STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Prepared for:

ATL CONTRACTORS
EMERSON ROAD
TOWN OF CANANDAIGUA, NY 14424

Date:
March 22, 2021

Prepared by:

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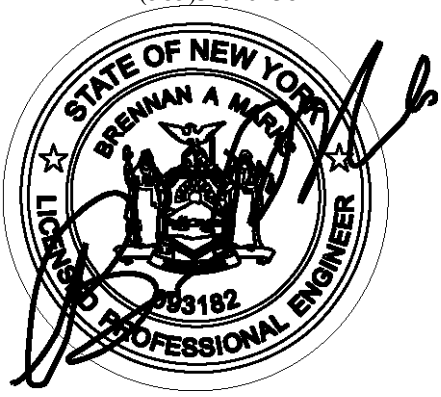

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Erosion & Sediment Control Plan & Details

LIST OF APPENDICES

1. 0 INTRODUCTION

This SWPPP is prepared in accordance with the requirements of Article 17, Titles 7, 8, and Article 70 of the New York State Environmental Conservation Law to obtain coverage by the SPDES General Permit for Stormwater Discharge from Construction Activities (GP-0-20-001). A Construction Notice of Intent (NOI) has been filed with the NYSDEC (APPENDIX D), and the Town of Canandaigua will review the SWPPP and indicate its approval through signature on the MS4 Stormwater Pollution Prevention Plan Acceptance Form (APPENDIX E).

The design standards and practices outlined herein are in accordance with the New York Standards and Specifications for Erosion and Sediment Control and the New York State Stormwater Management Design Manual (SWDM).

The SWPPP includes the following:

- Identification of the SWPPP coordinator with a description of this person's duties.
- Description of the existing site conditions including existing land use of the site (i.e., wooded areas, open grassed areas, pavement, buildings, etc.), soil types at the site, as well as the location of surface waters which are located on or next to the site (wetlands, streams, rivers, lakes, ponds, etc.).
- Identification of the body of water(s) which will receive runoff from the construction site, including the ultimate body of water that receives the stormwater.
- Identification of drainage areas and potential stormwater contaminants.
- Description of construction stormwater management controls necessary to reduce erosion, sediment, and pollutants in stormwater discharge.
- Description of the facility's monitoring plan and how controls will be coordinated with construction activities.
- Description of post-construction stormwater management practices for runoff quality and quantity control.

2.0 FACILITIES DESCRIPTION

2.1 Site Location

The proposed project is in the Town of Canandaigua located southwest of the corner of Emerson Road and Fire Hall Road (FIGURE 1). The site is bounded by neighboring vacant rural, commercial, and early/mid-successional lands.

According to the New York State Historic Preservation Office GIS – Public Access Website, the site is not in the state registry for historical significance or archeological sensitive. A letter of "No Impact" has been provided by NYS SHPO (Appendix H). The site is not within a 100 year floodplain as mapped by FEMA or a NYS DEC wetland.

2.2. Project Description

Existing:

The area of the subject property is 4.0053 acres. The lot directly to the east of the proposed facility vacant early/mid successional land. The lot directly to the west currently contains a car dealership. This community is a mixture of commercial, and vacant land uses. The site is not in a NYS DEC Brownfield remediation program and no know contamination is present.

Proposed:

The proposed project will include the new development of a new vehicle/equipment service facility. The new facility will be a 8,400 square foot service building. The building will have a 42,750 square foot surrounding impervious driveway and additional parking with a main entrance and exit at the north side of the facility. The remaining lands will be used for stormwater management and/or maintained as lawn.

2.3 Type of Construction

The development construction activities will generally consist of the following:

- Stripping of topsoil
- Earthwork (regrading of earth with cuts and fills)
- Rough grading of site
- Excavations for the installation of underground utilities
- Building construction
- Driveway installation
- Construction of stormwater management facilities
- Final grading
- Landscaping, topsoil, and seeding of disturbed areas

2.4 Existing Site Hydrology

In general, the site drains southeast towards the rear of the property. Ultimately drainage from this site is collected in an unnamed class C stream east of the proposed building and parking. This unnamed class C stream is tributary to the Canandaigua Lake Outlet. The site as it exists consists of just one main drainage area.

Drainage Area 1 (DA-1) (FIGURE 5) is currently vacant early/ mid-successional lands. DA-1 flow from stormwater ultimately discharges into the Canandaigua Lake Outlet, which is not a TMDL water body or a 303d stream segment.

2.4 Proposed Site Hydrology

The purpose of the Stormwater Management Plan is to safely control and convey all runoff from the site and to effectively reduce post-development runoff flows from new impervious areas while providing treatment of water quality.

The sites proposed drainage patterns will remain consistent with existing patterns. Runoff from the new roof and new gravel parking lot will be directed to dry swales prior to collection in a proposed infiltration basin on the south side of the proposed development. In the event of any overflow, stormwater from the basin will flow north towards the unnamed class C stream via an existing vegetative channel.

A proposed stormwater management basin is designed as an Infiltration Basin (I-

2), an infiltration practice that stores the water quality volume in a shallow depression, before it is infiltrated it into the ground. This basin provides water quality treatment and stormwater detention above the bottom of basin.

The site development provides Green Infrastructure (GI) design as required by chapter 5 of the SWDM. See Appendix C for GI information and design. The first part of GI is consideration low impact planning of the proposed site development. We have considered and applied the following planning principles in this design: reduction of clearing, locating development in less sensitive areas, soil restoration, roadway, sidewalk, parking, and driveway reduction. Additionally, we have provided GI practices before runoff drains to an infiltration basin. Runoff from new impervious areas flows through dry swales prior to entering the infiltration basin.

3.0 CONSTRUCTION STORMWATER MANAGEMENT

3.1 Stormwater Management Controls

The purpose of this section is to identify the types of temporary and permanent erosion and sediment controls that will be used on the site. The controls will provide soil stabilization for disturbed areas and structural controls to divert runoff and remove sediment. This section will also address control of other potential stormwater pollutant sources such as epoxy, concrete dust, grease, fuel oil, waste disposal, and sanitary waste disposal.

a. Temporary and Permanent Erosion Control Practices

To limit soil migration, the following measures will be implemented:

- Silt fencing will be placed along the perimeter of the area to be cleared and graded before any work takes place.

- Bare soils shall be seeded within 7 days of exposure, unless construction will begin within 14 days. Areas where soil disturbance activities have temporarily or permanently ceased, soil stabilization measures will be initiated by the end of the next business day and

completed within 14 days (7 days if over 5-acres of disturbance, or 3 days during specified winter months). The temporary seed mix shall consist of 30 pounds per acre of rye grass (annual or perennial) and 100 pounds per acre winter rye (cereal rye). Use winter rye if seeding occurs in October or November.

- Within 14 days after clearing and grading, ground agricultural limestone, 5-0-10 fertilizer will be applied to each acre to be stabilized by vegetation. The limestone should be at a pH of 6.0, and the fertilizer should be added at a rate of 600 pounds per acre. Phosphorus shall not be applied unless soil test by horticultural lab indicates it is necessary. Such lab paperwork shall be provided to the Town. If required it shall be applied at a minimum.

- After fertilizer, all areas which will not be impacted by further construction shall be permanently seeded. The permanent seed mix shall be 65% Kentucky Blue Grass blend at 85-114 pounds per acre, 20% perennial rye grass at 26-35 pounds per acre, and 15% fine fescue at 19-26 pounds per acre. An alternative seed would be 100% tall fescue, turf type fine leaf at 150-200 pounds per acre.

- After seeding, disturbed areas will be mulched with 4,000 pounds per acre of straw or hydroseeded with an appropriate tackifier.

- Topsoil stockpiles will be stabilized with temporary seed and mulch no later than 7 days from placement of the stockpile. The temporary seed shall be rye (grain) applied at the rate of 120 pounds per acre.

- Areas of the site which are to be paved will be temporarily stabilized by applying geotextile and stone sub-base until asphalt is applied.

- Stabilized construction entrances will be placed at the entrances to the site.

- All catch basins will be will have at least 1.0-foot sumps which will trap sediment from parking lot runoff following completion and stabilizations of the project. During construction, each basin will be protected from sediment laden inflow in accordance with the New York Standards and Specifications for Erosion and Sediment Control.

b. <u>Control Structure Design</u>

All erosion and sediment control structures are designed and shall be installed in accordance with the <u>New York Standards and Specifications for</u>

Erosion and Sediment Control.

c. Construction Practices to Minimize Stormwater Contamination

All waste materials will be collected and stored in a secure metal dumpster supplied by a waste handler which is a licensed solid waste management company. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster will be emptied on an as-needed basis and the trash will be hauled to an approved landfill. No construction materials will be buried on-site. All personnel will be instructed regarding the correct procedure for waste disposal. All sanitary waste will be collected from the portable units by a licensed sanitary sewer waste management contractor. Good housekeeping and spill control practices will be followed during construction to minimize stormwater contamination from petroleum products, fertilizers, paints, and concrete. To prevent stormwater contamination from the site, good housekeeping practices are listed below:

- Fertilizers will be applied only in the minimum amounts recommended by the manufacturer, unless specified otherwise by the engineer and will be worked into the soil to limit exposure to stormwater.
- Fertilizers and hazardous materials/waste shall be stored in a covered shed or a sealable bin to avoid spills.
- All construction vehicles on site shall be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage.
- Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Storage shall comply w/ NYSDEC standard requirements for the material(s) contained.
- Sanitary waste shall be collected from portable units as needed to avoid overfilling.
- All curing compounds shall be tightly sealed and stored when not required for use. Excess compounds shall not be discharged to the storm system and shall be properly disposed according to the manufacturer's instructions.

- Materials and equipment necessary for spill cleanup shall be kept in the temporary material storage trailer onsite. Equipment shall include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, fast absorbent material, sand, saw dust, and plastic and metal trash containers.

- Petroleum spills must be reported to the DEC. Consult NYDEC regulations for spills.

  All reportable petroleum spills and most hazardous spills must be reported to the DEC hotline (1-800-457-7362) and the National Response Center (1-800-424-8802). Report the spill to local authorities, if required. For spills not deemed reportable, facts concerning the incident shall be documented by the spiller and a record maintained for one year.

- Concrete trucks shall only be allowed to wash out or discharge surplus concrete or drum wash water to a correctly installed and maintained concrete wash-out area.

- When testing/cleaning of water supply lines occurs, the discharge from the tested pipe will be collected and conveyed to a completed stormwater collection system for ultimate discharge into the stormwater management facility.

- Stabilized construction entrances shall be constructed to reduce vehicle tracking of sediments onto public roadways.

- The paved roads at the site entrances shall be swept daily to remove excess mud, dirt, or rock tracked from the site.

- Dump trucks hauling fine and dusty material from the construction site shall be covered with a tarpaulin.

- All ruts caused by equipment used for site clearing and grading shall be eliminated by re-grading.

d. <u>Coordination of Stormwater Management Control Structures with Construction Activities</u>

Stormwater Management Control Structures shall be coordinated with construction activities so the control plan is in place before construction begins. The following control structures will be coordinated with

construction activities:

- The temporary perimeter controls (silt fences, stabilized construction entrance, sediment basins and check dams) shall be installed before any work begins.
- Clearing and grading shall not occur in an area until it is necessary for construction to proceed.
- Once construction activity ceases permanently in an area, that area will be immediately stabilized with permanent seed and mulch.
- The proposed detention basin shall initially be constructed as a sediment trap during construction (See Construction Documents).
- The temporary perimeter controls (silt fencing) shall not be removed until all construction activities at the site are complete and soils have been stabilized.

e. Certification of Compliance with Federal, State, and Local Regulation

This SWPPP reflects local, state, and federal requirements for stormwater management and erosion and sediment control, as established in SPDES General Permit for Stormwater Discharge from Construction Activity, Permit No. GP-0-20-001. There are no other applicable State or Federal requirements for sediment and erosion site plans (or permits), or stormwater management site plans (or permits).

3.2 Maintenance/Inspection Procedures

a. Inspections

Visual inspections of all cleared and graded areas of the construction site will be performed weekly as required by the SPDES General Permit for Stormwater Discharge from Construction Activities (GP-0-20-001). Inspection Reports will be submitted to the developer, the construction contractor(s), and the Town of Canandaigua.

The site inspections will be conducted by a qualified professional whom the DEC defines as a person knowledgeable in principals and practice of

erosion and sediment controls, such as a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist. The inspections will verify that the control structures described in Section 3 of this SWPPP are being utilized correctly to control erosion and sedimentation. The inspector shall also have the capacity to require additional controls as required to control erosion and sediment on the site. The inspection will also verify that the procedures used to prevent stormwater contamination from construction materials and petroleum products are effective.

The Inspection Report will be completed after each inspection. A copy of the report form to be completed by the SWPPP coordinator is provided in APPENDIX A of this SWPPP. Completed forms will be maintained on-site during the entire construction project. A copy shall also be submitted to the governing agency. The developer will be responsible for reviewing each report and making all necessary repairs to the stormwater management facilities as indicated in the report. Following construction, the completed forms shall be retained at the owner's office for a minimum of one year.

If construction activities change or design modifications are made to the site plan which could impact stormwater, this SWPPP will be amended appropriately by recommendations and requirements set forth by the inspector. The inspection report shall serve as an amendment to this SWPPP.

b. <u>Maintenance</u>

1. Construction

During construction and until such time as the site is stabilized, all erosion/sediment control measures shall be maintained as specified in the New York Standards and Specifications for Erosion and Sediment Control and as summarized below:

- Silt Fence - Remove accumulated sediment when bulges appear in the fencing or when sediment is one-foot deep.
- Sediment Trap - Remove sediment and restore trap to original dimensions when sediment has accumulated to one-half of the design depth of the trap.
- Stabilized Construction Entrance - Periodic top dressing with stone is required to help prevent tracking of sediment onto public roads.

2. Post-Construction

APPENDIX F includes the recommended Maintenance and Management Inspection Checklists taken from the New York State Stormwater Management Design Manual for the stormwater management facility.

Maintenance of the site by the owner will also include but not be limited to the following:

- Periodic sweeping of the pavement to remove accumulated sediment.
- Periodic mowing of the banks of the pond area and maintenance of the vegetation.

3. 3. Employee Training

An employee training program shall be developed and implemented by the owner(s) and contractors to educate employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP and hands-on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of waste, equipment fueling, and proper storage, washing, and inspection procedures. All employees shall be trained prior to their first day on the site.

3.4 SWPPP COORDINATOR AND DUTIES

A construction site SWPPP coordinator for the facility shall be appointed by the developer and/or contractor. The duties of the construction site SWPPP coordinator include the following:

- Implement the SWPPP plan with the aid of the SWPPP team; Oversee maintenance practices identified in the SWPPP
- Implement and oversee employee training
- Conduct or provide for inspection and monitoring activities
- Identify other potential pollutant sources and make sure they are added to the plan
- Identify any deficiencies in the SWPPP and make sure they are corrected, and ensure that any changes in construction plans are addressed in the SWPPP
- Ensure that all housekeeping and monitoring procedures are implemented

4.0 POST-CONSTRUCTION STORMWATER MANAGEMENT

4.1 Collection and Conveyance Facilities

Permanent stormwater collection and conveyance facilities are designed to control the developed, post-construction stormwater runoff from the proposed development, employing the following standards:

Facilities	Design Standard
Underground storm sewer and catch basins	- developed 10-year storm
Swales	- developed 10-year storm
Major culverts	- developed 25-year storm
Overland stabilized flood routes	- developed 100-year storm

(1) Pipe velocity <15 fps, rip-rap aprons provided at outlets in accordance with New York Standards and Specifications for Erosion and Sediment Control.

(2) If calculated channel velocity exceeds 6 fps, then erosion protection

(i.e. stone lining, pavement, staked mesh) will be provided in accordance with New York Standards and Specifications for Erosion and Sediment Control.

4.2 Stormwater Peak Runoff Rates and Water Quality Management

Due to the construction of additional impervious surfaces, peak stormwater runoff rates, volumes, and pollutant loads will increase when the new areas are developed. Mitigation of this impact is achieved through employment of stormwater management measures that achieve pollutant removal goals, reduce channel erosion, prevent overbank flooding, and help control extreme floods. This project will meet all NYSDEC Water quality treatment requirements for the improvements. In addition, this project will meet the Town of Canandaigua required Enhanced Phosphorous Removal as outlined in Chapter 10 of the SWDM.

Green infrastructure has been implemented (Appendix C) to reduce, infiltrate and treatment the required water quality volume. The proposed pocket pond has been designed using the unified stormwater sizing criteria in accordance with the New York State Stormwater Design Manual, Detail I-2 ("Infiltration Basin"). The following is a summary of how the design standards have been met.

Water Quality/Runoff Reduction- Green Infrastructure (APPENDIX C).

Channel Protection	-	Provided in the I-2 Basin above permanent pool. Volume will be infiltrated.
Overbank Flood	-	Provided in the I-2 Basin above bottom. Use catch basin to safely outlet these flows.
Extreme Storm	-	Provided in the I-2 Basin. Use 10' wide emergency spillway to convey these flows out of the pond.

Computations for the design are included in APPENDICES B and C. FIGURES 5 and 6 show existing and proposed tributary drainage areas.

5.0 GREEN INFRASTRUCTURE TECHNIQUES

This project has incorporated several of the required practices outlined by the SWDM as

"Green Infrastructure Techniques and Practices". The intent of these practices are to preserve natural areas and features as well as promote infiltration and groundwater recharge. Appendix C explains the design and implementation of these practices.

Dry swales are applied to receive runoff from newly impervious areas. This practice is a total of 500 linear feet of grass channel totaling approximately 2,300 square feet. Runoff will be collected in these swales and filtered through a vegetative and soil media before entering the infiltration basin. Shallow pea gravel trenches will line the south, east, and west edges of the parking lot with the intention of reducing flows. Overflow from the basin will flow into a vegetative channel and discharge east to the unnamed class C stream.

6.0 NOTICE OF TERMINATION

Following the completion of construction, the owner/operator shall file a Notice of Termination (NOT) with the DEC (APPENDIX H). Prior to filing the NOT, the operator shall have the qualified professional perform a final site inspection, at which time the qualified professional shall certify that the site has undergone final stabilization. "Final Stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80% has been established or equivalent stabilization measures (such as the use of mulches or geotextile) have been employed on all unpaved areas and areas not covered by permanent structures.

6.0 Certification

Engineer's 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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manages 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 false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

_____

Name

Project Engineer

Title

_____

Date

Corporate Certification (Owner)

"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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manages 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 false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

_____

Name

_____

Title

_____

Date

The General Contractor shall be responsible for the coordination of the installation and maintenance of all erosion and sediment controls for the project, including the work of all subcontractors. Final stabilization of the site, including removal of temporary controls and placement of permanent stormwater management practices shall also be coordinated by the General Contractor.

Contractor Certification (General Contractor)

"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 Eliminate 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 subject me to criminal, civil, and/or administrative proceedings."

_____

Name

_____

Title

_____

Date

The excavation and grading subcontractor shall be responsible for erosion and sediment control during all aspects of general excavation and grading including, but not limited to; clearing and grubbing, installation of temporary stabilization controls (silt fence, sediment traps, diversion swales, temporary seeding, etc.) earthwork, utility installations, paving, and other permanent, non-vegetative cover.

Contractor Certification (Excavations and Grading Subcontractor)

"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 Eliminate 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 subject me to criminal, civil, and/or administrative proceedings."

_____

Name

_____

Title

_____

Date

The Landscaping Contractor shall be responsible for erosion and sediment control practices, including permanent vegetative cover, during and directly related to all landscaping for the project.

Contractor Certification (Landscaping Subcontractor)

"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 Eliminate 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 subject me to criminal, civil, and/or administrative proceedings."

_____

Name

_____

Title

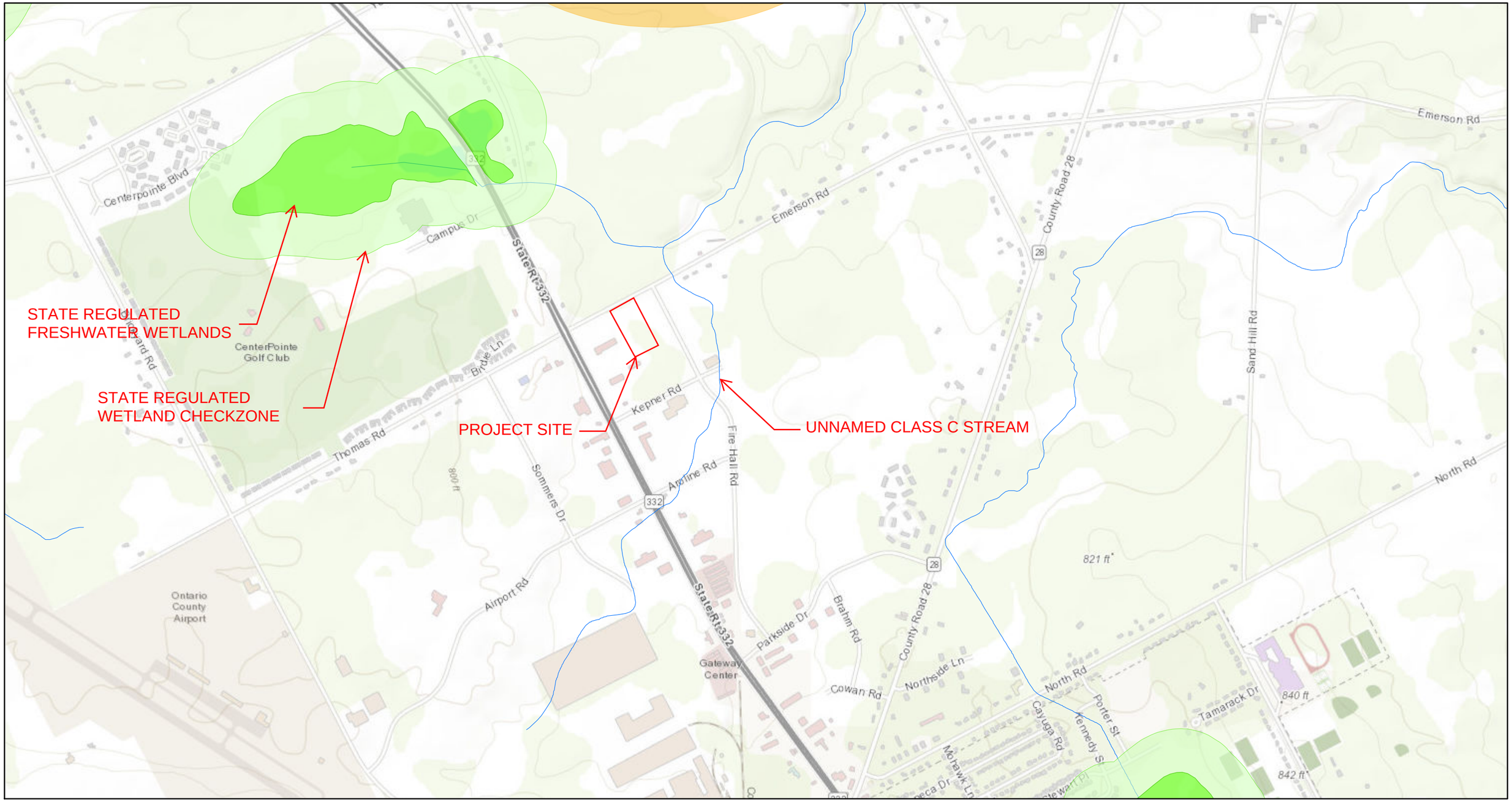
_____

Date

FIGURE 1

LOCATION MAP

Figure-1 LOCATION MAP



March 18, 2021

1:18,056

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Author: Marks Engineering
Not a legal document

FIGURE 2

AERIAL PHOTO

Figure-2 AERIAL MAP

March 18, 2021

1:9,028

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, NYS ITS GIS Program Office, Westchester County GIS , Esri, HERE, Garmin, (c) OpenStreetMap contributors

Author: Marks Engineering
Not a legal document

FIGURE 3

SOIL MAP

Hydrologic Soil Group—Ontario County, New York
(FIGURE 3 - SOILS MAP)

Map Scale: 1:1,590 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Ontario County, New York
Survey Area Data: Version 18, Jun 11, 2020

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

Date(s) aerial images were photographed: Jun 4, 2020—Jun 17, 2020

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
34A	Lakemont silty clay loam, 0 to 3 percent slopes	D	1.6	27.6%
35A	Odessa silt loam, 0 to 3 percent slopes	D	2.6	43.8%
36A	Schoharie silty clay loam, 0 to 3 percent slopes	D	0.5	8.9%
260B	Cayuga silt loam, 3 to 8 percent slopes	C/D	0.0	0.2%
304A	Kendaia loam, 0 to 3 percent slopes	B/D	1.2	19.4%
Totals for Area of Interest			**5.9**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

FIGURE 4

NYS DEC STORMWATER MAPPER MAP

Figure - 4 STORMWATER MAP

March 18, 2021

1:36,112

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Author: Marks Engineering
Not a legal document

FIGURE 5

EXISTING DRAINAGE MAP

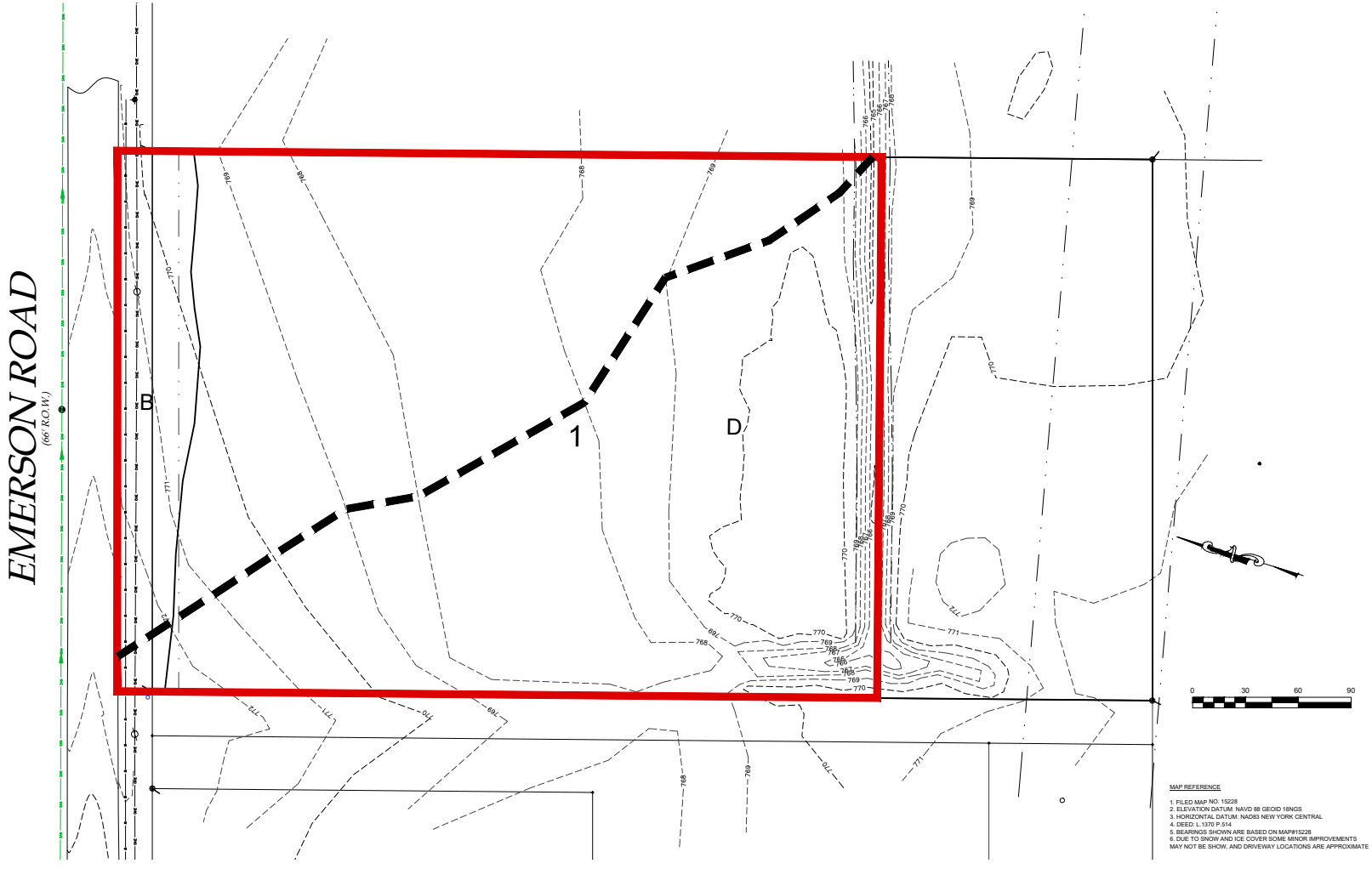
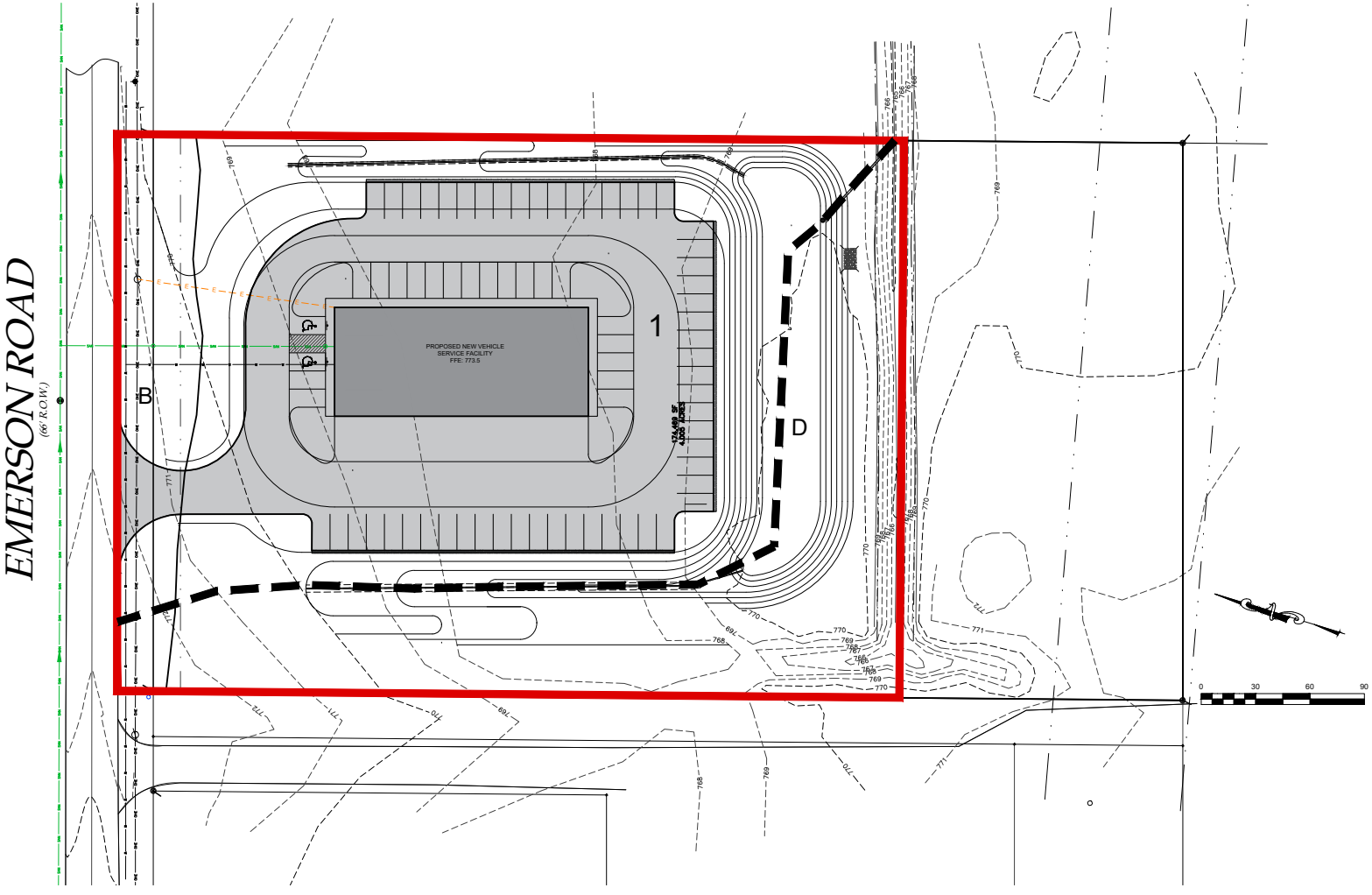


FIGURE 5 – EXISTING DRAINAGE AREA MAP
NTS

FIGURE 6

PROPOSED DRAINAGE MAP



1 FIGURE 6 – PROPOSED DRAINAGE AREA MAP
NTS

APPENDIX A

Inspection Report Form

MARKS ENGINEERING, P.C.

42 BEEMAN STREET, CANANDAIGUA, NY 14424 phone 585.329.6138 fax 585.486.6205

SWPPP INSPECTION REPORT

PROJECT:	**SPDES PERMIT NO. :**
PROJECT NO.:	**WEATHER:**
CONSTRUCTION STAGE:	**LASTSIGNINFICANT PERCIPITATION EVENT:**

	COMPONENT	CONDITION		DEFICIENCIES AND RECOMMENDATIONS
1	GENERAL HOUSEKEEPING	ACCEPT		
		DEFICIENT	N/A	
2	SILT FENCE/ PERIMETER CONTROLS	ACCEPT		
		DEFICIENT	N/A	
3	SEDIMENT BASINS, TRAPS & PONDS	ACCEPT		
		DEFICIENT	N/A	
4	INLET PROTECTION	ACCEPT		
		DEFICIENT	N/A	
5	PAVEMENT/ ROADWAY/ OFF-SITE	ACCEPT		
		DEFICIENT	N/A	
6	CONSTRUCTION ACCESS	ACCEPT		
		DEFICIENT	N/A	
7	STABILIZATION (SEED/MULCH)	ACCEPT		
		DEFICIENT	N/A	
8	CHECK DAMS	ACCEPT		
		DEFICIENT	N/A	
9	SWALES & DIKES	ACCEPT		
		DEFICIENT	N/A	
10	STOCKPILES & MATERIAL MANAGEMENT	ACCEPT		
		DEFICIENT	N/A	
11	STABLIZED OUTLET PROTECTION & LEVEL SPREADERS	ACCEPT		
		DEFICIENT	N/A	
12	DEWATERING	ACCEPT		
		DEFICIENT	N/A	
13	CONCRETE WASH-OUT	ACCEPT		
		DEFICIENT	N/A	
14	RECORD KEEPING & POSTINGS	ACCEPT		
		DEFICIENT	N/A	
	CRITICAL / REPORT			
	SOIL CONDITIONS:	DRY	WET	none

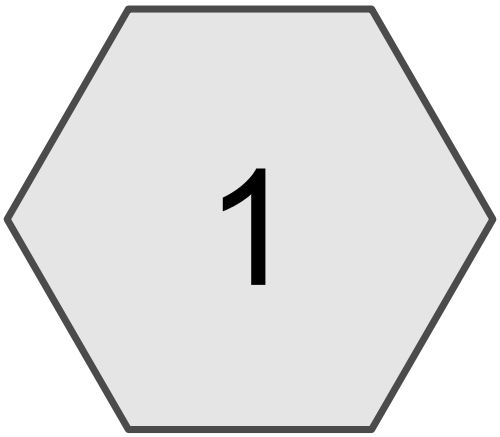
ADDITIONAL COMMENTS:

INSPECTION BY: _____ **TIME:** _____ **DATE OF INSPECTION:** _____

SIGNATURE OF INSPECTOR: J.P.S. **INSPECTIONS FREQUENCY** Weekly

APPENDIX B

Existing and Proposed Peak Runoff Computations



1

Subcat Reach Pond Link

Routing Diagram for 21-014 SITE PLAN BASE DRAINAGE EX
Prepared by Marks Engineering, Printed 3/22/2021

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.277	69	50-75% Grass cover, Fair, HSG B (1)
2.772	84	50-75% Grass cover, Fair, HSG D (1)
3.049	**83**	**TOTAL AREA**

Summary for Subcatchment 1: 1

CarlsonPlanXYPos|627544.1761|1064792.3605|
CarlsonSurface||

Runoff = 1.30 cfs @ 12.53 hrs, Volume= 0.156 af, Depth> 0.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
NRCC 24-hr A 1-Year Rainfall=1.89"

Area (sf)	CN	Description
120,754	84	50-75% Grass cover, Fair, HSG D
12,058	69	50-75% Grass cover, Fair, HSG B
132,812	83	Weighted Average
132,812		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.6	299	0.0167	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.18"
4.4	190	0.0105	0.72		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0100	4.95	99.07	**Channel Flow,** Area= 20.0 sf Perim= 20.0' r= 1.00' n= 0.030 Earth, grassed & winding
35.2	539	Total			

Summary for Subcatchment 1: 1

CarlsonPlanXYPos|627544.1761|1064792.3605|
CarlsonSurface||

Runoff = 3.44 cfs @ 12.51 hrs, Volume= 0.394 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
NRCC 24-hr A 10-Year Rainfall=3.14"

Area (sf)	CN	Description
120,754	84	50-75% Grass cover, Fair, HSG D
12,058	69	50-75% Grass cover, Fair, HSG B
132,812	83	Weighted Average
132,812		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.6	299	0.0167	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.18"
4.4	190	0.0105	0.72		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0100	4.95	99.07	**Channel Flow,** Area= 20.0 sf Perim= 20.0' r= 1.00' n= 0.030 Earth, grassed & winding
35.2	539	Total			

Summary for Subcatchment 1: 1

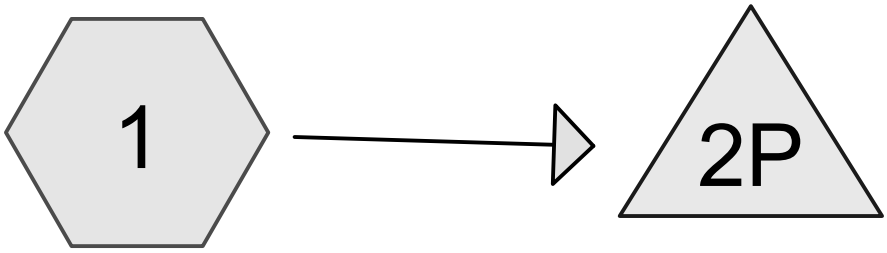
CarlsonPlanXYPos|627544.1761|1064792.3605|
CarlsonSurface||

Runoff = 7.57 cfs @ 12.49 hrs, Volume= 0.868 af, Depth> 3.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
NRCC 24-hr A 100-Year Rainfall=5.29"

Area (sf)	CN	Description
120,754	84	50-75% Grass cover, Fair, HSG D
12,058	69	50-75% Grass cover, Fair, HSG B
132,812	83	Weighted Average
132,812		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.6	299	0.0167	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.18"
4.4	190	0.0105	0.72		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	50	0.0100	4.95	99.07	**Channel Flow,** Area= 20.0 sf Perim= 20.0' r= 1.00' n= 0.030 Earth, grassed & winding
35.2	539	Total			



1

INFILTRATION BASIN

Subcat Reach Pond Link

Routing Diagram for 21-014 SITE PLAN BASE DRAINAGE pro
Prepared by Marks Engineering, Printed 3/22/2021

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.245	69	50-75% Grass cover, Fair HSG B (1)
1.630	84	50-75% Grass cover, Fair HSG D (1)
0.032	98	Paved parking HSG B (1)
0.950	98	Paved parking HSG D (1)
0.193	98	Roofs HSG D (1)
3.049	**88**	**TOTAL AREA**

Summary for Subcatchment 1: 1

CarlsonPlanXYPos|627544.1761|1064792.3605|
CarlsonSurface||

Runoff = 2.95 cfs @ 12.23 hrs, Volume= 0.222 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
NRCC 24-hr A 1-Year Rainfall=1.89"

Area (sf)	CN	Description
1,386	98	Paved parking HSG B
41,363	98	Paved parking HSG D
8,400	98	Roofs HSG D
10,672	69	50-75% Grass cover, Fair HSG B
70,991	84	50-75% Grass cover, Fair HSG D
132,812	88	Weighted Average
81,663		61.49% Pervious Area
51,149		38.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	105	0.0250	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.18"
2.5	250	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.3	200	0.0500	11.50	920.06	**Channel Flow,** Area= 80.0 sf Perim= 60.0' r= 1.33' n= 0.035 High grass
0.3	50	0.0100	3.01	2.41	**Channel Flow,** Area= 0.8 sf Perim= 3.1' r= 0.26' n= 0.020 Corrugated PE, corrugated interior
14.4	605	Total			

Summary for Pond 2P: INFILTRATION BASIN

Inflow Area = 3.049 ac, 38.51% Impervious, Inflow Depth > 0.88" for 1-Year event
Inflow = 2.95 cfs @ 12.23 hrs, Volume= 0.222 af
Outflow = 0.78 cfs @ 12.71 hrs, Volume= 0.218 af, Atten= 74%, Lag= 28.5 min
Discarded = 0.78 cfs @ 12.71 hrs, Volume= 0.218 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 765.88' @ 12.71 hrs Surf.Area= 9,910 sf Storage= 3,534 cf

Plug-Flow detention time= 61.5 min calculated for 0.218 af (98% of inflow)
Center-of-Mass det. time= 50.1 min (882.4 - 832.3)

Volume	Invert	Avail.Storage	Storage Description
#1	765.50'	47,193 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

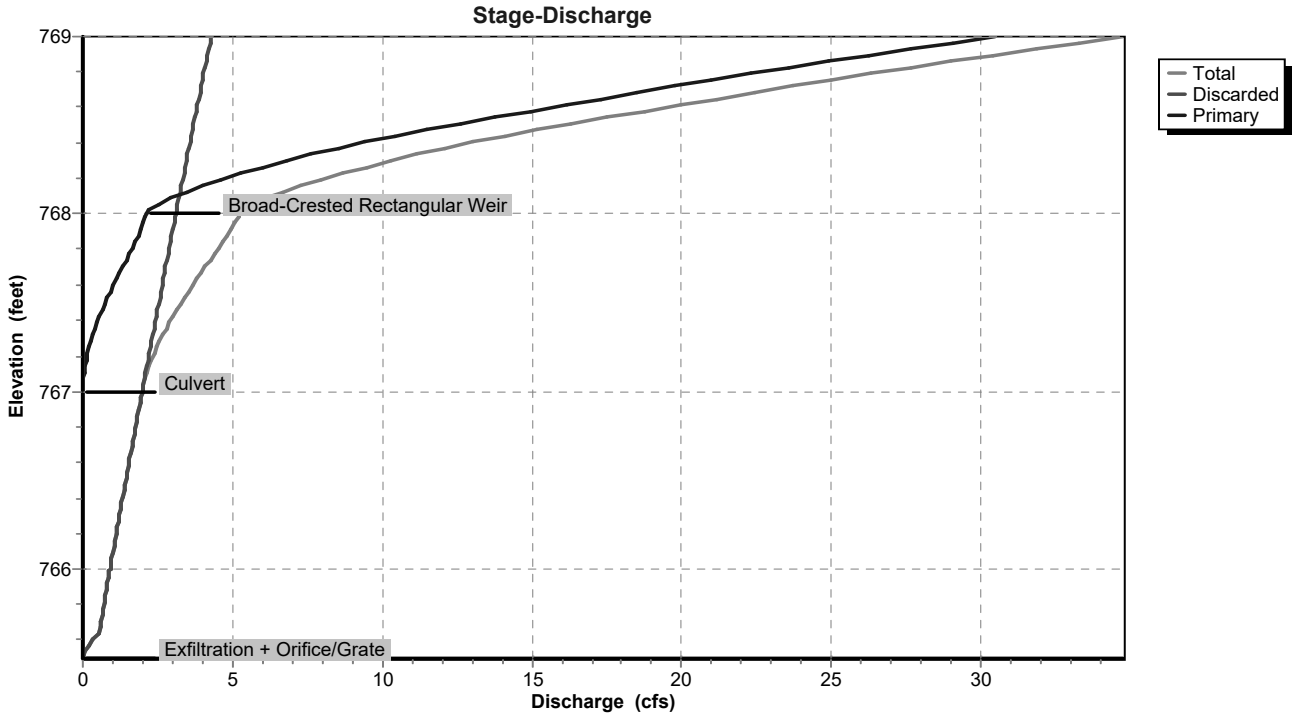
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
765.50	8,696	0	0	8,696
766.00	10,309	4,746	4,746	10,318
767.00	12,979	11,618	16,364	13,015
768.00	15,374	14,160	30,524	15,447
769.00	18,000	16,670	47,193	18,113

Device	Routing	Invert	Outlet Devices
#1	Discarded	765.50'	**2.000 in/hr Exfiltration over Wetted area** Conductivity to Groundwater Elevation = 765.00'
#2	Device 1	765.50'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	767.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 767.00' / 765.00' S= 0.0400 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#4	Primary	768.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.78 cfs @ 12.71 hrs HW=765.88' (Free Discharge)
└**1=Exfiltration** (Controls 0.78 cfs)
└**2=Orifice/Grate** (Passes 0.78 cfs of 2.33 cfs potential flow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=765.50' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: INFILTRATION BASIN



Summary for Subcatchment 1: 1

CarlsonPlanXYPos|627544.1761|1064792.3605|
CarlsonSurface||

Runoff = 6.54 cfs @ 12.23 hrs, Volume= 0.493 af, Depth> 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
NRCC 24-hr A 10-Year Rainfall=3.14"

Area (sf)	CN	Description
1,386	98	Paved parking HSG B
41,363	98	Paved parking HSG D
8,400	98	Roofs HSG D
10,672	69	50-75% Grass cover, Fair HSG B
70,991	84	50-75% Grass cover, Fair HSG D
132,812	88	Weighted Average
81,663		61.49% Pervious Area
51,149		38.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	105	0.0250	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.18"
2.5	250	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.3	200	0.0500	11.50	920.06	**Channel Flow,** Area= 80.0 sf Perim= 60.0' r= 1.33' n= 0.035 High grass
0.3	50	0.0100	3.01	2.41	**Channel Flow,** Area= 0.8 sf Perim= 3.1' r= 0.26' n= 0.020 Corrugated PE, corrugated interior
14.4	605	Total			

Summary for Pond 2P: INFILTRATION BASIN

Inflow Area = 3.049 ac, 38.51% Impervious, Inflow Depth > 1.94" for 10-Year event
Inflow = 6.54 cfs @ 12.23 hrs, Volume= 0.493 af
Outflow = 1.32 cfs @ 12.78 hrs, Volume= 0.485 af, Atten= 80%, Lag= 33.4 min
Discarded = 1.32 cfs @ 12.78 hrs, Volume= 0.485 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 766.40' @ 12.78 hrs Surf.Area= 11,335 sf Storage= 9,053 cf

Plug-Flow detention time= 83.0 min calculated for 0.485 af (98% of inflow)
Center-of-Mass det. time= 74.0 min (887.3 - 813.3)

Volume	Invert	Avail.Storage	Storage Description
#1	765.50'	47,193 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

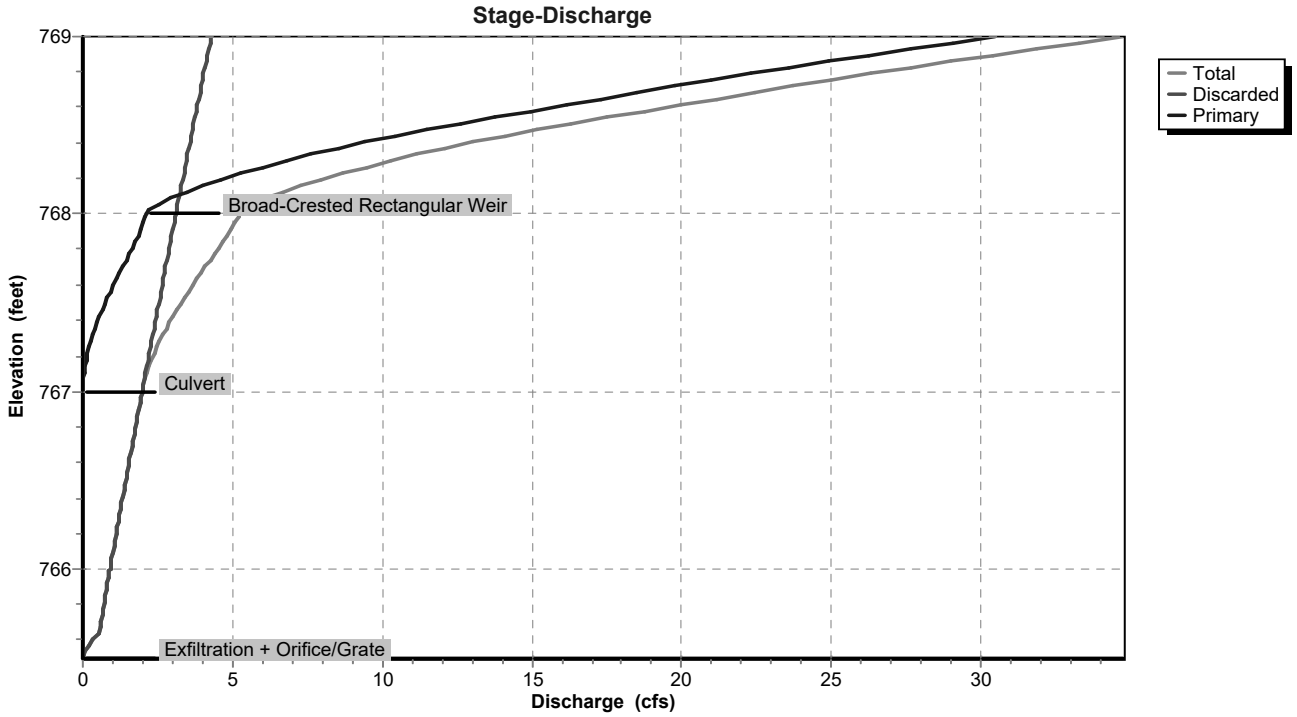
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
765.50	8,696	0	0	8,696
766.00	10,309	4,746	4,746	10,318
767.00	12,979	11,618	16,364	13,015
768.00	15,374	14,160	30,524	15,447
769.00	18,000	16,670	47,193	18,113

Device	Routing	Invert	Outlet Devices
#1	Discarded	765.50'	**2.000 in/hr Exfiltration over Wetted area** Conductivity to Groundwater Elevation = 765.00'
#2	Device 1	765.50'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	767.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 767.00' / 765.00' S= 0.0400 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#4	Primary	768.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=1.32 cfs @ 12.78 hrs HW=766.40' (Free Discharge)
└**1=Exfiltration** (Controls 1.32 cfs)
└**2=Orifice/Grate** (Passes 1.32 cfs of 3.58 cfs potential flow)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=765.50' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: INFILTRATION BASIN



Summary for Subcatchment 1: 1

CarlsonPlanXYPos|627544.1761|1064792.3605|
CarlsonSurface||

Runoff = 12.96 cfs @ 12.22 hrs, Volume= 1.000 af, Depth> 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
NRCC 24-hr A 100-Year Rainfall=5.29"

Area (sf)	CN	Description
1,386	98	Paved parking HSG B
41,363	98	Paved parking HSG D
8,400	98	Roofs HSG D
10,672	69	50-75% Grass cover, Fair HSG B
70,991	84	50-75% Grass cover, Fair HSG D
132,812	88	Weighted Average
81,663		61.49% Pervious Area
51,149		38.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	105	0.0250	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.18"
2.5	250	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.3	200	0.0500	11.50	920.06	**Channel Flow,** Area= 80.0 sf Perim= 60.0' r= 1.33' n= 0.035 High grass
0.3	50	0.0100	3.01	2.41	**Channel Flow,** Area= 0.8 sf Perim= 3.1' r= 0.26' n= 0.020 Corrugated PE, corrugated interior
14.4	605	Total			

Summary for Pond 2P: INFILTRATION BASIN

Inflow Area = 3.049 ac, 38.51% Impervious, Inflow Depth > 3.94" for 100-Year event
Inflow = 12.96 cfs @ 12.22 hrs, Volume= 1.000 af
Outflow = 2.46 cfs @ 12.78 hrs, Volume= 0.989 af, Atten= 81%, Lag= 33.7 min
Discarded = 2.26 cfs @ 12.78 hrs, Volume= 0.978 af
Primary = 0.20 cfs @ 12.78 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.10 hrs
Peak Elev= 767.25' @ 12.78 hrs Surf.Area= 13,553 sf Storage= 19,648 cf

Plug-Flow detention time= 105.0 min calculated for 0.989 af (99% of inflow)
Center-of-Mass det. time= 98.3 min (894.8 - 796.5)

Volume	Invert	Avail.Storage	Storage Description
#1	765.50'	47,193 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

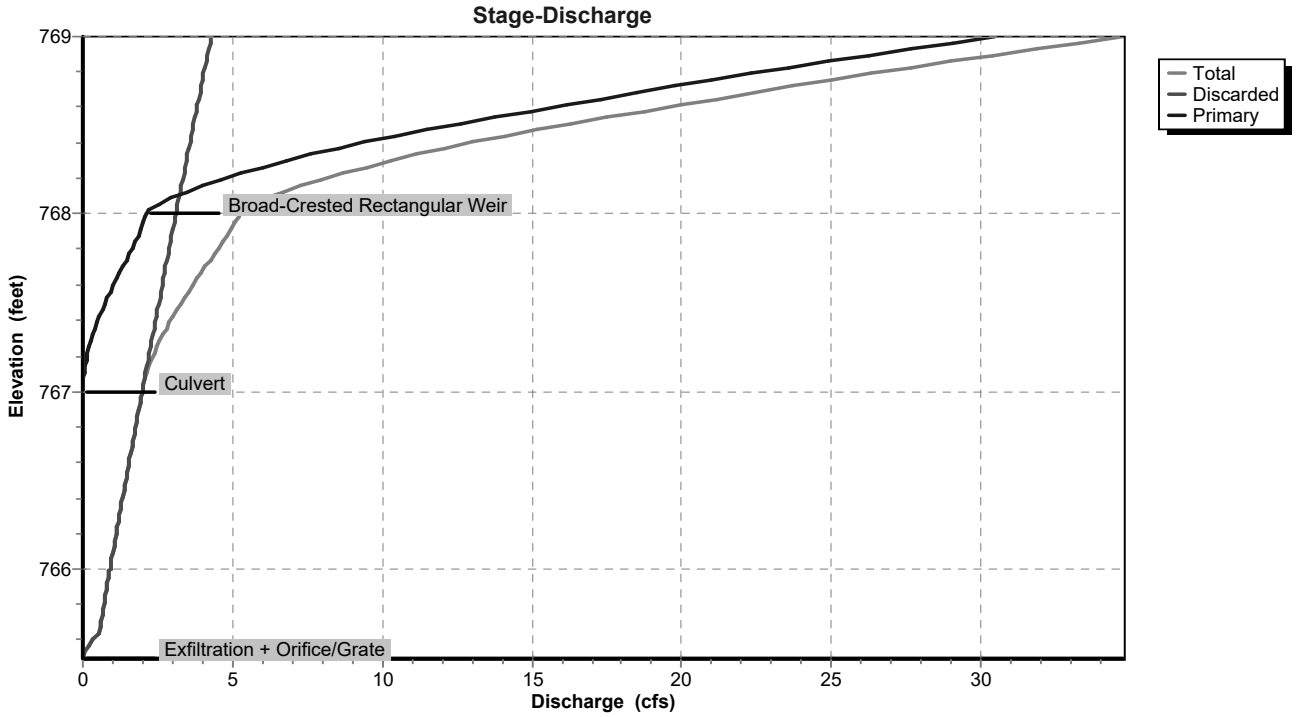
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
765.50	8,696	0	0	8,696
766.00	10,309	4,746	4,746	10,318
767.00	12,979	11,618	16,364	13,015
768.00	15,374	14,160	30,524	15,447
769.00	18,000	16,670	47,193	18,113

Device	Routing	Invert	Outlet Devices
#1	Discarded	765.50'	**2.000 in/hr Exfiltration over Wetted area** Conductivity to Groundwater Elevation = 765.00'
#2	Device 1	765.50'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	767.00'	**12.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 767.00' / 765.00' S= 0.0400 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#4	Primary	768.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=2.26 cfs @ 12.78 hrs HW=767.25' (Free Discharge)
└**1=Exfiltration** (Controls 2.26 cfs)
└**2=Orifice/Grate** (Passes 2.26 cfs of 5.00 cfs potential flow)

Primary OutFlow Max=0.20 cfs @ 12.78 hrs HW=767.25' (Free Discharge)
└**3=Culvert** (Inlet Controls 0.20 cfs @ 1.34 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2P: INFILTRATION BASIN



APPENDIX C

Stormwater Design Calculations

Version 1.7
Last Updated: 10/02/2015

Total Water Quality Volume Calculation
WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....	No

Design Point:	storm	
P=	1.89	*inch*

Manually enter P, Total Area and Impervious Cover.

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	3.05	1.17	39%	0.40	8,296	Vegetated Swale
2						
3						
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	3.05	1.17	39%	0.40	**8,296**	**Subtotal 1**
Total	3.05	1.17	39%	0.40	**8,296**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

Technique	Total Contributing Area *(Acre)*	Contributing Impervious Area *(Acre)*	Notes
Conservation of Natural Areas	0.00	0.00	*minimum 10,000 sf*
Riparian Buffers	0.00	0.00	*maximum contributing length 75 feet to 150 feet*
Filter Strips	0.00	0.00	
Tree Planting	0.00	0.00	*Up to 100 sf directly connected impervious area may be subtracted per tree*
Total	**0.00**	**0.00**	

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	3.05	1.17	39%	0.40	8,296
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**3.05**	**1.17**	39%	0.40	8,296
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	3.05	1.17	39%	0.40	**8,296**
WQv reduced by Area Reduction techniques					0

Runoff Reduction Volume and Treated volumes						
	Runoff Reduction Techiques/Standard SMPs		**Total Contributing Area**	**Total Contributing Impervious Area**	**WQv Reduced (RRv)**	**WQv Treated**
			(acres)	**(acres)**	**cf**	**cf**
Area/Volume Reduction	Conservation of Natural Areas	RR-1	0.00	0.00		
	Sheetflow to Riparian Buffers/Filter Strips	RR-2	0.00	0.00		
	Tree Planting/Tree Pit	RR-3	0.00	0.00		
	Disconnection of Rooftop Runoff	RR-4		0.00		
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rain Barrel/Cistern	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Intensive & Extensive)	RR-10	0.00	0.00	0	
Standard SMPs w/RRv Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	3.05	1.17	13617	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	0.00			
	Bioretention & Infiltration Bioretention	F-5	0.00	0.00	0	0
	Dry swale	O-1	3.05	1.17	2278	0
Standard SMPs	Micropool Extended Detention (P-1)	P-1				
	Wet Pond (P-2)	P-2				
	Wet Extended Detention (P-3)	P-3				
	Multiple Pond system (P-4)	P-4				
	Pocket Pond (p-5)	P-5				
	Surface Sand filter (F-1)	F-1				
	Underground Sand filter (F-2)	F-2				
	Perimeter Sand Filter (F-3)	F-3				
	Organic Filter (F-4	F-4				
	Shallow Wetland (W-1)	W-1				
	Extended Detention Wetland (W-2	W-2				
	Pond/Wetland System (W-3)	W-3				
	Pocket Wetland (W-4)	W-4				
	Wet Swale (O-2)	O-2				
Totals by Area Reduction →			0.00	0.00	0	
Totals by Volume Reduction →			0.00	0.00	0	
Totals by Standard SMP w/RRV →			6.10	2.35	15895	0
Totals by Standard SMP →			0.00	0.00		0
Totals (Area + Volume + all SMPs) →			6.10	2.35	15,895	0
	Impervious Cover √	error				

Minimum RRv

Enter the Soils Data for the site		
Soil Group	Acres	S
A	0.00	55%
B	0.28	40%
C	0.00	30%
D	**2.77**	20%
Total Area	3.0468	
Calculate the Minimum RRv		
S =	**0.22**	
Impervious =	1.17	*acre*
Precipitation	1.89	*in*
Rv	0.95	
Minimum RRv	**1,670**	***ft3***
	0.04	af

NOI QUESTIONS

#	NOI Question	Reported Value	
		cf	af
28	Total Water Quality Volume (WQv) Required	8296	*0.190*
30	Total RRV Provided	15895	*0.365*
31	Is RRv Provided ≥WQv Required?	Yes	
32	Minimum RRv	1670	*0.038*
32a	Is RRv Provided ≥ Minimum RRv Required?	Yes	
33a	Total WQv Treated	0	*0.000*
34	Sum of Volume Reduced & Treated	15895	*0.365*
34	Sum of Volume Reduced and Treated	15895	*0.365*
35	Is Sum RRv Provided and WQv Provided ≥WQv Required?	Yes	

Apply Peak Flow Attenuation			
36	Channel Protection	*Cpv*	
37	Overbank	*Qp*	
37	Extreme Flood Control	*Qf*	
	Are Quantity Control requirements met?	*Yes*	Plan Completed

Planning

Practice	Description	Application
Preservation of Undisturbed Areas	Delineate and place into permanent conservation undisturbed forests, native vegetated areas, riparian corridors, wetlands, and natural terrain.	Considered & Not Applied
Preservation of Buffers	Define, delineate and preserve naturally vegetated buffers along perennial streams, rivers, shorelines and wetlands.	N/A
Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Considered & Applied
Locating Development in Less Sensitive Areas	Avoid sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats by locating development to fit the terrain in areas that will create the least impact.	Considered & Applied
Open Space Design	Use clustering, conservation design or open space design to reduce impervious cover, preserve more open space and protect water resources.	N/A
Soil Restoration	Restore the original properties and porosity of the soil by deep till and amendment with compost to reduce the generation of runoff and enhance the runoff reduction performance of post construction practices.	Considered & Applied
Roadway Reduction	Minimize roadway widths and lengths to reduce site impervious area	Considered & Applied
Sidewalk Reduction	Minimize sidewalk lengths and widths to reduce site impervious area	Considered & Applied
Driveway Reduction	Minimize driveway lengths and widths to reduce site impervious area	Considered & Applied
Cul-de-sac Reduction	Minimize the number of cul-de-sacs and incorporate landscaped areas to reduce their impervious cover.	N/A
Building Footprint Reduction	Reduce the impervious footprint of residences and commercial buildings by using alternate or taller buildings while maintaining the same floor to area ratio.	Considered & Not Applied
Parking Reduction	Reduce imperviousness on parking lots by eliminating unneeded spaces, providing compact car spaces and efficient parking lanes, minimizing stall dimensions, using porous pavement surfaces in overflow parking areas, and using multi-storied parking decks where appropriate.	Considered & Applied

Infiltration Basin Worksheet

Design Point:	storm

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	3.05	1.17	0.39	0.40	8295.98	1.89	Vegetated Swale
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	39%	0.40	8,296	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					5,321	*ft^3*	

Pretreatment Techniques to Prevent Clogging			
Infiltration Rate	2.00	*in/hour*	*Okay*
Pretreatment Sizing	25	*% WQv*	*25% minimum;* *50% if >2 in/hr* *100% if >5in/hour*
Pretreatment Required Volume	3,404	*ft^3*	
Pretreatment Provided	3,262	*ft^3*	*Inadequate Pretreatment Provided*
Pretreatment Techniques utilized	*Grass Channel*		

Size An Infiltration Basin			
Design Volume	13,617	*ft^3*	WQv
Basal Area Required	12,379	*ft^2*	*Infiltration practices shall be designed to exfiltrate the entire WQv through the floor of each practice.*
Basal Area Provided	15,100	*ft^2*	
Design Depth	1.10	*ft*	
Volume Provided	16,610	*ft^3*	*Storage Volume provided in infiltration basin area (not including pretreatment.*

Determine Runoff Reduction			
RRv	**13,617**	***ft^3***	***90% of the storage provided in the basin or WQv whichever is smaller***
Volume Treated	0	*ft^3*	*This is the portion of the WQv that is not reduced/infiltrated*
Sizing √	OK		*The infiltration basin must provide storage equal to or greater than the WQv of the contributing area.*

Infiltration Basin Worksheet

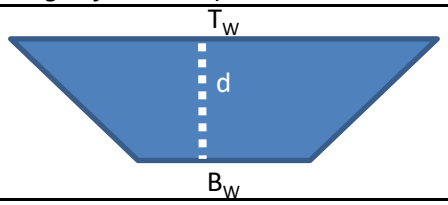
Total RRV	13,616.98
Total Area	3.05
Total Impervious Area	1.17
Total Volume Treated	0.00
Rooftop Disconnect Impervious Area Total	0.00

Dry Swale Worksheet

Design Point:	storm

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
1	3.05	1.17	0.39	0.40	8295.98	1.89	Vegetated Swale
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	39%	0.40	8,296	<<WQv after adjusting for Disconnected Rooftops	

Pretreatment Provided			Pretreatment Technique
Pretreatment (10% of WQv)	830	ft^3	Veg Buffer

Calculate Available Storage Capacity			
Bottom Width	5	*ft*	Design with a bottom width no greater than eight feet to avoid potential gullying and channel braiding, but no less than two feet
Side Slope (X:1)	4	*Okay*	Channels shall be designed with moderate side slopes (flatter than 3:1) for most conditions. 2:1 is the absolute maximum side slope
Longitudinal Slope	2%	*Okay*	*Maximum longitudinal slope shall be 4%*
Flow Depth	1.5	*ft*	*Maximum ponding depth of one foot at the mid-point of the channel, and a maximum depth of 18" at the end point of the channel (for storage of the WQv)*
Top Width	17	*ft*	
Area	16.50	*sf*	
Minimum Length	453	*ft*	
Actual Length	640	*ft*	
End Point Depth check	1.50	*Okay*	*A maximum depth of 18" at the end point of the channel (for storage of the WQv)*
Storage Capacity	11,390	ft^3	
Soil Group (HSG)		D	

Runoff Reduction				
Is the Dry Swale contributing flow to another practice?		Yes	Select Practice	Infiltration Basin
RRv	**2,278**	ft^3	**Runnoff Reduction equals 40% in HSG A and B and 20% in HSG C and D up to the WQv**	
Volume Treated	0	ft^3	This is the difference between the WQv calculated and the runoff reduction achieved in the swale	
Volume Directed	6,018	ft^3	This volume is directed another practice	
Volume √	*Okay*		Check to be sure that channel is long enough to store WQv	

Dry Swale Worksheet

Total RRV	2,277.92
Total Area	3.05
Total Impervious Area	1.17
Total Volume Treated	0.00
Rooftop Disconnect Impervious Area Total	0.00

BTY Holdings **3/22/2021**

4. Channel Protection Volume (1-year Storm For 24 hours)

Developed Tributary DA = **2.60** acres
RCN = **87**
Rainfall (1-yr) = **1.89** in.

Runoff 1-yr (Qd) = **0.8** (from TR-55 FIGURE 2.1)

Time of Concentration (Tc) = **0.24** hours

Ia =0.2(1000/RCN - 10) = 0.30

Ia/P = 0.16

Form EXHIBIT 4-II (TR-55) Unit Peak Discharge for Type II Rainfall:

Qu = **700** csm/in

From FIGURE B.1 (NYS Stormwater Design Manual) (for 24 hours)

Qo/Qi = **0.02**

Eq. 2.1.16 (NYS Stormwater Design Manual)

$$Vs/Vr = 0.682 - 1.43(Qo/Qi) + 1.64(Qo/Qi)^2 - 0.804(Qo/Qi)^3$$

Vs/Vr = 0.654

Equation 2.1.17 (NYS Stormwater Design Manual)

$$Vs = (Vs/Vr \times Qd \times A)/12$$

Vs = 0.11 ac-ft
4945 Cubic Feet

APPENDIX D

Notice of Intent
(NOI)

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR _____
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001

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

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
ATL Contractors

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

Owner/Operator Contact Person First Name
Angelo

Owner/Operator Mailing Address

City

State
NY

Zip
_____ - _____

Phone (Owner/Operator)
___ - ___ - ____

Fax (Owner/Operator)
___ - ___ - ____

Email (Owner/Operator)

FED TAX ID
__ - _____ (not required for individuals)

Project Site Information

Project/Site Name
New Vehicle Service Facility

Street Address (NOT P.O. BOX)
Emerson Road

Side of Street
○ **North** ● **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Canandaigua

State: NY
Zip: 14424-
County: Ontario
DEC Region: 8

Name of Nearest Cross Street
Fire Hall Rd

Distance to Nearest Cross Street (Feet)
215

Project In Relation to Cross Street
○ **North** ○ **South** ○ **East** ● **West**

Tax Map Numbers
Section-Block-Parcel
56.00-2-25.120

Tax Map Numbers

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

https://gisservices.dec.ny.gov/gis/stormwater/

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)
-7 3 0 3 0 8
Ex. -73.749

Y Coordinates (Northing)
4 2 9 2 0 5 1
Ex. 42.652

2. What is the nature of this construction project?

● **New Construction**

○ **Redevelopment with increase in impervious area**

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

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

Pre-Development Existing Land Use

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

Post-Development Future Land Use

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

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

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

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
4.0	2.6	0.	1.2

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

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

A	B	C	D
0 %	10 %	0 %	90 %

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

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

Start Date	End Date
07/01/2021	11/01/2021

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

Name: Unnamed Class C Stream

9a. Type of waterbody identified in Question 9?

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

9b. How was the wetland identified?

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

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001? ( ) **Yes** (●) **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-20-001? ( ) **Yes** (●) **No**

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

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

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

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

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

Town of Canandaigua

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

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

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

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

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

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

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

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

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

SWPPP Preparer
Marks Engineering, P.C.

Contact Name (Last, Space, First)
Marks, Brennan

Mailing Address
42 Beeman St.

City
Canandaigua

State Zip
NY 14424-

Phone
585-905-0360

Fax

Email
bmarks@markseengineering.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. 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.

First Name
Brennan

MI
A

Last Name
Marks

Signature

Date
03/18/2021

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

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

Temporary Structural

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

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

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

Permanent Structural

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

Other

Post-construction Stormwater Management Practice (SMP) Requirements

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

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

- ● **Preservation of Undisturbed Areas**
- ● **Preservation of Buffers**
- ● **Reduction of Clearing and Grading**
- ● **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ● **Sidewalk Reduction**
- ● **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ● **Building Footprint Reduction**
- ○ **Parking Reduction**

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

- ● All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

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

Total WQv Required

		0	.	1	9	0

acre-feet

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

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

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

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

	Total Contributing Area (acres)		Total Contributing Impervious Area(acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)		and/or	
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or	
○ Tree Planting/Tree Pit (RR-3)		and/or	
○ Disconnection of Rooftop Runoff (RR-4)		and/or	
RR Techniques (Volume Reduction)			
○ Vegetated Swale (RR-5)			
○ Rain Garden (RR-6)			
○ Stormwater Planter (RR-7)			
○ Rain Barrel/Cistern (RR-8)			
○ Porous Pavement (RR-9)			
○ Green Roof (RR-10)			
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			
● Infiltration Basin (I-2)			1.17
○ Dry Well (I-3)			
○ Underground Infiltration System (I-4)			
○ Bioretention (F-5)			
● Dry Swale (O-1)			1.17
Standard SMPs			
○ Micropool Extended Detention (P-1)			
○ Wet Pond (P-2)			
○ Wet Extended Detention (P-3)			
○ Multiple Pond System (P-4)			
○ Pocket Pond (P-5)			
○ Surface Sand Filter (F-1)			
○ Underground Sand Filter (F-2)			
○ Perimeter Sand Filter (F-3)			
○ Organic Filter (F-4)			
○ Shallow Wetland (W-1)			
○ Extended Detention Wetland (W-2)			
○ Pond/Wetland System (W-3)			
○ Pocket Wetland (W-4)			
○ Wet Swale (O-2)			

Table 2 - Alternative SMPs (DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

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

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

Name

Manufacturer

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

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

Total RRv provided

0.365 **acre-feet**

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

● **Yes** ○ **No**

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

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

Minimum RRv Required

0.038 **acre-feet**

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

● **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

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

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

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

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

WQv Provided

0.0 **acre-feet**

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

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). 0.365

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

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

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

CPv Required

0.11 **acre-feet**

CPv Provided

0.11 **acre-feet**

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

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

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

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

Total Overbank Flood Control Criteria (Qp)

Pre-Development

3.44 **CFS**

Post-development

1.32 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

7.57 **CFS**

Post-development

2.46 **CFS**

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

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ● **Yes** ○ **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

ATL Contractors

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

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

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

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. [ ][ ][ ][ ][ ].[ ]

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

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

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

Owner/Operator Certification

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

Print First Name: Angelo

MI:

Print Last Name: Liccciardello

Owner/Operator Signature:

Date: 03/22/2021

APPENDIX E

MS4 Stormwater Pollution Prevention Plan (SWPPP)
Acceptance Form -

APPENDIX F

MAINTENANCE AGREEMENT

and

Management Inspection Checklist

Stormwater Ponds

Description: Constructed stormwater retention basin that has a permanent pool (or micropool). Runoff from each rain event is detained and treated in the pool through settling and biological uptake mechanisms.

Design Options: Micropool Extended Detention (P-1), Wet Pond (P-2), Wet Extended Detention (P-3), Multiple Pond (P-4), Pocket Pond (P-5)

KEY CONSIDERATIONS

FEASIBILITY

- Contributing drainage area greater than 10 acres for P-1, 25 acres for P-2 to P-4.
- Follow DEC Guidelines for Design of Dams.
- Provide a minimum 2' separation from the groundwater in sole source aquifers.
- Do not locate ponds in jurisdictional wetlands.
- Avoid directing hotspot runoff to design P-5.

CONVEYANCE

- Forebay at each inlet, unless the inlet contributes less than 10% of the total inflow, 4' to 6' deep.
- Stabilize the channel below the pond to prevent erosion.
- Stilling basin at the outlet to reduce velocities.

PREATREATMENT

- Forebay volume at least 10% of the WQ_v
- Forebay shall be designed with non-erosive outlet conditions.
- Provide direct access to the forebay for maintenance equipment
- In sole source aquifers, provide 100% pretreatment for hotspot runoff.

TREATMENT

- Provide the water quality volume in a combination of permanent pool and extended detention (Table 6.1 in manual provides limitations on storage breakdown)
- Minimum length to width ratio of 1.5:1
- Minimum surface area to drainage area ratio of 1:100

LANDSCAPING

STORMWATER MANAGEMENT SUITABILITY

X	Water Quality
X	Channel Protection
X	Overbank Flood Protection
X	Extreme Flood Protection

Accepts Hotspot Runoff: *Yes*

(2 feet minimum separation distance required to water table)

FEASIBILITY CONSIDERATIONS

L	Cost
L	Maintenance Burden

Key: L=Low **M**=Moderate **H**=High

Residential Subdivision Use: Yes

High Density/Ultra-Urban: *No*

Soils: *Hydrologic group 'A' soils may require pond liner*

Hydrologic group 'D' soils may have compaction constraints

Other Considerations:

- *Thermal effects*

- Provide a minimum 10’ and preferably 15’ safety bench extending from the high water mark, with a maximum slope of 6%.
- Provide an aquatic bench extending 15 feet outward from the shoreline, and a maximum depth of 18" below normal water elevation.
- Develop a landscaping plan.
- Provide a 25’pond buffer.
- No woody vegetation within 15 feet of the toe of the embankment, or 25 feet from the principal spillway.

MAINTENANCE REQUIREMENTS

- Legally binding maintenance agreement
- Sediment removal from forebay every five to six years or when 50% full.
- Provide a maintenance easement and right-of-way.
- Removable trash rack on the principal spillway.
- Non-clogging low flow orifice
- Riser in the embankment.
- Pond drain required, capable of drawing down the pond in 24 hours.
- Notification required for pond drainage.
- Provide an adjustable gate valve on both the WQ_v-ED pipe, and the pond drain.
- Side Slopes less than 3:1, and terminate at a safety bench.
- Principal spillway shall not permit access by small children, and endwalls above pipes greater than 48” in diameter shall be fenced.

- *Outlet clogging*
- *Safety bench*

POLLUTANT REMOVAL

G	Phosphorus
G	Nitrogen
G	Metals - Cadmium, Copper,Lead, and Zinc removal
G	Pathogens Coliform, E.Coli, Streptococci removal

Key: G=Good **F**=Fair **P**=Poor

APPENDIX G

Notice of Termination
(NOT)

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person: | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

APPENDIX H

Environmental Impact Information