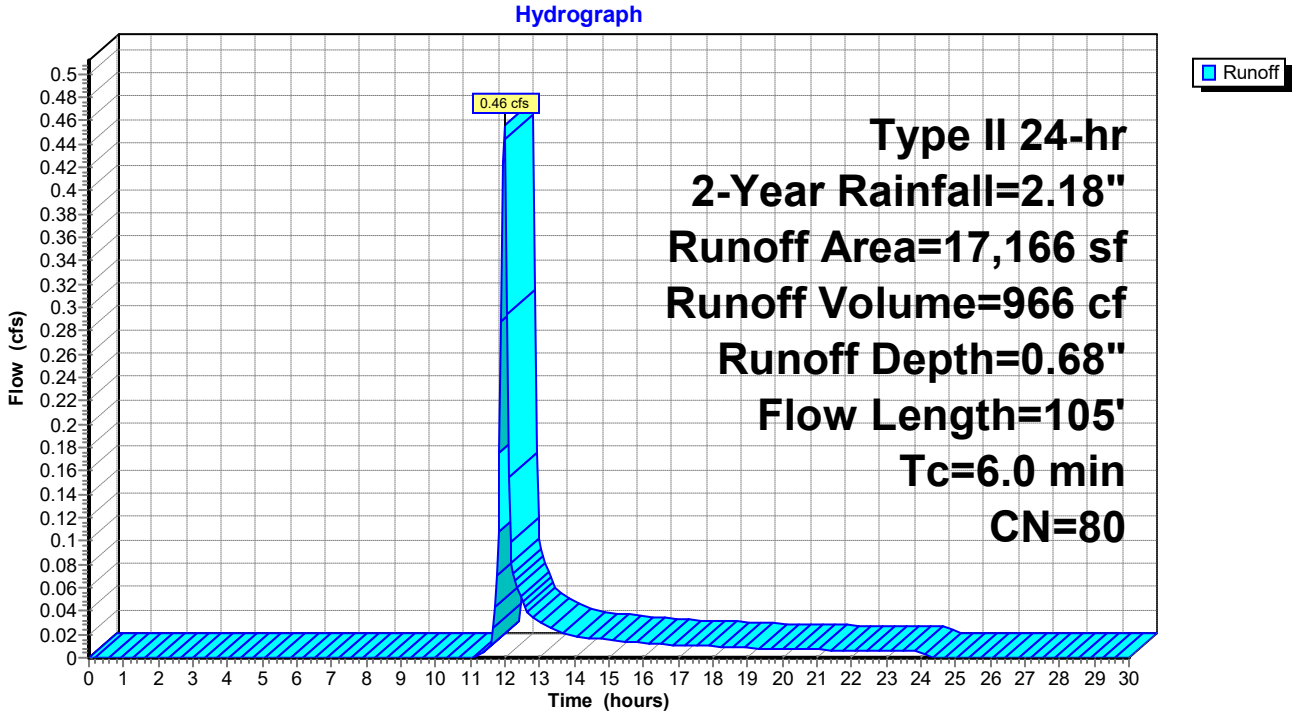
Runoff = 0.46 cfs @ 11.98 hrs, Volume= 966 cf, Depth= 0.68"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Description
11,865	98	Roofs, HSG A
5,301	39	>75% Grass cover, Good, HSG A
17,166	80	Weighted Average
5,301		30.88% Pervious Area
11,865		69.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.6000	0.28		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.2	30	0.1500	2.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1					**Direct Entry, Round Up to 6min**
6.0	105	Total			

Subcatchment 2S: Pre-2S

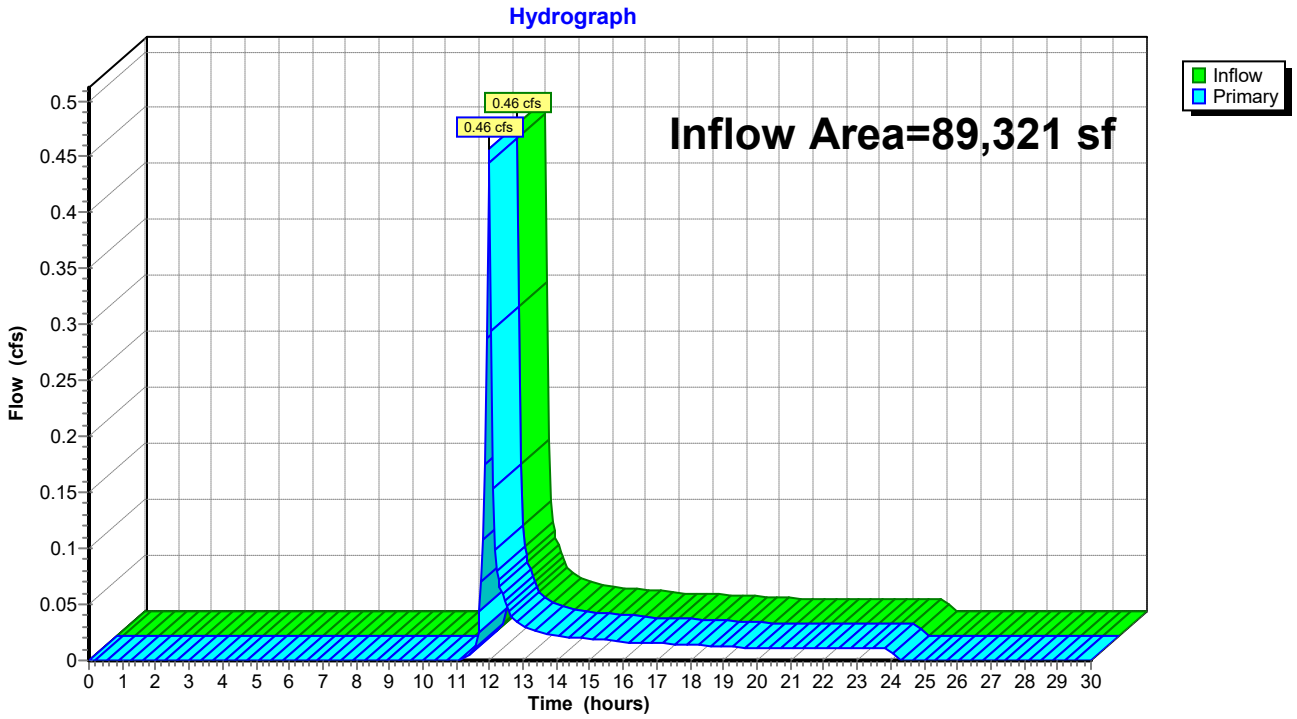


Summary for Link 1L: Design Point 1

Inflow Area = 89,321 sf, 39.05% Impervious, Inflow Depth = 0.15" for 2-Year event
Inflow = 0.46 cfs @ 11.98 hrs, Volume= 1,118 cf
Primary = 0.46 cfs @ 11.98 hrs, Volume= 1,118 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 1L: Design Point 1



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-1S Runoff Area=72,155 sf 31.90% Impervious Runoff Depth=0.19"
Flow Length=275' Tc=6.0 min CN=54 Runoff=0.17 cfs 1,151 cf

Subcatchment 2S: Pre-2S Runoff Area=17,166 sf 69.12% Impervious Runoff Depth=1.31"
Flow Length=105' Tc=6.0 min CN=80 Runoff=0.90 cfs 1,874 cf

Link 1L: Design Point 1 Inflow=1.02 cfs 3,025 cf
Primary=1.02 cfs 3,025 cf

Total Runoff Area = 89,321 sf Runoff Volume = 3,025 cf Average Runoff Depth = 0.41"
60.95% Pervious = 54,437 sf 39.05% Impervious = 34,884 sf

Summary for Subcatchment 1S: Pre-1S

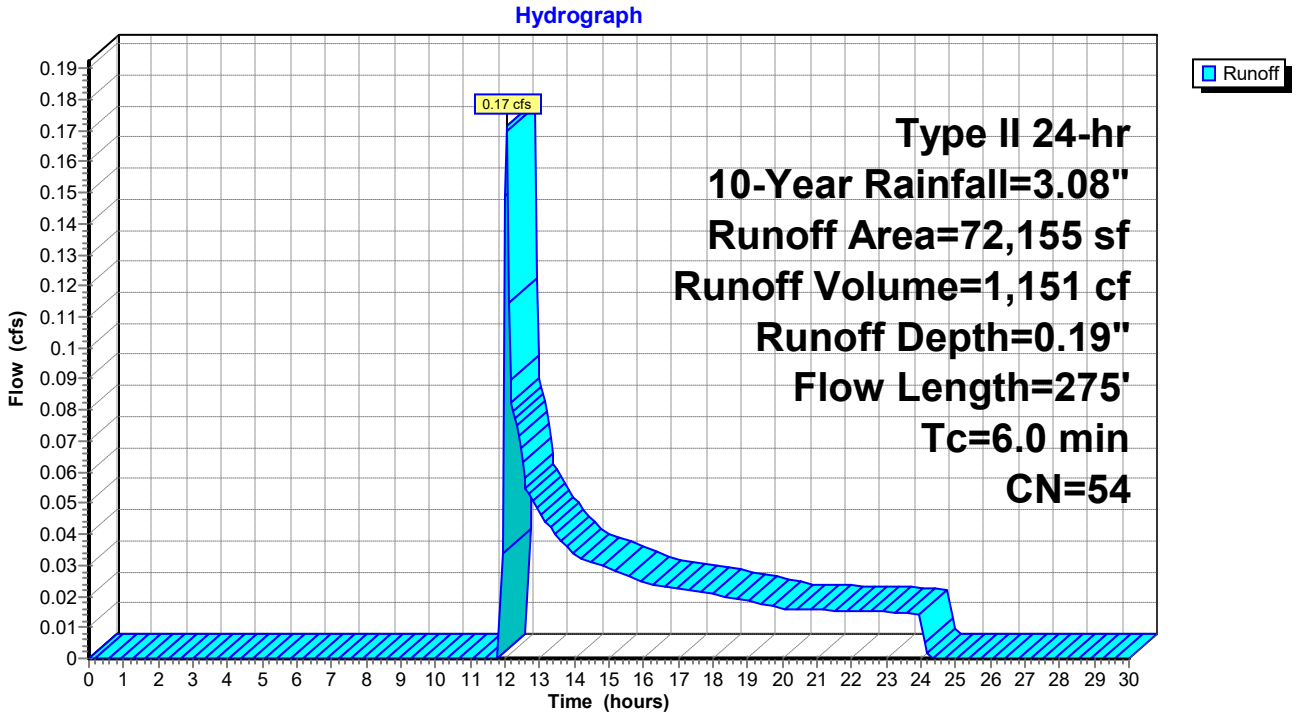
Runoff = 0.17 cfs @ 12.04 hrs, Volume= 1,151 cf, Depth= 0.19"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Description
23,019	98	Paved roads w/curbs & sewers, HSG A
46,397	32	Woods/grass comb., Good, HSG A
2,139	39	>75% Grass cover, Good, HSG A
600	76	Gravel roads, HSG A
72,155	54	Weighted Average
49,136		68.10% Pervious Area
23,019		31.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow, Upper Bank Sheet** Woods: Light underbrush n= 0.400 P2= 2.18"
0.9	138	0.2890	2.69		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	87	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	25	0.5000	3.54		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4					**Direct Entry, Round up to 6min**
6.0	275	Total			

Subcatchment 1S: Pre-1S



Summary for Subcatchment 2S: Pre-2S

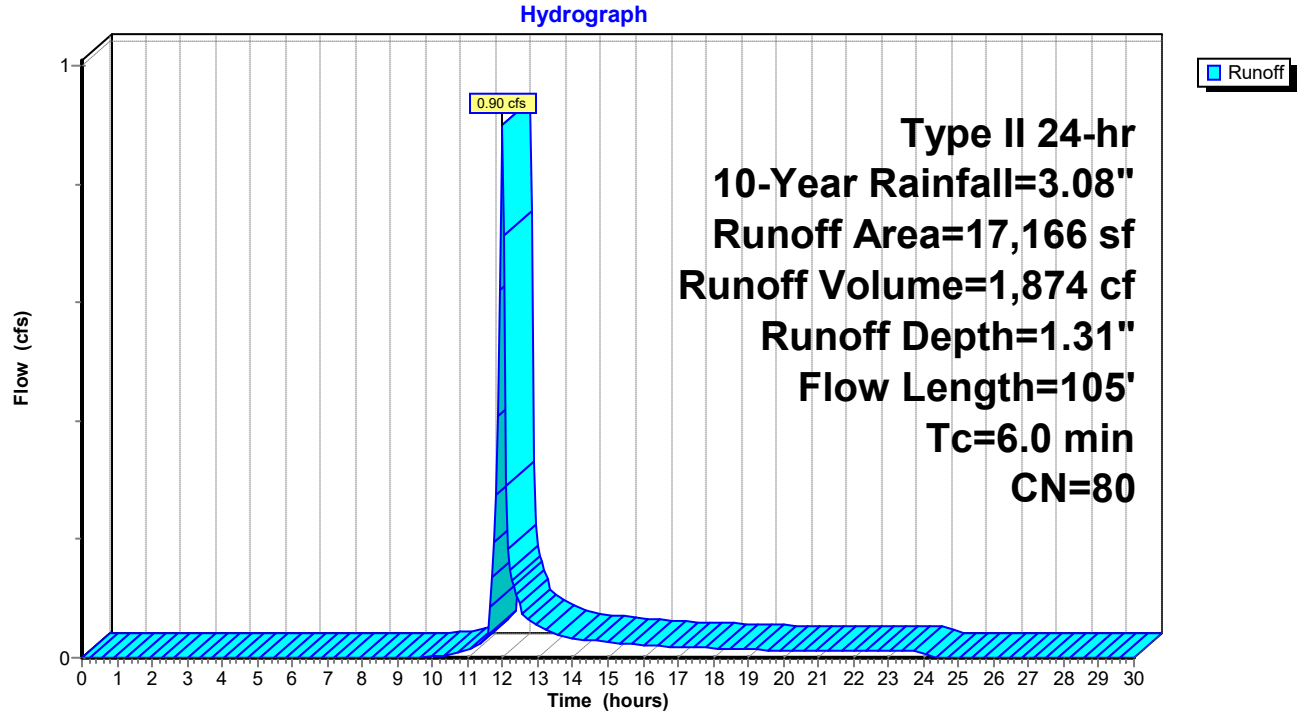
Runoff = 0.90 cfs @ 11.98 hrs, Volume= 1,874 cf, Depth= 1.31"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Description
11,865	98	Roofs, HSG A
5,301	39	>75% Grass cover, Good, HSG A
17,166	80	Weighted Average
5,301		30.88% Pervious Area
11,865		69.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.6000	0.28		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.2	30	0.1500	2.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1					**Direct Entry, Round Up to 6min**
6.0	105	Total			

Subcatchment 2S: Pre-2S

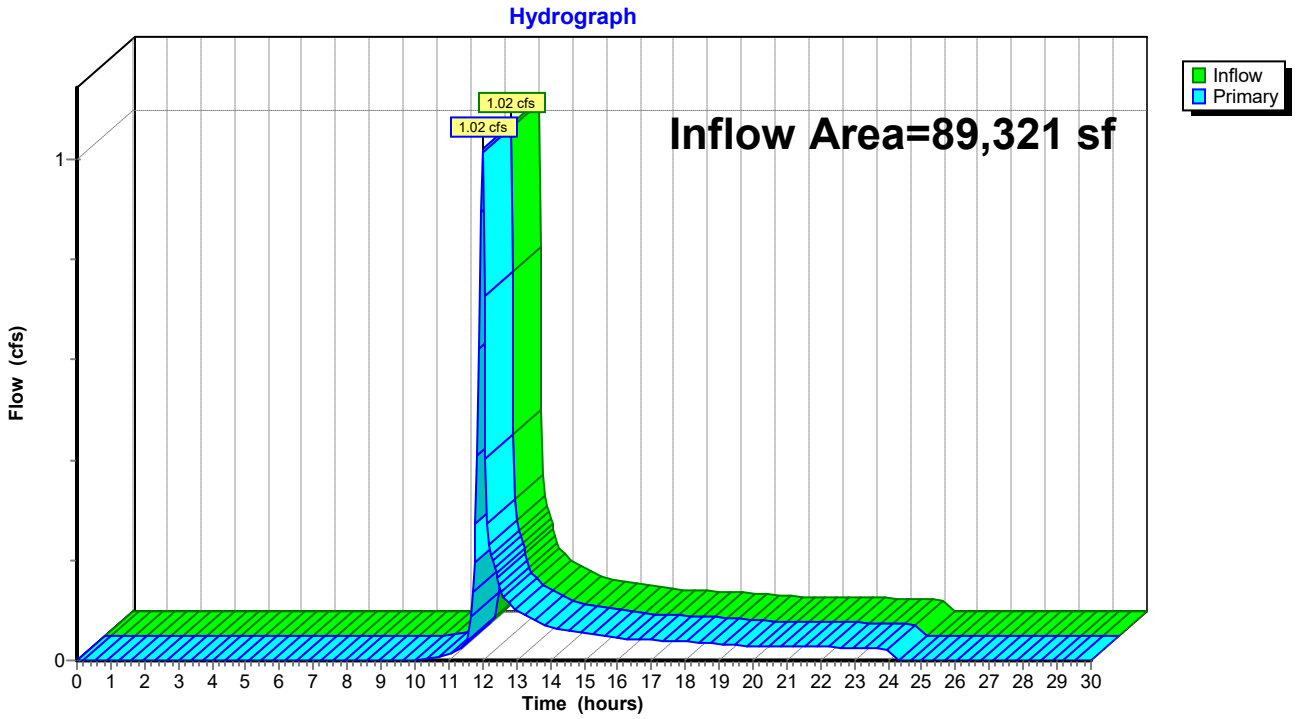


Summary for Link 1L: Design Point 1

Inflow Area = 89,321 sf, 39.05% Impervious, Inflow Depth = 0.41" for 10-Year event
Inflow = 1.02 cfs @ 11.99 hrs, Volume= 3,025 cf
Primary = 1.02 cfs @ 11.99 hrs, Volume= 3,025 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 1L: Design Point 1



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-1S Runoff Area=72,155 sf 31.90% Impervious Runoff Depth=0.94"
Flow Length=275' Tc=6.0 min CN=54 Runoff=2.43 cfs 5,646 cf

Subcatchment 2S: Pre-2S Runoff Area=17,166 sf 69.12% Impervious Runoff Depth=2.93"
Flow Length=105' Tc=6.0 min CN=80 Runoff=1.97 cfs 4,188 cf

Link 1L: Design Point 1 Inflow=4.38 cfs 9,834 cf
Primary=4.38 cfs 9,834 cf

Total Runoff Area = 89,321 sf Runoff Volume = 9,834 cf Average Runoff Depth = 1.32"
60.95% Pervious = 54,437 sf 39.05% Impervious = 34,884 sf

Summary for Subcatchment 1S: Pre-1S

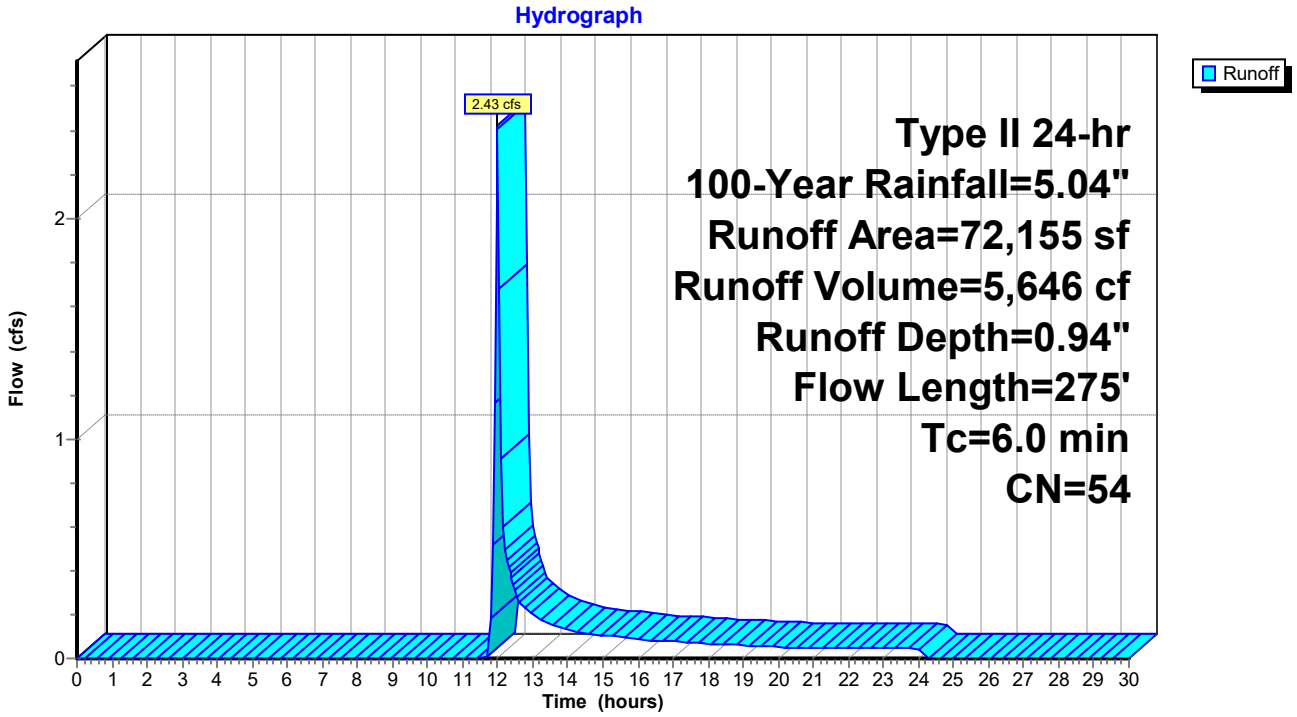
Runoff = 2.43 cfs @ 11.99 hrs, Volume= 5,646 cf, Depth= 0.94"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Description
23,019	98	Paved roads w/curbs & sewers, HSG A
46,397	32	Woods/grass comb., Good, HSG A
2,139	39	>75% Grass cover, Good, HSG A
600	76	Gravel roads, HSG A
72,155	54	Weighted Average
49,136		68.10% Pervious Area
23,019		31.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow, Upper Bank Sheet** Woods: Light underbrush n= 0.400 P2= 2.18"
0.9	138	0.2890	2.69		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	87	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	25	0.5000	3.54		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4					**Direct Entry, Round up to 6min**
6.0	275	Total			

Subcatchment 1S: Pre-1S



Summary for Subcatchment 2S: Pre-2S

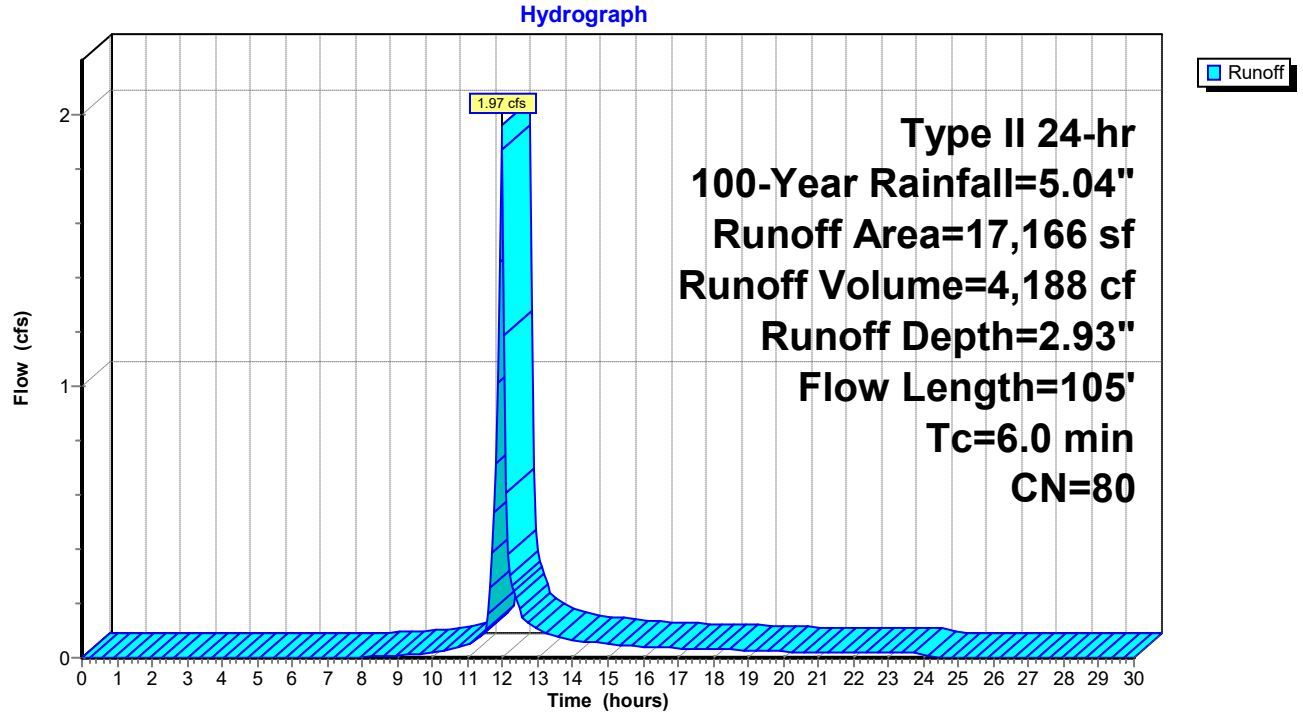
Runoff = 1.97 cfs @ 11.97 hrs, Volume= 4,188 cf, Depth= 2.93"
Routed to Link 1L : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Description
11,865	98	Roofs, HSG A
5,301	39	>75% Grass cover, Good, HSG A
17,166	80	Weighted Average
5,301		30.88% Pervious Area
11,865		69.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.6000	0.28		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.2	30	0.1500	2.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1					**Direct Entry, Round Up to 6min**
6.0	105	Total			

Subcatchment 2S: Pre-2S

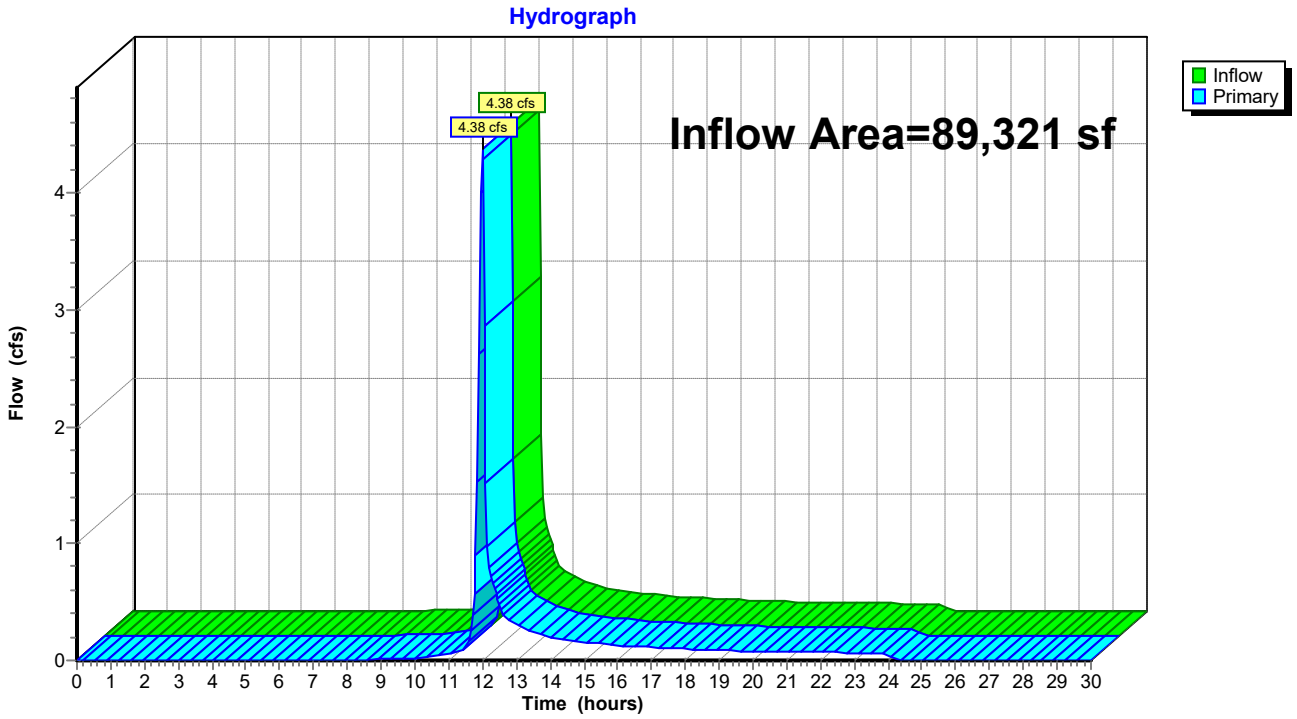


Summary for Link 1L: Design Point 1

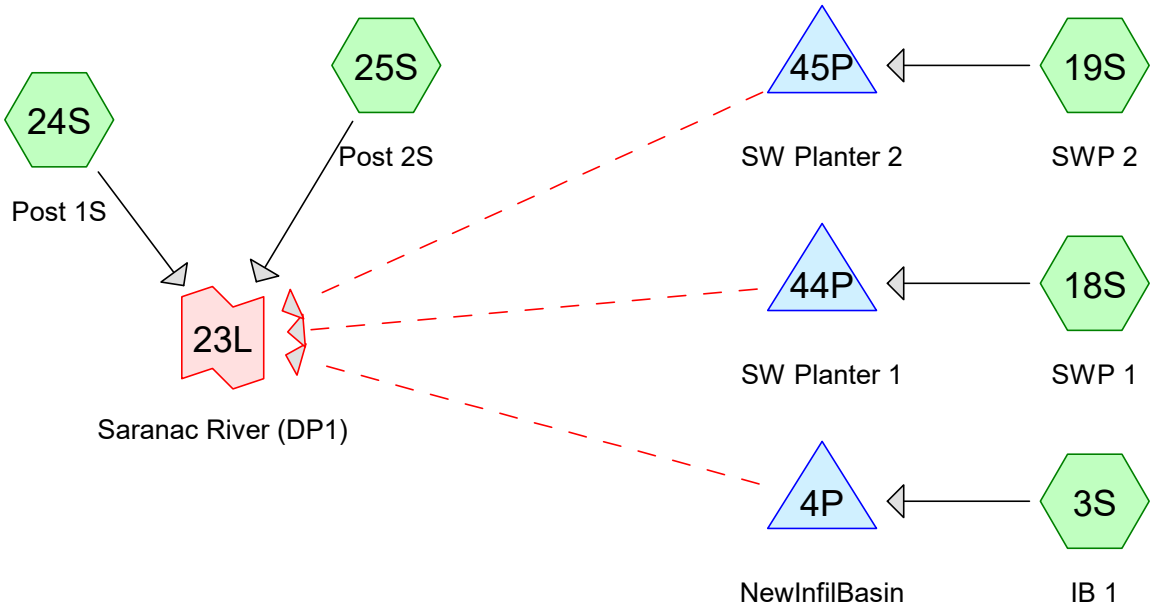
Inflow Area = 89,321 sf, 39.05% Impervious, Inflow Depth = 1.32" for 100-Year event
Inflow = 4.38 cfs @ 11.98 hrs, Volume= 9,834 cf
Primary = 4.38 cfs @ 11.98 hrs, Volume= 9,834 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 1L: Design Point 1



Appendix E-5



Subcat Reach Pond Link

Routing Diagram for 25-059_APAOGS_Proposed
Prepared by Suozzo, Doty, & Associates, Printed 9/11/2026
HydroCAD® 10.10-7a s/n 11444 © 2021 HydroCAD Software Solutions LLC

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: IB 1 Runoff Area=6,927 sf 22.42% Impervious Runoff Depth=0.00"
Flow Length=100' Slope=0.3100 '/' Tc=8.7 min CN=48 Runoff=0.00 cfs 0 cf

Subcatchment 18S: SWP 1 Runoff Area=551 sf 24.50% Impervious Runoff Depth=0.00"
Tc=6.0 min UI Adjusted CN=46 Runoff=0.00 cfs 0 cf

Subcatchment 19S: SWP 2 Runoff Area=359 sf 33.98% Impervious Runoff Depth=0.04"
Tc=6.0 min CN=59 Runoff=0.00 cfs 1 cf

Subcatchment 24S: Post 1S Runoff Area=64,347 sf 38.49% Impervious Runoff Depth=0.04"
Flow Length=473' Tc=7.8 min CN=59 Runoff=0.01 cfs 202 cf

Subcatchment 25S: Post 2S Runoff Area=17,117 sf 57.64% Impervious Runoff Depth=0.23"
Flow Length=204' Tc=6.0 min CN=71 Runoff=0.12 cfs 335 cf

Pond 4P: NewInfilBasin Peak Elev=1,532.95' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 44P: SW Planter 1 Peak Elev=1,534.25' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 45P: SW Planter 2 Peak Elev=1,534.41' Storage=0 cf Inflow=0.00 cfs 1 cf
Discarded=0.00 cfs 1 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 1 cf

Link 23L: Saranac River (DP1) Inflow=0.12 cfs 536 cf
Primary=0.12 cfs 536 cf

Total Runoff Area = 89,301 sf Runoff Volume = 537 cf Average Runoff Depth = 0.07"
59.19% Pervious = 52,860 sf 40.81% Impervious = 36,441 sf

Summary for Subcatchment 3S: IB 1

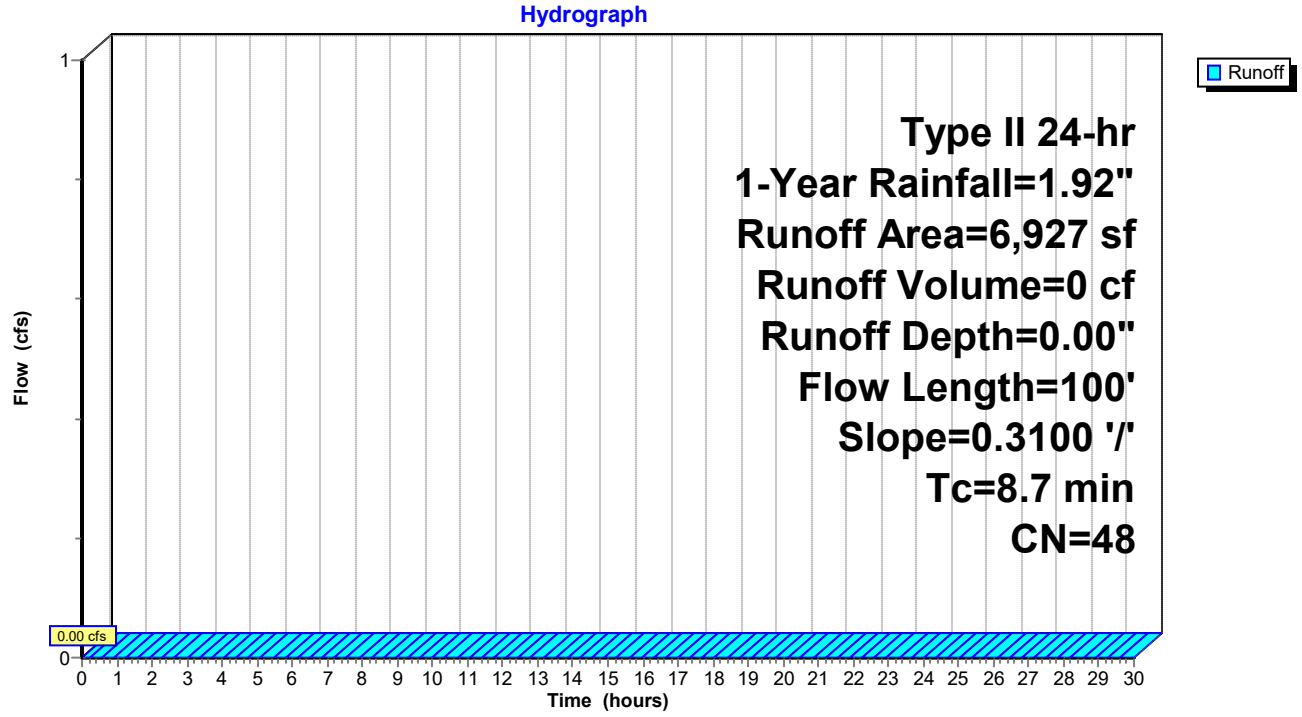
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"
Routed to Pond 4P : NewInfilBasin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Description
1,553	98	Paved parking, HSG A
4,638	32	Woods/grass comb., Good, HSG A
620	39	>75% Grass cover, Good, HSG A
116	76	Gravel roads, HSG A
6,927	48	Weighted Average
5,374		77.58% Pervious Area
1,553		22.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.3100	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"

Subcatchment 3S: IB 1



Summary for Subcatchment 18S: SWP 1

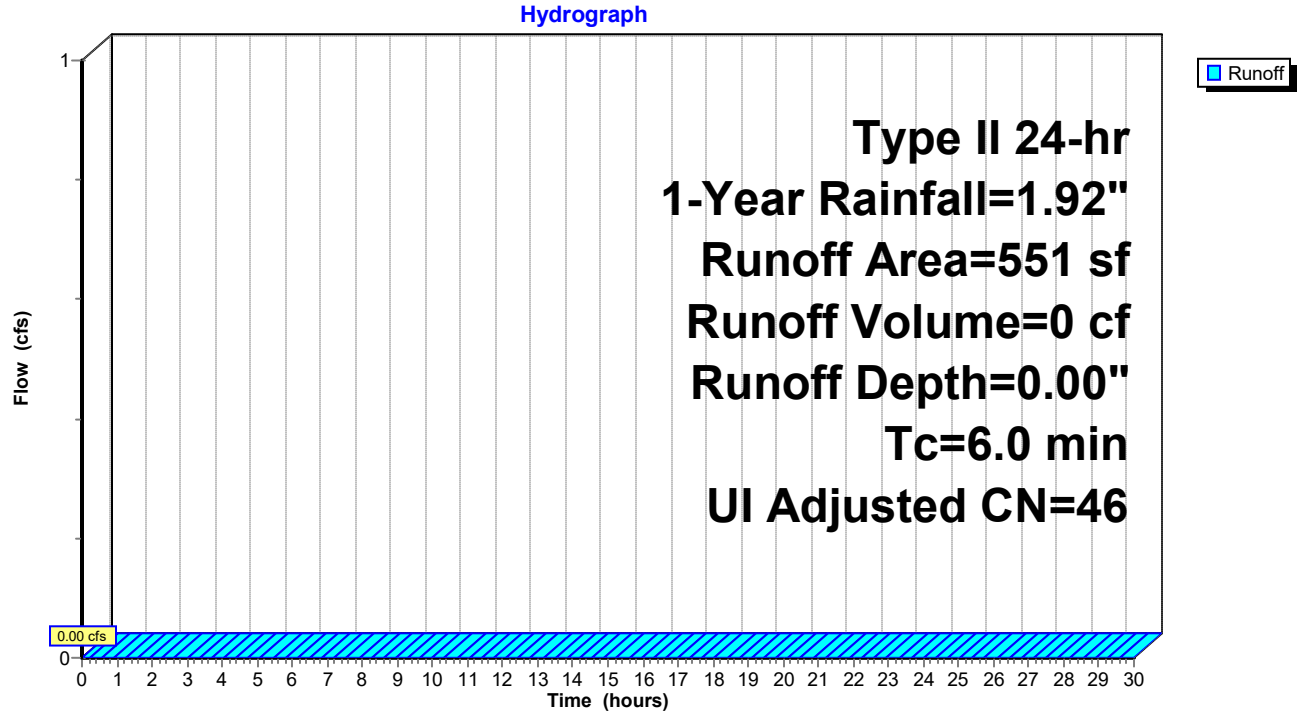
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"
Routed to Pond 44P : SW Planter 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Adj	Description
135	98		Unconnected pavement, HSG A
416	39		>75% Grass cover, Good, HSG A
551	53	46	Weighted Average, UI Adjusted
416			75.50% Pervious Area
135			24.50% Impervious Area
135			100.00% Unconnected

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

Subcatchment 18S: SWP 1



Summary for Subcatchment 19S: SWP 2

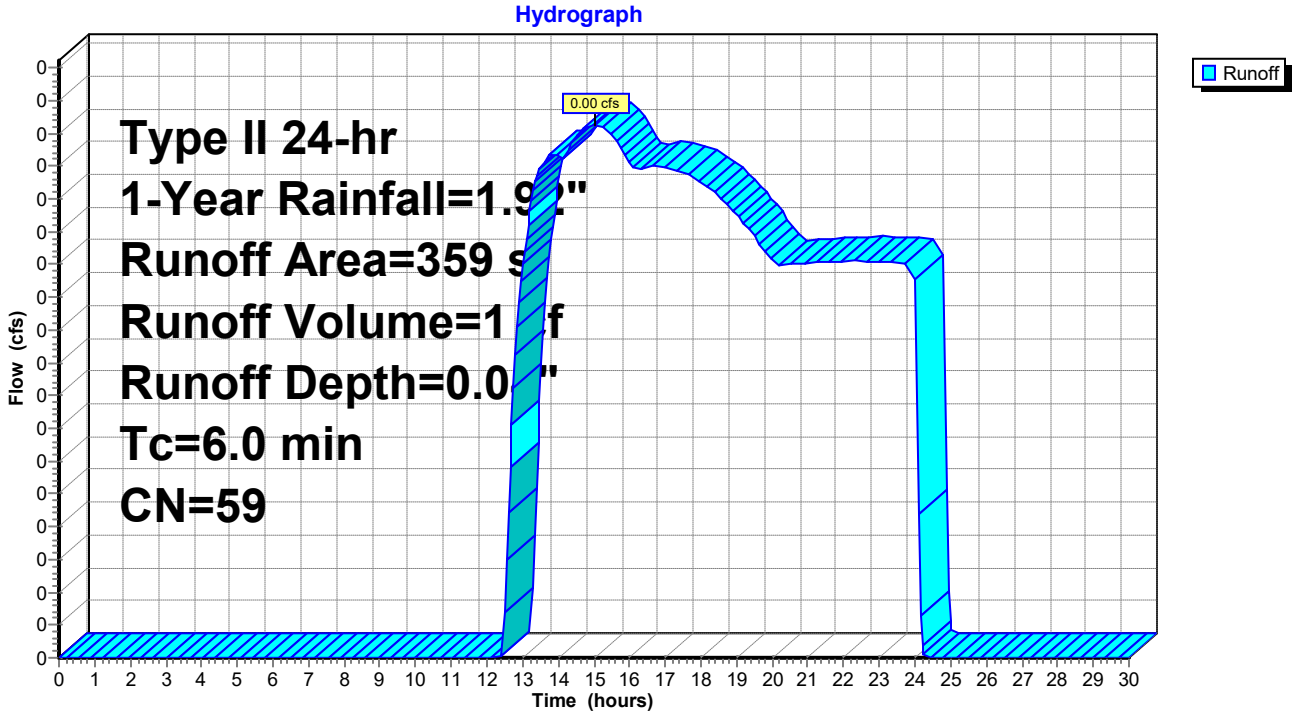
Runoff = 0.00 cfs @ 15.01 hrs, Volume= 1 cf, Depth= 0.04"
Routed to Pond 45P : SW Planter 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Description
122	98	Unconnected pavement, HSG A
237	39	>75% Grass cover, Good, HSG A
359	59	Weighted Average
237		66.02% Pervious Area
122		33.98% Impervious Area
122		100.00% Unconnected

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

Subcatchment 19S: SWP 2



Summary for Subcatchment 24S: Post 1S

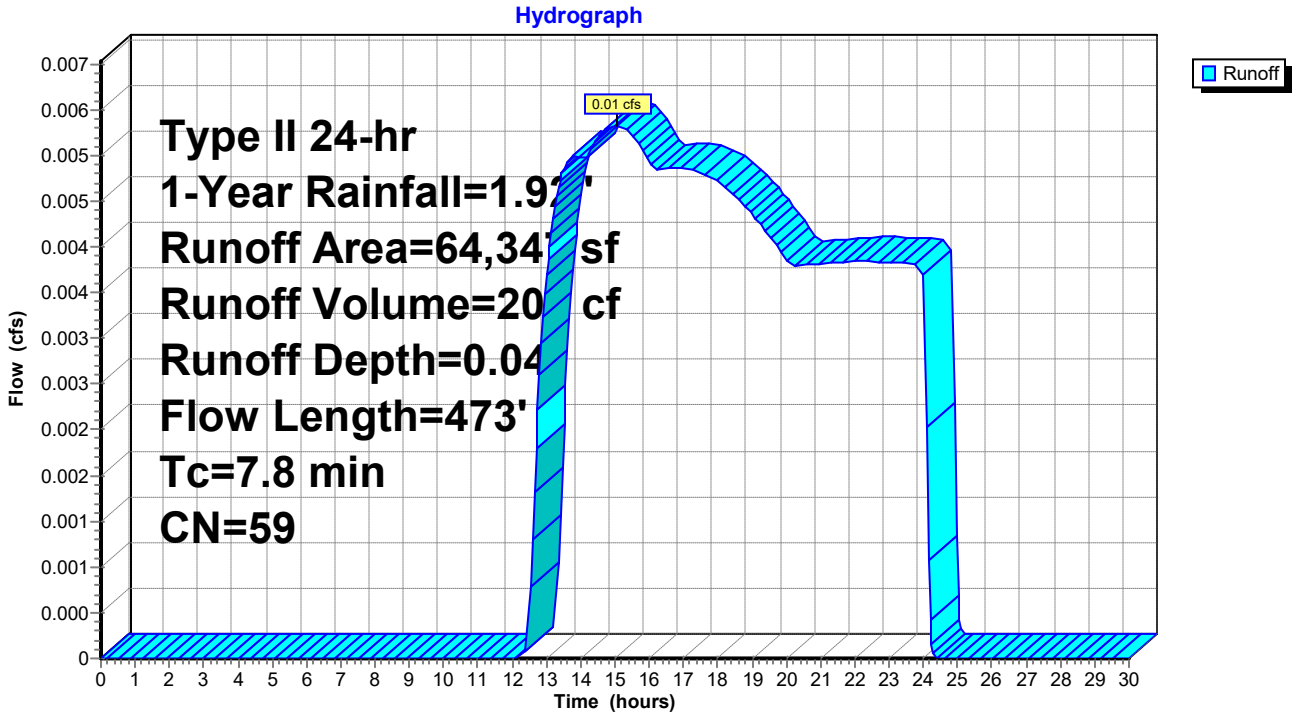
Runoff = 0.01 cfs @ 15.03 hrs, Volume= 202 cf, Depth= 0.04"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Description
28,535	30	Woods, Good, HSG A
24,765	98	Paved parking, HSG B
9,286	39	>75% Grass cover, Good, HSG A
1,761	76	Gravel roads, HSG A
64,347	59	Weighted Average
39,582		61.51% Pervious Area
24,765		38.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"
0.5	88	0.4000	3.16		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.4	125	0.0150	0.86		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	53	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	145	0.0173	7.50	9.20	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.0	37	0.0963	17.70	21.72	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
7.8	473	Total			

Subcatchment 24S: Post 1S



Summary for Subcatchment 25S: Post 2S

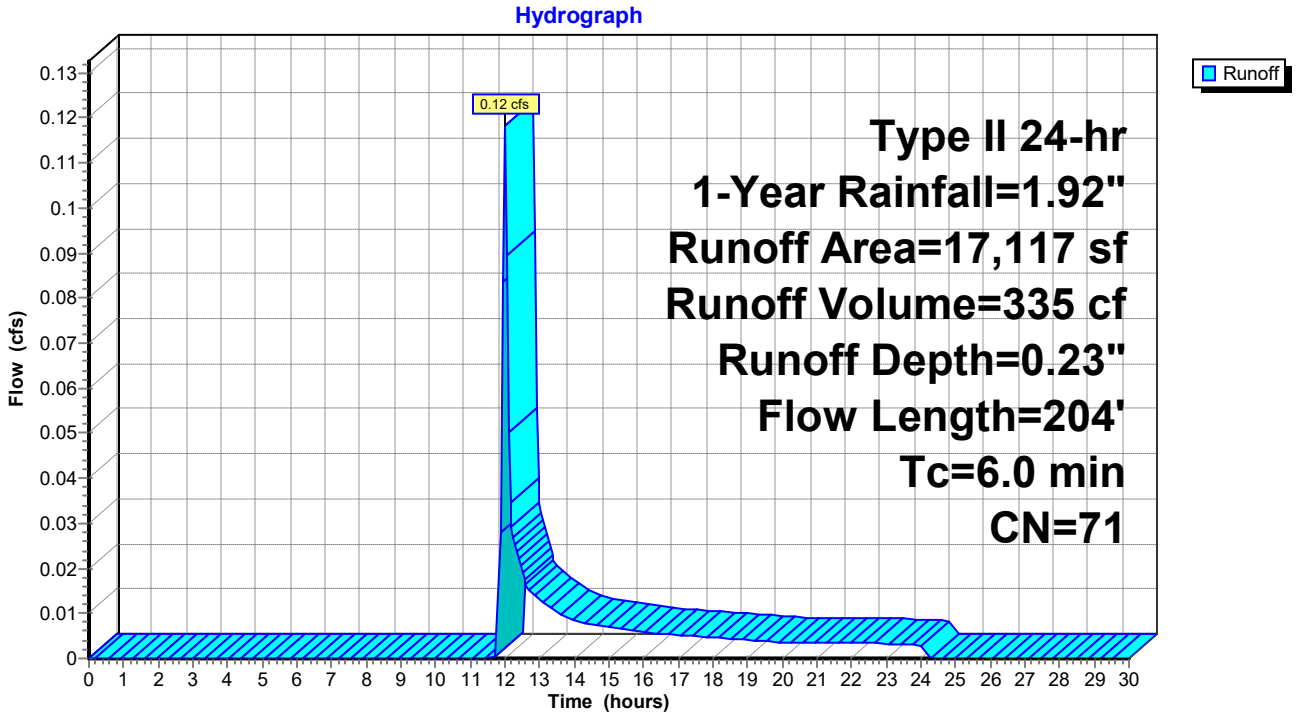
Runoff = 0.12 cfs @ 12.00 hrs, Volume= 335 cf, Depth= 0.23"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=1.92"

Area (sf)	CN	Description
9,866	98	Paved parking, HSG B
2,226	39	>75% Grass cover, Good, HSG A
5,025	32	Woods/grass comb., Good, HSG A
17,117	71	Weighted Average
7,251		42.36% Pervious Area
9,866		57.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	25	0.4000	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.7	52	0.0325	1.26		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	87	0.0860	8.03	9.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
3.2					**Direct Entry, Round up to 6 min**
6.0	204	Total			

Subcatchment 25S: Post 2S



Summary for Pond 4P: NewInfilBasin

Inflow Area = 6,927 sf, 22.42% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,532.95' @ 0.00 hrs Surf.Area= 174 sf Storage= 0 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	1,532.95'	711 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

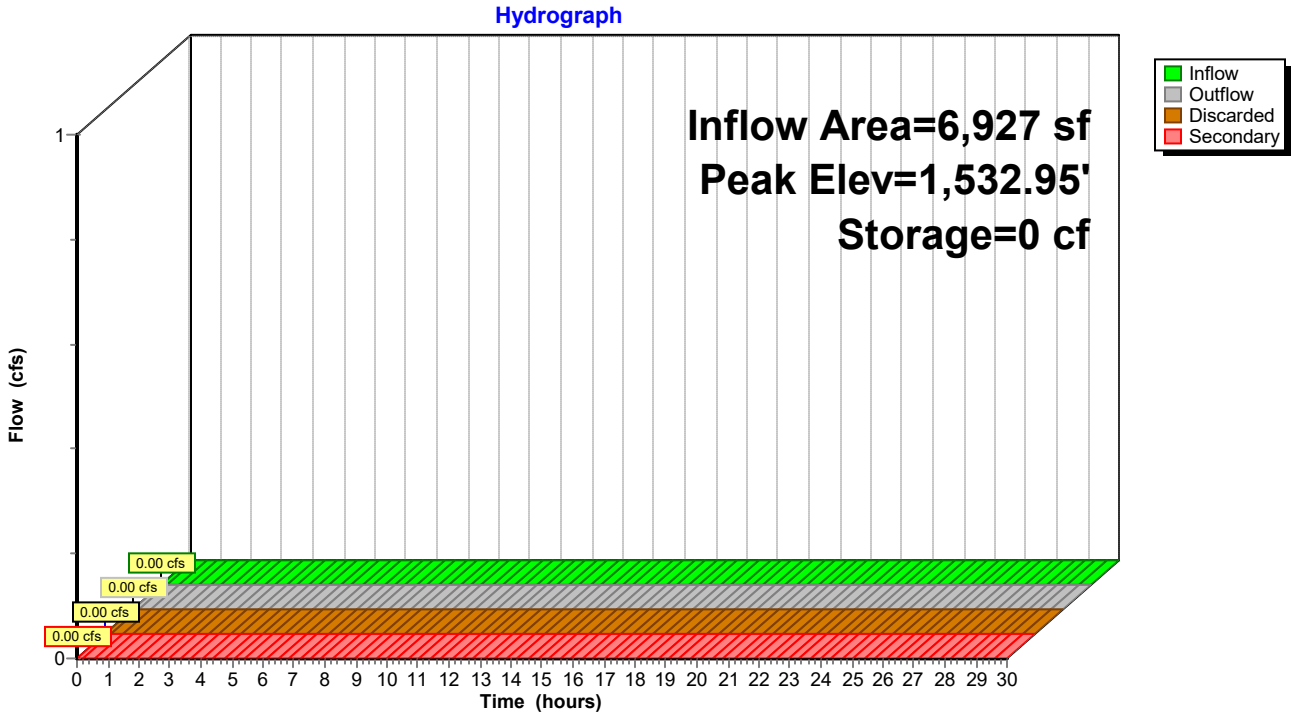
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,532.95	174	56.8	0	0	174
1,533.00	183	57.9	9	9	184
1,534.00	390	78.7	280	289	421
1,534.85	612	94.8	422	711	655

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,532.95'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.85'	**2.0" x 2.0" Horiz. Orifice/Grate X 12.00 columns** X 12 rows C= 0.600 in 24.0" x 24.0" Grate (100% open area) Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,532.95' (Free Discharge)
↑—**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,532.95' TW=0.00' (Dynamic Tailwater)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: NewInfilBasin



Summary for Pond 44P: SW Planter 1

Inflow Area = 551 sf, 24.50% Impervious, Inflow Depth = 0.00" for 1-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.25' @ 0.00 hrs Surf.Area= 362 sf Storage= 0 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.25'	91 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

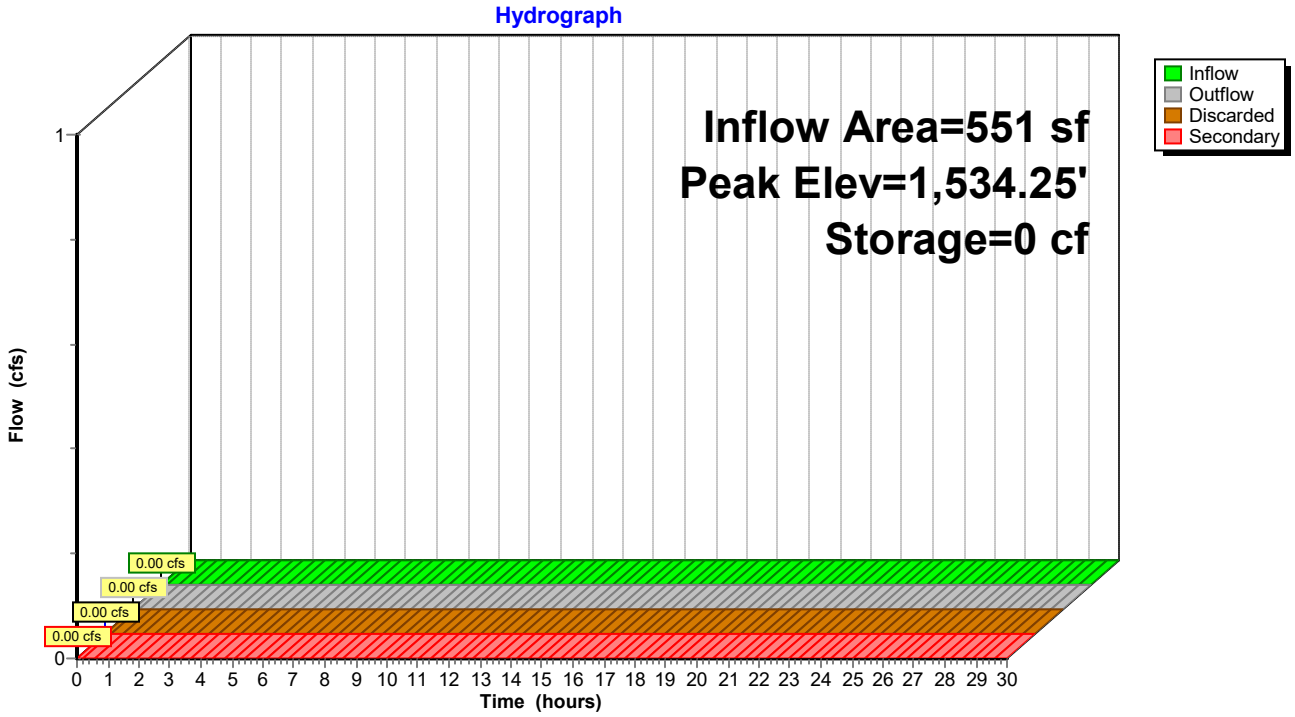
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.25	362	77.9	0	0	362
1,534.50	362	77.9	91	91	381

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.25'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.40
			Width (feet) 0.00 37.23

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.25' (Free Discharge)
1=Exfiltration (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.25' TW=0.00' (Dynamic Tailwater)
2=Custom Weir/Orifice (Controls 0.00 cfs)

Pond 44P: SW Planter 1



Summary for Pond 45P: SW Planter 2

Inflow Area = 359 sf, 33.98% Impervious, Inflow Depth = 0.04" for 1-Year event
Inflow = 0.00 cfs @ 15.01 hrs, Volume= 1 cf
Outflow = 0.00 cfs @ 15.01 hrs, Volume= 1 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 15.01 hrs, Volume= 1 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.41' @ 0.00 hrs Surf.Area= 201 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (1,086.0 - 1,086.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.41'	50 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

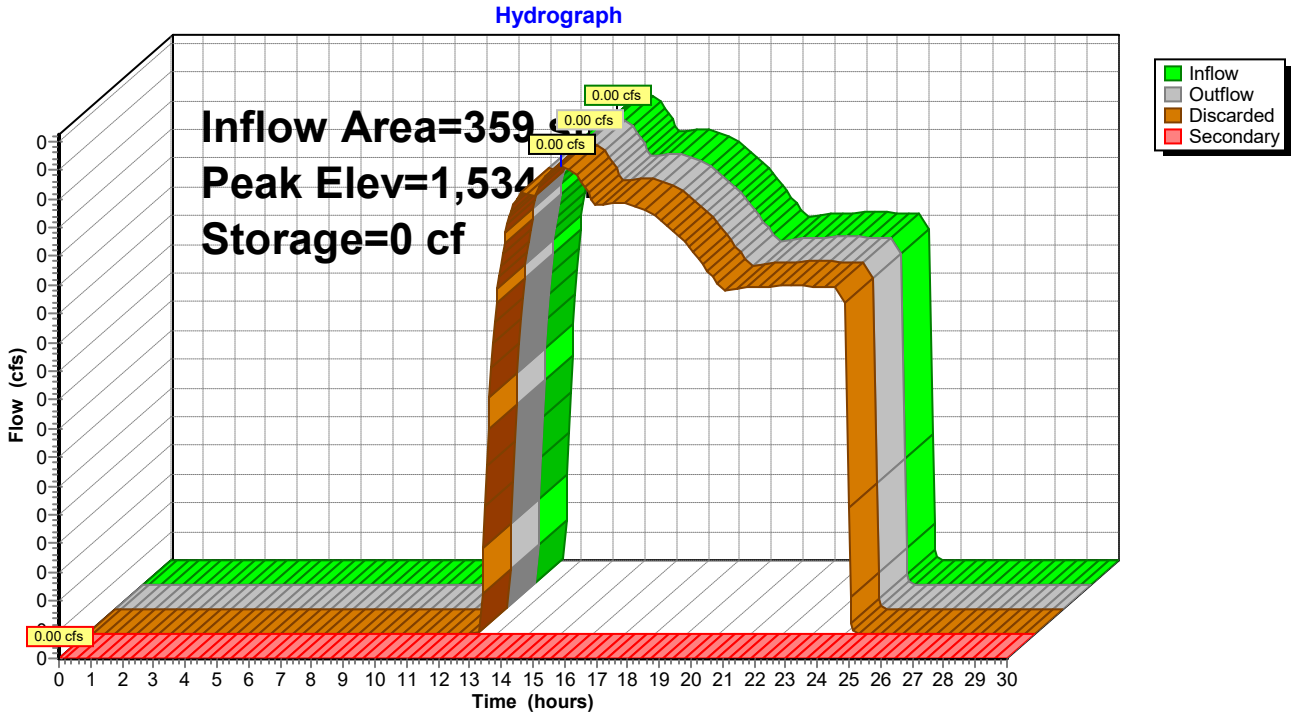
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.41	201	57.0	0	0	201
1,534.66	201	57.0	50	50	215

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.41'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.66'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.50
			Width (feet) 8.35 8.35

Discarded OutFlow Max=0.00 cfs @ 15.01 hrs HW=1,534.41' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.41' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 45P: SW Planter 2

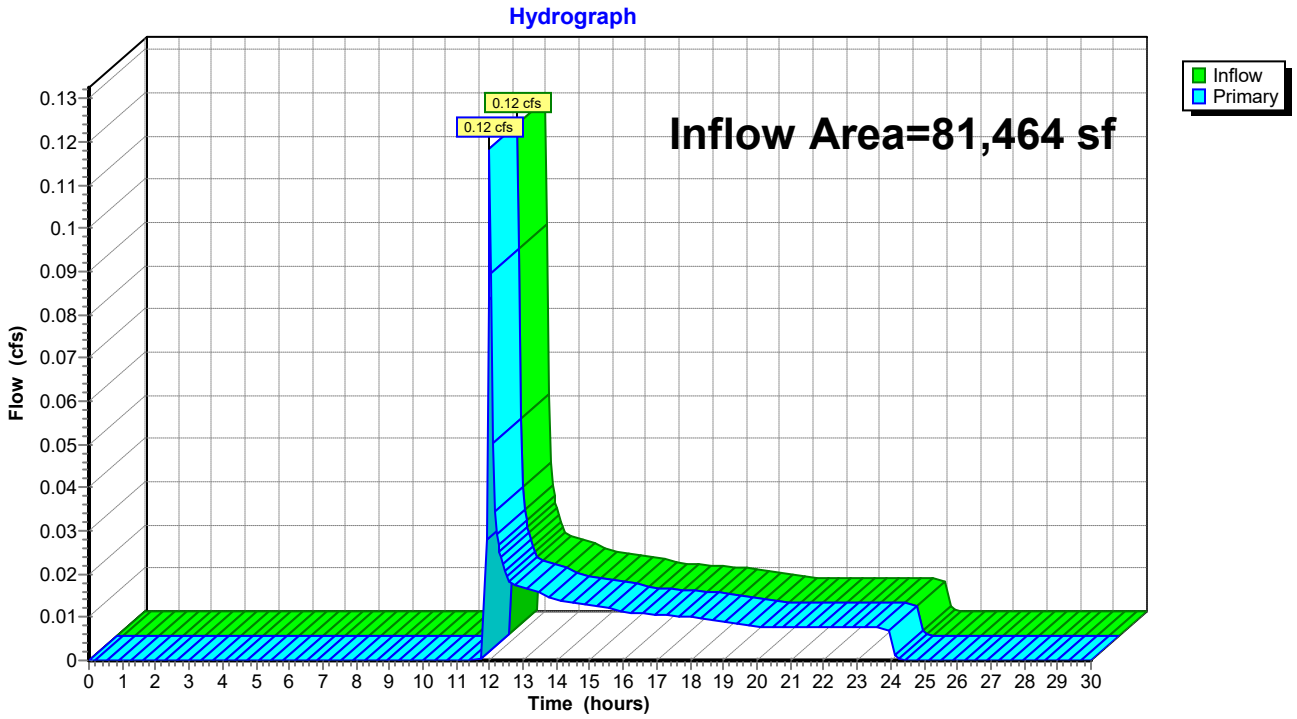


Summary for Link 23L: Saranac River (DP1)

Inflow Area = 81,464 sf, 42.51% Impervious, Inflow Depth = 0.08" for 1-Year event
Inflow = 0.12 cfs @ 12.00 hrs, Volume= 536 cf
Primary = 0.12 cfs @ 12.00 hrs, Volume= 536 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 23L: Saranac River (DP1)



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: IB 1 Runoff Area=6,927 sf 22.42% Impervious Runoff Depth=0.00"
Flow Length=100' Slope=0.3100 '/' Tc=8.7 min CN=48 Runoff=0.00 cfs 0 cf

Subcatchment 18S: SWP 1 Runoff Area=551 sf 24.50% Impervious Runoff Depth=0.00"
Tc=6.0 min UI Adjusted CN=46 Runoff=0.00 cfs 0 cf

Subcatchment 19S: SWP 2 Runoff Area=359 sf 33.98% Impervious Runoff Depth=0.08"
Tc=6.0 min CN=59 Runoff=0.00 cfs 2 cf

Subcatchment 24S: Post 1S Runoff Area=64,347 sf 38.49% Impervious Runoff Depth=0.08"
Flow Length=473' Tc=7.8 min CN=59 Runoff=0.02 cfs 433 cf

Subcatchment 25S: Post 2S Runoff Area=17,117 sf 57.64% Impervious Runoff Depth=0.34"
Flow Length=204' Tc=6.0 min CN=71 Runoff=0.20 cfs 487 cf

Pond 4P: NewInfilBasin Peak Elev=1,532.95' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 44P: SW Planter 1 Peak Elev=1,534.25' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 45P: SW Planter 2 Peak Elev=1,534.41' Storage=0 cf Inflow=0.00 cfs 2 cf
Discarded=0.00 cfs 2 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 2 cf

Link 23L: Saranac River (DP1) Inflow=0.20 cfs 919 cf
Primary=0.20 cfs 919 cf

Total Runoff Area = 89,301 sf Runoff Volume = 922 cf Average Runoff Depth = 0.12"
59.19% Pervious = 52,860 sf 40.81% Impervious = 36,441 sf

Summary for Subcatchment 3S: IB 1

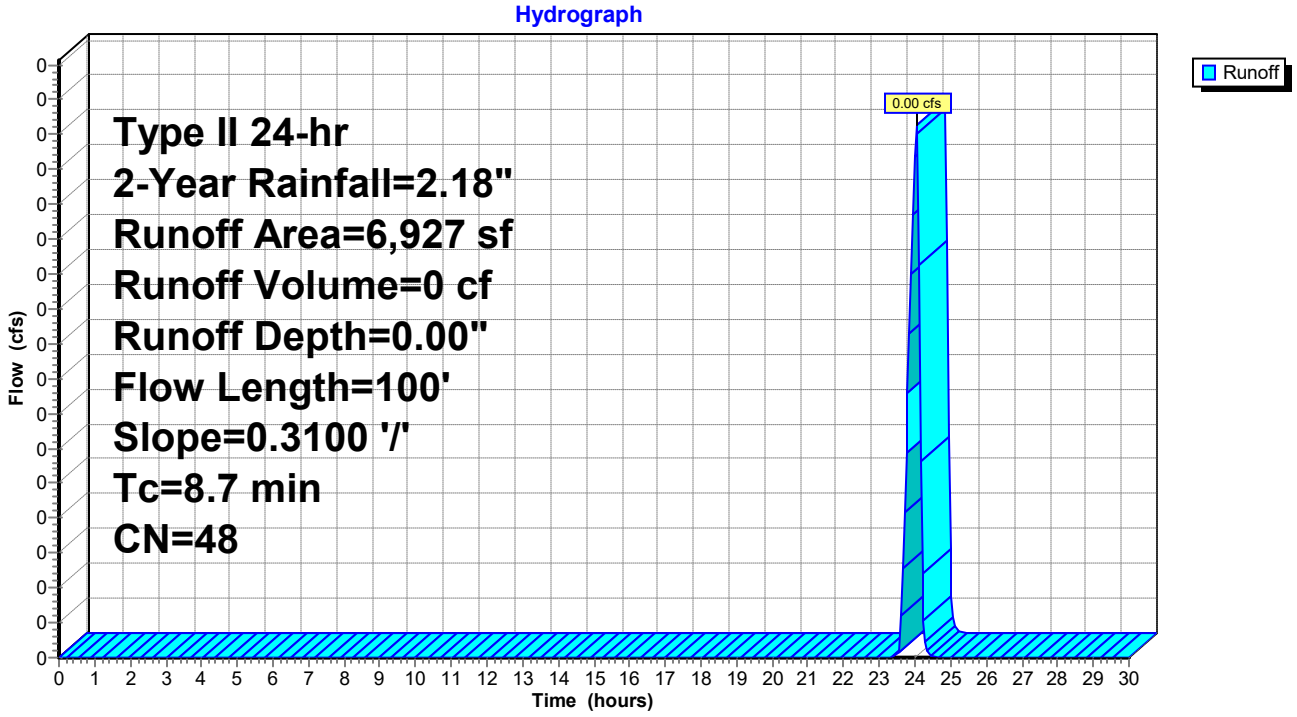
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0 cf, Depth= 0.00"
Routed to Pond 4P : NewInfilBasin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Description
1,553	98	Paved parking, HSG A
4,638	32	Woods/grass comb., Good, HSG A
620	39	>75% Grass cover, Good, HSG A
116	76	Gravel roads, HSG A
6,927	48	Weighted Average
5,374		77.58% Pervious Area
1,553		22.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.3100	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"

Subcatchment 3S: IB 1



Summary for Subcatchment 18S: SWP 1

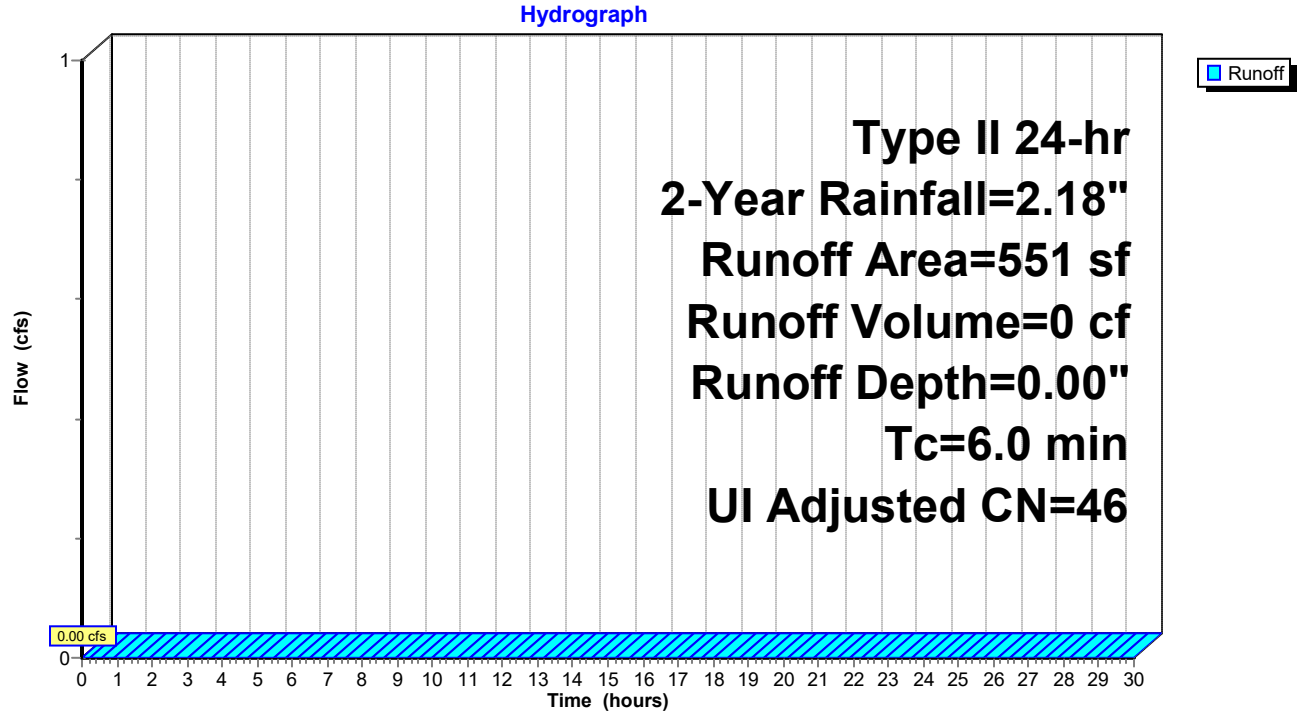
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"
Routed to Pond 44P : SW Planter 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Adj	Description
135	98		Unconnected pavement, HSG A
416	39		>75% Grass cover, Good, HSG A
551	53	46	Weighted Average, UI Adjusted
416			75.50% Pervious Area
135			24.50% Impervious Area
135			100.00% Unconnected

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

Subcatchment 18S: SWP 1



Summary for Subcatchment 19S: SWP 2

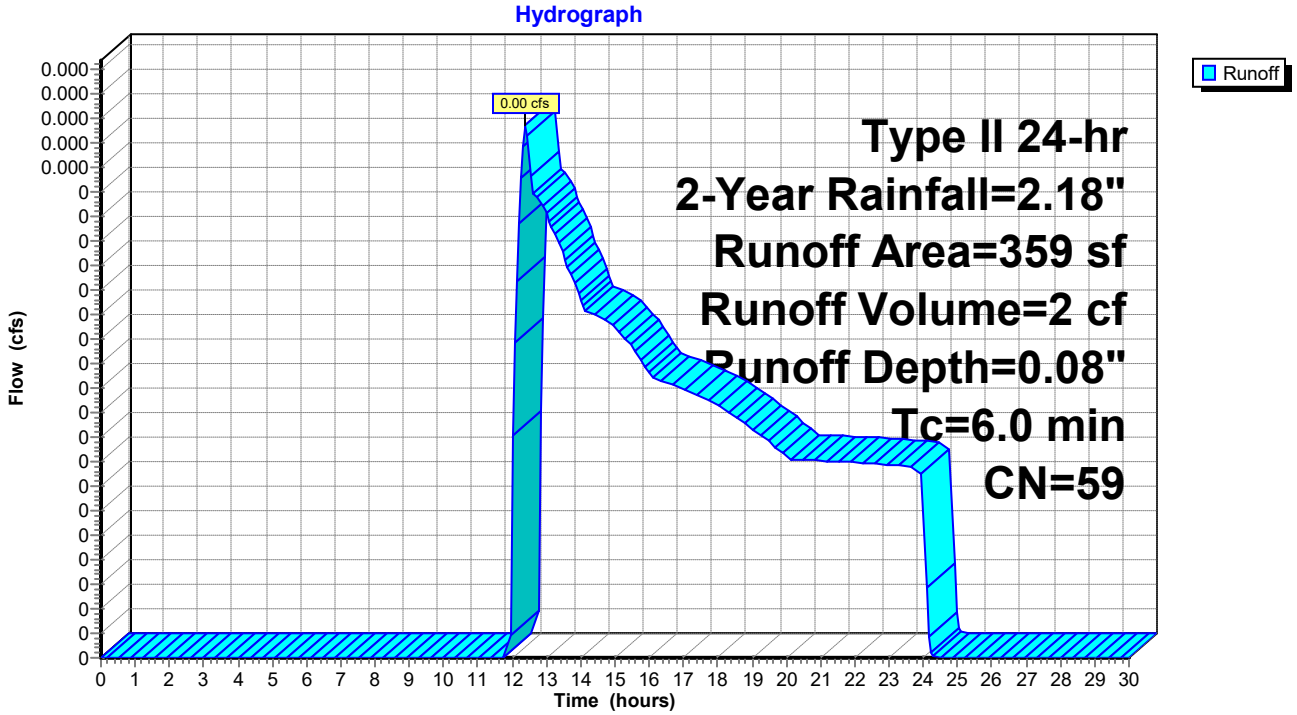
Runoff = 0.00 cfs @ 12.39 hrs, Volume= 2 cf, Depth= 0.08"
Routed to Pond 45P : SW Planter 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Description
122	98	Unconnected pavement, HSG A
237	39	>75% Grass cover, Good, HSG A
359	59	Weighted Average
237		66.02% Pervious Area
122		33.98% Impervious Area
122		100.00% Unconnected

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

Subcatchment 19S: SWP 2



Summary for Subcatchment 24S: Post 1S

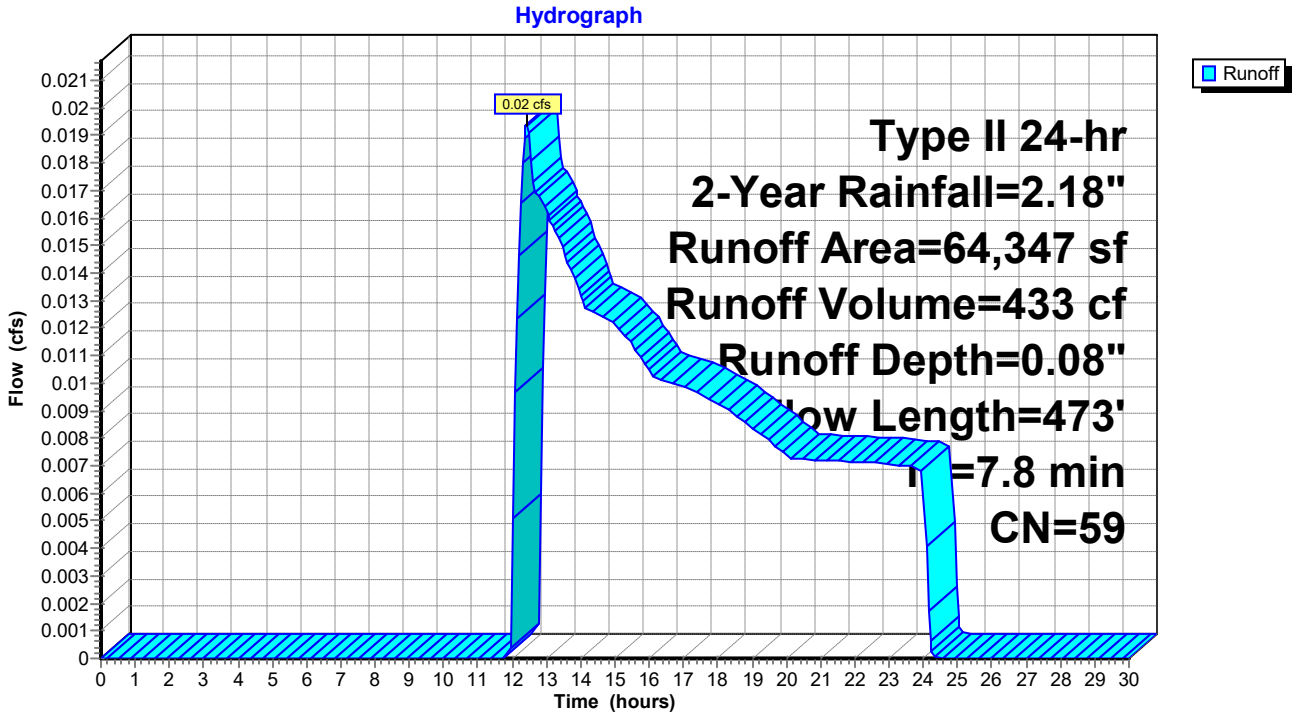
Runoff = 0.02 cfs @ 12.42 hrs, Volume= 433 cf, Depth= 0.08"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Description
28,535	30	Woods, Good, HSG A
24,765	98	Paved parking, HSG B
9,286	39	>75% Grass cover, Good, HSG A
1,761	76	Gravel roads, HSG A
64,347	59	Weighted Average
39,582		61.51% Pervious Area
24,765		38.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"
0.5	88	0.4000	3.16		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.4	125	0.0150	0.86		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	53	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	145	0.0173	7.50	9.20	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.0	37	0.0963	17.70	21.72	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
7.8	473	Total			

Subcatchment 24S: Post 1S



Summary for Subcatchment 25S: Post 2S

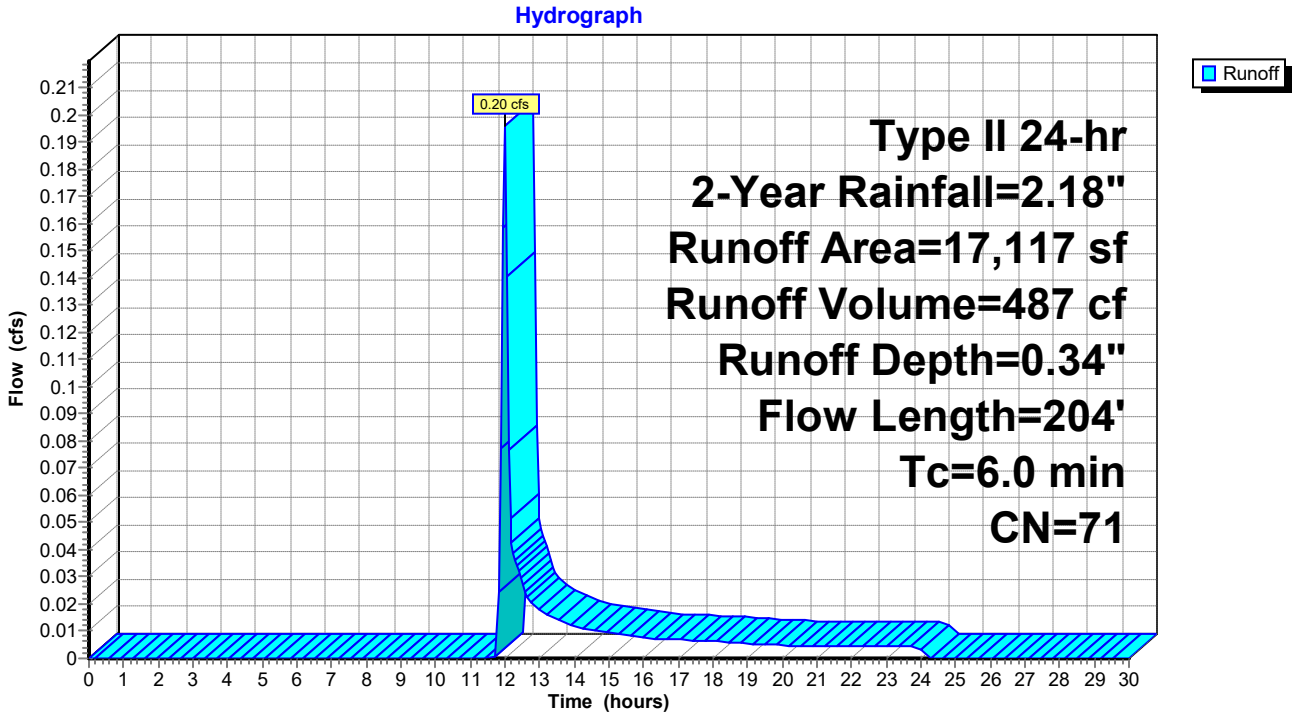
Runoff = 0.20 cfs @ 12.00 hrs, Volume= 487 cf, Depth= 0.34"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=2.18"

Area (sf)	CN	Description
9,866	98	Paved parking, HSG B
2,226	39	>75% Grass cover, Good, HSG A
5,025	32	Woods/grass comb., Good, HSG A
17,117	71	Weighted Average
7,251		42.36% Pervious Area
9,866		57.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	25	0.4000	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.7	52	0.0325	1.26		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	87	0.0860	8.03	9.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
3.2					**Direct Entry, Round up to 6 min**
6.0	204	Total			

Subcatchment 25S: Post 2S



Summary for Pond 4P: NewInfilBasin

Inflow Area = 6,927 sf, 22.42% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 24.03 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 24.03 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 24.03 hrs, Volume= 0 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,532.95' @ 0.00 hrs Surf.Area= 174 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (1,437.0 - 1,437.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,532.95'	711 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

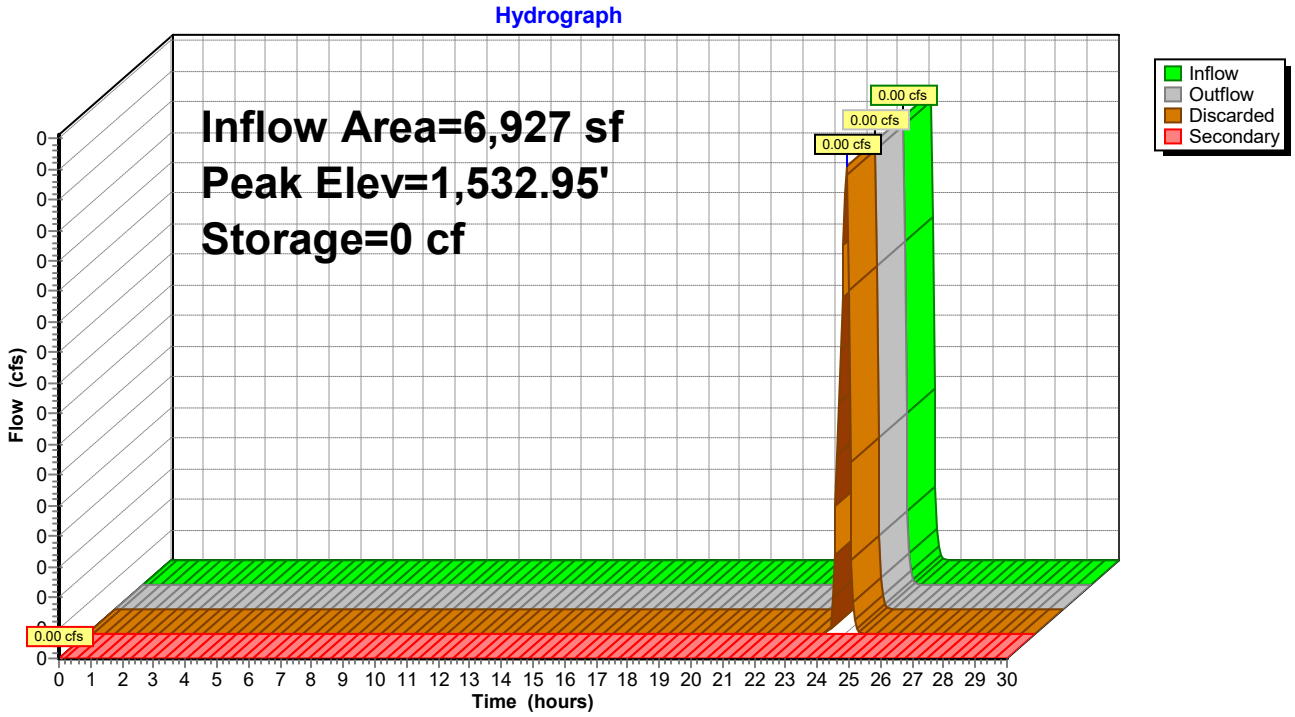
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,532.95	174	56.8	0	0	174
1,533.00	183	57.9	9	9	184
1,534.00	390	78.7	280	289	421
1,534.85	612	94.8	422	711	655

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,532.95'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.85'	**2.0" x 2.0" Horiz. Orifice/Grate X 12.00 columns** X 12 rows C= 0.600 in 24.0" x 24.0" Grate (100% open area) Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 24.03 hrs HW=1,532.95' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,532.95' TW=0.00' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: NewInfilBasin



Summary for Pond 44P: SW Planter 1

Inflow Area = 551 sf, 24.50% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.25' @ 0.00 hrs Surf.Area= 362 sf Storage= 0 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.25'	91 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

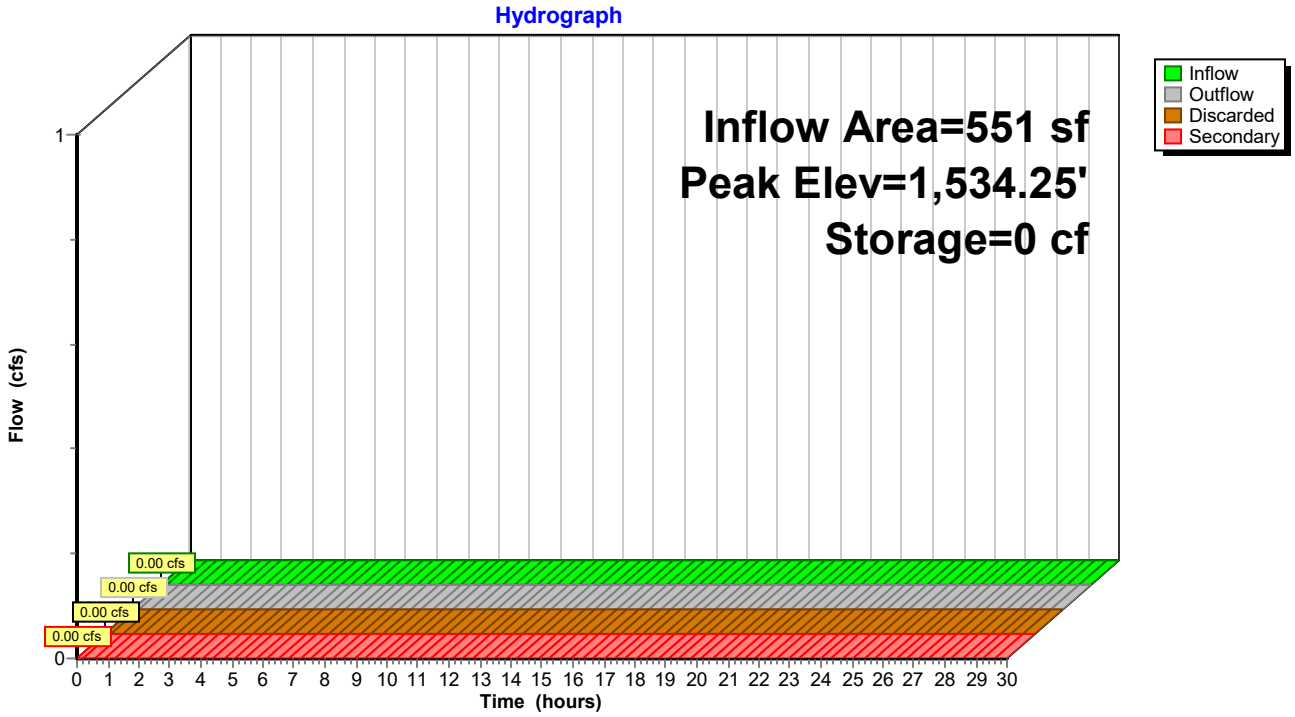
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.25	362	77.9	0	0	362
1,534.50	362	77.9	91	91	381

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.25'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.40
			Width (feet) 0.00 37.23

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.25' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.25' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 44P: SW Planter 1



Summary for Pond 45P: SW Planter 2

Inflow Area = 359 sf, 33.98% Impervious, Inflow Depth = 0.08" for 2-Year event
Inflow = 0.00 cfs @ 12.39 hrs, Volume= 2 cf
Outflow = 0.00 cfs @ 12.39 hrs, Volume= 2 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 12.39 hrs, Volume= 2 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.41' @ 0.00 hrs Surf.Area= 201 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (1,023.3 - 1,023.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.41'	50 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

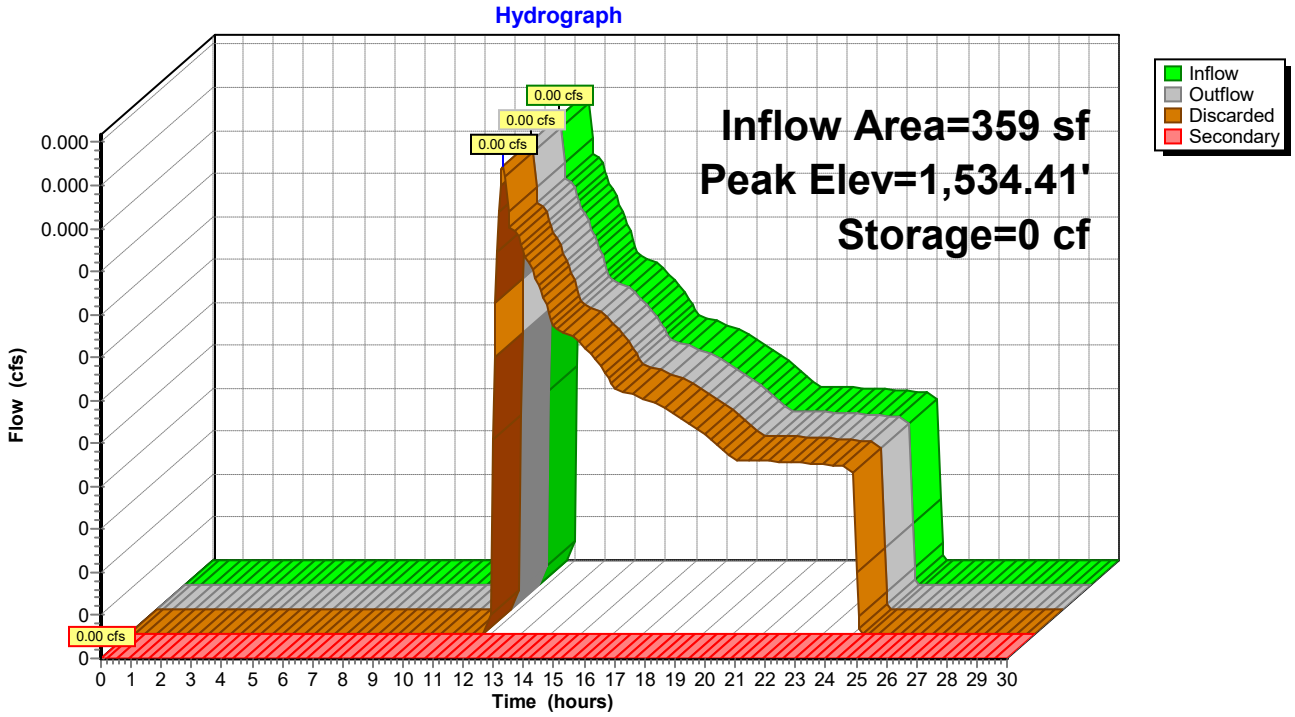
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.41	201	57.0	0	0	201
1,534.66	201	57.0	50	50	215

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.41'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.66'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.50
			Width (feet) 8.35 8.35

Discarded OutFlow Max=0.00 cfs @ 12.39 hrs HW=1,534.41' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.41' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 45P: SW Planter 2

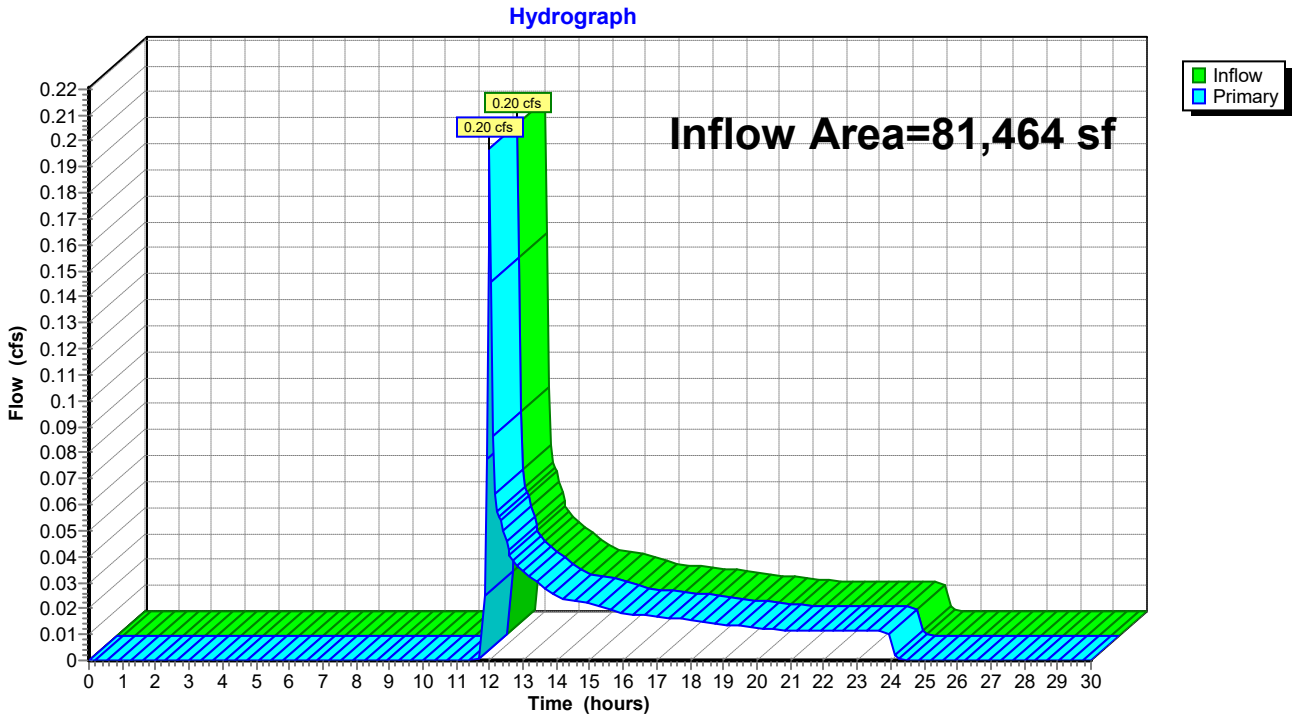


Summary for Link 23L: Saranac River (DP1)

Inflow Area = 81,464 sf, 42.51% Impervious, Inflow Depth = 0.14" for 2-Year event
Inflow = 0.20 cfs @ 12.00 hrs, Volume= 919 cf
Primary = 0.20 cfs @ 12.00 hrs, Volume= 919 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 23L: Saranac River (DP1)



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: IB 1 Runoff Area=6,927 sf 22.42% Impervious Runoff Depth=0.07"
Flow Length=100' Slope=0.3100 '/' Tc=8.7 min CN=48 Runoff=0.00 cfs 41 cf

Subcatchment 18S: SWP 1 Runoff Area=551 sf 24.50% Impervious Runoff Depth=0.04"
Tc=6.0 min UI Adjusted CN=46 Runoff=0.00 cfs 2 cf

Subcatchment 19S: SWP 2 Runoff Area=359 sf 33.98% Impervious Runoff Depth=0.33"
Tc=6.0 min CN=59 Runoff=0.00 cfs 10 cf

Subcatchment 24S: Post 1S Runoff Area=64,347 sf 38.49% Impervious Runoff Depth=0.33"
Flow Length=473' Tc=7.8 min CN=59 Runoff=0.50 cfs 1,773 cf

Subcatchment 25S: Post 2S Runoff Area=17,117 sf 57.64% Impervious Runoff Depth=0.81"
Flow Length=204' Tc=6.0 min CN=71 Runoff=0.53 cfs 1,151 cf

Pond 4P: NewInfilBasin Peak Elev=1,532.95' Storage=0 cf Inflow=0.00 cfs 41 cf
Discarded=0.00 cfs 41 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 41 cf

Pond 44P: SW Planter 1 Peak Elev=1,534.25' Storage=0 cf Inflow=0.00 cfs 2 cf
Discarded=0.00 cfs 2 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 2 cf

Pond 45P: SW Planter 2 Peak Elev=1,534.41' Storage=0 cf Inflow=0.00 cfs 10 cf
Discarded=0.00 cfs 10 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 10 cf

Link 23L: Saranac River (DP1) Inflow=0.99 cfs 2,924 cf
Primary=0.99 cfs 2,924 cf

Total Runoff Area = 89,301 sf Runoff Volume = 2,977 cf Average Runoff Depth = 0.40"
59.19% Pervious = 52,860 sf 40.81% Impervious = 36,441 sf

Summary for Subcatchment 3S: IB 1

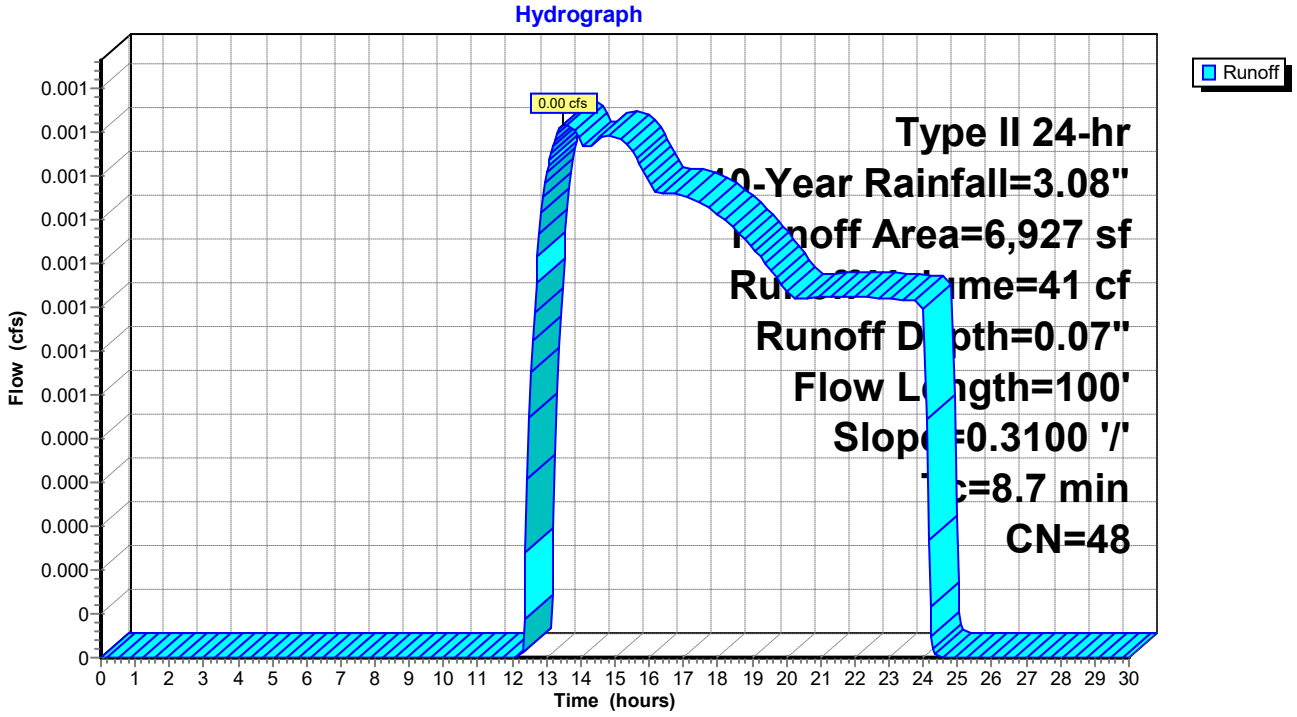
Runoff = 0.00 cfs @ 13.50 hrs, Volume= 41 cf, Depth= 0.07"
Routed to Pond 4P : NewInfilBasin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Description
1,553	98	Paved parking, HSG A
4,638	32	Woods/grass comb., Good, HSG A
620	39	>75% Grass cover, Good, HSG A
116	76	Gravel roads, HSG A
6,927	48	Weighted Average
5,374		77.58% Pervious Area
1,553		22.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.3100	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"

Subcatchment 3S: IB 1



Summary for Subcatchment 18S: SWP 1

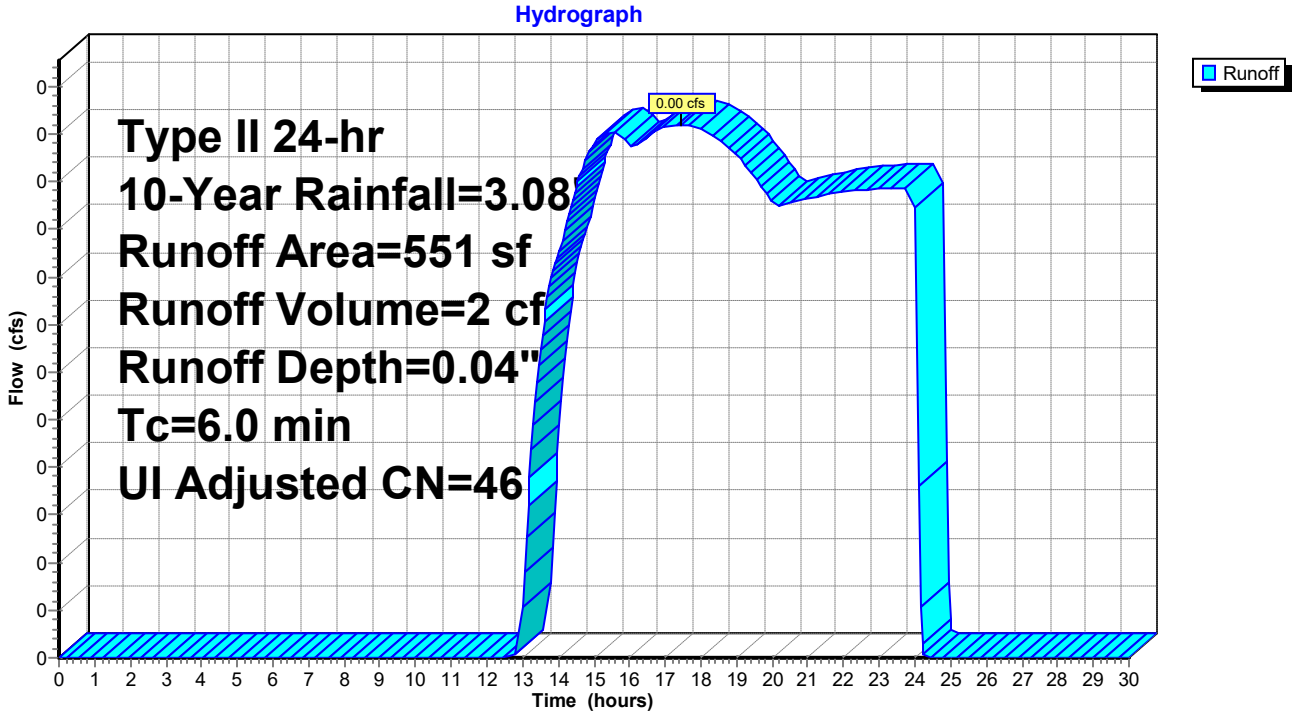
Runoff = 0.00 cfs @ 17.42 hrs, Volume= 2 cf, Depth= 0.04"
Routed to Pond 44P : SW Planter 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Adj	Description
135	98		Unconnected pavement, HSG A
416	39		>75% Grass cover, Good, HSG A
551	53	46	Weighted Average, UI Adjusted
416			75.50% Pervious Area
135			24.50% Impervious Area
135			100.00% Unconnected

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

Subcatchment 18S: SWP 1



Summary for Subcatchment 19S: SWP 2

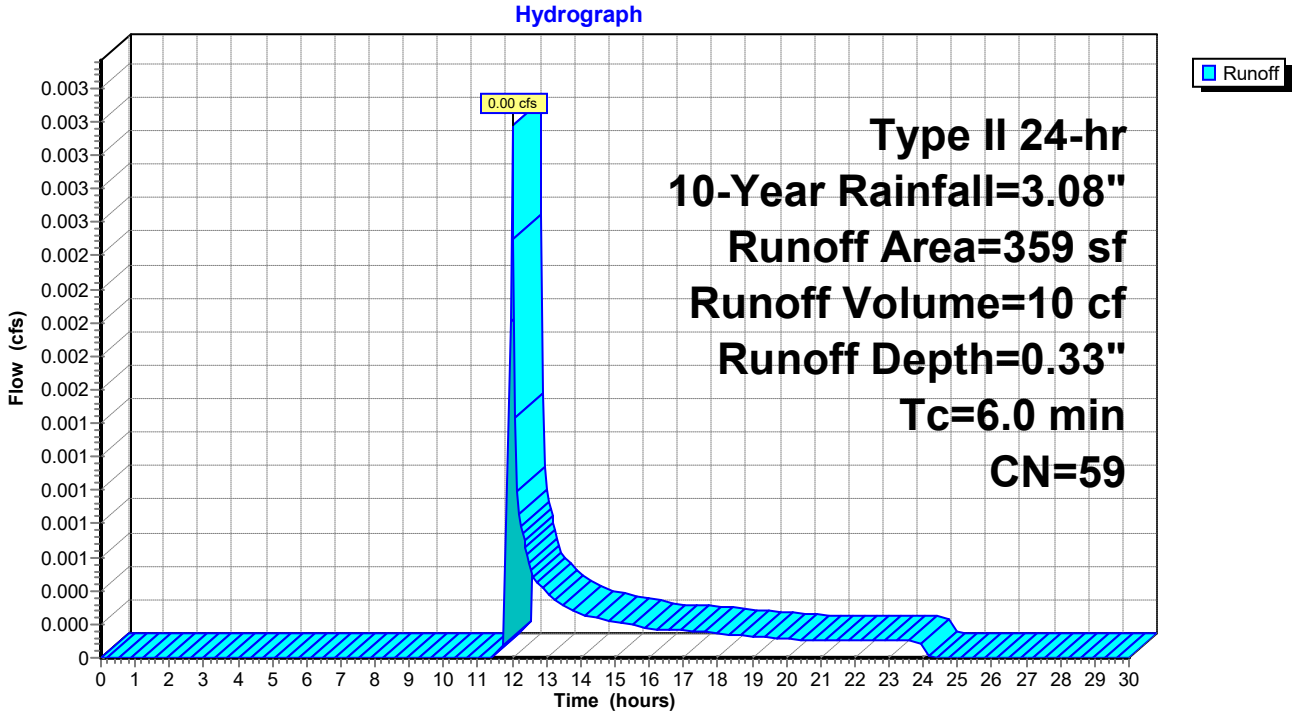
Runoff = 0.00 cfs @ 12.01 hrs, Volume= 10 cf, Depth= 0.33"
Routed to Pond 45P : SW Planter 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Description
122	98	Unconnected pavement, HSG A
237	39	>75% Grass cover, Good, HSG A
359	59	Weighted Average
237		66.02% Pervious Area
122		33.98% Impervious Area
122		100.00% Unconnected

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

Subcatchment 19S: SWP 2



Summary for Subcatchment 24S: Post 1S

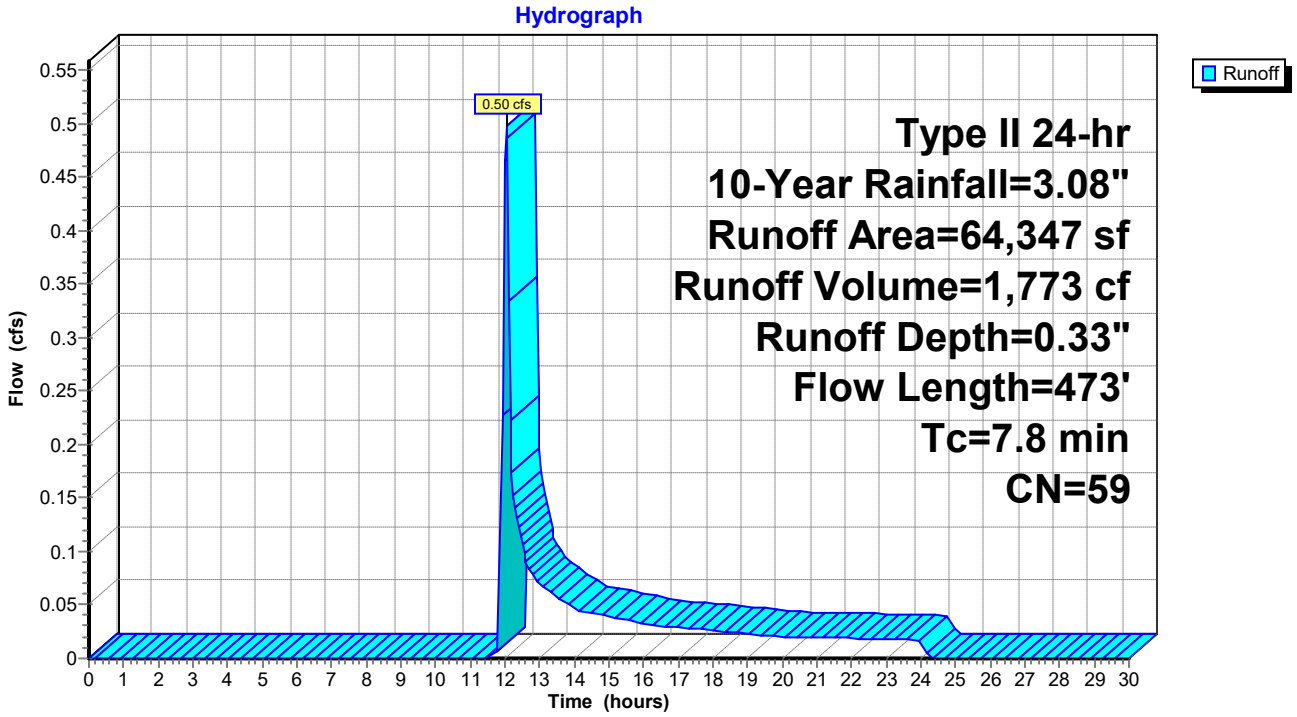
Runoff = 0.50 cfs @ 12.03 hrs, Volume= 1,773 cf, Depth= 0.33"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Description
28,535	30	Woods, Good, HSG A
24,765	98	Paved parking, HSG B
9,286	39	>75% Grass cover, Good, HSG A
1,761	76	Gravel roads, HSG A
64,347	59	Weighted Average
39,582		61.51% Pervious Area
24,765		38.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"
0.5	88	0.4000	3.16		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.4	125	0.0150	0.86		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	53	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	145	0.0173	7.50	9.20	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.0	37	0.0963	17.70	21.72	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
7.8	473	Total			

Subcatchment 24S: Post 1S



Summary for Subcatchment 25S: Post 2S

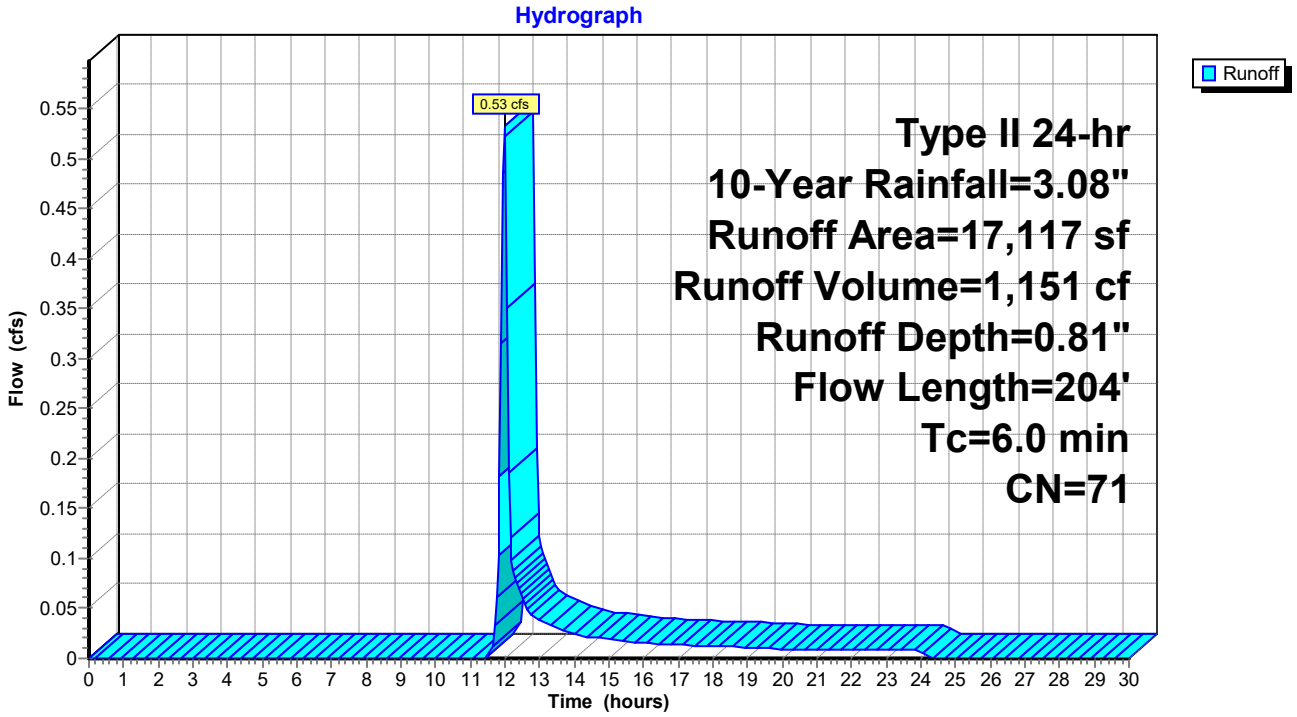
Runoff = 0.53 cfs @ 11.98 hrs, Volume= 1,151 cf, Depth= 0.81"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=3.08"

Area (sf)	CN	Description
9,866	98	Paved parking, HSG B
2,226	39	>75% Grass cover, Good, HSG A
5,025	32	Woods/grass comb., Good, HSG A
17,117	71	Weighted Average
7,251		42.36% Pervious Area
9,866		57.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	25	0.4000	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.7	52	0.0325	1.26		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	87	0.0860	8.03	9.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
3.2					**Direct Entry, Round up to 6 min**
6.0	204	Total			

Subcatchment 25S: Post 2S



Summary for Pond 4P: NewInfilBasin

Inflow Area = 6,927 sf, 22.42% Impervious, Inflow Depth = 0.07" for 10-Year event
Inflow = 0.00 cfs @ 13.50 hrs, Volume= 41 cf
Outflow = 0.00 cfs @ 13.50 hrs, Volume= 41 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 13.50 hrs, Volume= 41 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,532.95' @ 0.00 hrs Surf.Area= 174 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (1,072.1 - 1,072.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,532.95'	711 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

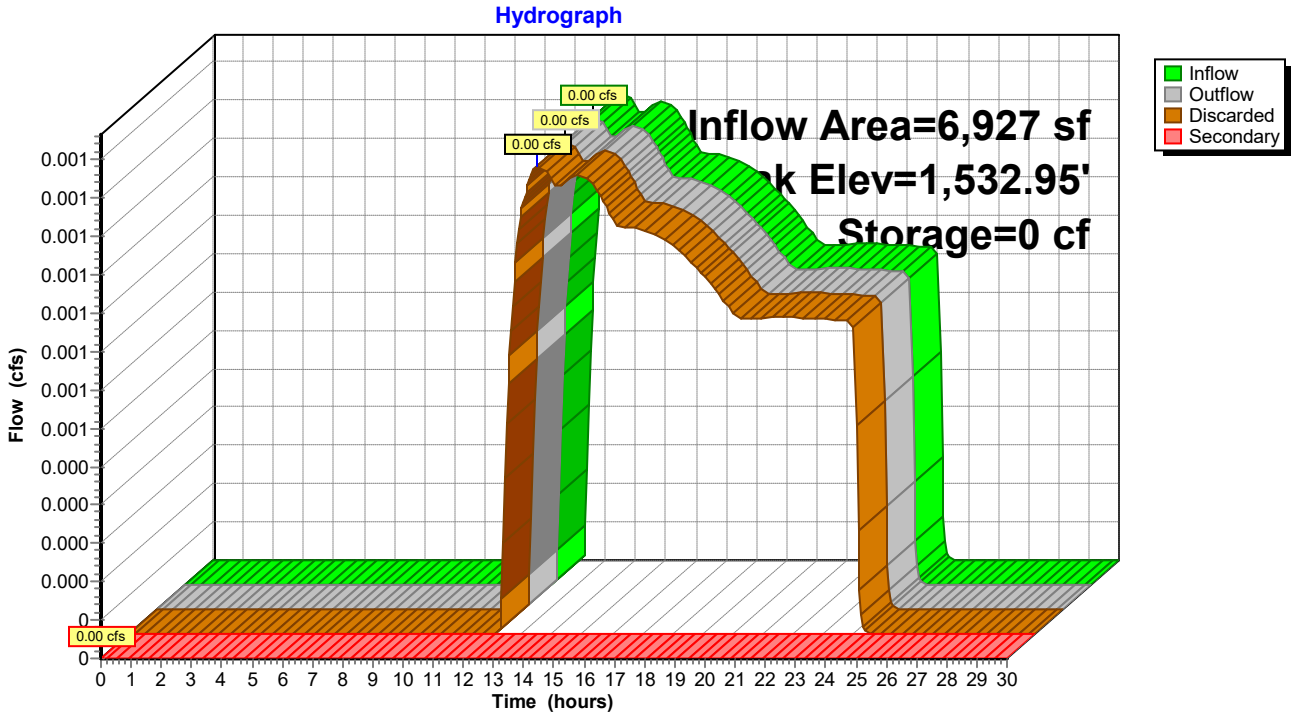
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,532.95	174	56.8	0	0	174
1,533.00	183	57.9	9	9	184
1,534.00	390	78.7	280	289	421
1,534.85	612	94.8	422	711	655

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,532.95'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.85'	**2.0" x 2.0" Horiz. Orifice/Grate X 12.00 columns** X 12 rows C= 0.600 in 24.0" x 24.0" Grate (100% open area) Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 13.50 hrs HW=1,532.95' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,532.95' TW=0.00' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: NewInfilBasin



Summary for Pond 44P: SW Planter 1

Inflow Area = 551 sf, 24.50% Impervious, Inflow Depth = 0.04" for 10-Year event
Inflow = 0.00 cfs @ 17.42 hrs, Volume= 2 cf
Outflow = 0.00 cfs @ 17.42 hrs, Volume= 2 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 17.42 hrs, Volume= 2 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.25' @ 0.00 hrs Surf.Area= 362 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (1,119.7 - 1,119.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.25'	91 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

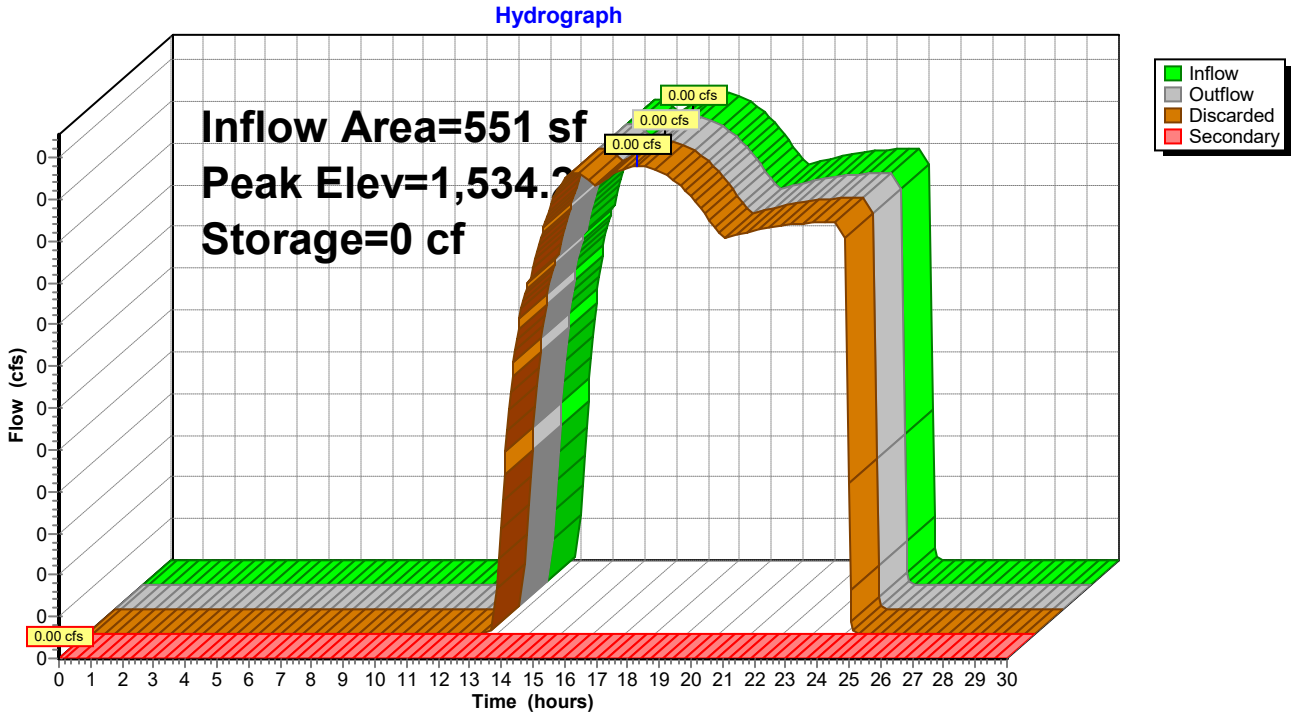
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.25	362	77.9	0	0	362
1,534.50	362	77.9	91	91	381

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.25'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.40
			Width (feet) 0.00 37.23

Discarded OutFlow Max=0.00 cfs @ 17.42 hrs HW=1,534.25' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.01 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.25' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 44P: SW Planter 1



Summary for Pond 45P: SW Planter 2

Inflow Area = 359 sf, 33.98% Impervious, Inflow Depth = 0.33" for 10-Year event
Inflow = 0.00 cfs @ 12.01 hrs, Volume= 10 cf
Outflow = 0.00 cfs @ 12.01 hrs, Volume= 10 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 12.01 hrs, Volume= 10 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.41' @ 12.00 hrs Surf.Area= 201 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (931.9 - 931.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.41'	50 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

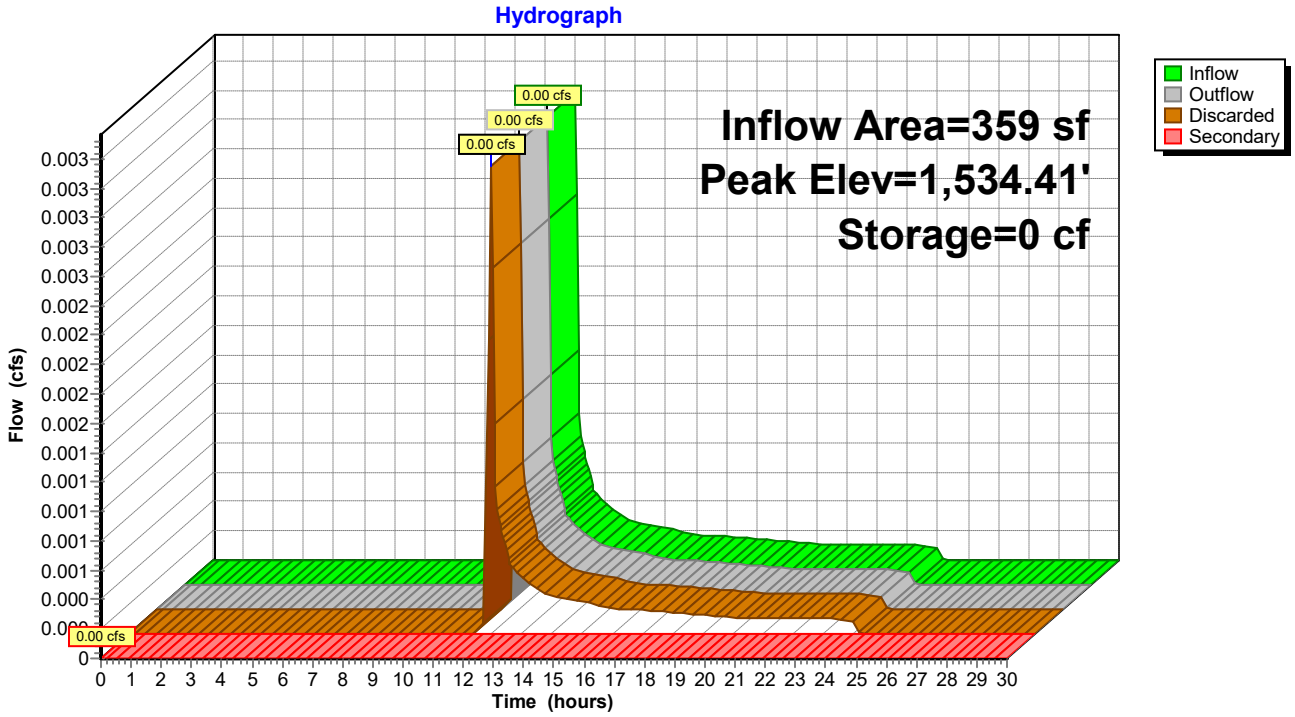
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.41	201	57.0	0	0	201
1,534.66	201	57.0	50	50	215

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.41'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.66'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.50
			Width (feet) 8.35 8.35

Discarded OutFlow Max=0.00 cfs @ 12.01 hrs HW=1,534.41' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.41' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 45P: SW Planter 2

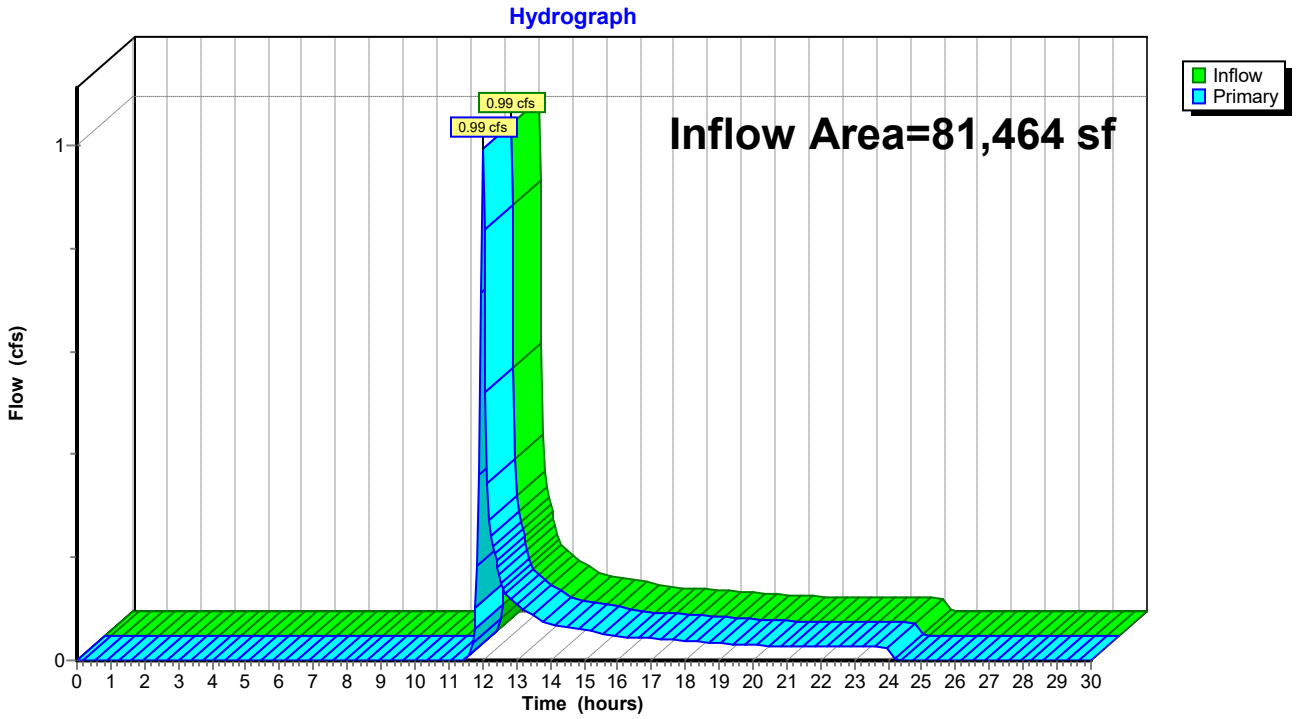


Summary for Link 23L: Saranac River (DP1)

Inflow Area = 81,464 sf, 42.51% Impervious, Inflow Depth = 0.43" for 10-Year event
Inflow = 0.99 cfs @ 12.01 hrs, Volume= 2,924 cf
Primary = 0.99 cfs @ 12.01 hrs, Volume= 2,924 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link 23L: Saranac River (DP1)



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: IB 1 Runoff Area=6,927 sf 22.42% Impervious Runoff Depth=0.60"
Flow Length=100' Slope=0.3100 '/' Tc=8.7 min CN=48 Runoff=0.10 cfs 348 cf

Subcatchment 18S: SWP 1 Runoff Area=551 sf 24.50% Impervious Runoff Depth=0.50"
Tc=6.0 min UI Adjusted CN=46 Runoff=0.01 cfs 23 cf

Subcatchment 19S: SWP 2 Runoff Area=359 sf 33.98% Impervious Runoff Depth=1.26"
Tc=6.0 min CN=59 Runoff=0.02 cfs 38 cf

Subcatchment 24S: Post 1S Runoff Area=64,347 sf 38.49% Impervious Runoff Depth=1.26"
Flow Length=473' Tc=7.8 min CN=59 Runoff=2.90 cfs 6,741 cf

Subcatchment 25S: Post 2S Runoff Area=17,117 sf 57.64% Impervious Runoff Depth=2.15"
Flow Length=204' Tc=6.0 min CN=71 Runoff=1.47 cfs 3,062 cf

Pond 4P: NewInfilBasin Peak Elev=1,533.53' Storage=132 cf Inflow=0.10 cfs 348 cf
Discarded=0.01 cfs 348 cf Secondary=0.00 cfs 0 cf Outflow=0.01 cfs 348 cf

Pond 44P: SW Planter 1 Peak Elev=1,534.25' Storage=0 cf Inflow=0.01 cfs 23 cf
Discarded=0.01 cfs 23 cf Secondary=0.00 cfs 0 cf Outflow=0.01 cfs 23 cf

Pond 45P: SW Planter 2 Peak Elev=1,534.44' Storage=7 cf Inflow=0.02 cfs 38 cf
Discarded=0.00 cfs 38 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 38 cf

Link 23L: Saranac River (DP1) Inflow=4.31 cfs 9,803 cf
Primary=4.31 cfs 9,803 cf

Total Runoff Area = 89,301 sf Runoff Volume = 10,211 cf Average Runoff Depth = 1.37"
59.19% Pervious = 52,860 sf 40.81% Impervious = 36,441 sf

Summary for Subcatchment 3S: IB 1

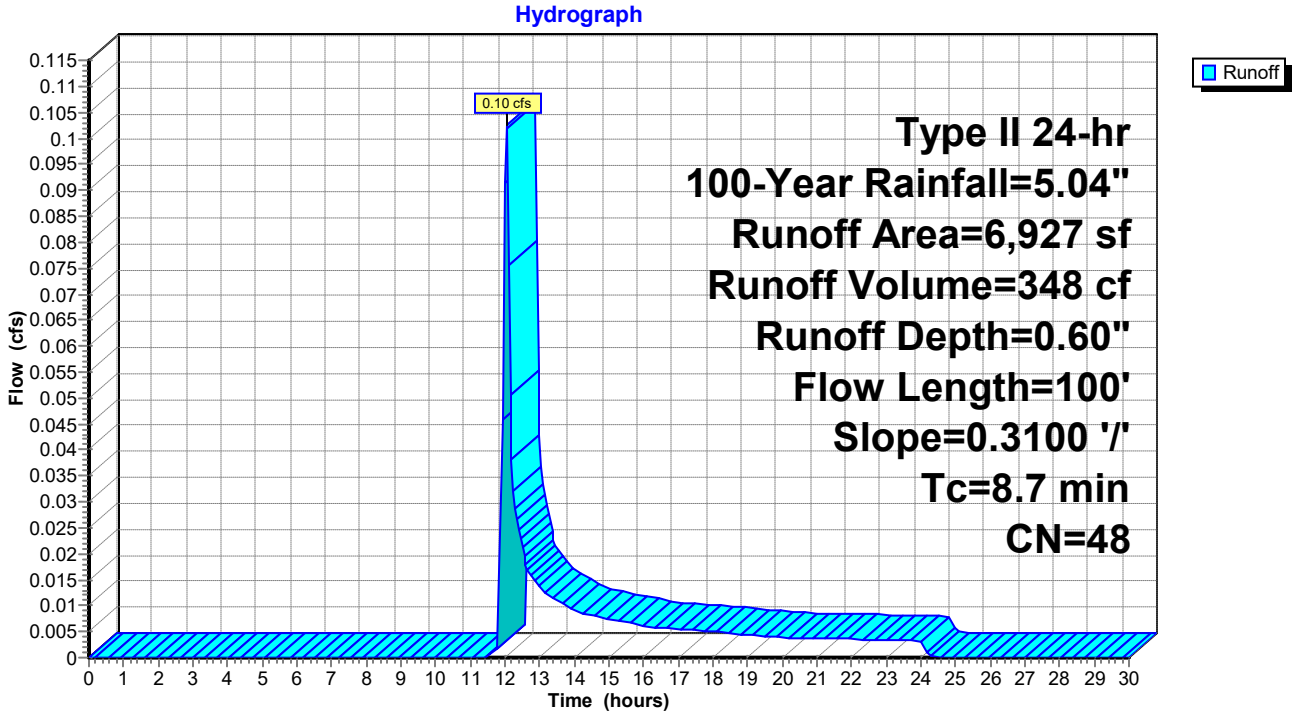
Runoff = 0.10 cfs @ 12.04 hrs, Volume= 348 cf, Depth= 0.60"
Routed to Pond 4P : NewInfilBasin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Description
1,553	98	Paved parking, HSG A
4,638	32	Woods/grass comb., Good, HSG A
620	39	>75% Grass cover, Good, HSG A
116	76	Gravel roads, HSG A
6,927	48	Weighted Average
5,374		77.58% Pervious Area
1,553		22.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.3100	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"

Subcatchment 3S: IB 1



Summary for Subcatchment 18S: SWP 1

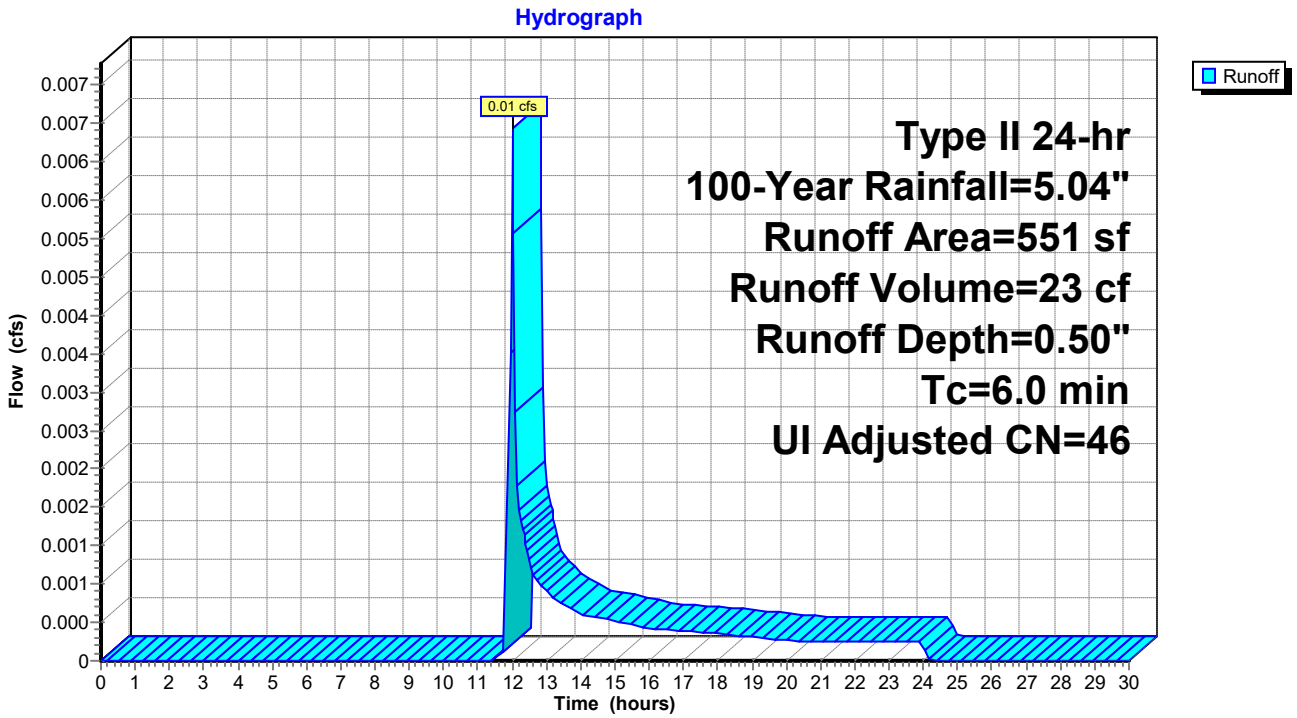
Runoff = 0.01 cfs @ 12.01 hrs, Volume= 23 cf, Depth= 0.50"
Routed to Pond 44P : SW Planter 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Adj	Description
135	98		Unconnected pavement, HSG A
416	39		>75% Grass cover, Good, HSG A
551	53	46	Weighted Average, UI Adjusted
416			75.50% Pervious Area
135			24.50% Impervious Area
135			100.00% Unconnected

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

Subcatchment 18S: SWP 1



Summary for Subcatchment 19S: SWP 2

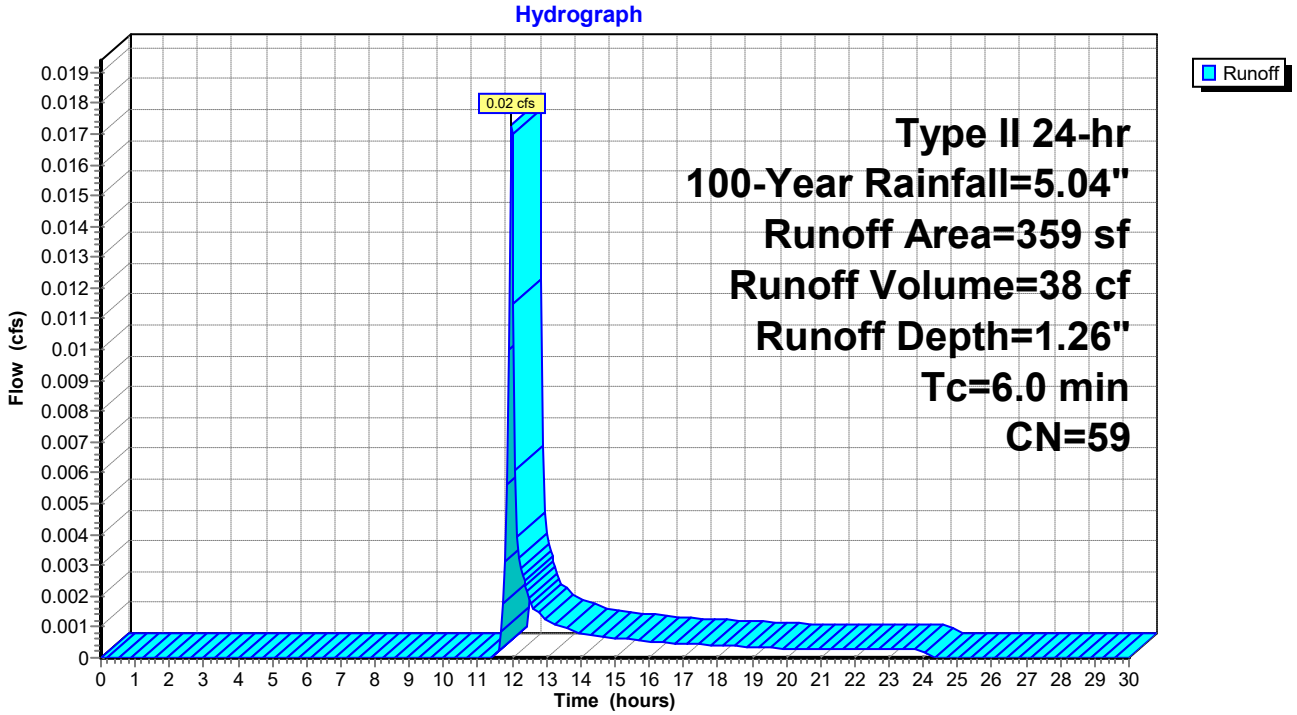
Runoff = 0.02 cfs @ 11.98 hrs, Volume= 38 cf, Depth= 1.26"
Routed to Pond 45P : SW Planter 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Description
122	98	Unconnected pavement, HSG A
237	39	>75% Grass cover, Good, HSG A
359	59	Weighted Average
237		66.02% Pervious Area
122		33.98% Impervious Area
122		100.00% Unconnected

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

Subcatchment 19S: SWP 2



Summary for Subcatchment 24S: Post 1S

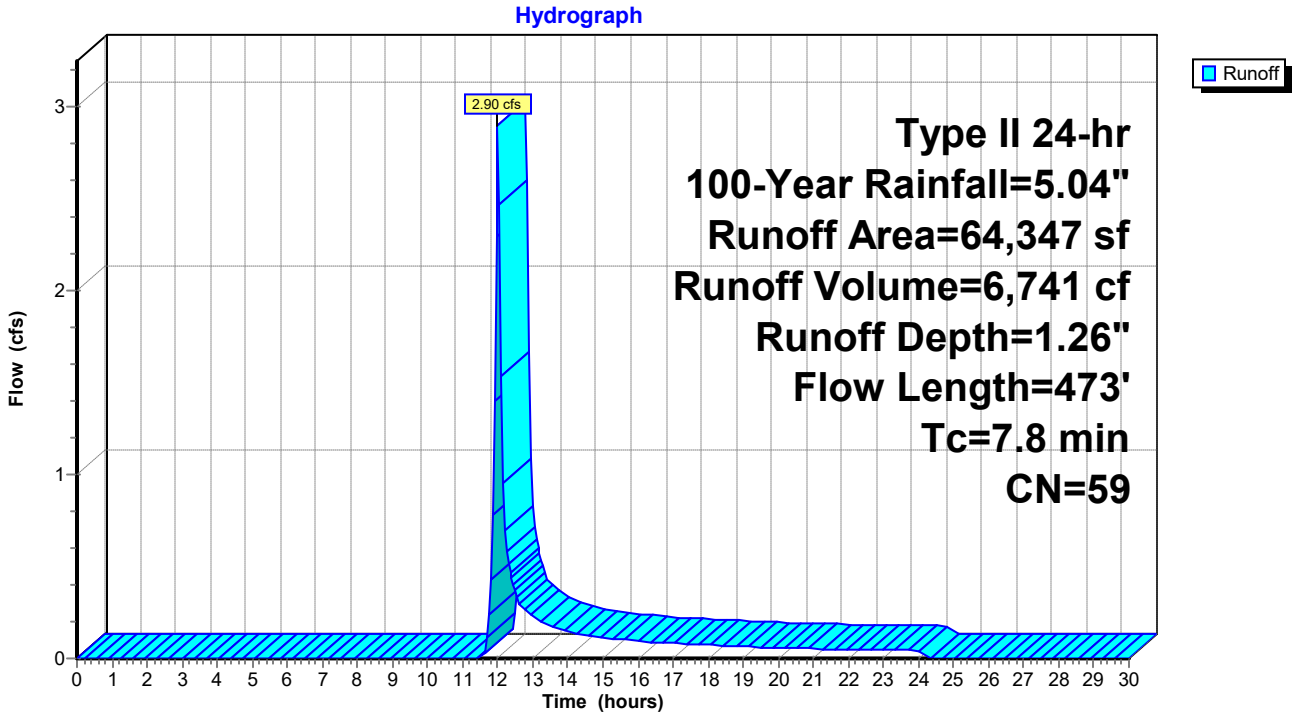
Runoff = 2.90 cfs @ 12.00 hrs, Volume= 6,741 cf, Depth= 1.26"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Description
28,535	30	Woods, Good, HSG A
24,765	98	Paved parking, HSG B
9,286	39	>75% Grass cover, Good, HSG A
1,761	76	Gravel roads, HSG A
64,347	59	Weighted Average
39,582		61.51% Pervious Area
24,765		38.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	25	0.1200	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.18"
0.5	88	0.4000	3.16		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.4	125	0.0150	0.86		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	53	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	145	0.0173	7.50	9.20	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.0	37	0.0963	17.70	21.72	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
7.8	473	Total			

Subcatchment 24S: Post 1S



Summary for Subcatchment 25S: Post 2S

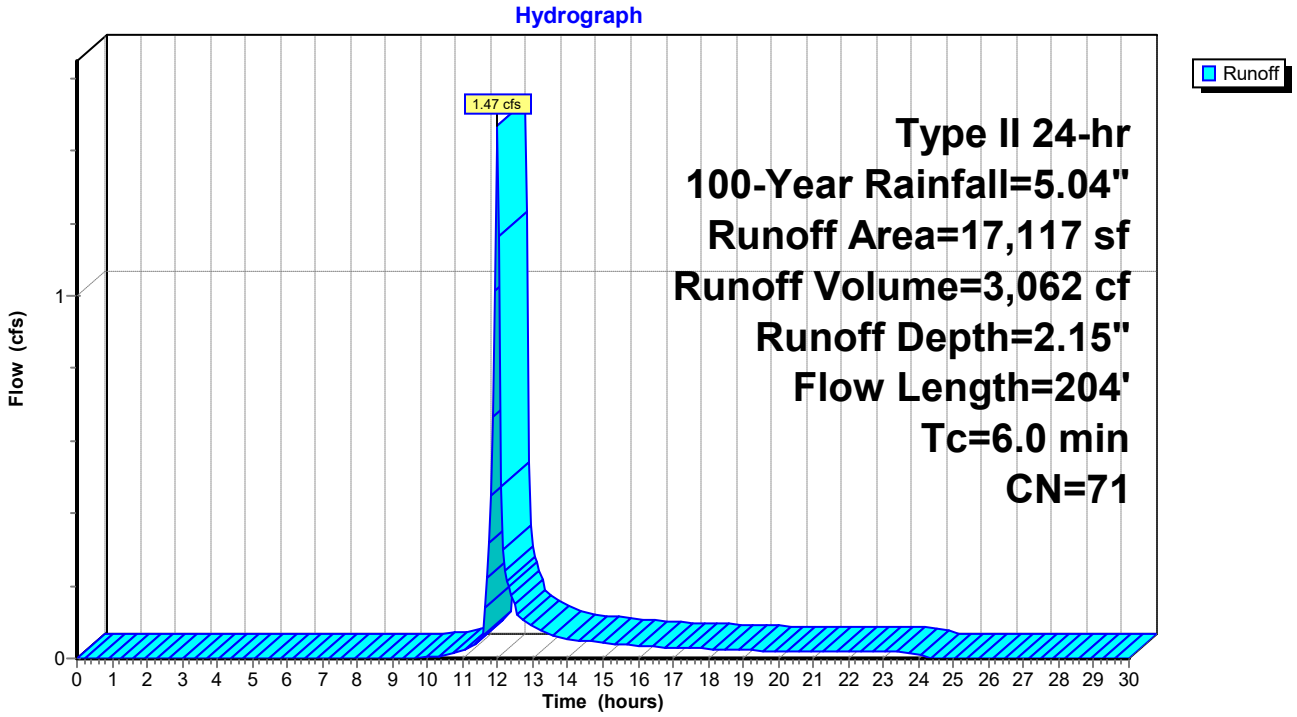
Runoff = 1.47 cfs @ 11.98 hrs, Volume= 3,062 cf, Depth= 2.15"
Routed to Link 23L : Saranac River (DP1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=5.04"

Area (sf)	CN	Description
9,866	98	Paved parking, HSG B
2,226	39	>75% Grass cover, Good, HSG A
5,025	32	Woods/grass comb., Good, HSG A
17,117	71	Weighted Average
7,251		42.36% Pervious Area
9,866		57.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	25	0.4000	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.18"
0.7	52	0.0325	1.26		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	40	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	87	0.0860	8.03	9.85	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.025 Corrugated metal
3.2					**Direct Entry, Round up to 6 min**
6.0	204	Total			

Subcatchment 25S: Post 2S



Summary for Pond 4P: NewInfilBasin

Inflow Area = 6,927 sf, 22.42% Impervious, Inflow Depth = 0.60" for 100-Year event
Inflow = 0.10 cfs @ 12.04 hrs, Volume= 348 cf
Outflow = 0.01 cfs @ 15.68 hrs, Volume= 348 cf, Atten= 94%, Lag= 218.7 min
Discarded = 0.01 cfs @ 15.68 hrs, Volume= 348 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,533.53' @ 15.68 hrs Surf.Area= 283 sf Storage= 132 cf

Plug-Flow detention time= 258.1 min calculated for 347 cf (100% of inflow)
Center-of-Mass det. time= 258.4 min (1,184.9 - 926.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,532.95'	711 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

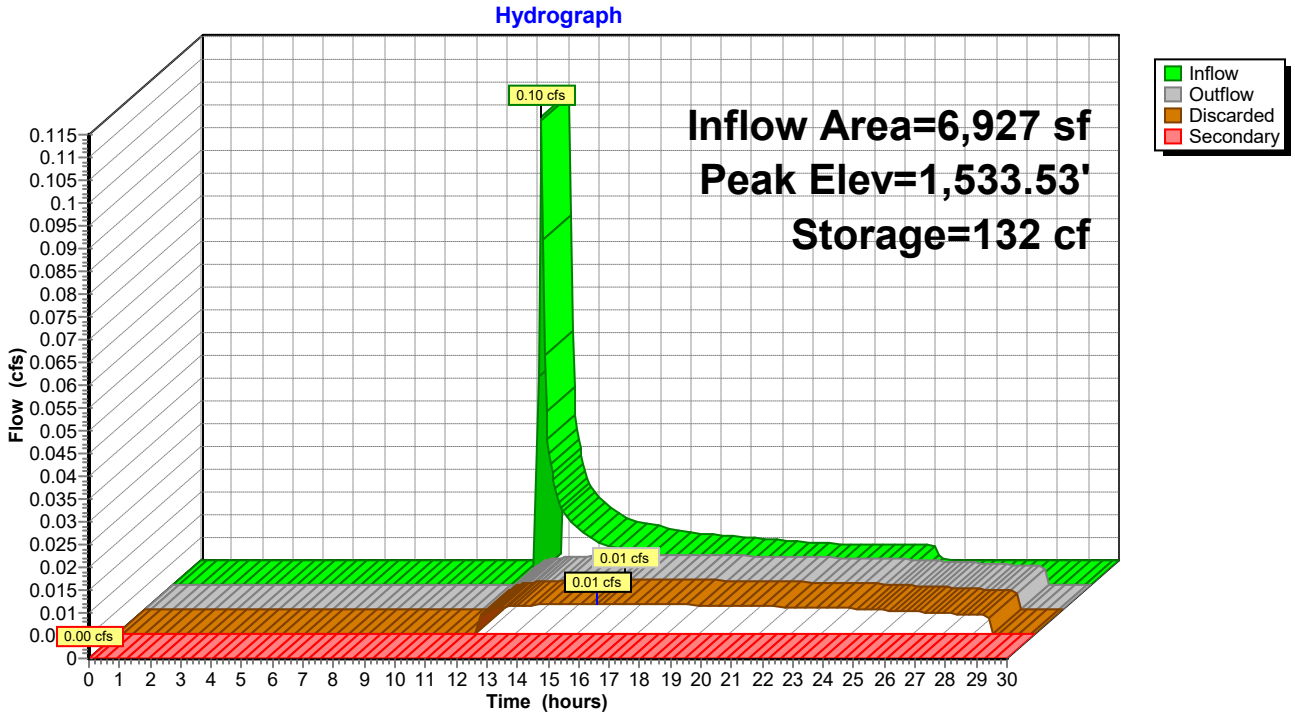
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,532.95	174	56.8	0	0	174
1,533.00	183	57.9	9	9	184
1,534.00	390	78.7	280	289	421
1,534.85	612	94.8	422	711	655

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,532.95'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.85'	**2.0" x 2.0" Horiz. Orifice/Grate X 12.00 columns** X 12 rows C= 0.600 in 24.0" x 24.0" Grate (100% open area) Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 15.68 hrs HW=1,533.53' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,532.95' TW=0.00' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: NewInfilBasin



Summary for Pond 44P: SW Planter 1

Inflow Area = 551 sf, 24.50% Impervious, Inflow Depth = 0.50" for 100-Year event
Inflow = 0.01 cfs @ 12.01 hrs, Volume= 23 cf
Outflow = 0.01 cfs @ 12.01 hrs, Volume= 23 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.01 cfs @ 12.01 hrs, Volume= 23 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.25' @ 12.00 hrs Surf.Area= 362 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (937.6 - 937.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.25'	91 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

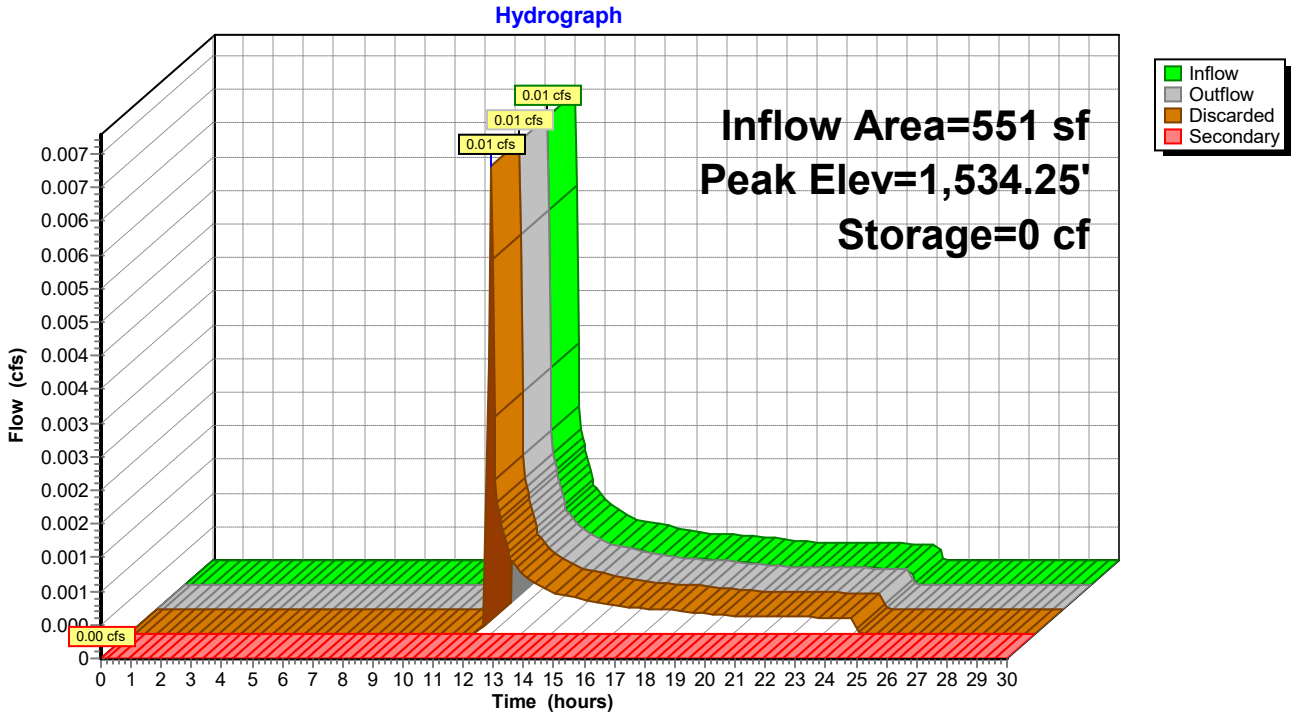
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.25	362	77.9	0	0	362
1,534.50	362	77.9	91	91	381

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.25'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.40
			Width (feet) 0.00 37.23

Discarded OutFlow Max=0.01 cfs @ 12.01 hrs HW=1,534.25' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.25' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 44P: SW Planter 1



Summary for Pond 45P: SW Planter 2

Inflow Area = 359 sf, 33.98% Impervious, Inflow Depth = 1.26" for 100-Year event
Inflow = 0.02 cfs @ 11.98 hrs, Volume= 38 cf
Outflow = 0.00 cfs @ 11.95 hrs, Volume= 38 cf, Atten= 73%, Lag= 0.0 min
Discarded = 0.00 cfs @ 11.95 hrs, Volume= 38 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link 23L : Saranac River (DP1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1,534.44' @ 12.14 hrs Surf.Area= 201 sf Storage= 7 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 6.8 min (881.7 - 874.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,534.41'	50 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

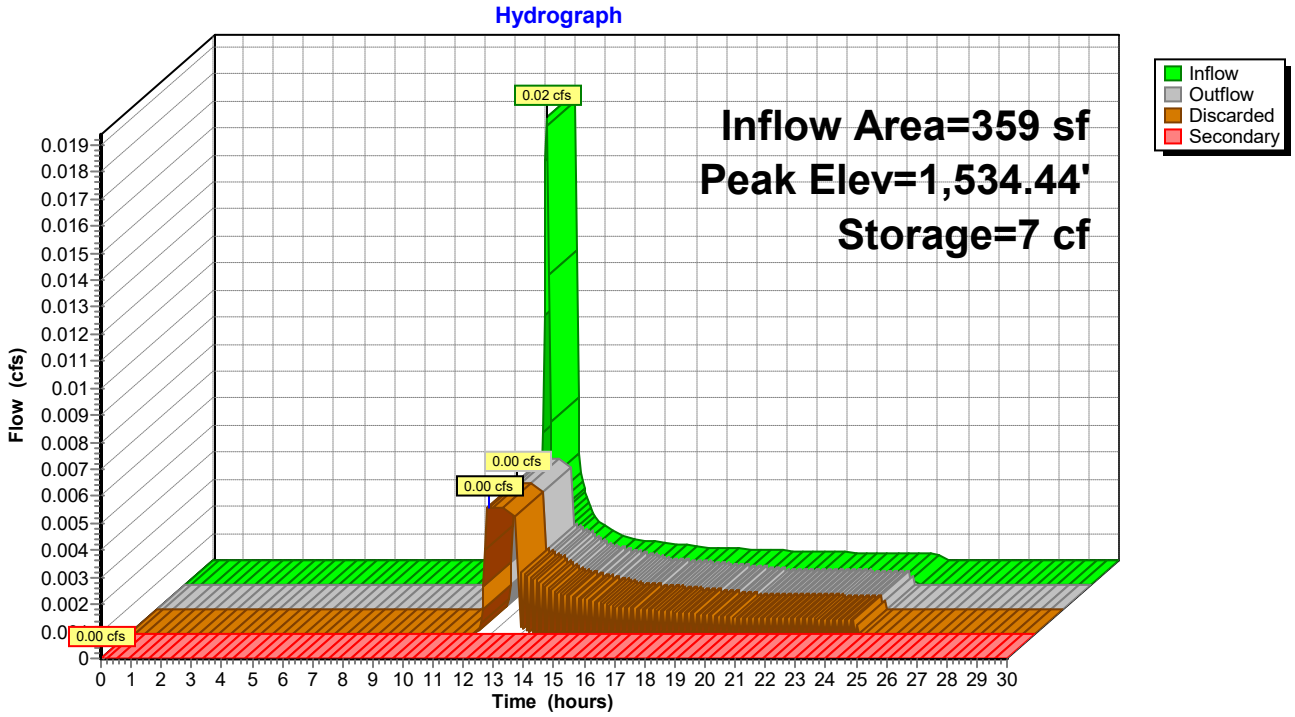
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
1,534.41	201	57.0	0	0	201
1,534.66	201	57.0	50	50	215

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,534.41'	**1.000 in/hr Exfiltration over Surface area**
#2	Secondary	1,534.66'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)**
			Head (feet) 0.00 0.50
			Width (feet) 8.35 8.35

Discarded OutFlow Max=0.00 cfs @ 11.95 hrs HW=1,534.42' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,534.41' TW=0.00' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 45P: SW Planter 2

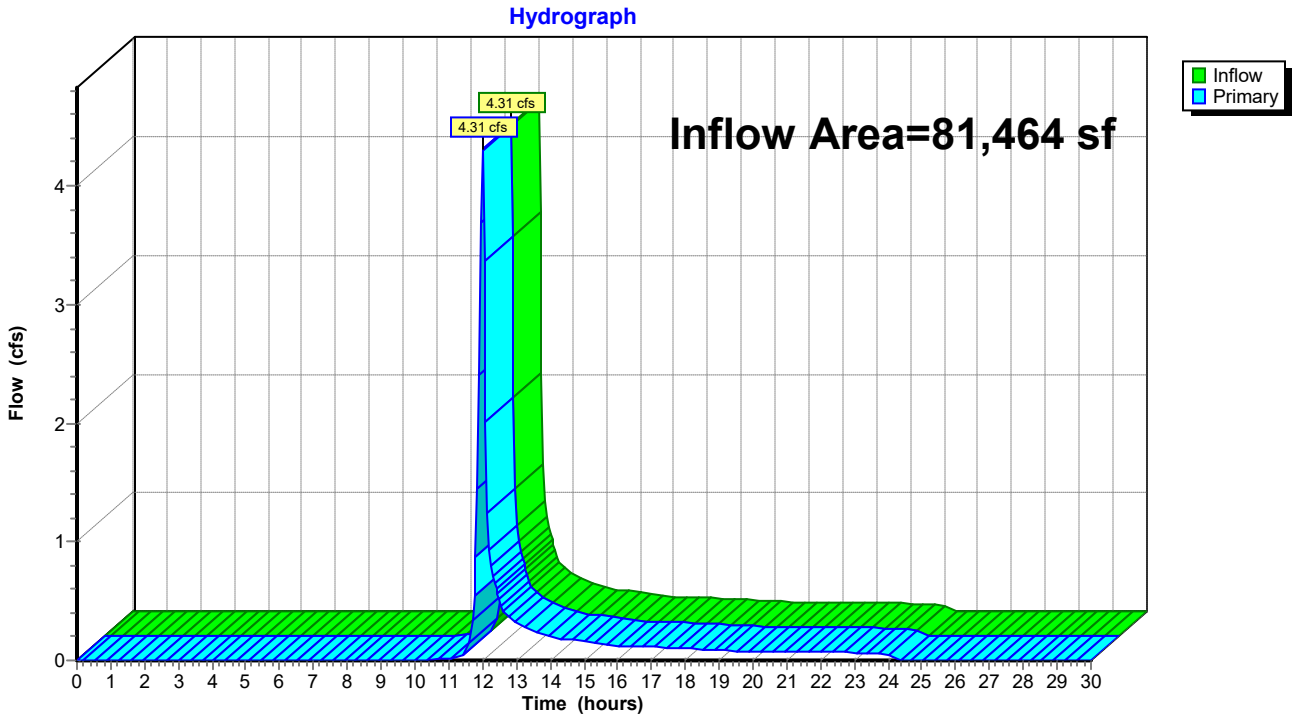


Summary for Link 23L: Saranac River (DP1)

Inflow Area = 81,464 sf, 42.51% Impervious, Inflow Depth = 1.44" for 100-Year event
Inflow = 4.31 cfs @ 11.99 hrs, Volume= 9,803 cf
Primary = 4.31 cfs @ 11.99 hrs, Volume= 9,803 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

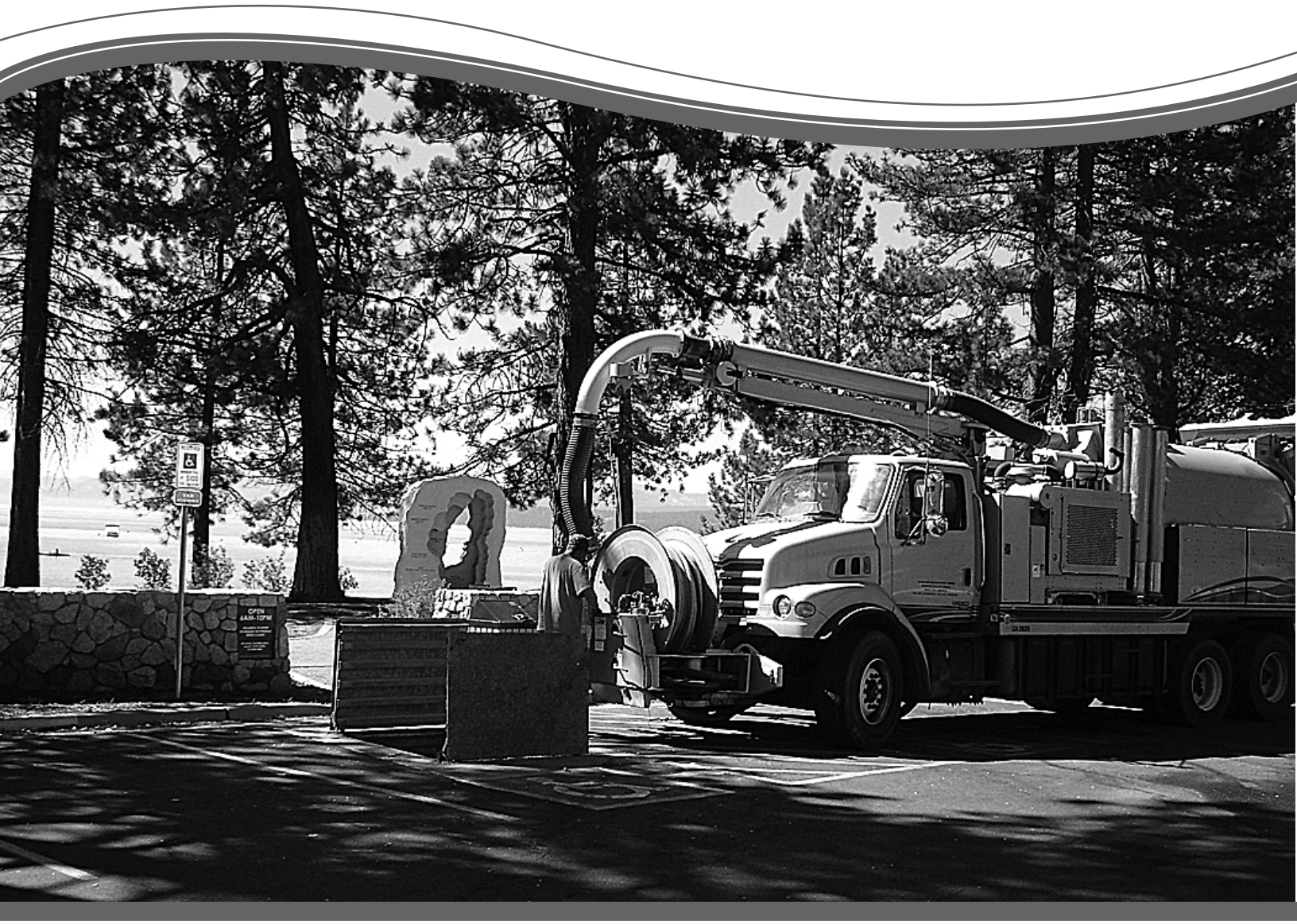
Link 23L: Saranac River (DP1)



Appendix F-1

CONTECH®
ENGINEERED SOLUTIONS

Cascade Separator® Inspection and Maintenance Guide



CASCADE
separator®

Maintenance

The Cascade Separator® system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects sediment and debris will depend upon on-site activities and site pollutant characteristics. For example, unstable soils or heavy winter sanding will cause the sediment storage sump to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (i.e. spring and fall). However, more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment wash-down areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

A visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet chamber, flumes or outlet channel. The inspection should also quantify the accumulation of hydrocarbons, trash and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided in this Inspection and Maintenance Guide.

Access to the Cascade Separator unit is typically achieved through one manhole access cover. The opening allows for inspection and cleanout of the center chamber (cylinder) and sediment storage sump, as well as inspection of the inlet chamber and slanted skirt. For large units, multiple manhole covers allow access to the chambers and sump.

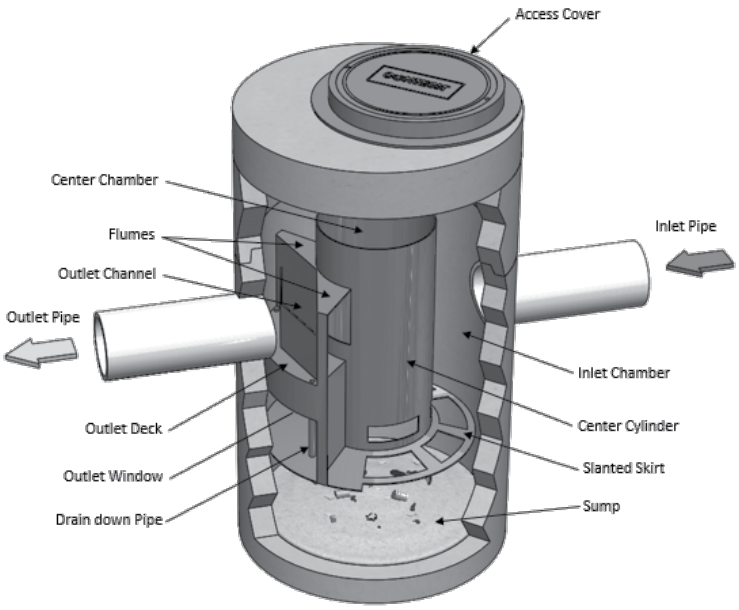
The Cascade Separator system should be cleaned before the level of sediment in the sump reaches the maximum sediment depth and/or when an appreciable level of hydrocarbons and trash has accumulated. If sorbent material is used, it must be replaced when significant discoloration has occurred. Performance may be impacted when maximum sediment storage capacity is exceeded. Contech recommends maintaining the system when sediment level reaches 50% of maximum storage volume. The level of sediment is easily determined by measuring the distance from the system outlet invert (standing water level) to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Finer, silty particles at the top of the pile typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the chart in this document to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage.

Cleaning

Cleaning of a Cascade Separator system should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole cover and insert the vacuum tube down through the center chamber and into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The areas outside the center chamber and the slanted skirt should also be washed off if pollutant build-up exists in these areas.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. Then the system should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and to ensure proper safety precautions. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the Cascade Separator system must be done in accordance with local regulations. In many locations, disposal of evacuated sediments may be handled in the same manner as disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal. If any components are damaged, replacement parts can be ordered from the manufacturer.



Cascade Separator® Maintenance Indicators and Sediment Storage Capacities

Model Number	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y^3	m^3
CS-3	3	0.9	1.5	0.5	0.4	0.3
CS-4	4	1.2	2.5	0.8	0.7	0.5
CS-5	5	1.3	3	0.9	1.1	0.8
CS-6	6	1.8	3.5	1	1.6	1.2
CS-8	8	2.4	4.8	1.4	2.8	2.1
CS-10	10	3.0	6.2	1.9	4.4	3.3
CS-12	12	3.6	7.5	2.3	6.3	4.8

Note: The information in the chart is for standard units. Units may have been designed with non-standard sediment storage depth.



A Cascade Separator unit can be easily cleaned in less than 30 minutes.



A vacuum truck excavates pollutants from the systems.

Cascade Separator® Inspection & Maintenance Log

Cascade Model:			Location:		
Date	Depth Below Invert to Top of Sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The depth to sediment is determined by taking a measurement from the manhole outlet invert (standing water level) to the top of the sediment pile. Once this measurement is recorded, it should be compared to the chart in the maintenance guide to determine if the height of the sediment pile off the bottom of the sump floor exceeds 50% of the maximum sediment storage. Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.
2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

SUPPORT

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from our engineers.

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Appendix F-2

New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

New York State
Department of Environmental Conservation

Document Prepared by:

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Land Resource Consultant and Environmental Compliance Monitor
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NYS Dept. of Agriculture & Markets)

Alternative Stormwater Management
Deep-Ripping and Decompaction

Description

The two-phase practice of 1) “Deep Ripping;” and 2) “Decompaction” (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil’s water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.



Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper “rips” through severely compressed subsoil.

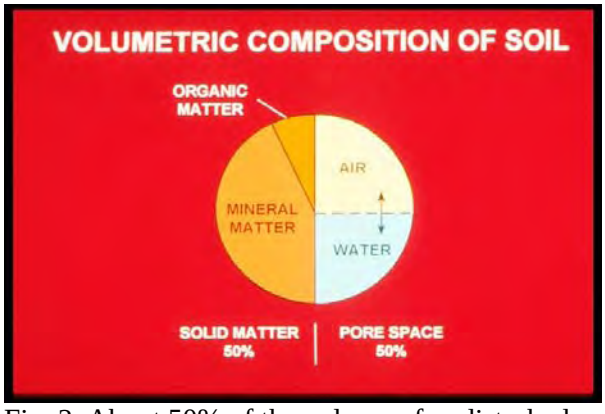


Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice

The objective of Deep Ripping and Decompaction is to effectively fracture (vertically and laterallly) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the "two-phase" practice of Deep Ripping and Decompaction first became established as a "best management practice" through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).



Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

Benefits

Aggressive "deep ripping" through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by "decompaction," i.e.: "sub-soiling," through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area's direct surface infiltration of rainfall by providing the open site's mitigated soil condition and lowers the demand on concentrated runoff control structures

- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures

- Decreases runoff volume generated and provides hydrologic source control

- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility / Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil

In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

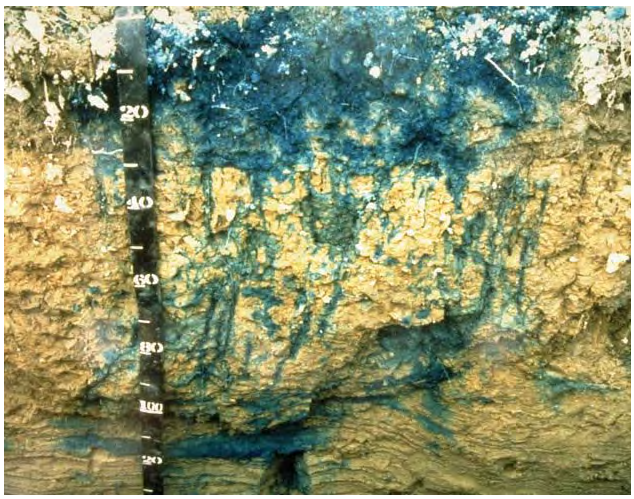


Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

Slope

The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture

Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a "plastic" or "liquid" state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the "slicing and smearing" of the material or added "squeezing and compression" instead of the necessary fracturing. Ample drying time is needed for a "rippable" soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The "poor man's Atterberg field test" for soil plasticity is a simple "hand-roll" method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a "plastic" state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.



Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and

2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, "decompaction," mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area's soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only "scarify" the uppermost surface portion of the mass of compacted subsoil material. The term "chisel plow" is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).



Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.



Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a "heavy duty" agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like "lifting and shattering" action up through the soil layers as it is pulled.

Pulling-Power of Equipment

Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are "chained up" so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.



Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.



Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or "teeth" of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.

Depth and Patterns of Movement

As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a ¾ inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.



Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.



Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas

For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.

- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.

- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a ¾-inch cone penetrometer.)



Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.



Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors

In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

● A second series of passes makes a broad “S” shaped pattern of rips, continually and gradually alternating the “S” curves between opposite edges inside the compacted corridor.

● The third and final series again uses the broad, alternating S pattern, but it is “flip-flopped” to continually cross the previous S pattern along the corridor’s centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompation is completed, two items are essential for maintaining a site’s soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.



Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months; shown before deep ripping, topsoil replacement, and decompaction.



Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland.The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at $1800 per day, the net cost is $900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs $675 per acre for a combined total of $1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

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- Examples of implements:

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- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey.* http://websoilsurvey.nrcs.usda.gov/app/ and *USDA-NRCS Official Soil Series Descriptions; View by Name.* http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi . *Last visited Jan. 08.*

- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension;* as well as *Dickey-john Soil Compaction Tester*.
http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf and http://cropsoil.psu.edu/Extension/Facts/uc178pdf Last visited Sept. 07

Appendix G-1

Appendix G

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Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
Location: _____
Site Status: _____

Date: _____
Time: _____

Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6.Pond, toe & chimney drains clear and functioning		
7.Seeps/leaks on downstream face		
8.Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam “As-Built”		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____ 1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4.Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3.Aesthetics a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants “choked” with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

Infiltration Trench Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Trench surface clear of debris		
Inflow pipes clear of debris		
Overflow spillway clear of debris		
Inlet area clear of debris		
2. Sediment Traps or Forebays (Annual)		
Obviously trapping sediment		
Greater than 50% of storage volume remaining		
3. Dewatering (Monthly)		
Trench dewaters between storms		
4. Sediment Cleanout of Trench (Annual)		
No evidence of sedimentation in trench		
Sediment accumulation doesn't yet require cleanout		
5. Inlets (Annual)		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Good condition		
No evidence of erosion		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repair		
No evidence of erosion		
7. Aggregate Repairs (Annual)		
Surface of aggregate clean		
Top layer of stone does not need replacement		
Trench does not need rehabilitation		

Comments:

Actions to be Taken:

Sand/Organic Filter Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
Filtration facility clean of debris		
Inlet and outlets clear of debris		
2. Oil and Grease (Monthly)		
No evidence of filter surface clogging		
Activities in drainage area minimize oil and grease entry		
3. Vegetation (Monthly)		
Contributing drainage area stabilized		
No evidence of erosion		
Area mowed and clipping removed		
4. Water Retention Where Required (Monthly)		
Water holding chambers at normal pool		
No evidence of leakage		
5. Sediment Deposition (Annual)		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Filter chamber free of sediments		
Sedimentation chamber not more than half full of sediments		
6. Structural Components (Annual)		
No evidence of structural deterioration		
Any grates are in good condition		
No evidence of spalling or cracking of structural parts		
7. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repairs		
No evidence of erosion (if draining into a natural channel)		
8. Overall Function of Facility (Annual)		
Evidence of flow bypassing facility		
No noticeable odors outside of facility		

Comments:

Actions to be Taken:

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

Open Channel Operation, Maintenance, and Management Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
2. Check Dams or Energy Dissipators (Annual, After Major Storms)		
No evidence of flow going around structures		
No evidence of erosion at downstream toe		
Soil permeability		
Groundwater / bedrock		
3. Vegetation (Monthly)		
Mowing done when needed		
Minimum mowing depth not exceeded		
No evidence of erosion		
Fertilized per specification		
4. Dewatering (Monthly)		
Dewaters between storms		

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Sediment deposition (Annual)		
Clean of sediment		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repairs		
No evidence of erosion		

Comments:

Actions to be Taken: