

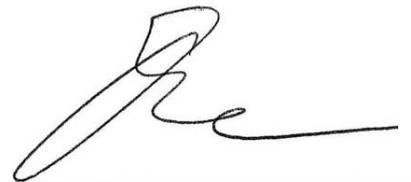
REPORT

**PROPOSED SOLAR FARM
TO GLENMERE LAKE SOLAR
SECTION 17, BLOCK 1, LOT 24.11
1199-1249 PULASKI HIGHWAY
TOWN OF GOSHEN
ORANGE COUNTY, NEW YORK**

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Prepared by:

**LAN ASSOCIATES
ENGINEERING, PLANNING, ARCHITECTURE, SURVEYING, LLP
252 Main Street
Goshen, New York 10924
Phone 845-615-0350
Fax 845-615-0351**



**Erik E. Boe, P.E.
NY PE #089208-1**

**LAN Job #4.1408.01
October 18, 2018**

**PROPOSED SOLAR FARM
TO GLENMERE LAKE SOLAR
SECTION 17, BLOCK 1, LOT 24.11
1199-1249 PULASKI HIGHWAY
TOWN OF GOSHEN
ORANGE COUNTY, NEW YORK
STORMWATER POLLUTION PREVENTION PLAN**

I) Project Summary

- Introduction
- Existing Conditions
- Proposed Conditions
- Five step process for site planning with green infrastructure

II) Hydrologic and Hydraulic Analysis

- Analysis Methodology
- Water Quality Volume
- Runoff Reduction Volume
- Channel Protection Volume
- Overbank Flood
- Extreme Storm

III) Stormwater Management Practices

A) Permanent Structures:

B) Temporary Structures:

- Silt Fence
- Inlet Filters

IV) Stormwater Management Maintenance Program

A) General SWPPP requirements

B) Inspection and maintenance requirements

C) Temporary structures

D) Maintenance implementation

E) Erosion and sediment control schedule

F) Inspection and Maintenance of Permanent Structures

V) Conclusion

- Pollution Prevention Plan Certification
- Contractors Certification

VI) Appendices:

- Appendix A: Grading and Soil Erosion Control Plans
- Appendix B: Soil Map & Hydrologic Soil Group Map
- Appendix C: Hydraflow Hydrographs Report Output
- Appendix D: Notice of Intent Filing Certification
- Appendix E: Construction Inspection Checklists

I) PROJECT SUMMARY

Introduction

The following report outlines the stormwater management and sediment control measures proposed for the proposed improvements to the Glenmere Lake Solar Project in Goshen, New York. The project includes the installation of an approximately 2 MW solar array, solar equipment, fencing, and a pervious crushed stone access path. Because the solar panels do not substantially change the drainage patterns of the site and there is only a de minimis increase in impervious area (for the equipment pad), no structural stormwater measures are proposed. The site was analyzed in accordance with the requirements of the New York State Stormwater Management Design Manual prepared by the NYCDEC and dated August 2010.

Existing Conditions

The subject property is 129 acres and is presently a combination of farm buildings, pastures, farm land, farm paths, and some undeveloped open space and woods. The undeveloped portions of the site are generally grass and landscape areas, and a large portion devoted to a farm area alongside south and southeast part of the property. There are several areas of wetlands on the site.

Proposed Conditions

Glenmere Lake Solar is proposing a solar array to be located in the north-eastern portion of the property. Existing wetland areas and steep slopes in the area of the solar array are avoided in the design. The entire solar area will be enclosed by an 8-foot-high security fence that is to be set back 15' from the photovoltaic arrays. An 8-foot-high chain link double swing gate is proposed to control access to the solar area. Also proposed is a new 15-foot-wide pervious crushed stone access path that will start from Pulaski Highway at the location of the existing farm driveway and lead all the way into the fenced solar area. The end of the stone access path will have a L shaped area to allow for U-turns to be made. At the end of the access path in the middle of the solar area, a concrete pad is proposed with equipment pad for the photovoltaic arrays. The conduit will be buried underground alongside the access path and will run to Pulaski Highway where it will meet with a new utility pole.

Five step process for site planning with Green Infrastructure:

Step 1: Site Planning

In as much as was possible, green infrastructure practices were considered in the design of the site improvements for the Glenmere Lake Solar Project:

- **Preservation of Undisturbed Areas:** The majority of the proposed solar array is proposed in an area that was previously cleared. Minimal tree removal will be

necessary to construct the solar array. Undisturbed areas were left undisturbed as much as was feasible while still achieving the site goals.

- Preservation of buffers: Existing vegetative buffers around the perimeter of the property are proposed to remain undisturbed.
- Reduction of Clearing and Grading: Only minimal grading is proposed to achieve acceptable grading for the proposed crushed stone access path. No substantial grading is proposed within the solar array. As noted above, the solar array is proposed in an area of the site that is already mostly cleared, and only minimal tree removal will be necessary.
- Locating Development in Less Sensitive Areas: All sensitive areas were avoided in siting the proposed solar array.
- Open Space Design: N/A
- Soil Restoration: N/A
- Roadway Reduction: N/A
- Sidewalk Reduction: N/A
- Driveway Reduction: The driveway width was chosen to allow access by all proposed construction and maintenance vehicles that would need to access the site during and after construction. A pervious crushed stone surface was proposed to minimize the impact by the driveway.
- Cul-de-sac Reduction: N/A
- Building Footprint Reduction: No buildings are proposed.
- Parking Reduction: No parking areas are proposed.
- Conservation of Natural Areas: The solar array is proposed in an area of the site that is already mostly cleared. Most of the forested areas of the site are not proposed to be disturbed as part of this project.
- Sheet flow to Riparian buffers or filter strips: All of the stormwater that leaves the project area will sheet flow across existing vegetative areas before it enters downstream wetlands or waterways.
- Vegetated open swales: No collection of stormwater is proposed.
- Tree Planting/Tree Box: Some new trees are proposed to enhance the existing vegetative buffers around the site.
- Disconnection of rooftop runoff: No rooftops are proposed.
- Stream Daylighting: N/A
- Rain Garden: N/A
- Green Roof: N/A
- Stormwater planter: N/A
- Rain Tank/Cistern: N/A
- Porous Pavement: The proposed crushed stone driveway is considered porous.

Step 2: Determine Water Quality Volume (WQv)

The WQv is calculated below in Section II (below).

Step 3: Runoff Reduction by Applying Green Infrastructure Techniques and Standard SMPs with RRv Capacity

The RRv is calculated below, and is being addressed by a vegetative filter strip, that will treat all runoff from the one small utility pad, which is the only proposed impervious area.

Step 4: Apply SMP to address remaining WQv

No further water quality treatment is proposed.

Step 5: Apply volume and peak rate control practices

The de minimis increase in impervious area due to the proposed equipment pad is small enough as to not change the composite CN value of the project area. Because the CN value does not change, no increase in runoff is anticipated as a result of the proposed improvements.

II) HYDROLOGIC AND HYDRAULIC ANALYSIS

Analysis Methodology

The proposed improvements to the lot will have minimal impact upon the stormwater quantity or quality from the project area. The solar panel area groundcover will remain basically the same as the existing conditions. The access road is designed to be pervious stone, which will infiltrate similarly to existing conditions. The only change to the surface runoff characteristics will be the one proposed equipment pad, which we consider to be a de minimis change, such that after it is applied to the weighted average, the proposed CN number is the same as the existing conditions. This will result in effectively identical stormwater characteristics.

The SCS Unit Hydrograph Method was used to determine the 1, 10, and 100-year peak discharges for the existing and proposed conditions, for the entire limit of disturbance as shown on sheet SC.01, using a Type III storm with USDA 24 hour rainfall frequency data for Orange County. A summary of curve number data is as follows:

Existing Conditions		
	ac	CN
Total Site Area	25.65	
Pasture or Range Land – B soil	12.54	61
Pasture or Range Land – D soil	13.11	80
Impervious	0	98

Proposed Conditions		
	ac	CN
Total Site Area	25.65	
Pasture or Range Land – B soil	12.54	61
Pasture or Range Land – D soil	13.10	80
Impervious	0.01	98

Design Storms

The existing and proposed rainfall amounts were taken from the NYSDEC Stormwater Management Design Manual rainfall maps, as follows in the following figures. The table below summarizes the design storm figures used for the analysis.

Storm	Rainfall Amount (inches)
1-Year Storm	2.7
10-Year Storm	4.8
100-Year Storm	8.6
90 th Percentile Rainfall	1.38

Figure 4.2: One-Year Design Storm in New York State (NYSDEC, 2013)

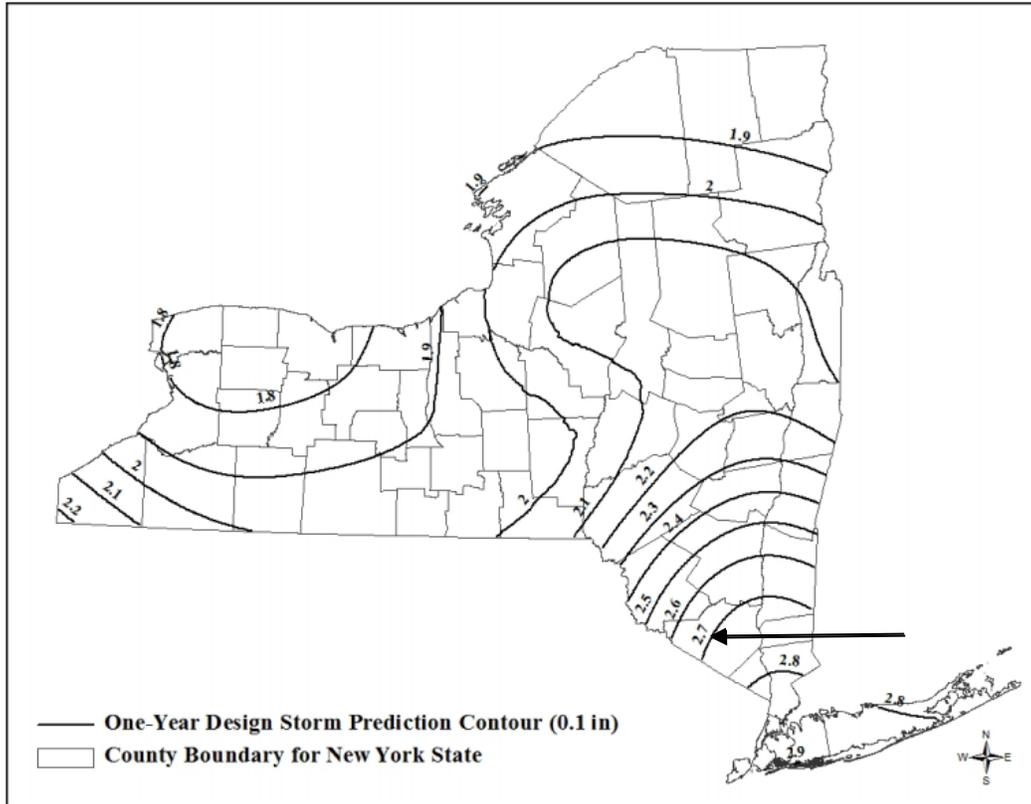


Figure 4.3: Ten-Year Design Storm in New York State (NYSDEC, 2013)

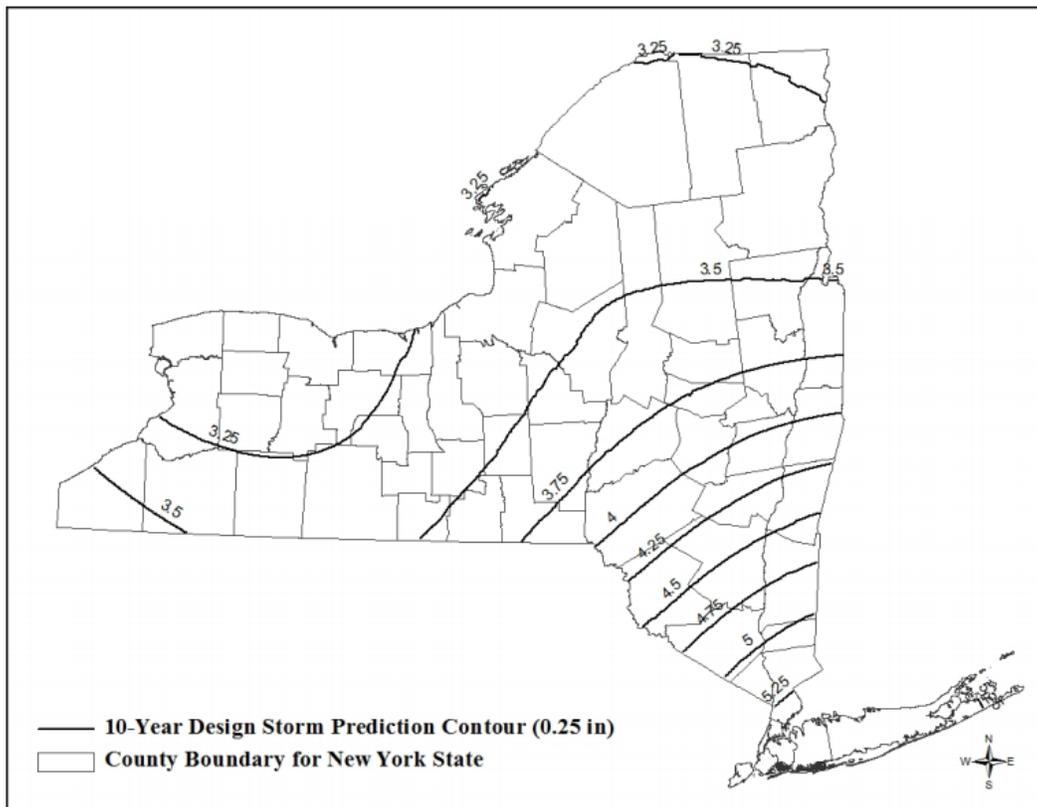


Figure 4.4: One Hundred-Year Design Storm in New York State (NYSDEC, 2013)

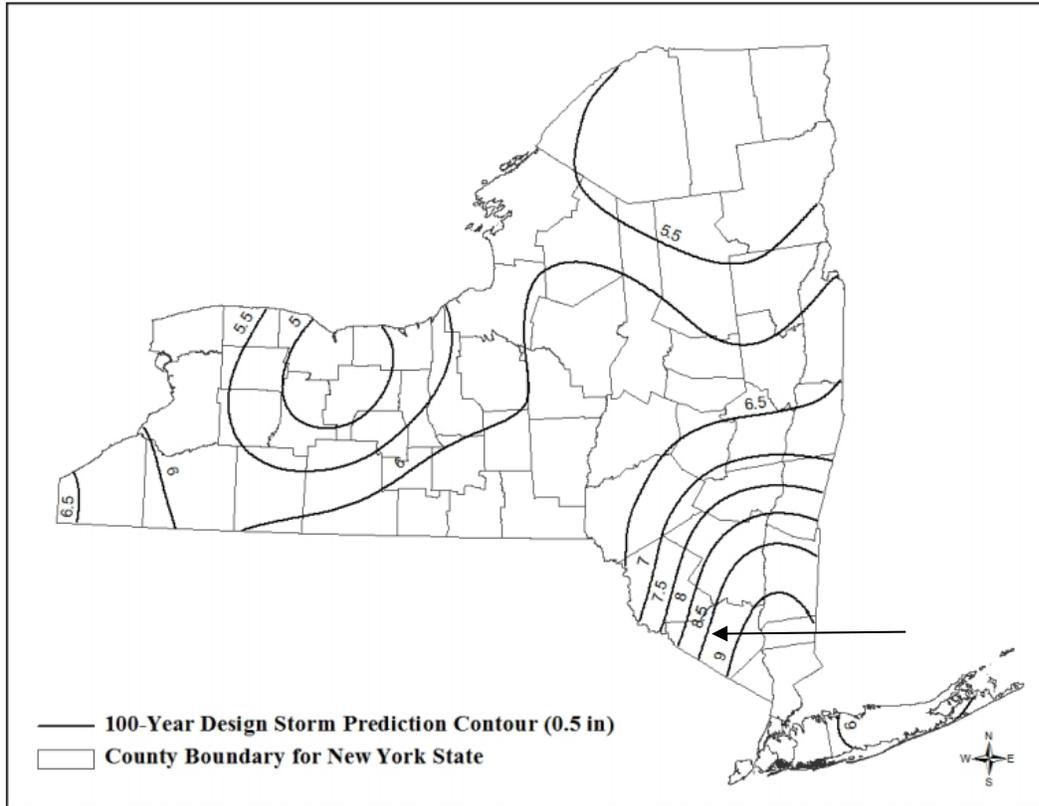
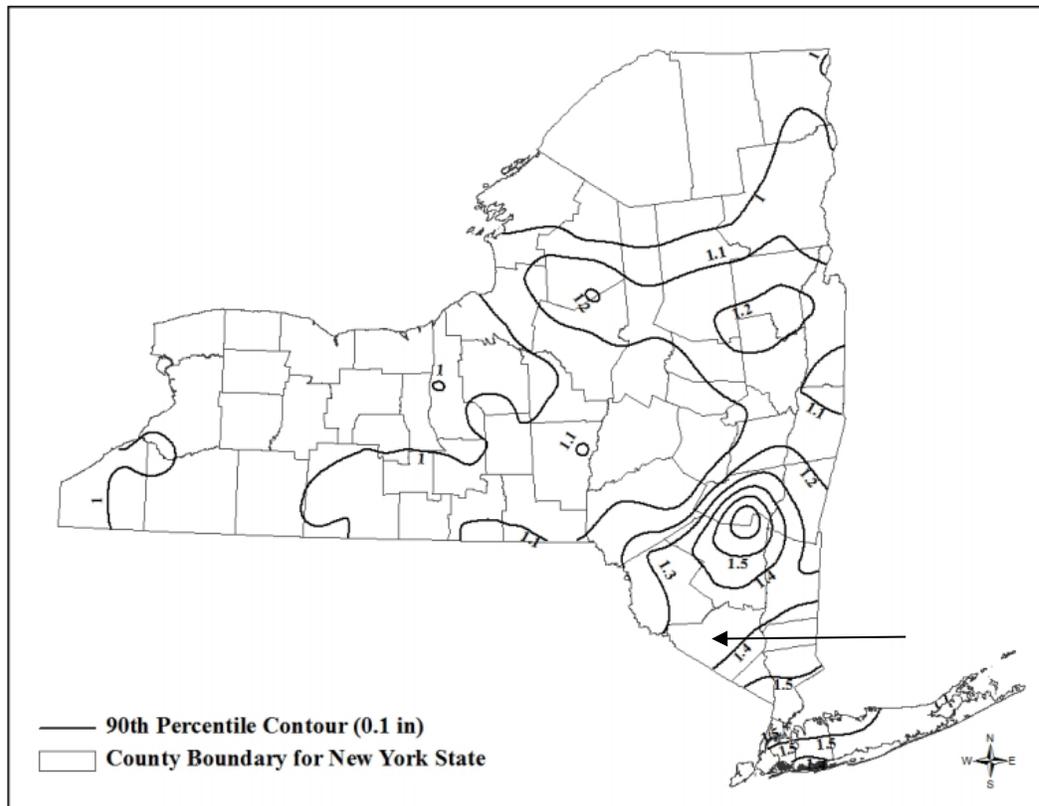


Figure 4.1: 90th Percentile Rainfall in New York State (NYSDEC, 2013)



Water Quality Volume (WQv):

The only areas required to be treated for water quality would be the one impervious equipment pad. Any runoff from this de minimis impervious area will run across existing vegetation before entering an area of on-site wetlands. This vegetative filter strip will provide the requisite water quality treatment for the new impervious area.

Runoff Reduction Volume (RRv):

Stormwater runoff from the equipment pad will be treated by a vegetative filter strip, as noted above.

Channel Protection Volume (CPv):

The 1-Year storm peak flow from the site under existing conditions is 10.63 cfs. Under proposed conditions, the 1-Year storm peak flow will be the same 10.63 cfs.

Overbank Flood (Qp):

The 10-Year storm peak flow from the site under existing conditions is 40.74 cfs. Under proposed conditions, the 1-Year storm peak flow will be the same 40.74 cfs.

Extreme Storm (Qf):

The 100-Year storm peak flow from the site under existing conditions is 107.43 cfs. Under proposed conditions, the 100-Year storm peak flow will be the same 107.43 cfs.

III) STORMWATER MANAGEMENT PRACTICES

A) Permanent Structures

No permanent structural stormwater improvements are proposed.

B) Temporary Structures

1. Silt Fence

Silt fence is proposed down gradient from all disturbed areas proposed on the site and is shown on the Erosion Control Plans. Silt fence is used to collect the transported sediment load due to runoff and to slow, said runoff, in an effort to prevent erosion. The silt fence is a temporary barrier of geotextile fabric supported on fence posts at a 10' maximum interval.

IV) STORMWATER MANAGEMENT MAINTENANCE PROGRAM

A) GENERAL SWPPP REQUIREMENTS:

1. The NOI shall be submitted to the Department prior to the commencement of construction activity.
2. The owner or operator must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls 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. At a minimum, the owner or operator shall amend the SWPPP:
 - a. whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the site;
 - 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, the Department or other regulatory authority.
3. The Department 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 shall 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 the Department, the owner or operator shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the owner or operator does not respond to the Department's comments in the specified time frame, the Department may suspend the owner's or operator's coverage under this permit.
4. 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 post-construction stormwater management practices included in the SWPPP.
5. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed. The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any construction activity: "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. "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 shall 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 construction has commenced, they must also sign the certification statement and provide the information listed above.

6. For projects where the Department requests a copy of the SWPPP or inspection reports, the owner or operator shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B) INSPECTION AND MAINTENANCE REQUIREMENTS:

1. General Construction Site Inspection and Maintenance Requirements

- a. The owner or operator must ensure that all erosion and sediment control practices and all post-construction stormwater management practices identified in the SWPPP are maintained in effective operating condition at all times.
- b. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

2. Owner or Operator Maintenance Inspection Requirements

- a. The owner or operator shall inspect, in accordance with the requirements in the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, the erosion and sediment controls identified in the SWPPP to ensure that they are being maintained in effective operating condition at all times.
- b. 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 owner or operator can stop conducting the maintenance inspections. The owner or operator shall begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.
- c. For construction sites where soil disturbance activities have been shut down with partial project completion, the owner or operator can stop conducting the maintenance 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.

3. Qualified Inspector Inspection Requirements - The owner or operator shall have a qualified inspector conduct site inspections in conformance with the following requirements:

[Note: The trained contractor identified in Part III.A.6. cannot conduct the qualified inspector site inspections unless they meet the qualified inspector qualifications included in Appendix A. In order to perform these inspections, the trained contractor would have to be a:

- Licensed Professional Engineer,
 - Certified Professional in Erosion and Sediment Control (CPESC),
 - Registered Landscape Architect, 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 Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
4. A qualified inspector shall conduct site inspections for all site construction activities.
 5. Unless otherwise notified by the Department, the qualified inspector shall conduct site inspections in accordance with the following timetable:
 - a. For construction sites where soil disturbance activities are on-going, the qualified inspector shall conduct a site inspection at least once every seven (7) calendar days.
 - b. 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. The owner or operator shall notify the Regional Office stormwater contact person (see contact information in Appendix F) or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the owner or operator of the construction activity) in writing prior to reducing the frequency of inspections.
 - c. 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. The owner or operator shall notify the Regional Office stormwater contact person (see contact information in Appendix F) or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the MS4 (provided the MS4 is not the owner or operator of the construction activity). in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the owner or operator shall have the qualified inspector 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 postconstruction 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 NOT. The owner or operator shall then submit the completed NOT form to the address in Part II.A.1..

6. At a minimum, the qualified inspector shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.
7. The qualified inspector shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:
 - a. Date and time of inspection;
 - b. Name and title of person(s) performing inspection;
 - c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
 - d. A description of the condition of the runoff at all points of discharge from the construction site. This shall 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;
 - e. 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 waterbody;
 - f. Identification of all erosion and sediment control practices that need repair or maintenance;
 - g. Identification of all erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
 - h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection;
 - i. 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;

- j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and
 - k. Digital 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 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.
8. Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor identified in Part III.A.6. of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
9. All inspection reports shall be signed by the qualified inspector. Pursuant to Part II.C.2., the inspection reports shall be maintained on site with the SWPPP.

C) TEMPORARY STRUCTURES

Silt Fence: Maintenance shall be performed as needed. Material shall be removed when “bulges” develop in the silt fence.

D) MAINTENANCE IMPLEMENTATION

The Contractor will be responsible for the maintenance and inspections of the temporary erosion control structures, while the Property Owner will conduct the inspections and maintenance of the permanent stormwater management devices outlined in the SWPPP. In addition to these regularly scheduled events, the Property Owner will repair any noted deficiencies with the stormwater management system on an as-needed basis.

E) EROSION AND SEDIMENT CONTROL SCHEDULE

Measures to be taken for this project with regard to erosion and sediment control are

contained within the Erosion and Sediment Control Details and Plans. The extents of grading activities are shown on the plans as contours and cut and fill limits, with all work occurring on-site.

Step 1: Pre-Construction Activities

- On-site trees will be evaluated and marked as shown in the plans or determined in field inspection.
- Trees to remain will be protected with tree-vegetation barrier fence.
- Drainage may be diverted from disturbed areas during construction with the use of proposed swales or check dams.
- A stabilized construction entrance will be established by the Contractor.
- Bare areas will be stabilized with seeding/soil.
- Contractor will be responsible for daily sediment cleanup on the roadway.
- Silt fence will be installed around the perimeter of the site on the downhill side of construction.

Step 2: Grading

- Initial grading shall only take place to install sediment control measures
- Stockpiles of topsoil removed from the site shall be stabilized away from any drainage structures or water bodies.
- Any established control should not be disturbed by grading activities.
- Contractor shall not impair existing surface drainage with grading activities avoiding potential erosion hazards.

Step 3: Erosion Control

- Implement measures such as stabilization of bare areas, perimeter controls, etc.
- Stockpiles must be protected with seeding or mulching as soon as possible, and no longer than 14 days after ceasing activity.
- Ensure temporary or permanent measures where work is delayed or completed

Step 4: Sediment Control

- Measures must be in place prior to disturbance of a particular area in order to prevent sediment from traveling off site.
- Stabilize any existing swales, outlets, slopes, etc. to control concentrated flow.
- Dust control will be used to keep the amount of dust particles/sediment generated by construction activity to a minimum.

Step 5: Maintenance and Inspection

- All temporary and permanent sediment control measures should be checked on a weekly basis for functionality and stability, This includes silt/sediment fence along site, silt fence protection around catch basins, sediment filters in catch basins, stone outlet protection, and any additional measures in place.
- Any bare areas in need of additional seed shall be treated as required.
- The Contractor will be responsible for keeping maintenance and inspection records and reporting any problems to the Engineer for repair.

Step 6: Finalize Grading and Landscaping

- Final grading shall match approximately the cut and fill lines as shown on the plans.
- Top soil, seed and stabilization shall be placed as appropriate and as shown in the plans within 14 days of the end of construction.
- Remove temporary measures.

F) INSPECTION AND MAINTENANCE OF PERMANENT STRUCTURES:

1. The property owner shall be responsible to maintain the stormwater structures as shown on the approved plan such that they function as designed.
2. At least once every four months, the following items shall be noted:
 - a. The stormwater swale is in good condition, with no signs of erosion or puddling. The vegetation has been maintained.
 - b. The grates to the lawn inlets are not clogged and are in good condition.
 - c. The four (4) seepage pits shall be opened and inspected. The following items shall be noted.
 - i. The seepage tank, pipes, and manhole are in good condition.
 - ii. Sediment, leaves, or other debris does not displace more than 25% of the seepage pit volume (approximately 9" deep max). If sediment does exceed 25% of the volume, the seepage tank shall be cleaned out and returned to its original condition.
 - d. The stormwater piping is clean and clear of debris.
3. Should any of the above items be determined to be sub-standard, that item shall be corrected immediately.

V) CONCLUSION

The proposed design satisfies the applicable stormwater requirements. The project will disturb less than five acres. The contractor will be responsible for adhering to the erosion and sediment control measures detailed in this report. The property owner will be responsible for the post construction maintenance and operation activities.

POLLUTION PREVENTION PLAN 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 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.

Signed: _____

Date: _____

CONTRACTOR'S CERTIFICATION

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the pollution prevention plan for the construction site identified in such plan as a condition of authorization to discharge storm water. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Delimitations System ("SPDES") general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

General Contractor:

(Signature)

(Company)

(Name)

(Street)

(Title)

(City, State, Zip)

(Date)

(Phone number)

Site Work Contractor:

(Signature)

(Company)

(Name)

(Street)

(Title)

(City, State, Zip)

(Date)

(Phone number)

Appendix A:

Grading and Soil Erosion Plans

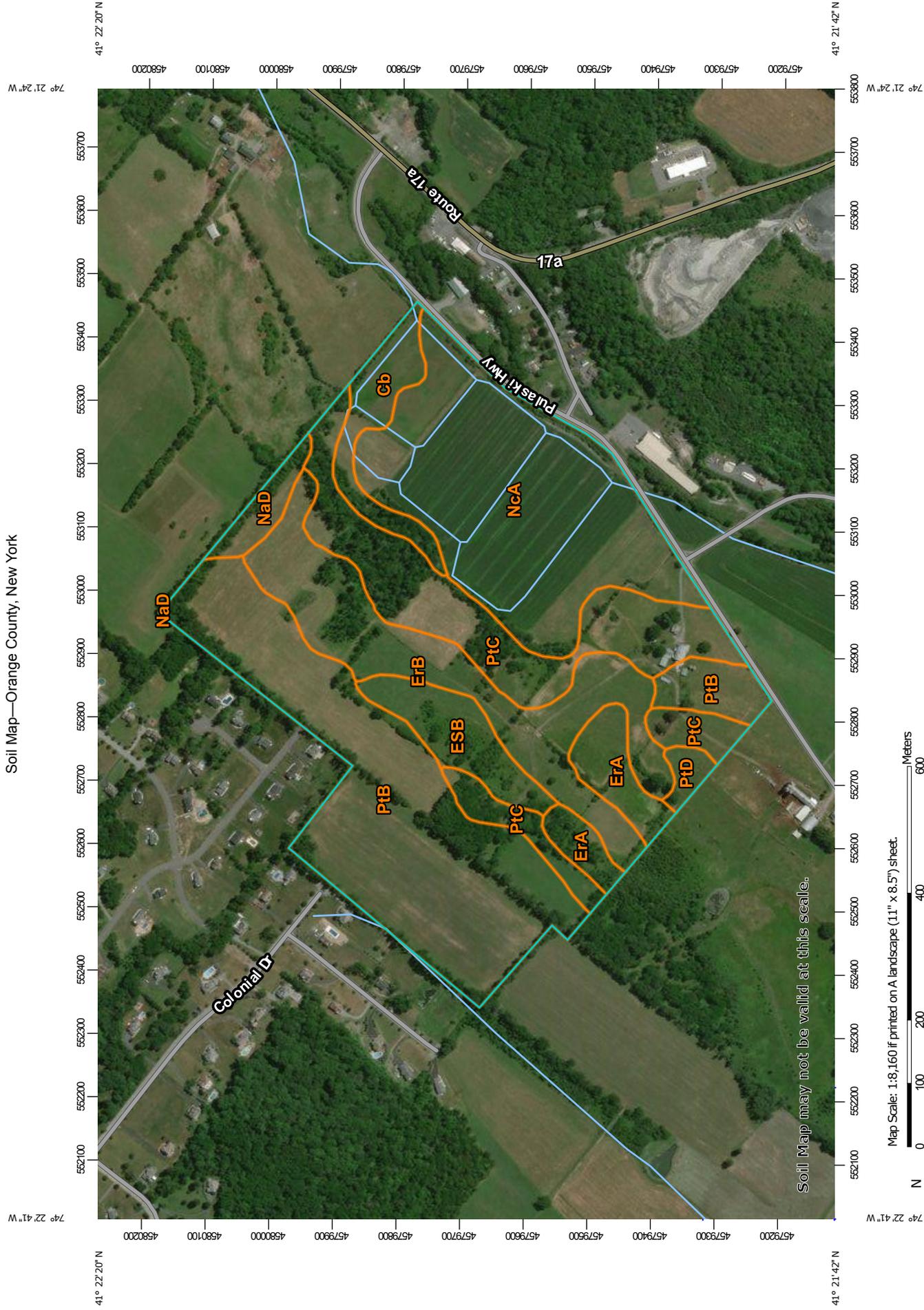
Included within plan set entitled:

GLENMERE LAKE SOLAR
PROPOSED SOLAR FARM SITE PLAN
SECTION 17, BLOCK 1, LOT 24.11
1199-1249 PULASKI HIGHWAY, TOWN OF GOSHEN
ORANGE COUNTY, NEW YORK

Appendix B

Soil Map & Hydrologic Soil Group Map

Soil Map—Orange County, New York



Soil Map may not be valid at this scale.

Map Scale: 1:8,160 if printed on A landscape (11" x 8.5") sheet.



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

MAP LEGEND

-  Area of Interest (AOI)
-  Area of Interest (AOI)
-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points
- Special Point Features**
-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

Soil Survey Area: Orange County, New York
 Survey Area Data: Version 19, Sep 3, 2018

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

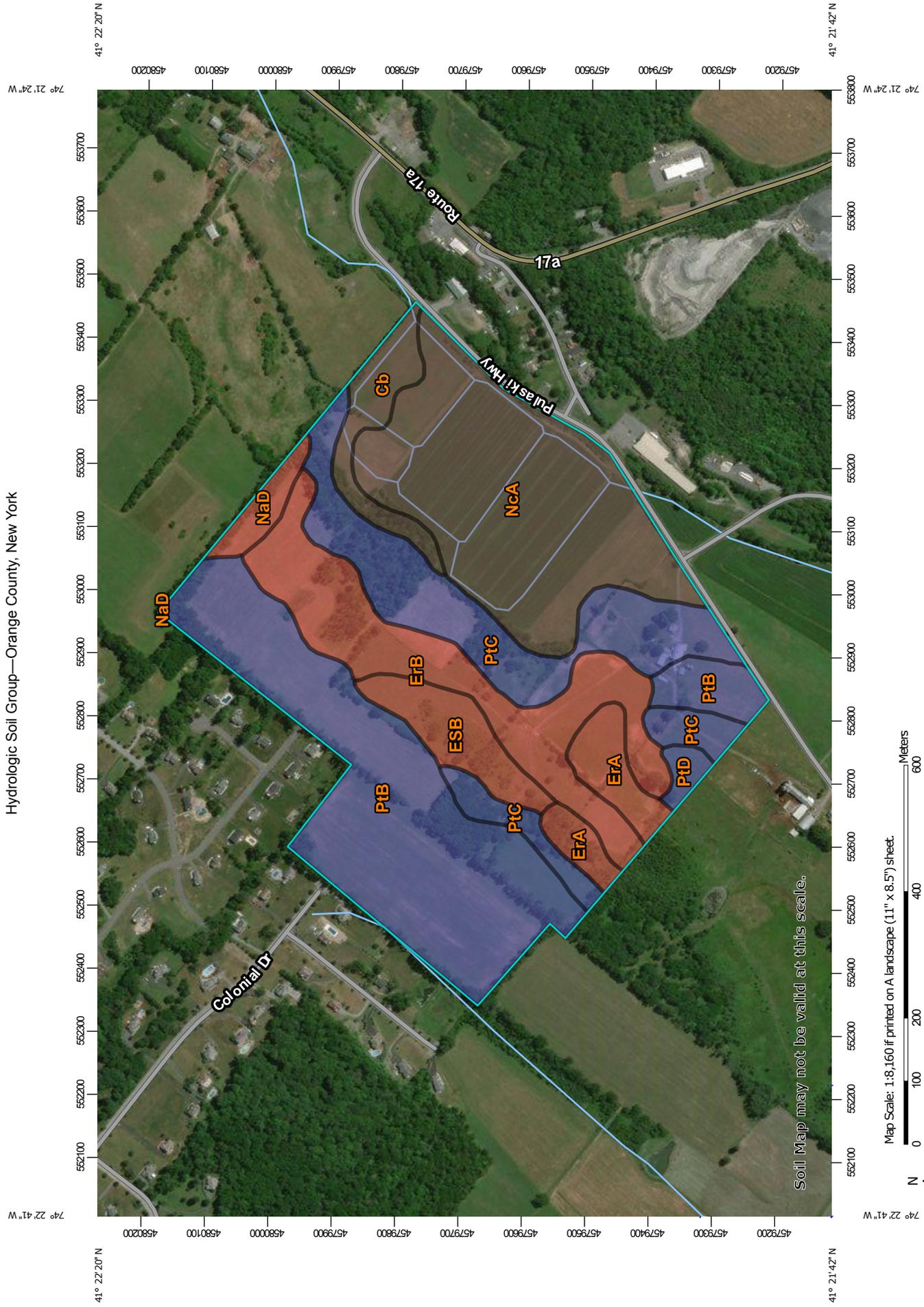
Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cb	Canadaigua mucky silt loam	5.5	4.0%
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	5.9	4.3%
ErB	Erie gravelly silt loam, 3 to 8 percent slopes	21.0	15.1%
ESB	Erie extremely stony soils, gently sloping	6.1	4.4%
NaD	Nassau channery silt loam, 15 to 25 percent slopes	2.4	1.7%
NcA	Natchaug muck, drained, 0 to 2 percent slopes	34.2	24.6%
PtB	Pittsfield gravelly loam, 3 to 8 percent slopes	39.6	28.5%
PtC	Pittsfield gravelly loam, 8 to 15 percent slopes	23.0	16.5%
PtD	Pittsfield gravelly loam, 15 to 25 percent slopes	1.2	0.9%
Totals for Area of Interest		139.0	100.0%

Hydrologic Soil Group—Orange County, New York



Soil Map may not be valid at this scale.

Map Scale: 1:8,160 if printed on A landscape (11" x 8.5") sheet.



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

MAP LEGEND

Area of Interest (AOI)	 C
Soils	 C/D
Soil Rating Polygons	 D
Soil Rating Lines	 Not rated or not available
Water Features	 Streams and Canals
Transportation	 Rails
	 Interstate Highways
	 US Routes
	 Major Roads
	 Local Roads
Background	 Aerial Photography
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

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Orange County, New York
 Survey Area Data: Version 19, Sep 3, 2018

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

Date(s) aerial images were photographed: Oct 7, 2013—Feb 26, 2017

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Cb	Canadaigua mucky silt loam	B/D	5.5	4.0%
ErA	Erie gravelly silt loam, 0 to 3 percent slopes	D	5.9	4.3%
ErB	Erie gravelly silt loam, 3 to 8 percent slopes	D	21.0	15.1%
ESB	Erie extremely stony soils, gently sloping	D	6.1	4.4%
NaD	Nassau channery silt loam, 15 to 25 percent slopes	D	2.4	1.7%
NcA	Natchaug muck, drained, 0 to 2 percent slopes	B/D	34.2	24.6%
PtB	Pittsfield gravelly loam, 3 to 8 percent slopes	B	39.6	28.5%
PtC	Pittsfield gravelly loam, 8 to 15 percent slopes	B	23.0	16.5%
PtD	Pittsfield gravelly loam, 15 to 25 percent slopes	B	1.2	0.9%
Totals for Area of Interest			139.0	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

Appendix C

Hydraflow Hydrographs Report Output

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v12

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	10.63	2	736	55,327	----	----	----	Existing LOD
2	SCS Runoff	10.63	2	736	55,327	----	----	----	Proposed LOD

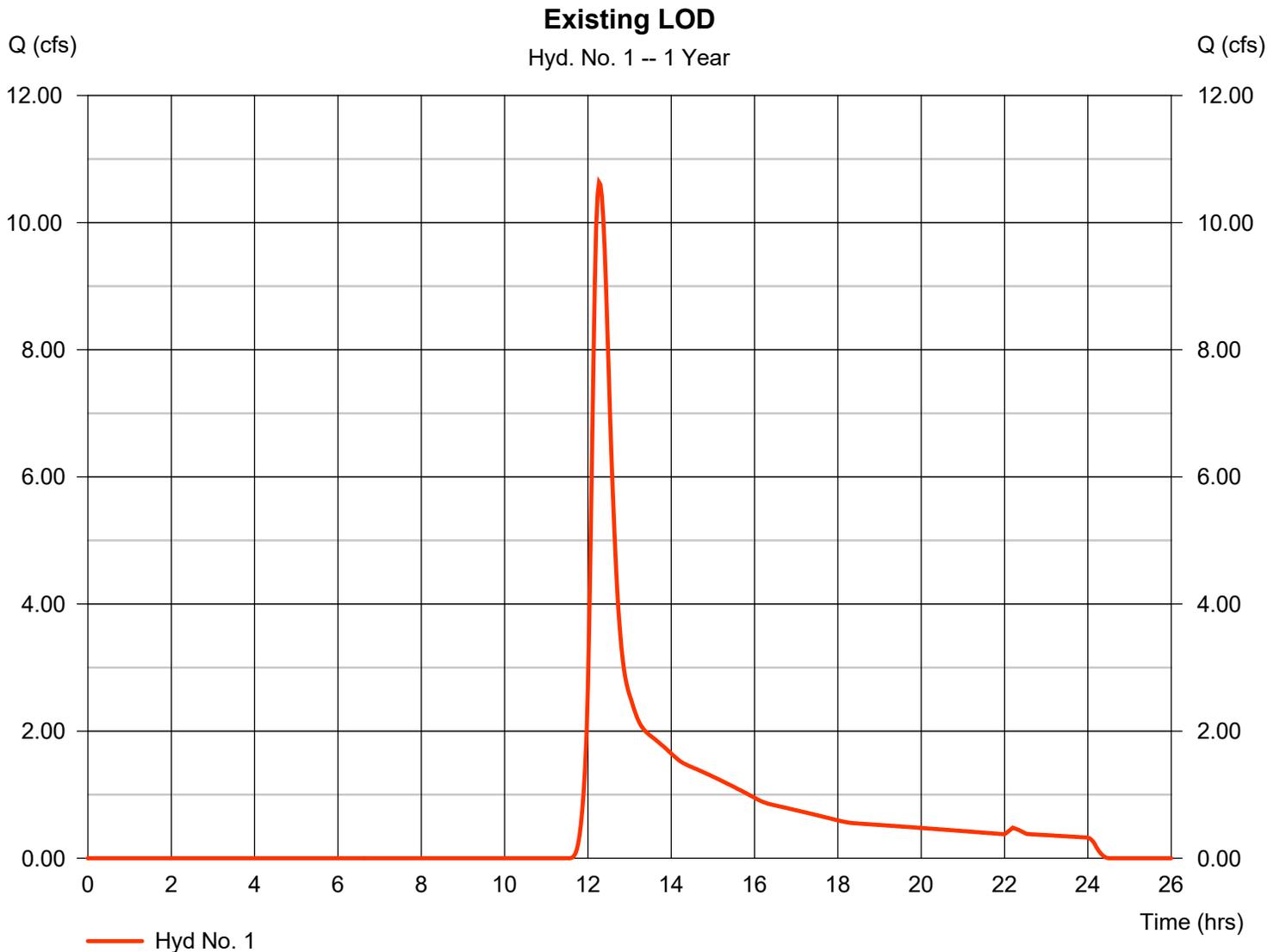
Hydrograph Report

Hyd. No. 1

Existing LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 10.63 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 55,327 cuft
Drainage area	= 25.650 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.70 min
Total precip.	= 2.70 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(12.540 x 61) + (13.110 x 80)] / 25.650



TR55 Tc Worksheet

Hyd. No. 1

Existing LOD

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 150.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.50	0.00	0.00	
Land slope (%)	= 5.20	0.00	0.00	
Travel Time (min)	= 12.88	+ 0.00	+ 0.00	= 12.88
Shallow Concentrated Flow				
Flow length (ft)	= 879.00	0.00	0.00	
Watercourse slope (%)	= 3.60	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=3.06	0.00	0.00	
Travel Time (min)	= 4.79	+ 0.00	+ 0.00	= 4.79
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	({0})0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				17.70 min

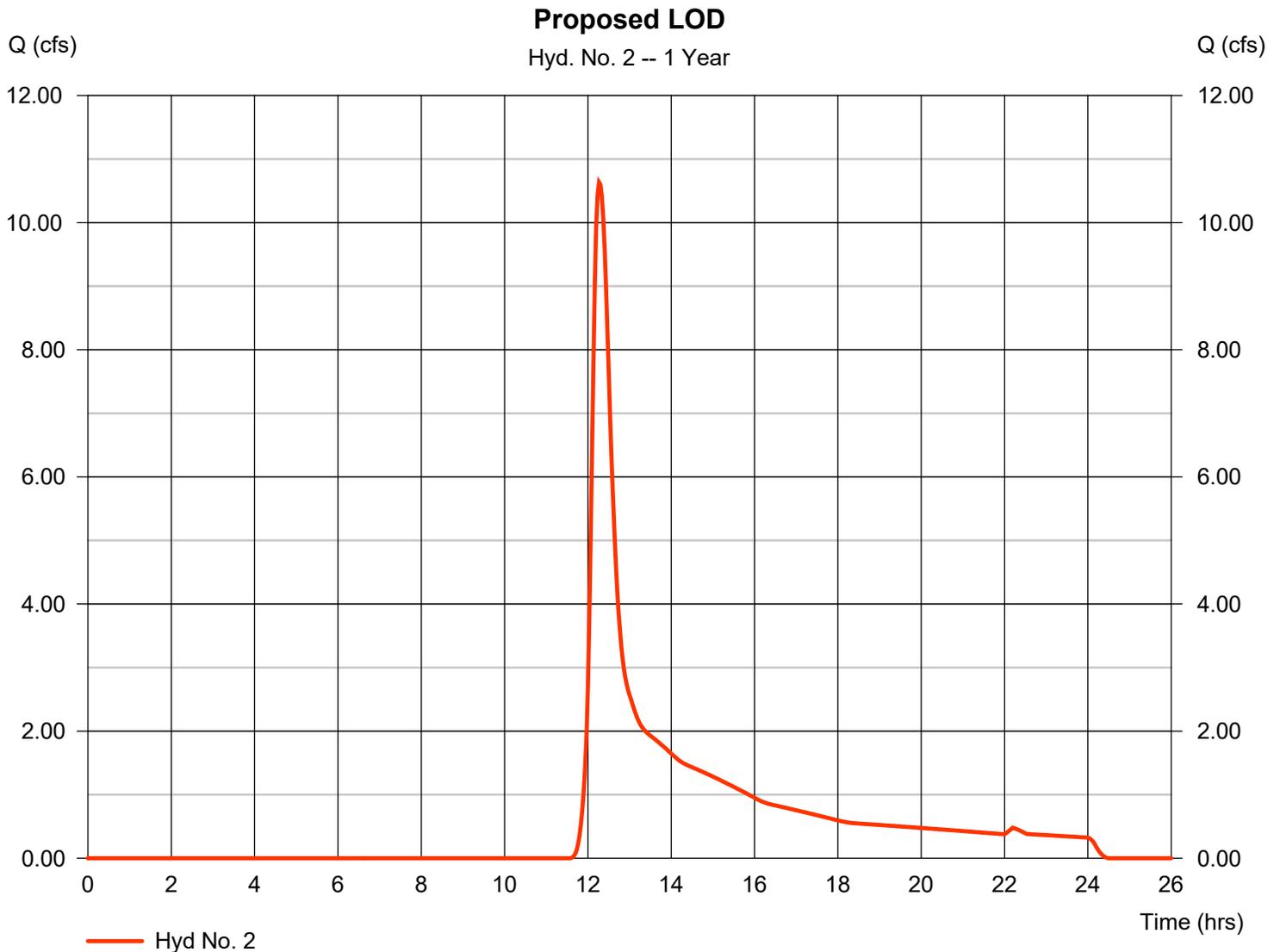
Hydrograph Report

Hyd. No. 2

Proposed LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 10.63 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 55,327 cuft
Drainage area	= 25.650 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.70 min
Total precip.	= 2.70 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(12.540 x 61) + (13.100 x 80)] / 25.650



TR55 Tc Worksheet

Hyd. No. 2

Proposed LOD

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 150.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.50	0.00	0.00	
Land slope (%)	= 5.20	0.00	0.00	
Travel Time (min)	= 12.88	+ 0.00	+ 0.00	= 12.88
Shallow Concentrated Flow				
Flow length (ft)	= 879.00	0.00	0.00	
Watercourse slope (%)	= 3.60	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=3.06	0.00	0.00	
Travel Time (min)	= 4.79	+ 0.00	+ 0.00	= 4.79
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				17.70 min

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v12

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	40.74	2	734	183,101	-----	-----	-----	Existing LOD
2	SCS Runoff	40.74	2	734	183,101	-----	-----	-----	Proposed LOD

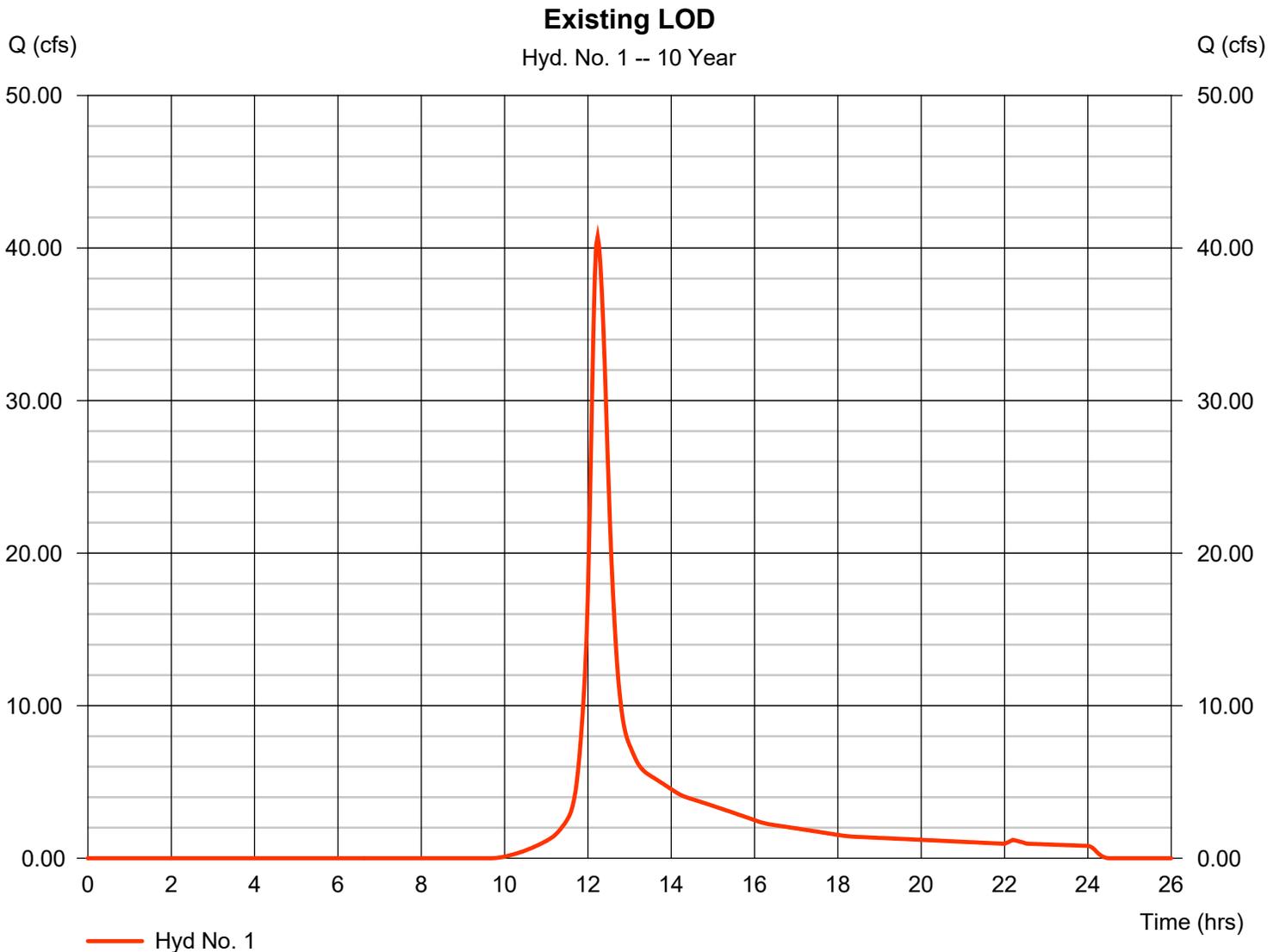
Hydrograph Report

Hyd. No. 1

Existing LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 40.74 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 183,101 cuft
Drainage area	= 25.650 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.70 min
Total precip.	= 4.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(12.540 x 61) + (13.110 x 80)] / 25.650



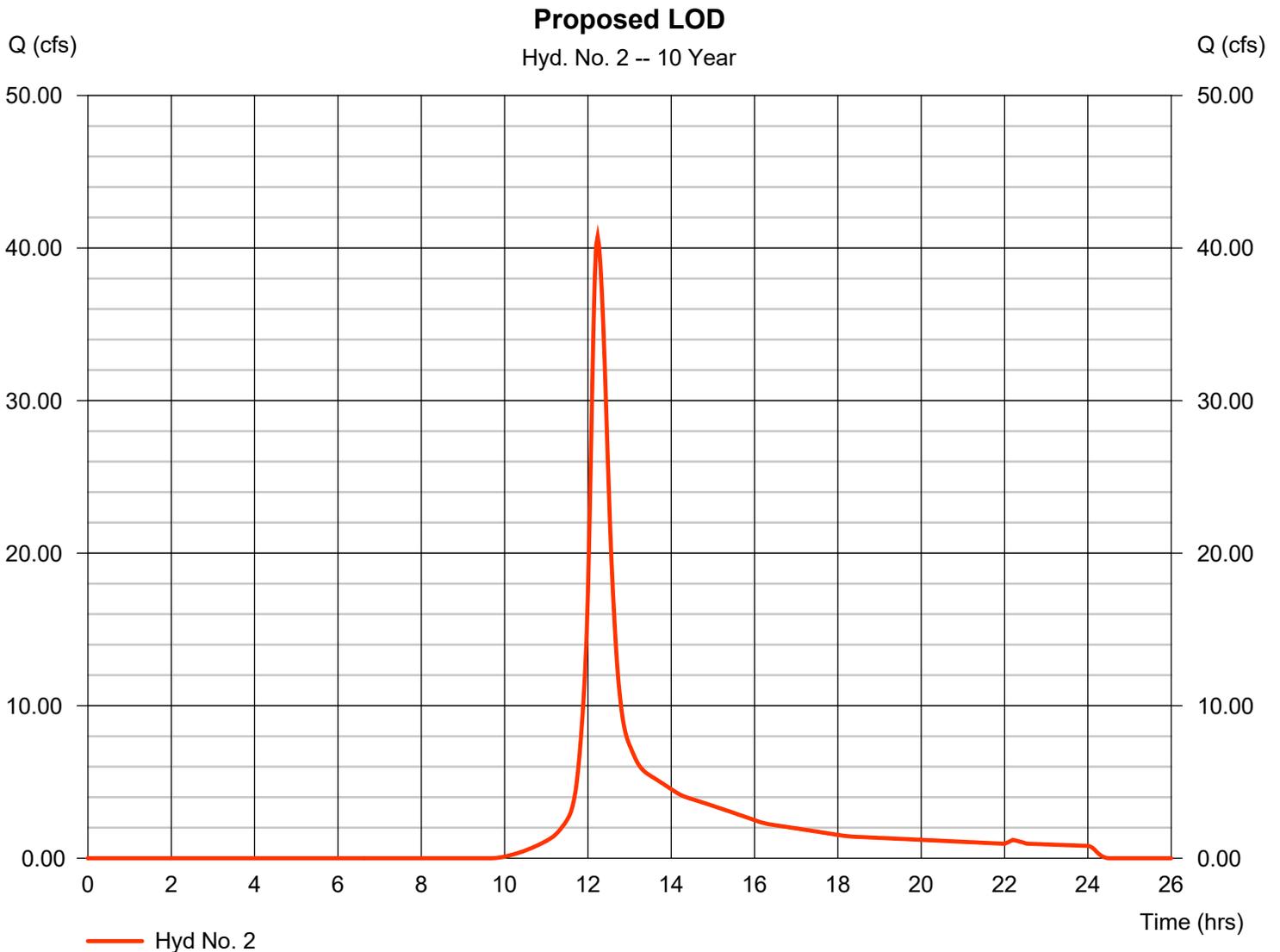
Hydrograph Report

Hyd. No. 2

Proposed LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 40.74 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 183,101 cuft
Drainage area	= 25.650 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.70 min
Total precip.	= 4.80 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(12.540 x 61) + (13.100 x 80)] / 25.650



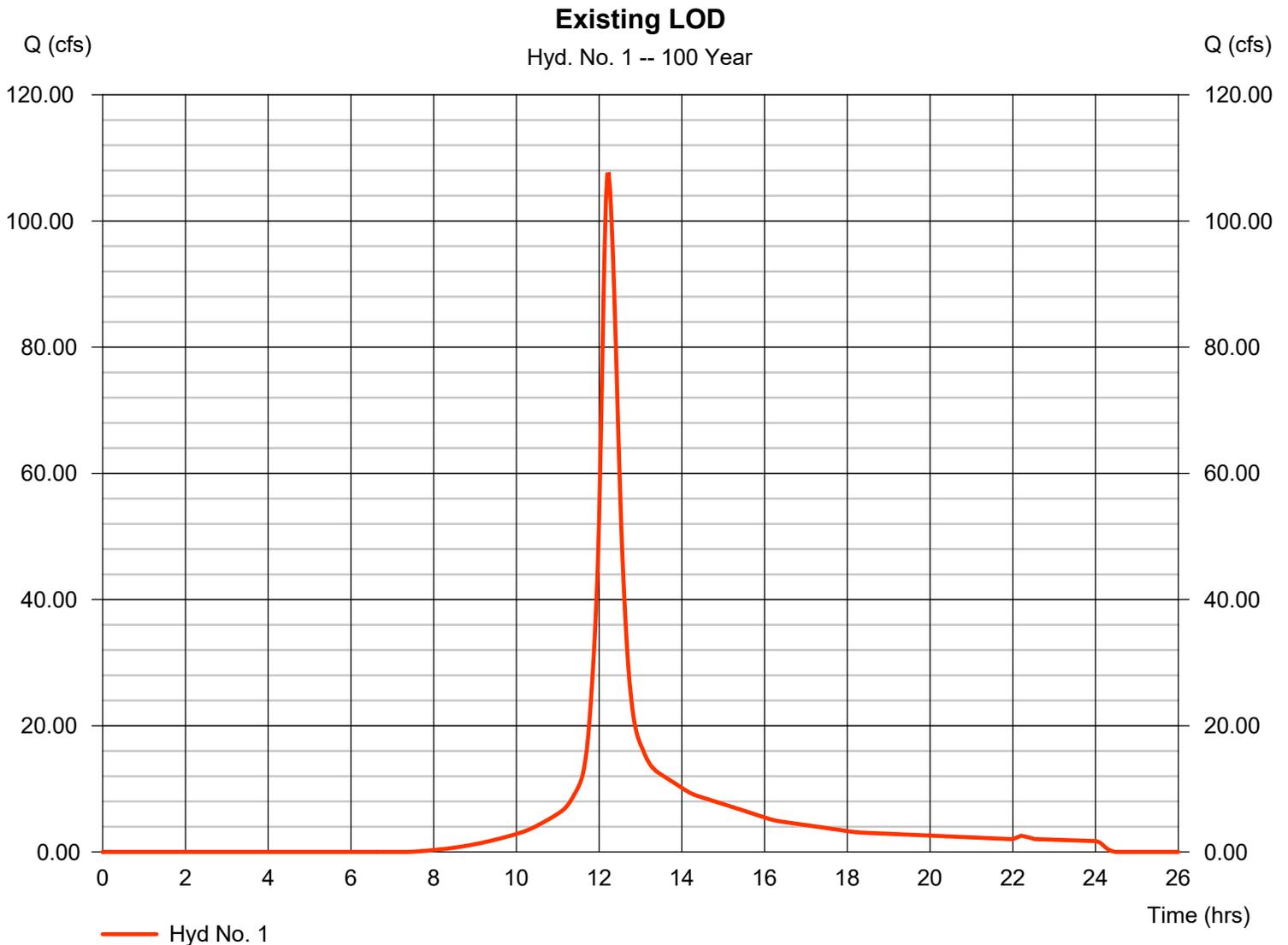
Hydrograph Report

Hyd. No. 1

Existing LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 107.43 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 475,265 cuft
Drainage area	= 25.650 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.70 min
Total precip.	= 8.60 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(12.540 x 61) + (13.110 x 80)] / 25.650



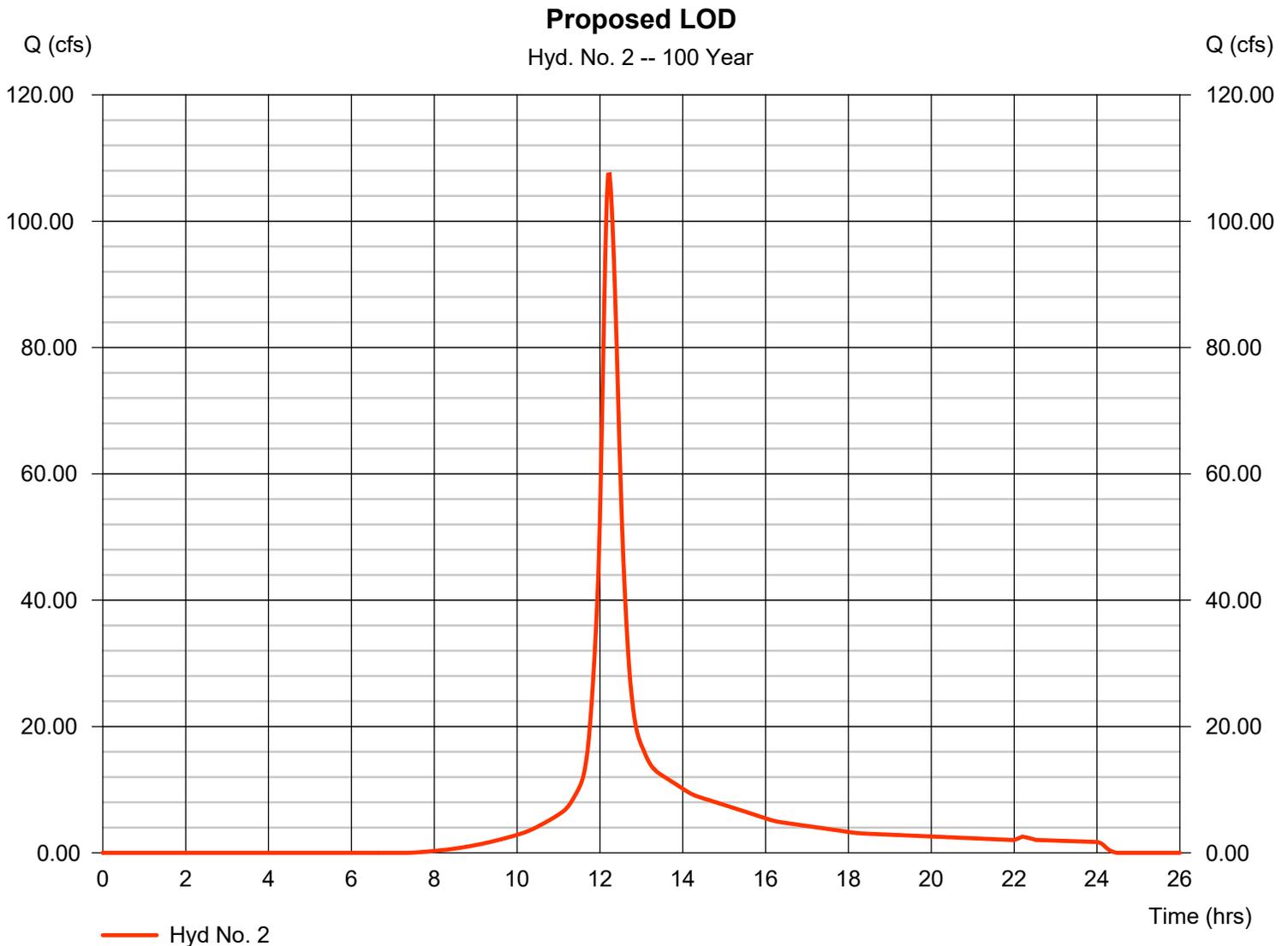
Hydrograph Report

Hyd. No. 2

Proposed LOD

Hydrograph type	= SCS Runoff	Peak discharge	= 107.43 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 475,265 cuft
Drainage area	= 25.650 ac	Curve number	= 71*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 17.70 min
Total precip.	= 8.60 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(12.540 x 61) + (13.100 x 80)] / 25.650



Appendix D

Notice of Intent Filing Certification

**NOTICE OF INTENT
FILING CERTIFICATION**

Glenmere Lake Solar
Proposed Solar Farm
Section 17 – Block 1 – Lot 24.11

Town of Goshen
Orange County, New York

This is to certify that a Notice of Intent (NOI) was filed and submitted by Erik E. Boe, P.E., the Engineer for the Glenmere Lake Solar. The NOI was submitted on _____, __, 20__.

Signed By:

Erik E. Boe, P.E.
NY PE #089208-1

Appendix E

Construction Inspection Checklists

APPENDIX H

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION ACTIVITIES CONSTRUCTION SITE LOG BOOK

Table of Contents

- I. Pre-Construction Meeting Documents
 - a. Preamble to Site Assessment and Inspections
 - b. Operator's Certification
 - c. Qualified Professional's Credentials & Certification
 - d. Pre-Construction Site Assessment Checklist

- II. Construction Duration Inspections
 - a. Directions
 - b. Modification to the SWPPP

- III. Monthly Summary Reports

- IV. Monitoring, Reporting, and Three-Month Status Reports
 - a. Operator's Compliance Response Form

Properly completing forms such as those contained in Appendix H meet the inspection requirement of NYS-DEC SPDES GP for Construction Activities. Completed forms shall be kept on site at all times and made available to authorities upon request.

I. PRE-CONSTRUCTION MEETING DOCUMENTS

Project Name _____

Permit No. _____ Date of Authorization _____

Name of Operator _____

Prime Contractor _____

a. Preamble to Site Assessment and Inspections

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified professional¹ conduct an assessment of the site prior to the commencement of construction² and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements.

When construction starts, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater (Construction Duration Inspections). The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request. The Operator shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis (Monthly Summary Report).

The operator shall also prepare a written summary of compliance with this general permit at a minimum frequency of every three months (Operator's Compliance Response Form), while coverage exists. The summary should address the status of achieving each component of the SWPPP.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization³ using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 "Qualified Professional means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed engineer or someone working under the direction and supervision of a licensed engineer (person must have experience in the principles and practices of erosion and sediment control).

2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

b. Operators 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 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. Further, I hereby certify that the SWPPP meets all Federal, State, and local erosion and sediment control requirements. 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 (please print): _____

Title _____ **Date:** _____

Address: _____

Phone: _____ **Email:** _____

Signature: _____

c. Qualified Professional's Credentials & Certification

"I hereby certify that I meet the criteria set forth in the General Permit to conduct site inspections for this project and that the appropriate erosion and sediment controls described in the SWPPP and as described in the following Pre-construction Site Assessment Checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction."

Name (please print): _____

Title _____ **Date:** _____

Address: _____

Phone: _____ **Email:** _____

Signature: _____

d. Pre-construction Site Assessment Checklist

(NOTE: Provide comments below as necessary)

1. Notice of Intent, SWPPP, and Contractors Certification:

Yes No NA

- Has a Notice of Intent been filed with the NYS Department of Conservation?
- Is the SWPPP on-site? Where? _____
- Is the Plan current? What is the latest revision date? _____
- Is a copy of the NOI (with brief description) onsite? Where? _____
- Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

Yes No NA

- Are construction limits clearly flagged or fenced?
- Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
- Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

Yes No NA

- Clean stormwater runoff has been diverted from areas to be disturbed.
- Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- Appropriate practices to protect on-site or downstream surface water are installed.
- Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Entrance

Yes No NA

- A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Perimeter Sediment Controls

Yes No NA

- Silt fence material and installation comply with the standard drawing and specifications.
- Silt fences are installed at appropriate spacing intervals
- Sediment/detention basin was installed as first land disturbing activity.
- Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

Yes No NA

- The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
- The plan is contained in the SWPPP on page _____
- Appropriate materials to control spills are onsite. Where? _____

II. CONSTRUCTION DURATION INSPECTIONS

a. Directions:

Inspection Forms will be filled out during the entire construction phase of the project.

Required Elements:

- (1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- (2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- (3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
- (4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
- (5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and
- (6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

SITE PLAN/SKETCH

Inspector (print name)

Date of Inspection

Qualified Professional (print name)

Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality

Yes No NA

- Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- Is there residue from oil and floating substances, visible oil film, or globules or grease?
- All disturbance is within the limits of the approved plans.
- Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes No NA

- Is construction site litter and debris appropriately managed?
- Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- Is construction impacting the adjacent property?
- Is dust adequately controlled?

2. Temporary Stream Crossing

Yes No NA

- Maximum diameter pipes necessary to span creek without dredging are installed.
- Installed non-woven geotextile fabric beneath approaches.
- Is fill composed of aggregate (no earth or soil)?
- Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering

Yes No NA

- Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- Clean water from upstream pool is being pumped to the downstream pool.
- Sediment laden water from work area is being discharged to a silt-trapping device.
- Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

Yes No NA

- Installed per plan.
- Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes No NA

- Installed per plan with minimum side slopes 2H:1V or flatter.
- Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- Sediment-laden runoff directed to sediment trapping structure

CONSTRUCTION DURATION INSPECTIONS
Runoff Control Practices (continued)

4. Stone Check Dam

Yes No NA

- Is channel stable? (flow is not eroding soil underneath or around the structure).
- Check is in good condition (rocks in place and no permanent pools behind the structure).
- Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

- Installed per plan.
- Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

- Stockpiles are stabilized with vegetation and/or mulch.
- Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

- Temporary seedings and mulch have been applied to idle areas.
- 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance

Yes No NA

- Stone is clean enough to effectively remove mud from vehicles.
- Installed per standards and specifications?
- Does all traffic use the stabilized entrance to enter and leave site?
- Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes No NA

- Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
 - Joints constructed by wrapping the two ends together for continuous support.
 - Fabric buried 6 inches minimum.
 - Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation is ____% of design capacity.

Sediment Control Practices (continued)

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

Yes No NA

- Installed concrete blocks lengthwise so open ends face outward, not upward.
 - Placed wire screen between No. 3 crushed stone and concrete blocks.
 - Drainage area is 1 acre or less.
 - Excavated area is 900 cubic feet.
 - Excavated side slopes should be 2:1.
 - 2" x 4" frame is constructed and structurally sound.
 - Posts 3-foot maximum spacing between posts.
 - Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
 - Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation ___% of design capacity.

4. Temporary Sediment Trap

Yes No NA

- Outlet structure is constructed per the approved plan or drawing.
 - Geotextile fabric has been placed beneath rock fill.
- Sediment accumulation is ___% of design capacity.

5. Temporary Sediment Basin

Yes No NA

- Basin and outlet structure constructed per the approved plan.
 - Basin side slopes are stabilized with seed/mulch.
 - Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
- Sediment accumulation is ___% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.
Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

