

Projects Committee Meeting
July 9th, 2026
8:00 A.M.

Craig Gelbsman, Chair • David Rowley, Vice Chair • Michelle Catan
Tim Johnson • Andrew Marietta

Jody Zakrevsky, CEO • Terel Marshburn, Economic Developer Director
Meaghan Remillard, Director of Finance and Administration
Jordan Allen, Administrative Assistant • Chris Canada, Bond Counsel
Kurt Schulte, Agency Counsel

1. Chair's Comments
2. Review Project Trackers
3. New and Unfinished Business
 - Sterling Environmental Engineering DRAFT SWPPP

Project Overview

Project Title	Oneonta Railyards Development
Project Description	Redevelopment of Oneonta Railyards
Key Objectives for 2025	• Prepared Storm Water Management Plan for clearance of property. • Continue to work with Southern Tier 8 to develop grant application to EDA for construction. • Sell 50-foot strip of property to May Enterprises for new roadway. • Work with Norfolk Southern to market sites.
Target Completion Date	Ongoing
Estimated Total Investment	\$5,200,000
Owner	Jody Zakrevsky
Stakeholders	City of Oneonta, Otsego Now, NYS ESD
Status	Active
Project Flags/Concerns	Site Contamination – low risk

Updated Information:

- DEC confirmed no wetlands south of Roundhouse Road, which is good. Sterling prepared the attached SWPPP for site preparation of the area south of Roundhouse Road to clear, remove/crush concrete debris, and grade to prepare a shove ready buildable area. To file the Notice of Intent, we need the attached Owner/Operator certification form signed.

IDA Objective ROI

Employment Impact	50-100 new jobs
IDA Revenue (One-Time)	NA
IDA Revenue (Recurring)	\$x (lease of 5 buildings)
Business Relationship Impact	Moderate
Community Engagement Impact	Moderate

Partnerships

Project Partnerships	Lucas Saltsman, C2C Construction Solutions (Utica) Bill Gaetano, Gaetano Construction (Utica) Aaron Marcus, Routine Properties (NYC) Jen Gregory, Southern Tier 8 Richard Bremmer, County Highway Superintendent Greg Matice, Oneonta City Administrator Ed May, May Enterprises
Post Project Partnerships	Michael N'Dolo, MRB Group Jane Nicholson, MRB Group Judy Pangman, City Community Development Danny Lapin, Otsego County Conservation Association Mark Davies, City Councilman Kevin Schultz, City Environmental Review Board Karl Seeley, Hartwick College Barbara Ann Heegan, Chamber of Commerce Katherine O'Donnell, Hartwick College

Grant Management

Grant ID	Project# 132,929
Grant Amount	\$500,000
Source Agency	NYS Empire State Development
Details	Grant funds are for acquisition and infrastructure investments
Requirements	Grant Funds can only account for 20% of total project costs.
Expiration Date	Fall 2024

Project Expenses	Target Amount	YTD Actual	Grant Funding Amount	YTD Actual
Acquisition	\$250,000	\$250,000	\$	\$250,000
Work w/ ST8	\$1,500,000		\$	
Site Master Plan	\$50,000 - planned \$32,800 – awarded	\$32,800	\$	\$32,800
Resurface Roundhouse Road	\$200,000	\$207,000	\$	\$207,000
Infrastructure Improvements	\$4,600,000		\$ 500,000* \$2.3 million**	
Clear 5 acres of property	\$30,000			
TOTALS	\$5,250,000	\$250,000	\$500,000	\$0

*Awarded by NYS ESD

** Planned application to Federal EDA

Project Milestones: Master Plan Development

Project Milestones	Target Start	Target End	Status	Actual Start	Actual End
Community Geo-Thermal Study	4/1/22	5/1/23	Completed	1/10/22	2/28/2024
Clean Up Site 5	3/15/22	9/15/22	Completed	7/30/2022	10/20/2022
Repave Roundhouse Road	5/15/2024	5/30/2024	Completed	7/23/2024	8/17/2024
Clearance of Another 8 Acres	3/1/2026	9/30/26	Proposals Received for SWMP.	12/20/2025	3/1/2026
Sale of Property to Ed May	9/30/3035	12/31/2025	Completed		12/15/2025.

Project Overview

Project Title	Richfield Spring Eco-Business Park
Project Description	Development of Richfield Spring Eco-Business Park to accommodate Crystal Mountain Properties will develop a 22-acre business Park in Richfield Springs Otsego County with 85,000 square feet of manufacturing space in two separate buildings to house Ruby Lake Glass and Andela Products business expansions. <i>2025 Phase: Site Development</i> The project will consist of site preparation and extension of necessary utilities to the Park, including site clearing and earthwork, construction of an access road, installation of a wastewater collection system, and extension of water service, a gas main, and electrical service.
Key Objectives	• Prepare Site for Sale or Lease • Provide for at least 3 new businesses to relocate or expand into the Richfield Springs Business Park
Target Completion Date	July 2026.
Estimated Total Investment	\$2,400,000
Owner	Jody Zakrevsky
Stakeholders	Andela Products/Ruby Lakes Glass, NYS ESD
Status	Under Construction.
Project Flags/Concerns/Updates	- Submitted additional \$57,750 worth of Capital Energy Partners expenses to EDA. - Submitted additional \$82,460 worth of Keystone's expenses to EDA. - Submitted additional \$ 44,400.70 worth of J. Zakrevsky expenses to EDA. - EDA Project Engineer has recommended increasing the reimbursement rate from 70% to 80% and their Regional Counsel is asking for ARC's process before signing off on the raise in match. ARC has been contacted and they are forwarding their process to EDA. - Senator Gillibrand's office contract us regarding the issue.

DA Objective ROI

Employment Impact	15 new jobs
IDA Revenue (One-Time)	\$55,000 (sale of site) To Be Determine by Appraisal
IDA Revenue (Recurring)	\$ To Be Determined – vacant sites could be leased to companies
Business Relationship Impact	Low Enhancing relationship with Ruby Lakes Glass/Andela Products

Community Engagement Impact	Low Village and town communication through project process.
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Partnerships

Project Partnerships	Tobey Clarkin, Project Engineer, EDA Michael N'Dolo, MRB Group Alyson Slack, MRB Group Cynthia Andela, Andela Products Ken Ellsworth, Keystone Associates Mark Parker, Keystone Associates Richfield Springs Town Board Richfield Springs Village Board ANJO Construction HUNT Engineers
Post Project Partnerships	IDA, the Village, the Town and Andela Products and Ruby Lake Glass

Grant Management

Grant ID	93220 - Approved
Grant Amount	\$325,000
Source Agency	NYS Empire State Development
Details	Grant funds are for sewer and water infrastructure
Requirements	Grant Funds can only account for 70% of total project costs.
Expiration Date	August 28, 2025

Grant ID	01-01-14979 - Approved
Grant Amount	\$1.2 million
Source Agency	Federal EDA
Details	Grant funds are for sewer and water infrastructure
Requirements	Grant Funds can only account for 70% of total project costs.
Expiration Date	August 28, 2025

Grant ID	Project ID: 67423
Grant Amount	\$500,000
Source Agency	Appalachian Regional Commission
Details	To be added to EDA funding

Requirements	EDA must approve payments on behalf of ARC
Expiration Date	August 28, 2026

Budget and Funding

Project Expenses	Target Amount	YTD Actual 6/10/2025	Grant Funding Amount	YTD Actual 9/9/2025
Administrative and Legal Expenses	\$59,000	\$53,140	\$325,000 - ESD* \$1,200,000 – EDA**	\$55,937.35
Architectural and Engineering Fees	\$18,000		\$500,000 – ARC***	
Construction Supervision and Grants Management	\$100,000	\$58,450	\$375,000 – IDA	\$90,136.80
Construction	\$1,910,000	\$1,131,861		\$1,679,717.50
Contingencies	\$313,000			
Totals	\$2,400,000	\$1,296,591	\$2,400,000	\$1,644,259.03

*Approved ***Approved 4/10/23

Project Milestones

Project Milestones	Target Start	Target End	Status	Actual Start	Actual End
Water and Sewer Memorandum of Agreement	3/11/24	3/24/24	Completed and signed	10/14/20	11/20/2024
Extension of Natural Gas -EDA will not reimburse the cost.	10/14/20	9/3/22	NYS Approved Gas Line Extension	6/5/2024	3/20/2025
County Loan	6/2/21	12/15/22	County of Otsego Approved Loan on March 2025	3/5/2025	12/31/2026
DEC Permit Approved	9/1/22	9/30/22	DEC permit issued.	4/29/2024	4/28/2029
DOT Permit	2/8/2024	6/1/2024	DOT permit issued.	7/3/2024	10/31/2024

NYS Department of Health	8/1/2024	9/15/2024	Permitted Needed	8/15/2024	10/25/2024
Construction Contract Award	6/15/2024	9/30/2024	Awarded	5/21/2024	5/21/2024
Project Milestones	Target Start	Target End	Status	Actual Start	Actual End
Pre-Construction Conference	5/1/23		Completed	5/28/2024	5/28/2024
Contract Extension Request	5/23/2024	6/17/2024	Approved Extension until August 28, 2025	5/23/2024	11/26/2024
Construction	7/29/2024	8/1/2026	Nearing Completion	7/29/2024	

Drawdown Request No. 1 from EDA Totaling \$732,906.54.	Total Expenditures \$1,034,691.54	Submitted	Approved	11/21/2024	4/17/2025
Drawdown Request No. 2 from EDA Totaling \$234,006.83	Total Expenditures \$330,362.58	Submitted	Submitted Date of Approval	5/28/2025 7/02/2025	 7/8/2025
Drawdown Request No. 3 from EDA Totaling \$197,770.12	Total Expenditures \$279,204.88	Submitted	Submitted Approved	7/7/2025 8/19/2025	
Drawdown Request No. 4 from EDA Totaling \$128,585.59	Total Expenditures \$181,532.60	Submitted	Submitted Approved	8/20/2025 9/9/2025	
Drawdown Request No. 5 from EDA Totaling \$115,383.17	Total Expenditures \$162,893.88	Submitted	Submitted	1/21/2026	
Drawdown Request No. 6 from EDA Totaling \$99,790.55	Total Expenditures \$140,880.78	Being Prepared			
Total Drawdowns	\$2,129,566.26	\$1,508,442.80	\$1,293,269.08		
Contract Extension Request	8/26/2025	8/26/2026	Approved	8/26/2026	
Other Expenses					
Balance of Anjo Construction	\$87,807.84				
Keystone Associates	\$82,459.72				
Capital Energy Partners	\$57,750.00				
Joanne Darcy Crum	\$10,000.00				
Larosa Landworks, LLC	\$22,000.00				
Total Expenditures	\$2,389,583.82				



**STORMWATER POLLUTION PREVENTION PLAN
(SWPPP)**

FOR

**COUNTY OF OTSEGO IDA
ROUNDHOUSE ROAD
REDEVELOPMENT SITE PREPARATION**

Prepared for:

Owner:

Oneonta Rail Yards Local Development Corp
189 Main Street
Oneonta, New York 13820

Prepared by:

Sterling Environmental Engineering, P.C.
24 Wade Road
Latham, New York 12110

July 1, 2026

"Serving our clients and the environment since 1993"

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

FOR

**COUNTY OF OTSEGO IDA
ROUNDHOUSE ROAD
REDEVELOPMENT SITE PREPARATION**

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Sheet 3 Erosion and Sediment Control Plan
Sheet 4 Erosion and Sediment Control Detail Sheet

Appendices

Appendix A General Permit for Stormwater Discharges from Construction Activities (GP-0-25-001)
Appendix B Agency Consultation Documentation
Appendix C Notice of Intent (NOI)
Appendix D Notice of Termination (NOT)
Appendix E USDA NRCS Soil Resources Report
Appendix F New York State Standards and Specifications for Erosion and Sediment Controls
Appendix G Contractor Certification Form
Appendix H Inspection Form

STORMWATER POLLUTION PREVENTION PLAN CERTIFICATIONS

DRAFT

SWPPP PREPARER CERTIFICATION

DRAFT



SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

Oneonta Railyards

eNOI Submission ID:

HQJ-FH8K-A66E7

Owner/Operator Name:

County of Otsego IDA

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Andrew

M

Millspaugh

SWPPP Preparer First Name

MI

SWPPP Preparer Last Name

Signature

Date

OWNER/OPERATOR CERTIFICATION

DRAFT



Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.)

Project/Site Name: Oneonta Railyards

eNOI Submission ID: HQJ-FH8K-A66E7

eNOI Submitted by: ☐ Owner/Operator ☒ SWPPP Preparer ☐ Other

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name

MI

Owner/Operator Last Name

Signature

Date

1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared by Sterling Environmental Engineering, P.C. (STERLING) on behalf of County of Otsego Industrial Development Agency (hereinafter the “Operator”) for the site preparation activities in support of redevelopment of the Oneonta Railyards project on a portion of Parcel ID # 299.11-2-3.11, Roundhouse Road, Oneonta, New York (hereinafter the “project”). A Site Location Map on a United States Geological Survey quadrangle map is provided as Figure 1. This SWPPP is written with specific reference to the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-25-001, the “Construction Activity General Permit”) and is in accordance with the New York State Standards for Erosion and Sediment Control. A copy of the Construction Activity General Permit is included in Appendix A.

1.1 Site Description

The project involves the clearing, demolition of existing impervious concrete surfaces, and grading of approximately 9.5 acres to create a level “shovel ready” buildable area for future development. The project area was previously developed for rail access associated with the former Delaware and Hudson railyard, which was once home to the country’s largest roundhouse. There are several concrete structures and foundations still present onsite. Existing conditions are depicted on Sheet 1, which shows areas of existing impervious concrete debris. The existing coverage of impervious debris in the project area is estimated at approximately 3.35 acres or 35% of the 9.5-acre project area. The project area is generally flat with mild slopes to the west.

1.2 Project Description

The project involves the following construction activity:

1. Clearing and grubbing vegetation within the project area.
2. Demolition, removal, and onsite crushing of concrete debris for onsite use as recycled concrete aggregate (RCA).
3. Grading and placement of RCA to create a level “shovel ready” buildable area to market for future development. Note that permanent post-construction stormwater management practices associated with future development will be incorporated into the specific development project.

2.0 REGULATORY REQUIREMENTS

Pursuant to the Federal Clean Water Act (CWA) and various New York State and Federal regulations, stormwater is defined as water from rain, melting snow, sleet, or hail that does not infiltrate into the ground but runs off into waterways. Stormwater flows from the ground surface, over paved areas and exposed soil, and through vegetated surfaces. Stormwater runoff typically collects and transports soil, organic matter, and other materials, which may be potential pollutants. The quality of runoff is affected by numerous factors and depends on the season, local meteorology, geography, and activities which lie in the path of runoff.

The United States Environmental Protection Agency (USEPA) published regulations on December 8, 1999, entitled “National Pollutant Discharge Elimination System - Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges.” These regulations are referred to as “Phase II”, which require permits for stormwater discharges from construction activities disturbing equal

to one (1) or more acres of land. New York State is authorized to administer the NPDES permitting program as part of the State Pollutant Discharge Elimination System (SPDES).

2.1 NYSDEC Requirements

The NYSDEC SPDES General Permit for Storm Water Discharges from Construction Activity (GP-0-25-001, the “Construction Activity General Permit”) authorizes stormwater discharges to surface waters of the State from the following construction activities:

- Construction activities involving soil disturbances of one (1) or more acres; including disturbances of less than one (1) acre that are part of a larger common plan of development or sale that will ultimately disturb one (1) or more acre of land.
- Construction activities involving soil disturbances less than one (1) acre where the NYSDEC has determined that a SPDES permit is required for stormwater discharges based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters of the State.
- Construction activities located in the watershed(s) identified in Appendix D of the Construction Activity General Permit that involve soil disturbances between 5,000 square feet and one (1) acre of land.

The project involves land disturbance exceeding one (1) acre of land and is required to obtain coverage under the Construction Activity General Permit. Projects that have the potential to affect archeologically sensitive area are ineligible for coverage. A consultation was initiated with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) during preparation of a Draft Generic Environmental Impact Statement (DGEIS), which resulted in a determination that no archeologically sensitive areas or historic places will be impacted by the project.

2.2 MS4 Requirements

The project is within the boundaries of the City of Oneonta which is not a regulated Municipal Separate Storm Sewer System (MS4).

2.3 Notice of Intent

The General Permit application process administered by the NYSDEC begins with the filing of an electronic Notice of Intent (eNOI). The owner or operator is authorized to commence construction activity as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted. When a filing is made, a copy of the completed NOI must be maintained at the site along with a brief description posted at a prominent location. A signed copy must be submitted to the local government and any authorized agency with jurisdiction or regulatory control over the construction project.

A copy of the filed NOI must be maintained in Appendix C.

2.4 Special Conditions and Prohibitions

The Construction Activity General Permit includes the following special conditions and prohibitions.

2.4.1 Non-Stormwater Discharges

Most non-stormwater discharges must not be mixed with the stormwater, unless a separate SPDES Permit is obtained. All discharges, other than stormwater, must be in compliance with an individual SPDES Permit and are not authorized under the Construction Activity General Permit, with the exception of discharges associated with:

- Firefighting activities only when activities are emergencies/unplanned.
- Fire hydrant flushing.
- Routine external building washdown (that does not contain detergents).
- Pavement washdown where spills or leaks of toxic or hazardous materials have not occurred.
- Air conditioning condensate.
- Uncontaminated groundwater or spring water.
- Foundation/footing drains where flows are not contaminated with process materials such as solvents.
- Vehicle wash water (no detergents) and water applied for dust control purposes (covered under the Construction Activity General Permit).
- Irrigation drainage and lawn watering discharges (covered under an Industrial Activity General Permit).
- Waters to which other components have not been added that are used to control dust in accordance with the SWPPP.
- Uncontaminated discharges from construction site dewatering operations.

2.4.2 Climate Change Risks

In accordance with the General Permit and the Community Risk and Resiliency Act (CRRA, 6 NYCRR Part 490), this SWPPP must consider the following physical risks due to climate change:

- Increasing Temperature: The project minimizes impervious surface and maximizes vegetated natural areas, which can mitigate extreme heat.
- Increasing Precipitation: The project maintains flow paths and is not expected to be significantly impacted by increasing precipitation.
- Increasing Variability in Precipitation: The project maintains flow paths and is not expected to be significantly impacted by increasing precipitation.
- Increasing Frequency and Severity of Flooding: The project is not within a 2 foot elevation buffer of a designated flood plain.
- Rising Sea Level: The project is not on a coast or shoreline susceptible to sea level rise.
- Increasing Storm Surge: The project is not on a coast or shoreline susceptible to storm surges.
- Shifting Ecology: The project does not rely on post-construction stormwater management practices that could be impacted by shifting ecology (e.g., constructed wetlands).

2.4.3 Maintaining Water Quality

The discharges authorized pursuant to the Construction Activity General Permit must not cause or contribute to a violation of water quality standards as contained in 6 NYCRR 700-705, including but not limited to:

- There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions.
- There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages.
- There shall be no residue from oil and floating substances, nor visible oil film, nor globules or grease.

The following section outlines the general requirements for the SWPPP, and individual requirements for the Construction Activity General Permit.

3.0 STORMWATER MANAGEMENT PLAN

Stormwater will be managed in accordance with the NYSDEC Stormwater Management Design Manual. The project involves approximately 9.5 acres of ground disturbance. Disturbed areas will be restored with a combination of grass and RCA to create a level “shovel read” buildable area for future development. Post-construction stormwater management practices will be specific to the future development and constructed at that time. The current project involves site preparation that will not alter the hydrology and therefore only requires temporary erosion and sediment controls.

3.1 Soil Description

The project is located on soils identified as predominantly Udorthents (Ue) and Carlisle Muck (Ce), with significant percentages of Wayland Soils Complex (Wg) and Chenango Gravelly Silt Loam (ChB). Common Hydrologic Soil Group classifications on site are predominantly A. A copy the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Resource Report is included in Appendix E.

3.2 Redevelopment Activity

The Construction Activity General Permit defines “Redevelopment Activity” as the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government. Redevelopment Activities are subject to special post-construction stormwater management practice requirements contained at Part II.C.2.c of the General Permit. Redevelopment Activities must address the water quality volume through one of the following options:

1. Reduce the existing impervious cover by a minimum of 25% of the total disturbed, impervious area.
2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment impervious area, by implementation of standard SMPs or reduced by application of runoff reduction techniques.
3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment impervious area, by implementation of a volume-based alternative SMP.
4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment impervious area, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm.
5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods.
6. If there is an existing SMP located on the site that captures and treats runoff from the impervious area that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

Redevelopment Activities are not required to provide channel protection or flood control provided there is no change to hydrology that increases the discharge rate and volume from the project site. The project will implement Option 1 by removing existing impervious concrete debris, crushing the debris into RCA, and consolidating the RCA into an area covering no more than 2.5 acres, which is 75% of the existing impervious debris coverage.

3.3 Site Planning (Step 1)

The Construction Activity General Permit defines Construction Activity subject to regulation as “any clearing, grading, excavation, filling, demolition, or stockpiling activities that result in soil disturbance.” The project will include the disturbance of approximately 50 acres of both pervious and impervious surface.

The construction activity will result in a 25% decrease in impervious area. In accordance with the Stormwater Design Manual, the following Green Infrastructure Planning Practices are applicable to this project:

Practice		Description	Applicable	Project Specific Evaluation
Preservation of Natural Features and Conservation Design	Preservation of Undisturbed Areas	Delineate and protect undisturbed forests, native vegetated areas, riparian corridors, water bodies, wetlands, and natural terrain.	Yes	The project area is limited to approximately 9.5 acres of previously disturbed land within a larger 78.8 acre parcel.
	Preservation of Buffers	Delineate and protect naturally vegetated buffers along perennial streams, rivers, wetlands, and shorelines.	Yes	The project area is limited to approximately 9.5 acres of previously disturbed land within a larger 78.8 acre parcel. Freshwater wetlands are present north of Roundhouse Road that will be preserved.
	Reduction of Clearing and Grading	Limit clearing and grading to the minimum amount needed for roads, driveways, foundations, utilities and stormwater management facilities.	Yes	Clearing and grading will be limited to the area of disturbance and will be minimized to the greatest extent practical. The limits of all proposed clearing will be demarcated prior to construction, to prevent unnecessary environmental disturbance.
	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.	Yes	The site has been designed to avoid sensitive resource areas to the greatest extent practical. The project area is south of Roundhouse Road to prevent disturbance to existing wetlands.
	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.	Yes	Disturbed areas that are planned to be restored with vegetation will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual.

3.4 Determine Water Quality Volume (Step 2)

The project will implement Redevelopment Activity Option 1 by removing existing impervious concrete debris, crushing the debris into RCA, and consolidating the RCA into an area covering no more than 2.5 acres, which is 75% of the existing impervious debris coverage. Therefore, only erosion and sediment controls are required with no post-construction stormwater management practices.

3.5 Construction Phasing Plan

The project consists of work in the following sequence:

Task	Sequence
1. Hold onsite pre-construction conference.	Prior to start of construction.
2. Mark out location of work area and erosion controls.	Prior to any ground disturbance.
3. Install temporary erosion controls according to SWPPP and Contract Documents.	Prior to any ground disturbance.
4. Perform tree clearing in accordance with the Contract Documents.	After installation of erosion controls.
5. Perform demolition in accordance with Contract Documents.	After installation of erosion controls.
6. Relocate concrete debris to consolidation area identified on Sheet 2 for processing into RCA.	After installation of erosion controls.
7. Process concrete debris into RCA and spread within consolidation area to achieve final grades.	After installation of erosion controls.
8. Grade site preparation area to achieve final grades.	After installation of erosion controls.
9. Inspect and maintain erosion controls according to SWPPP and Contract Documents.	Throughout ground disturbance.
10. Place final stabilization ground cover for disturbed areas.	After final grades are achieved and accepted.
11. Continue to inspect and maintain erosion controls according to SWPPP and Contract Documents.	Until Final Stabilization is achieved consisting of an established cover density of at least 80% over areas stabilized with vegetative cover (i.e., topsoil and seed).
12. Remove temporary erosion controls.	After Final Stabilization is achieved.
13. File Notice of Termination of the Construction Activity General Permit.	After Final Stabilization is achieved and all temporary erosion controls have been removed.

4.0 EROSION AND SEDIMENT CONTROLS PLAN

This Erosion and Sediment Control Plan has been prepared to meet the substantive requirements of the Construction Activity General Permit.

4.1 Plan Review

A copy of the approved SWPPP will be retained onsite while any construction activities are being performed.

4.2 Revisions

This SWPPP will be updated whenever there is a change in design, construction, operation, and/or maintenance, which may have a significant effect on the potential for the discharge of pollutants. This SWPPP will be amended if controls prove to be ineffective in minimizing the discharge of pollutants in stormwater or achieving the general objectives of controlling pollutants in stormwater discharge.

4.3 Soil Erosion and Sediment Control

Sheets 3 and 4 depicts the proposed temporary erosion and sediment control features to be installed as part of the project. Additional practice may be implemented as determined necessary by regular inspections. Installation and maintenance details for erosion and sediment controls are described in the New York State Standards and Specifications for Erosion and Sediment Controls provided in Appendix F.

4.3.1 Owner/Operator Requirements

The project Owner/Operator is required to retain contractors qualified in implementing the erosion and sediment control practices in this SWPPP. The contractor(s) must identify at least one person who will be responsible for implementing the SWPPP. Each identified person is referred to as a “Trained Contractor” and at least one Trained Contractor must be on site daily when soil disturbance is occurring. Each trained contractor with a role in implementing the SWPPP must sign a form containing the following certification statement, which will become an attachment to this SWPPP:

“I hereby certify under penalty of law 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 am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.”

Along with the above statement, the certification will also include:

- Name and title of person providing the signature
- Name, address, and telephone number of the contracting firm
- Address of the site
- Date the certification was signed

Completed contractor and subcontractor certification forms will be maintained in Appendix G.

4.3.2 Soil Restoration

Areas of removed impervious concrete debris that will be restored with vegetation must receive full soil restoration in accordance with Section 5.1.6 of the NYS Stormwater Management Design Manual. Soil restoration consists of the following:

- Apply 3 inches of compost of subsoil.
- Till compost into subsoil to a depth of at least 12 inches.
- Rock-pick to remove uplifted stones/rocks that are 4 inches in size or larger.
- Apply 6 inches of topsoil.
- Apply final vegetation.

4.3.3 Stabilization Seed Mix

Areas to receive topsoil and seed will include at least 4 inches of topsoil before placing seed. Any required fertilizer, pH adjusters, and/or soil conditioners will be mixed into the 4-inch-thick topsoil layer by disking, harrowing, tilling, or equivalent method. Following mixing, the topsoil layer must be protected from vehicle or pedestrian traffic.

Seed for grassed drainage areas shall conform to NYSDEC Standards and Specifications for Erosion and Sediment Control, current edition, Standard Specification for Vegetating Waterways, Seed Mix B, or approved equal.

Seed must be placed within one of the following planting seasons and must not be placed when the ground is muddy, frozen, snow covered, or in any other unsatisfactory condition for seeding.

Planting Season	Planting Dates
Season 1	March 15 – June 1
Season 2	September 15 – October 31
Temporary Seeding	March 1 – November 15

In areas where soil disturbing activity has temporarily or permanent ceased, the application of stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance ceased.

4.3.4 Dewatering

If dewatering is required, efforts should be made to keep run-off from entering active work areas. Use of grading, berms, or dikes is encouraged to minimize the amount of water entering the excavation area. Construction activities should not proceed with standing water in an excavation. If work areas have standing water, the water must be removed prior to proceeding with the work. Mechanical dewatering (e.g., by pump), if performed, must discharge water through a manufactured silt bag.

4.3.5 Dust Control

Site access roads and construction activities will be maintained as needed by spraying with water for dust control to reduce and minimize the generation of dust that could settle on the remainder of the site and potentially mobilize during subsequent rain events. Only enough water will be sprayed to wet the surface to minimize potential dust generation.

4.3.6 Petroleum Storage

Temporary petroleum storage facilities may be installed by the contractor during construction activities, if allowed by the Owner. If used, temporary storage must include integral secondary containment and be protected from traffic in a designated fueling location.

4.3.7 Erosion and Sediment Control Maintenance Schedule

The continuous and effective operation of the erosion and sediment control practices will be verified by inspection. If the controls are found to be inadequate, appropriate modifications will be implemented.

4.3.8 Maintenance

Erosion and sediment controls will be maintained during construction activities. All areas where construction activities occur will be inspected regularly for erosion, siltation, and effectiveness. Any identified problems will be promptly repaired. If inspections reveal that any erosion and sediment control measures are inadequate, such measures will be replaced with more suitable means as part of their maintenance.

4.4 Inspection Requirements

4.4.1 Owner or Operator Inspection Requirements

The trained contractor(s) will be responsible for installing, constructing, repairing, inspecting, and maintaining the erosion and sediment control practices identified in this SWPPP and the Contract Documents. At least one trained individual must be identified that will be responsible for implementation of this SWPPP. Each trained individual must provide current verification that the individual has received four hours of NYSDEC endorsed training in proper erosion and sediment control principles. Training credentials are valid for three years from the date of training. At least one trained individual must be onsite daily to inspect all installed erosion and sediment controls.

4.4.2 Qualified Inspector Inspection Requirements

At the commencement of construction, a site assessment will be conducted by the contractor and certified in an inspection report stating that the appropriate erosion and sediment controls are installed or are being implemented, as necessary.

A Qualified Inspector is defined as the following:

- Licensed Professional Engineer
- Certified Professional in Erosion and Sediment Control
- Registered Landscape Architect
- 4-hour Trained Individual under direction of a Licensed Professional Engineer or Registered Landscape Architect.

In accordance with the Construction Activity General Permit, a Qualified Inspector will conduct a site inspection at least once every seven (7) calendar days. Inspections will be conducted of disturbed areas of the site, structural control measures, and locations where vehicles enter or exit the site, to identify areas requiring maintenance or repair, and to assess the overall potential for pollutants to enter the drainage system. Erosion and sediment control measures will be observed to ensure that they are operating properly. Locations where vehicles enter or exit will be inspected for evidence of offsite tracking of soil or sediment onto roads.

Inspection reports will be complete, and will include and/or address the following:

- Date and time of inspection.
- Name, title, and signature(s) of person(s) performing inspection.
- A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection.
- A description of the condition of the runoff at all points of discharge from the construction site. This will 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.
- 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 will include identification of any discharges of sediment to the surface waterbody.
- Identification of all erosion and sediment control practices that require repair or maintenance.
- 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.
- 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.
- 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.
- 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).
- Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as requiring corrective actions. The qualified inspector will attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector will also obtain digital photographs, with date stamp, that clearly shows the condition of the practice(s) after the corrective action has been completed. The qualified inspector will attach color copies of the digital photographs to the inspection report that documents the completion of the corrective actions within seven (7) calendar days of that inspection.

Within one (1) business day of the completion of an inspection, the Qualified Inspector will notify the Owner and the contractor of any corrective actions that need to be taken. The contractor will begin implementing the corrective actions within one (1) business day of this notification and will complete the corrective actions in a reasonable timeframe. Completed inspection forms must be maintained in Appendix H.

4.4.3 Temporary Shutdown & Partial Project Completion

The Construction Activity General Permit provides that the frequency of inspections can be reduced during temporary shutdown with partial project completion or where soil disturbance activities have been temporarily suspended and temporary stabilization measures have been applied to disturbed areas. If the soil disturbance is completely suspended and the site is properly stabilized, the Owner or Operator may suspend daily inspection by a trained contractor and reduce the inspection by a Qualified Inspector to once every 30 calendar days with prior notice to the NYSDEC. The self-inspection frequency will maintain a minimum of monthly inspections in all situations. Inspections must return to the regular frequency when construction activities resume.

5.0 RECORDKEEPING

Throughout construction, a logbook must be maintained consisting of this SWPPP, the NOI, revisions, contractor certifications, and completed inspection reports. In accordance with the Construction Activity General Permit, all records regarding SWPPP compliance will be maintained by the Owner or Operator for a period of no less than five (5) years from the date that the site achieves final stabilization. The NOI, SWPPP, and inspection reports are public documents that the owner must make available for review and copying by any person within five (5) business days of receiving a written request.

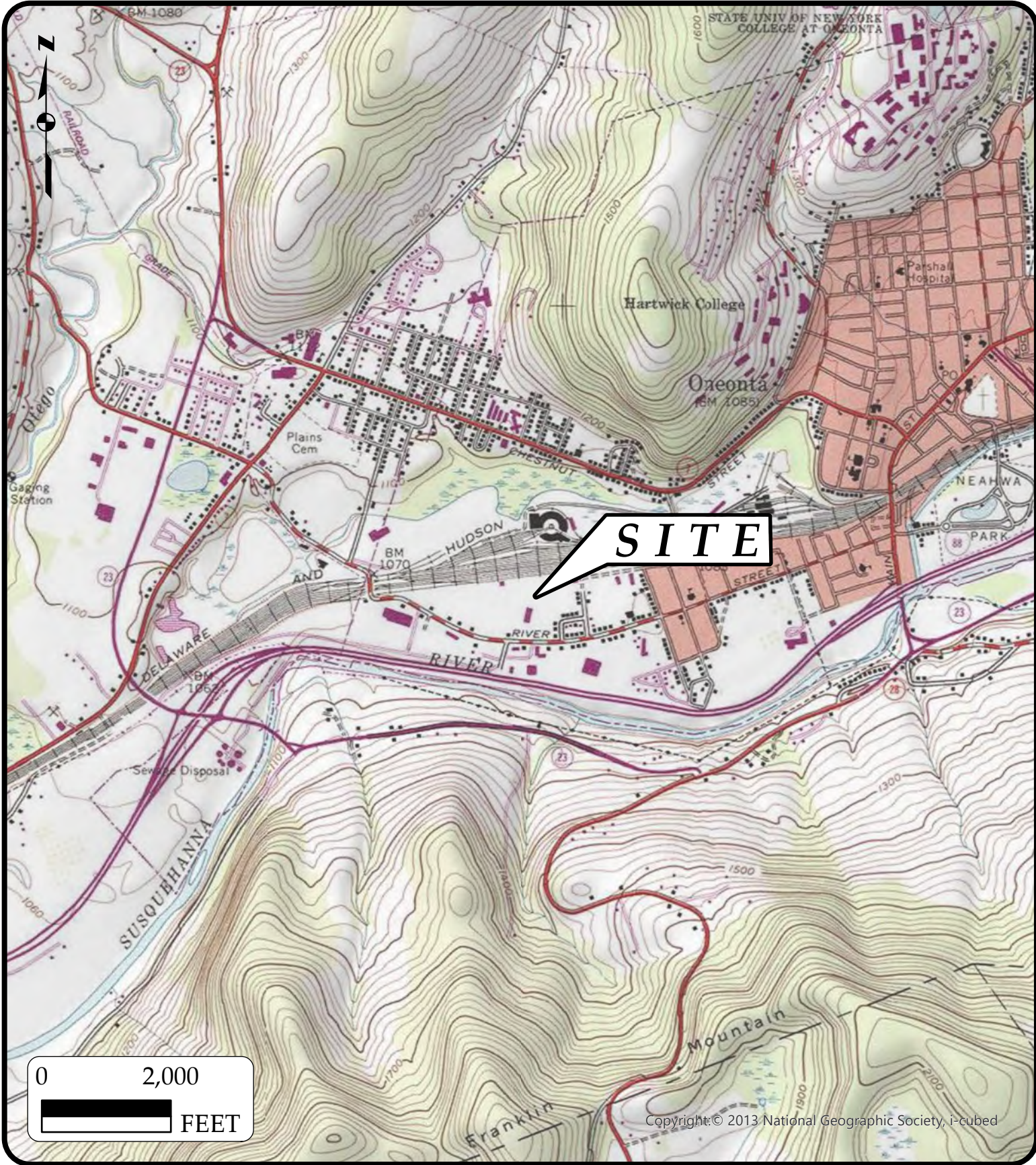
6.0 LONG-TERM MAINTENANCE

This construction activity includes no post-construction stormwater management practices requiring long-term maintenance.

S:\Sterling\Projects\2025 Projects\Otsego County IDA - 2025-125\Reports\SWPPP\2026-07-01_Ostego IDA Roundhouse Rd_SWPPP.docx

FIGURES

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STERLING

Sterling Environmental Engineering, P.C.

24 Wade Road • Latham, New York 12110

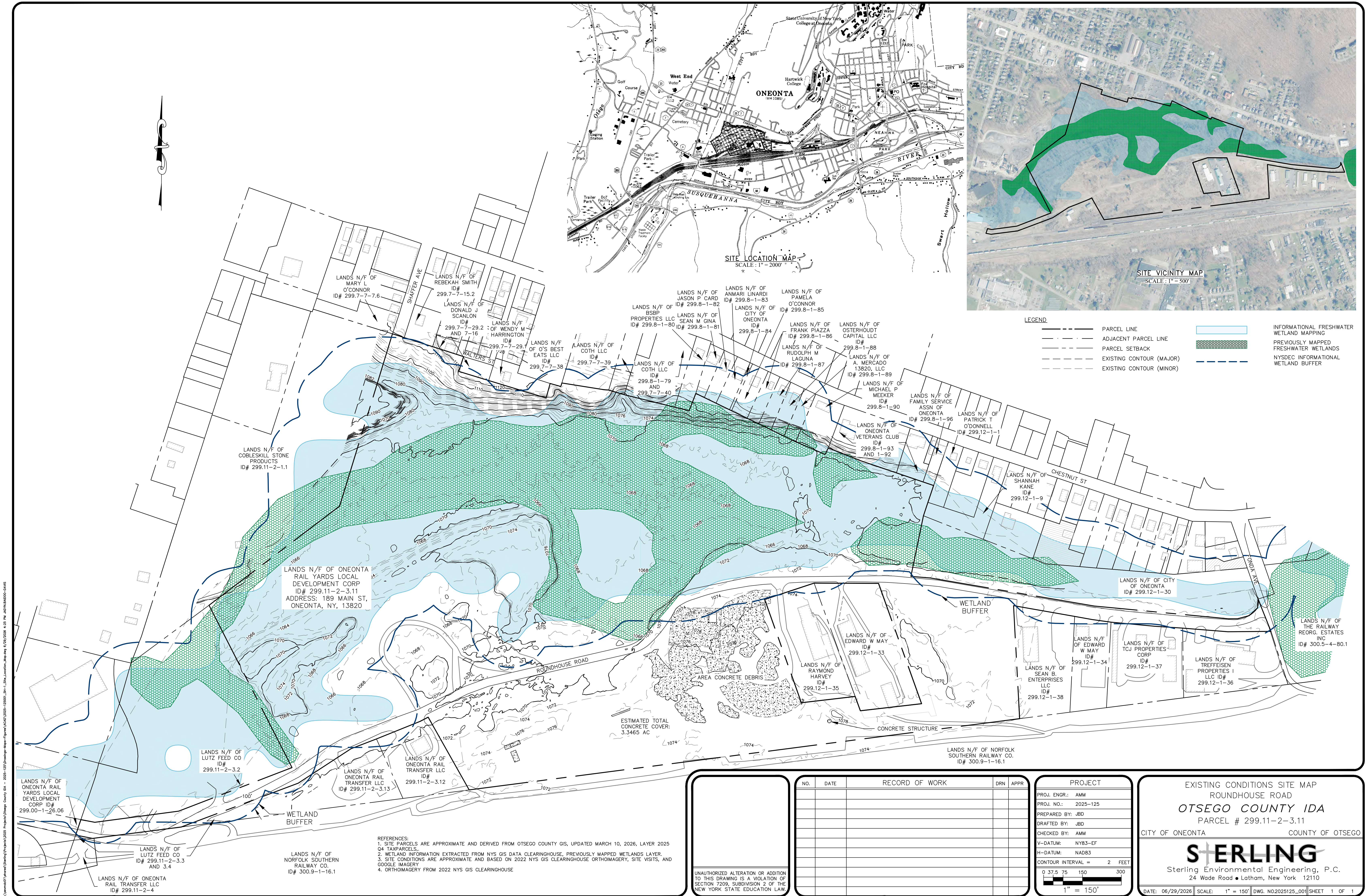
SITE LOCATION
OTSEGO COUNTY IDA
TAX PARCEL ID 299.11-2-3.11

TOWN OF ONEONTA

OTSEGO CO., NY

PROJ.NO.	2025-125	DATE	01/22/2026	SCALE	1" = 2,000'	DWG.NO.	2025-1250001G	FIGURE	1
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DRAWINGS



\\vermont\shared\Survey\Projects\2025\Project\Site\Map-Prep\A\A\2025-125\Drawing-Map-Prep\A\A\2025-125-2_Site_Preparation_Plan.dwg 6/20/2026 10:37 AM JWD\BAGDOO-JAWS



REFERENCES:
1. PROPOSED FILL AREA DERIVED FROM 2025 REQUEST FOR PROPOSALS- LAND CLEARANCE, RFP 2025-01, DRAWING TITLED ONEONTA RAILYARD BUSINESS PARK SITE CLEARANCE OF LOT 3
2. SITE PARCELS ARE APPROXIMATE AND DERIVED FROM LAYER 2025_Q4 TAXPARCELS, FROM OTSEGO COUNTY GIS, LAST UPDATED MARCH 10, 2026.
3. WETLAND INFORMATION EXTRACTED FROM NYS GIS DATA CLEARINGHOUSE
4. SITE CONDITIONS ARE APPROXIMATE AND BASED ON 2022 NYS GIS CLEARINGHOUSE ORTHOIMAGERY, SITE VISITS, AND GOOGLE IMAGERY

LEGEND			
	PARCEL LINE		INFORMATIONAL FRESHWATER WETLAND MAPPING
	ADJACENT PARCEL LINE		PREVIOUSLY MAPPED FRESHWATER WETLANDS
	PARCEL SETBACK		AREA OF CONCRETE DEBRIS
	EXISTING CONTOUR (MAJOR)		AREA OF RCA PLACEMENT
	EXISTING CONTOUR (MINOR)		AREA OF NEW VEGETATIVE COVER
	PROPOSED CONTOUR (MINOR)		
	PROPOSED CONTOUR (MAJOR)		
	NYSDEC INFORMATIONAL WETLAND BUFFER		

BULK ZONING TABLE:
PARCEL ID: 299.11-2-3.11
PARCEL ZONING: CI ZONE- COMMERCIAL/INDUSTRIAL
SMP MANAGEMENT:
PROPOSED NEW IMPERVIOUS COVER: 2.47 AC

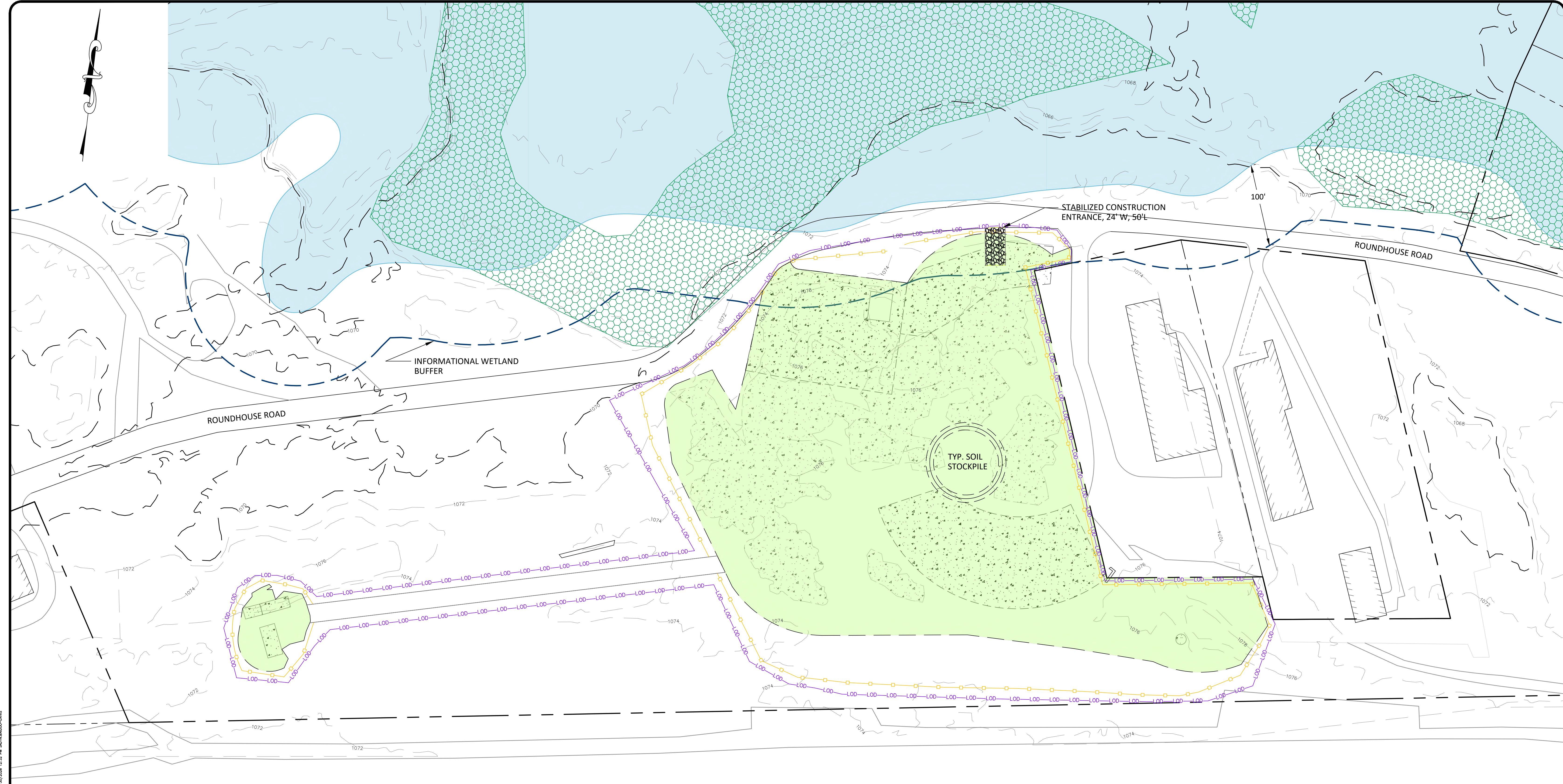
DRAFT

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

NO.	DATE	RECORD OF WORK	DRN	APPR

PROJECT	
PROJ. ENGR.:	AMM
PROJ. NO.:	2025-125
PREPARED BY:	JBD
DRAFTED BY:	JBD
CHECKED BY:	AMM
V-DATUM:	NY83
H-DATUM:	NAD83
CONTOUR INTERVAL =	2 FEET
1" = 50'	

SITE PREPARATION PLAN ROUNDHOUSE ROAD OTSEGO COUNTY IDA PARCEL # 299.11-2-3.11	
CITY OF ONEONTA	COUNTY OF OTSEGO
STERLING Sterling Environmental Engineering, P.C. 24 Wade Road • Latham, New York 12110	
DATE: 06/30/2026	SCALE: 1" = 50' DWG. NQ2025125_002 SHEET 2 OF 4



REFERENCES:
1. SITE PARCELS ARE APPROXIMATE AND DERIVED FROM OTSEGO COUNTY GIS, UPDATED MARCH 10, 2026, LAYER 2025 Q4 TAXPARCELS.
2. WETLAND INFORMATION EXTRACTED FROM NYS GIS DATA CLEARINGHOUSE, PREVIOUSLY MAPPED WETLANDS LAYER.
3. SITE CONDITIONS ARE APPROXIMATE AND BASED ON 2022 NYS GIS CLEARINGHOUSE ORTHOMAGERY, SITE VISITS, AND GOOGLE IMAGERY

LEGEND		
	PARCEL LINE	
	ADJACENT PARCEL LINE	
	PARCEL SETBACK	
	EXISTING CONTOUR (MAJOR)	
	EXISTING CONTOUR (MINOR)	
	LIMITS OF DISTURBANCE	
	EXCAVATION BOUNDARY (AREA OF REMOVAL)	
	SILT FENCE/FILTER SOCK	

BULK ZONING TABLE:
PARCEL ID: 299.11-2-3.11
PARCEL ZONING: C1 ZONE- COMMERCIAL/INDUSTRIAL
AREAS:
MAXIMUM CRUSHED CONCRETE: 3.35 AC

DRAFT

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

NO.	DATE	RECORD OF WORK	DRN	APPR

PROJECT	
PROJ. ENGR.:	AMM
PROJ. NO.:	2025-125
PREPARED BY:	AMM
DRAFTED BY:	JBD
CHECKED BY:	AMM
V-DATUM:	NY83
H-DATUM:	NAD83
CONTOUR INTERVAL =	2 FEET
1" = 60'	

EROSION AND SEDIMENT CONTROL PLAN ROUNDHOUSE ROAD OTSEGO COUNTY IDA PARCEL # 299.11-2-3.11	
CITY OF ONEONTA	COUNTY OF OTSEGO
Sterling Environmental Engineering, P.C. 24 Wade Road • Latham, New York 12110	
DATE: 06/30/2026	SCALE: 1" = 60' DWG. NQ2025125_003 SHEET 3 OF 4

APPENDIX A

GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES (GP-0-25-001)



Department of
Environmental
Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2025

Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator



Authorized Signature

JAN. 29, 2025

Date

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

PREFACE

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

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

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

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

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Part I. How to Obtain Coverage and General Requirements

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

A. Eligibility Requirements

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

1. The *owner's or operator's construction activities* involve soil disturbances of:
 - a. one or more acres; or
 - b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or
 - c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.
 - i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or
 - ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or
 - iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or
 - iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

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

- a. already covered by a different SPDES permit; or
- b. covered under a different SPDES permit that was denied, terminated, or revoked; or
- c. identified in an expired individual SPDES permit that was not renewed; or
- d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

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

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

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

- a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:
 - i. 1-5 acres of disturbance - 20 feet; or
 - ii. 5-20 acres of disturbance - 50 feet; or

- iii. 20+ acres of disturbance - 100 feet.
- b. NYSDEC consultation form sent to OPRHP,¹ and copied to NYSDEC's Agency Historic Preservation Officer (APO), and
 - i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
 - ii. documentation from OPRHP that the *construction activity* will result in No Impact; or
 - iii. documentation from OPRHP providing a determination of No Adverse Impact; or
 - iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).
- c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:
 - i. No Affect; or
 - ii. No Adverse Affect; or
 - iii. Executed Memorandum of Agreement.
- d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.
- 5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.
- 6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

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

Part I.A.6.

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

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:
 - a. obtain all such necessary permits; or
 - b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.
8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:
 - a. For linear transportation and linear utility project types, the *construction activities*:
 - i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and
 - ii. are undertaken on land with no existing *impervious cover*; and
 - iii. disturb two or more acres of *steep slope*.
 - b. For all other project types, the *construction activities*:
 - i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and
 - ii. are undertaken on land with no existing *impervious cover*; and
 - iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:
 - a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.
 - b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:
 - i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and
 - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and
 - iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and
 - iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.
2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:
 - a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: “*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned”; and
 - b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and
 - c. Uncontaminated *discharges* from *dewatering* operations

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

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:
 - a. Wastewater from washout of concrete; and
 - b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and
 - c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and
 - d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and
 - e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

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

1. An eNOI may be submitted for:
 - a. *construction activities* that are not part of a *common plan of development or sale*; or

- b. an entire *common plan of development or sale*; or
 - c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:
 - i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and
 - ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and
 - iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or
 - d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:
 - i. meets all other eligibility requirements of Part I.A.; and
 - ii. will occur in NYSDEC's Regions 3-9; and
 - iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and
 - iv. will occur between November 1st and March 31st.
2. As prerequisites for submitting an eNOI, the *owner or operator* must:
- a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and
 - b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:
 - i. for all eNOIs:
 - 1. the *SWPPP* Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and
- ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:
 1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:
 - a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or
 - b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or
 - c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and
 2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:
 - a. if outside the municipal boundaries of NYC: the *MS4 SWPPP Acceptance Form*, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator*, or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

- b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and
 - 3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator*, or by a duly authorized representative of that person in accordance with Part VII.J.2.
3. Submitting an eNOI:
- a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.²
 - b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.
 - i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

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

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

E. General Requirements for Owners or Operators with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.
2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:
 - a. all areas of disturbance have achieved *final stabilization*; and
 - b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.
3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:
 - a. all documentation necessary to demonstrate eligibility with this permit; and
 - b. this permit; and
 - c. the *SWPPP*; and
 - d. the signed *SWPPP Preparer Certification Form*; and
 - e. the signed *MS4 SWPPP Acceptance Form* or signed *NYCDEP SWPPP Acceptance/Approval Form* or signed *MS4 No Jurisdiction Form* (when applicable); and
 - f. the signed *Owner/Operator Certification Form*; and

- g. the eNOI; and
 - h. the LOA; and
 - i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).
4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:
- a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and
 - b. inspection reports in accordance with Part IV.C.4. and 6.; and
 - c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and
 - d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and
 - e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).
5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.
6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:
- a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

Part I.E.6.a.i.

- i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or
 - ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or
 - iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.
- b. The written Request to Disturb Greater Than Five Acres must include:
- i. The SPDES permit identification number (Permit ID); and
 - ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and
 - iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and
 - iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and
 - v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and
 - vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."
- c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

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

- i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or
 - ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.
7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).³ *Construction activity* shall not resume until written permission to do so has been received from the RWE.
9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:
 - a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and
 - b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and
 - c. receive an updated LOA.
10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

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

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

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of a *construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.
2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,⁴ which contains the information identified in Part I.F.3. below, if:
 - a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and
 - b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.
3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.
4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.
5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

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

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:
 - a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and
 - b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and
 - c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and
 - d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and
 - e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or
 - f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:
 - i. the revised area of disturbance and/or *impervious area(s)*; and
 - ii. the revised SMP information, if applicable; and
 - iii. a narrative description of what has changed; and
 - iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

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

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

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

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and
2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

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

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

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

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

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

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

- a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:
 - i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*; and
 - ii. Control *stormwater discharges*, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and
 - iii. *Minimize* the amount of soil exposed during *construction activity*; and
 - iv. *Minimize* the disturbance of *steep slope*; and
 - v. *Minimize* sediment *discharges* from the site; and
 - vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharges*, unless *infeasible*; and
 - vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

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

- viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
 - ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.
- c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.
- d. **Pollution Prevention Measures.** Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:
- i. *Minimize* the *discharge of pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and
 - ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

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

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

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

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

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for New Development

- i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):
 1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

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

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

- ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:
 1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or
 2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or
 3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

- iii. **Overbank Flood Control Criteria (Qp):** Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams, or
 - 2. A downstream analysis reveals that *overbank* control is not required.
- iv. **Extreme Flood Control Criteria (Qf):** Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams, or
 - 2. A downstream analysis reveals that *overbank* control is not required.

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

- i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):
 - 1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or
 - 2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

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

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

- ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:
 - 1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or
 - 2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or
 - 3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.
- iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams; or
 - 2. A downstream analysis reveals that *overbank* control is not required.

- iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams; or
 - 2. A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

- i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.
 - 1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or
 - 2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or
 - 3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or
 - 4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or
 6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.
- ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.
 - iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.
 - iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

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

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

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General SWPPP Requirements

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

- practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.
2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.
 - a. The owner or operator must consider:
 - i. the following physical risks due to climate change:
 - (i) increasing temperature; and
 - (ii) increasing precipitation; and
 - (iii) increasing variability in precipitation, including chance of drought; and
 - (iv) increasing frequency and severity of flooding; and
 - (v) rising sea level; and
 - (vi) increasing storm surge; and
 - (vii) shifting ecology.
 - ii. for each of the following:
 - (i) overall site planning; and
 - (ii) location, elevation, and sizing of:
 - a. control measures and practices; and
 - b. conveyance system(s); and
 - c. detention system(s).
 3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

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

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.
5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:
 - a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and
 - b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge of pollutants*; and
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, NYSDEC, or other regulatory authority; and
 - d. to document the final construction conditions in an as-built drawing.
6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.
7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

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

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

"I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

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

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.
 - a. Erosion and sediment control practices must be designed:
 - i. in conformance with the BB; or
 - ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.
 - b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.
 - c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:
 - i. Background information about the scope of the project, including the location, type and size of project; and
 - ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge(s)* and receiving surface water(s); and
 - iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and
 - iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

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

1. The phasing plan must include:
 - a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and
 - b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and
2. A sequencing plan for a specific *phase* must include:
 - a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and
 - b. all permanent and *temporary stabilization* measures; and
- v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and
- vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and
- vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

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

- viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and
- ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and
- x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and
- xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

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

- a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and
- b. SMPs must be designed in conformance with the *performance criteria*:
 - i. in the DM; or
 - ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or
 - iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:
 - a. subject to governmental review and approval:
 - i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and
 - ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or
 - b. not subject to governmental review and approval:
 - i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and
 - ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and
 - c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and
 - d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and
 - e. The SMP component of the *SWPPP* must include the following:
 - i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and
 - ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

- iii. A Stormwater Modeling and Analysis Report that includes:
 - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and
 - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and
 - (iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and
 - (iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and
 - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and
 - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.
- iv. Soil testing results and locations (test pits, borings); and
- v. Infiltration test results, when required in accordance with Part III.B.2.a.; and
- vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

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

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

C. Required *SWPPP* Components by Project Type

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

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

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

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

B. Contractor Maintenance Inspection Requirements

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

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

- a. if the corrective action does not require engineering design:
 - i. begin implementing corrective actions within one business day; and
 - ii. complete the corrective actions within five business days; or
 - b. if the corrective action requires engineering design:
 - i. begin the engineering design process within five business days; and
 - ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.
2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.
 3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. Qualified Inspector Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:
 - a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

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

- b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D; and
 - c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and
 - d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.
2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:
- a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or
 - b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or
 - c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator*, the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

- d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or
 - e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* must inspect:
- a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and
 - b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and
 - c. all areas of disturbance that have not achieved *final stabilization*; and
 - d. all points of *discharge to surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and
 - e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:
 - a. Permit identification number; and
 - b. Date and time of inspection; and
 - c. Name and title of person(s) performing inspection; and
 - d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and
 - e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and
 - f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and
 - g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and
 - h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and
 - i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and
 - j. Estimates, in square feet or acres, of the following areas:

- i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and
 - ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and
 - iii. Total area that has achieved *temporary stabilization*; and
 - iv. Total area that has achieved *final stabilization*; and
- k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and
- l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and
- m. Identification and status of all corrective actions that were required by previous inspection; and
- n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:
- a. if the corrective action does not require engineering design:

- i. begin implementing corrective actions within one business day; and
 - ii. complete the corrective actions within five business days; or
 - b. if the corrective action requires engineering design:
 - i. begin the engineering design process within five business days; and
 - ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.
6. All inspection reports must be signed by the *qualified inspector*. In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

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

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:
 - a. Total project completion:
 - i. all *construction activity* identified in the *SWPPP* has been completed; and
 - ii. all areas of disturbance have achieved *final stabilization*; and
 - iii. all temporary, structural erosion and sediment control measures have been removed; and
 - iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and
 - v. an as-built drawing has been prepared; or

- b. Planned shutdown with partial project completion:
 - i. all soil disturbance activities have ceased; and
 - ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and
 - iii. all temporary, structural erosion and sediment control measures have been removed; and
 - iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and
 - v. an as-built drawing has been prepared; or
 - c. In accordance with Part I.G. Change of Owner or Operator; or
 - d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.
2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the “Final Stabilization” and “Post-Construction Stormwater Management Practice(s)” certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.
3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the “MS4 Acceptance” statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) when required in Part V.A.2.

Part V.A.4.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:
 - a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or
 - b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or
 - c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or
 - d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.
5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.⁵
 - a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

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

Part VI. Record Retention and Reporting

A. Record Retention

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

B. Reporting

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

Part VII. Standard Permit Requirements

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

A. Duty to Comply

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Penalties

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

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

D. False Statements

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

E. Re-Opener Clause

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

F. Duty to Mitigate

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

G. Requiring Another General Permit or Individual SPDES Permit

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

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

Part VII.G.1.a.

- a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and
 - b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and
 - c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and
 - d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and
 - e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and
 - f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and
 - g. the *discharge* is in violation of section 17-0501 of the ECL; and
 - h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:
 - i. the location of the *discharge(s)* with respect to *surface waters of the State*; and
 - ii. the size of the *discharge(s)*; and
 - iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and
 - iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.
2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

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

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

H. Duty to Provide Information

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

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

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

I. Extension

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

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

J. Signatories and Certification

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

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

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

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

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

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

Part VII.J.1.c.

- c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 1. the chief executive officer of the agency; or
 2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to NYSDEC.
3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

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

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

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

K. Inspection and Entry

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

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and
2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and
3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and
5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

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

M. Other Permits May Be Required

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

N. NYSDEC Orders or Civil Decrees/Judgments

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

O. Property Rights

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

P. Compliance with Interstate Standards

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

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for “*Construction Activity(ies)*” also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The “common plan” of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for “*Commence (Commencement of) Construction Activities*” and “*Common Plan of Development or Sale.*”

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges to surface waters of the State*; and
2. designed or used for collecting or conveying *stormwater*; and
3. which is not a *combined sewer system*; and
4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRV, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint sources*, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned¹
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, “temporary” means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover*, and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators of construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

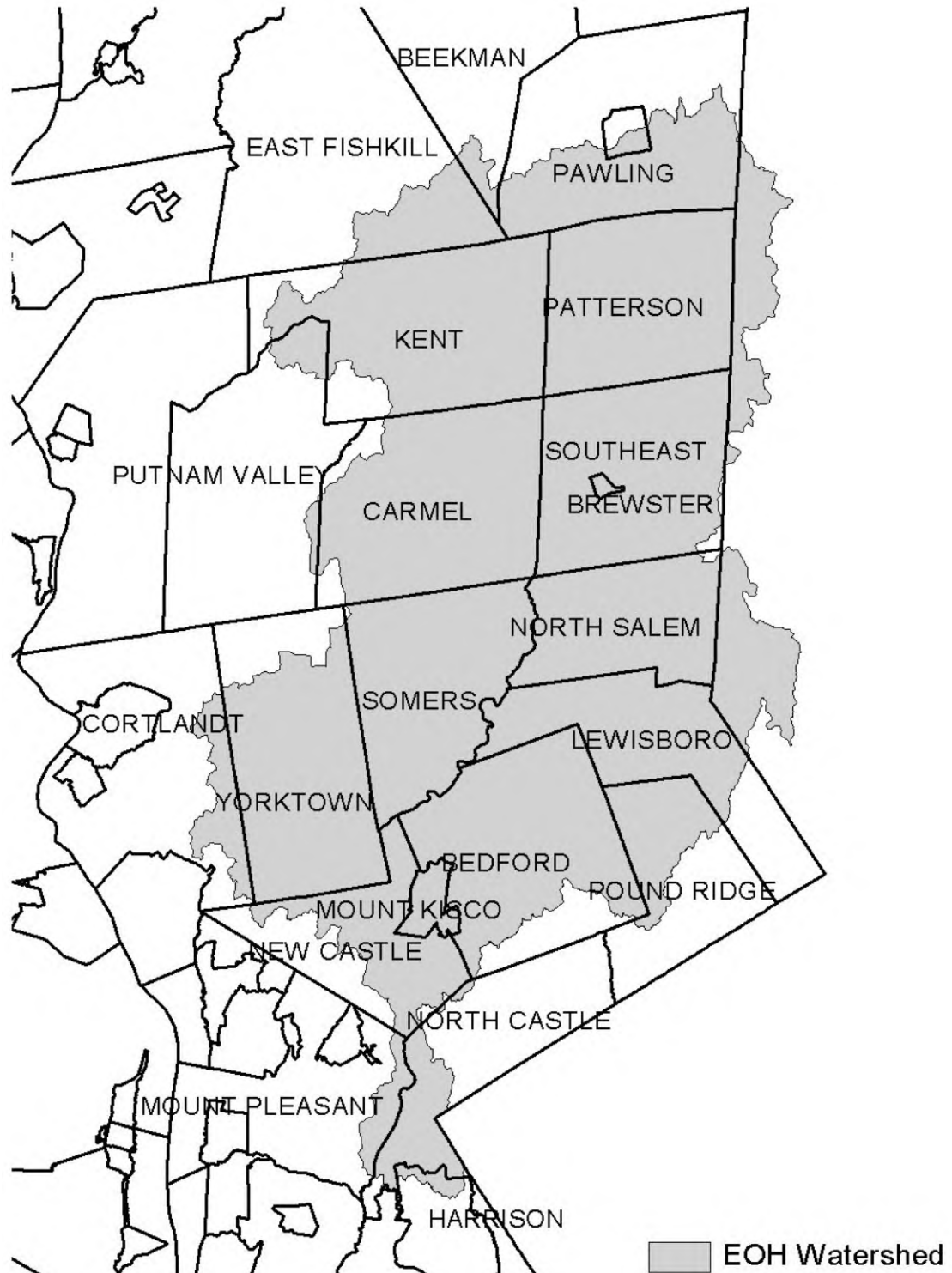


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed

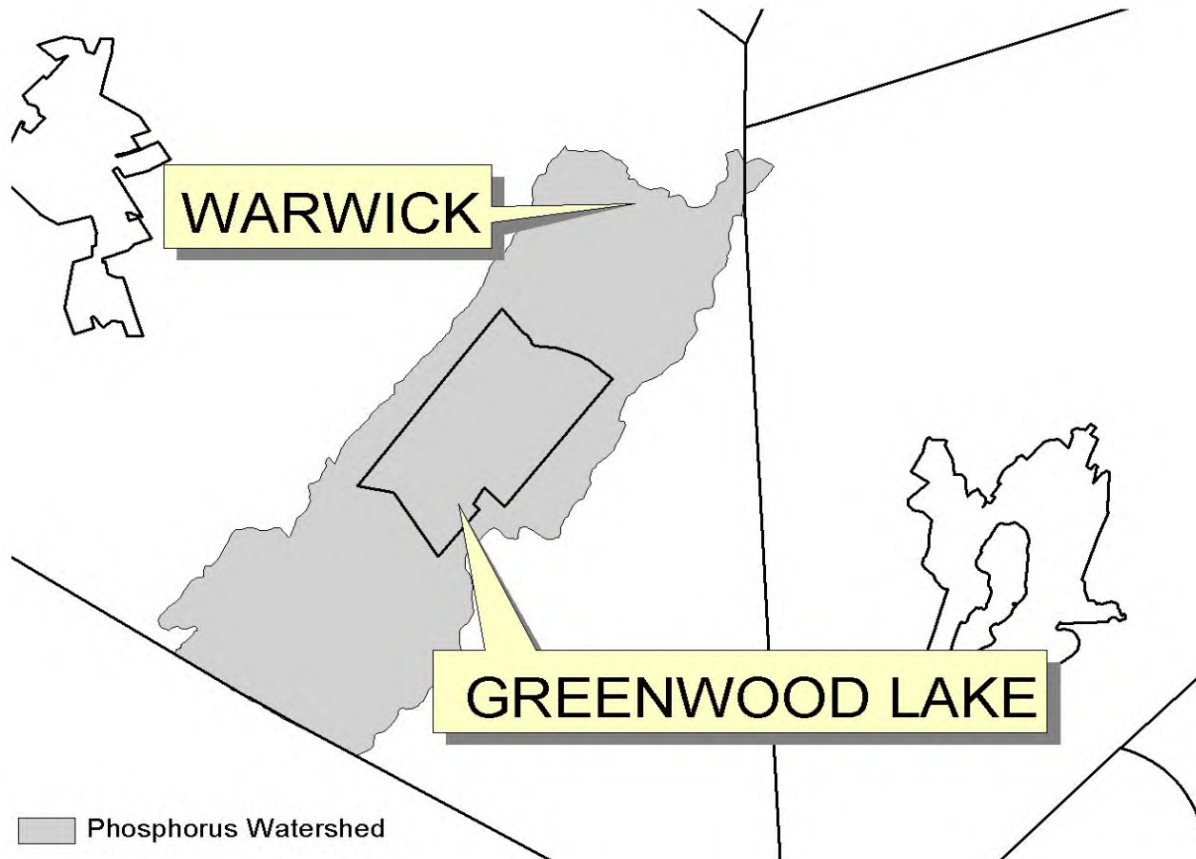


Figure 4 - Oscawana Lake Watershed

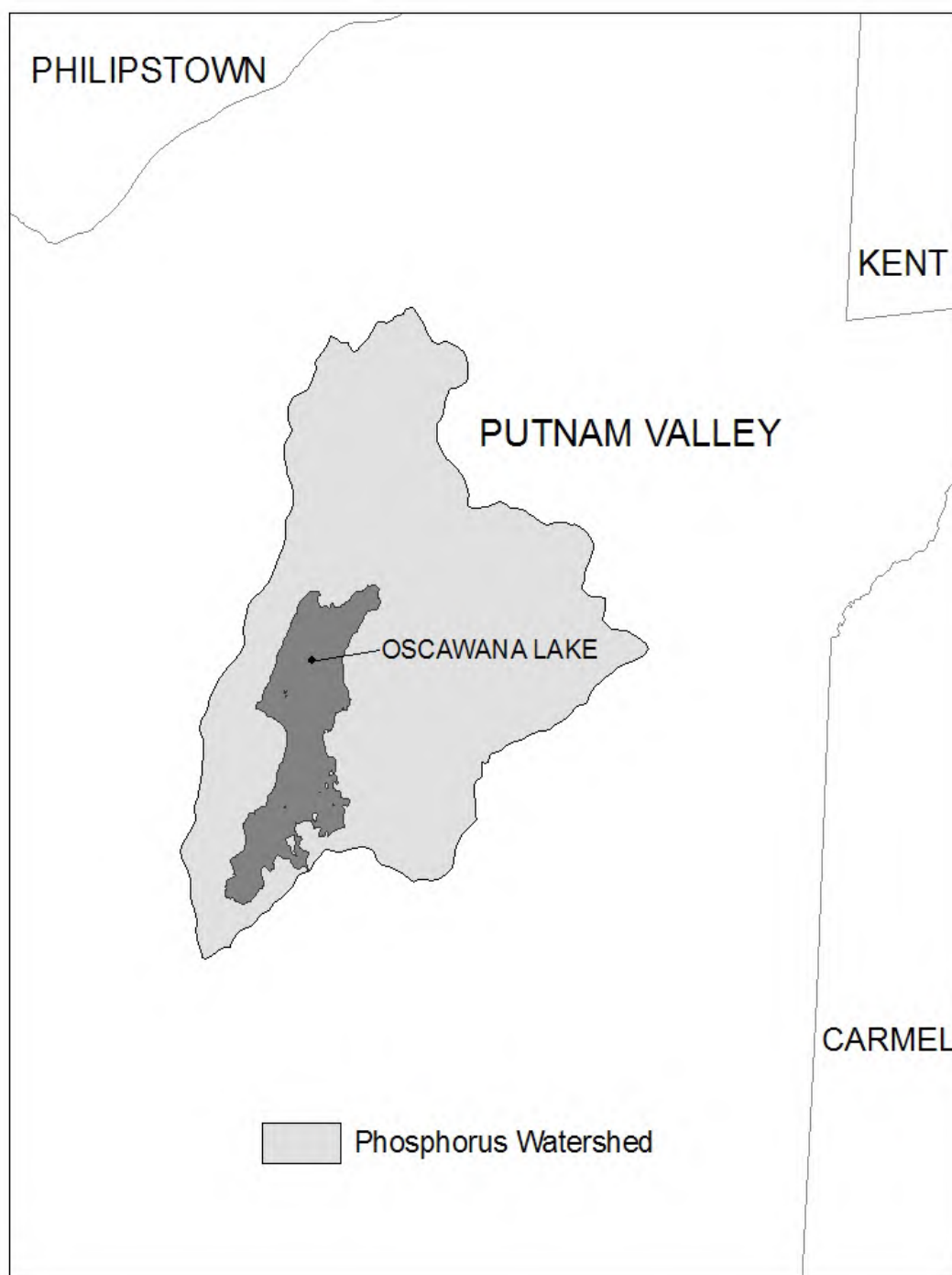
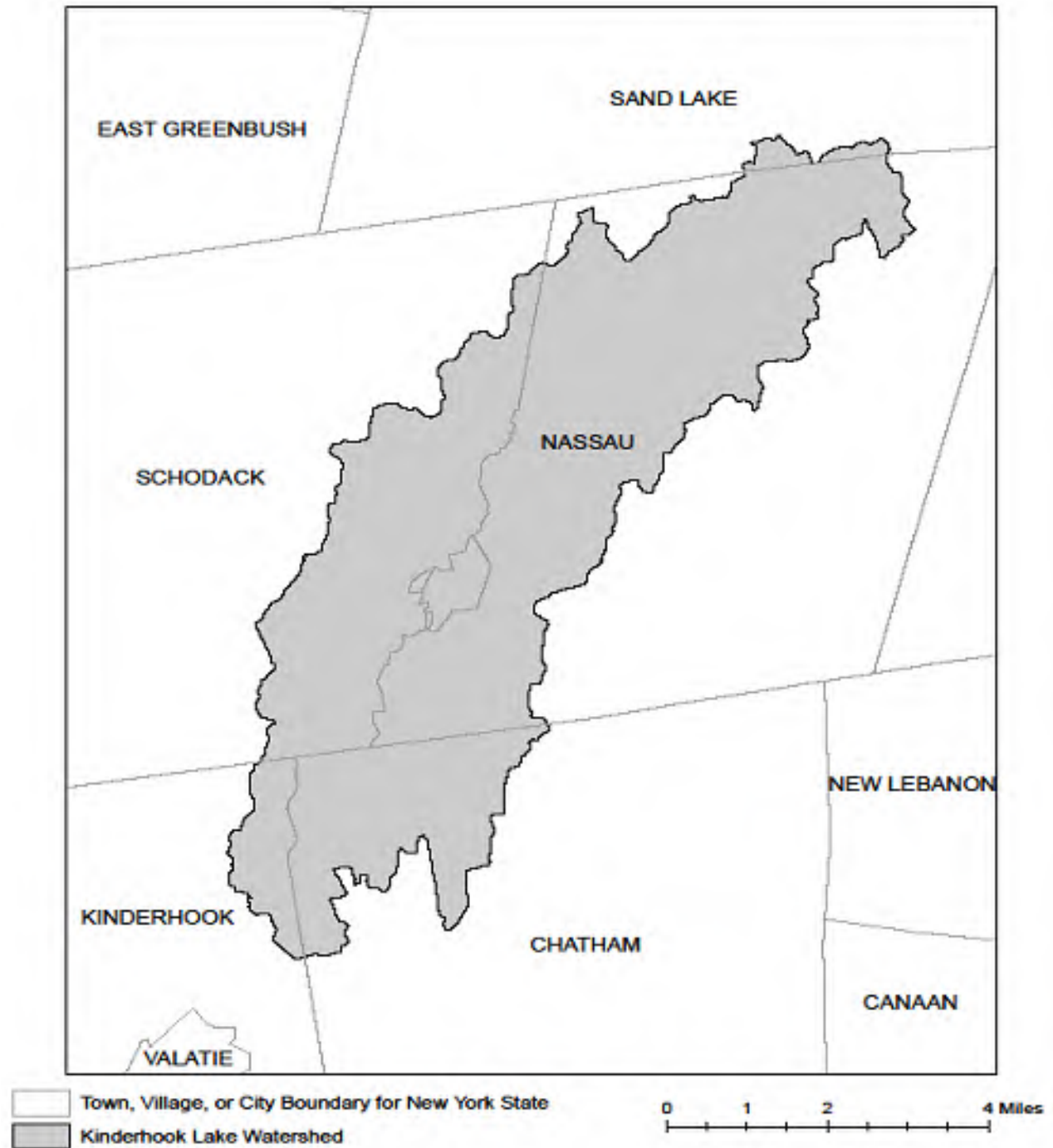


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of “The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL” dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402-0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genesee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Montgomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sediment
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	220 WHITE PLAINS ROAD, SUITE 110 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.



Department of
Environmental
Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name

MI

SWPPP Preparer Last Name

Signature

Date

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.



Department of
Environmental
Conservation

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4 Operator:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Street Address:

14. City/State/Zip:

15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name¹:

Title/Position:

Signature:

Date:

VI. Additional Information

¹ Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.



THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval

8. SWPPP Reviewed by:

9. Title/Position: /

10. Date Final SWPPP Reviewed and Accepted:

11. Acceptance/Approval Expiration Date:

IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity

12. Name of MS4: *CITY OF NEW YORK*

13. MS4 SPDES Permit Identification Number: *NY-0287890*

14. Contact Person:

15. Street Address: *59-17 Junction Blvd. 9th Floor*

16. City/State/Zip: *Flushing, NY 11373*

17. Telephone Number:



Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.



THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).

Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Conditions of Acceptance/Approval and Additional Information



Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.



Department of
Environmental
Conservation

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

- a. Owner/Operator Name:
- b. Contact Person:
- c. Street Address:
- d. City/State/Zip:

II. Project Site Information

- a. Project/Site Name:
- b. Street Address:
- c. City/State/Zip:
- d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

- a. Name of MS4 Operator:
- b. MS4 SPDES Permit ID Number: NYR20A
- c. Street Address:
- d. City/State/Zip:
- e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:
- b. Title/Position:
- c. Signature:
- d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.)

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: **Owner/Operator** **SWPPP Preparer** **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

Signature

Date

APPENDIX B

AGENCY CONSULTATION DOCUMENTATION

APPENDIX C

NOTICE OF INTENT (NOI)

Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.18

(Submission #: HQJ-FH8K-A66E7, version 1)

Details

Originally Started By Jadyn Baidoo-Davis

Alternate Identifier Oneonta Railyards—Region 4

Submission ID HQJ-FH8K-A66E7

Status Draft

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?

Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?

No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?

No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?

No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?

Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?

No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?

No

4.a. Will the construction activity:

- a) occur within an archeologically sensitive area indicated on the sensitivity map, or
- b) have the potential to affect a property that is listed or determined to be eligible for listing on the National or State Registers of Historic Places, or
- c) include a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old and OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined is a historically/archeologically significant building, structure, or object:
 - 1-5 acres of disturbance—20 feet
 - 5-20 acres of disturbance—50 feet
 - 20+ acres of disturbance—100 feet?

No

4.b. Is there documentation at the construction site demonstrating:

- a) that the construction activity is not within an archeologically sensitive area indicated on the sensitivity map, and that the construction activity is not immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and

b) that there is no new permanent building to be built on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

- 1-5 acres of disturbance – 20 feet
- 5-20 acres of disturbance – 50 feet
- 20+ acres of disturbance – 100 feet?

Yes

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?

Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?

Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001?

Select "Yes" if no UPA permits, or the equivalent, are required for this construction activity.

Yes

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?

No

Owner/Operator Information

8. Owner/Operator Name

County of Otsego IDA

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Jody Zakrevsky	607-267-4010	JZakrevsky@otsegonow.com

10. Owner/Operator Mailing Address

189 MAIN ST
STE 500
ONEONTA, NY 13820-2595
USA

11. Is the billing contact different from the Owner/Operator Contact?

No

12. What type of organization is the owner/operator?

County Government

Site Information

13. Project/Site Name

Oneonta Railyards

14. Site Address

Roundhouse Road
Oneonta, NY 13820
Otsego

DEC Region

4

15. Site Latitude & Longitude

42.4493275,-75.0853984

Project Details

16. This eNOI submission is for:

A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001?

If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".

Table 1

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.

The project involves the clearing, demolition of existing impervious concrete surfaces, and grading of approximately 9.5 acres to create a level "shovel ready" buildable area for future development. The project area was previously developed for rail access associated with the former Delaware and Hudson railyard, which was once home to the country's largest roundhouse. The existing coverage of impervious debris in the project area is estimated at approximately 3.35 acres or 35% of the 9.5-acre project area. The project will remove existing impervious concrete debris, crush the debris into recycled concrete aggregate (RCA), and consolidate the RCA into an area covering no more than 2.5 acres, which is 75% of the existing impervious debris coverage and satisfies the redevelopment activity requirement by reducing the impervious cover by at least 25%.

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)

80.0

20. Total Area to be Disturbed (acres)

9.5

21. Existing Impervious Area to be Disturbed (acres)

3.3

22. Future Impervious Area Within Disturbed Area (acres)

2.5

Nature of the project:

Redevelopment with no increase in impervious area

23. Do you plan to disturb more than 5 acres of soil at any one time?

No

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

A (%)

74

B (%)

26

C (%)

0

D (%)
0

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

Start Date
09/01/2026

End Date
12/31/2026

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

Minor Tribs to Susquehanna River - 0601-0192

27. Type of waterbody identified in question 26?

Wetland/State Jurisdiction On Site
Stream/Creek On Site
Wetland/State Jurisdiction Off Site

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?

No

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?

No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?

Yes

31. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?

No

32. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?

No

33. Is this property owned by a state authority, state agency, federal government or local government?

Yes

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?

Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?

Yes

36. 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

SWPPP Preparer

39. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

40. Name of the person who prepared the SWPPP
Andrew Millspaugh

41. SWPPP Preparer Organization Name
Sterling Environmental Engineering, P.C.

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Andrew Millspaugh	5184564900	Andrew.Millspaugh@sterlingenvironmental.com

43. SWPPP Preparer Address

24 Wade Rd
Latham, New York 12110

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

- 1) Click on the link below to download a blank certification form
- 2) The certified SWPPP preparer should sign this form
- 3) Upload the completed form

[Download SWPPP Preparer Certification Form](#)

44. Please upload the SWPPP Preparer Certification

NONE PROVIDED

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?
Yes

Erosion & Sediment Control Criteria

45. Has a construction sequence schedule for the planned management practices been prepared?
Yes

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.
Other: Freshwater Wetlands General Permit GP-0-25-003

57. Is this NOI for a change in owner/operator per Part I.G.?
No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?
No

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.
[Owner/Operator Certification Form](#)

61. Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

NONE PROVIDED

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?
Yes

Additional Project Information

62. Enter any additional pertinent project information in the text box below.

NONE PROVIDED

APPENDIX D

NOTICE OF TERMINATION (NOT)

APPENDIX E

USDA NRCS SOIL RESOURCES REPORT



United States
Department of
Agriculture

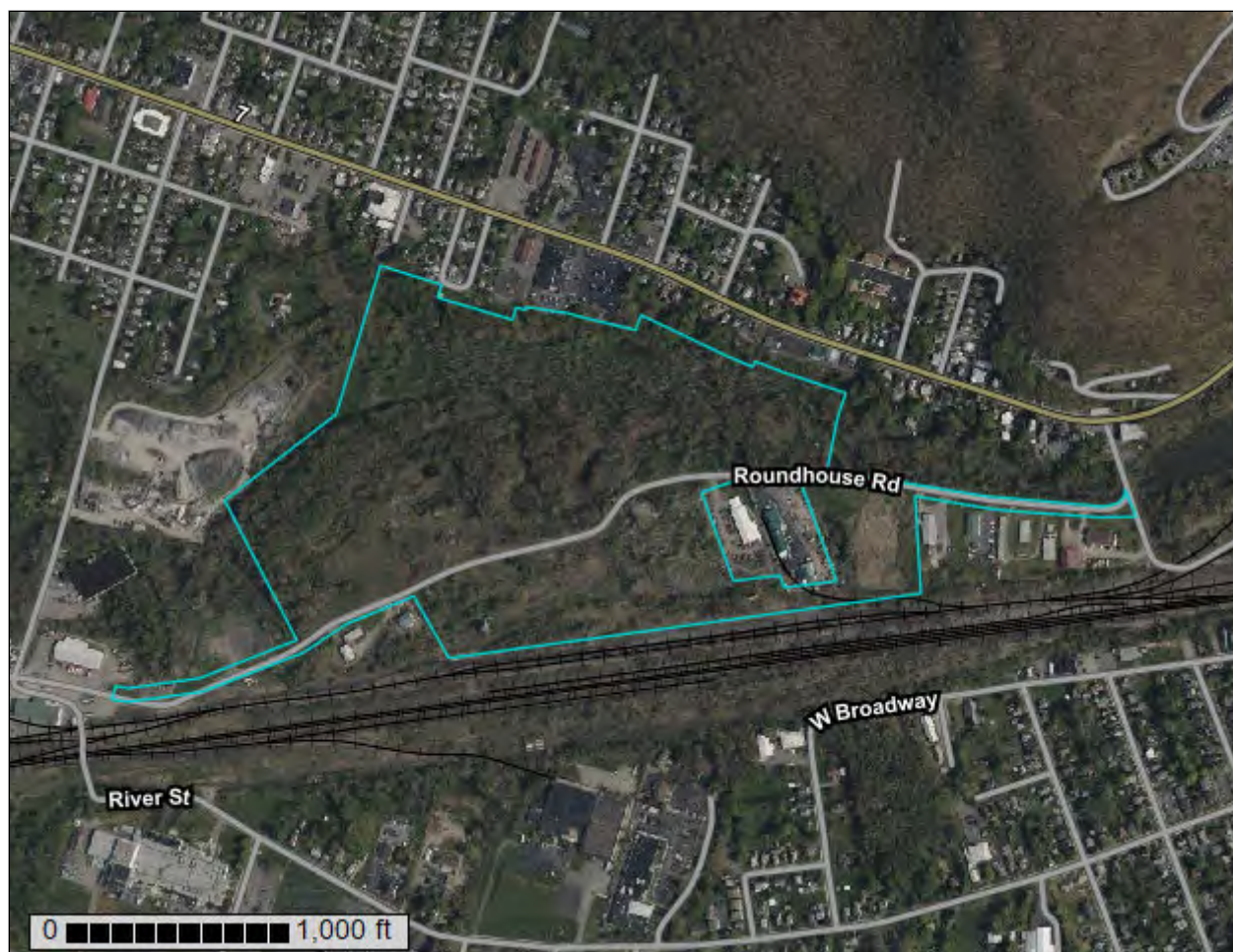
NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for **Otsego County, New York**

**Otsego County IDA - Oneonta
Railyards**



January 9, 2026

Preface

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

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

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

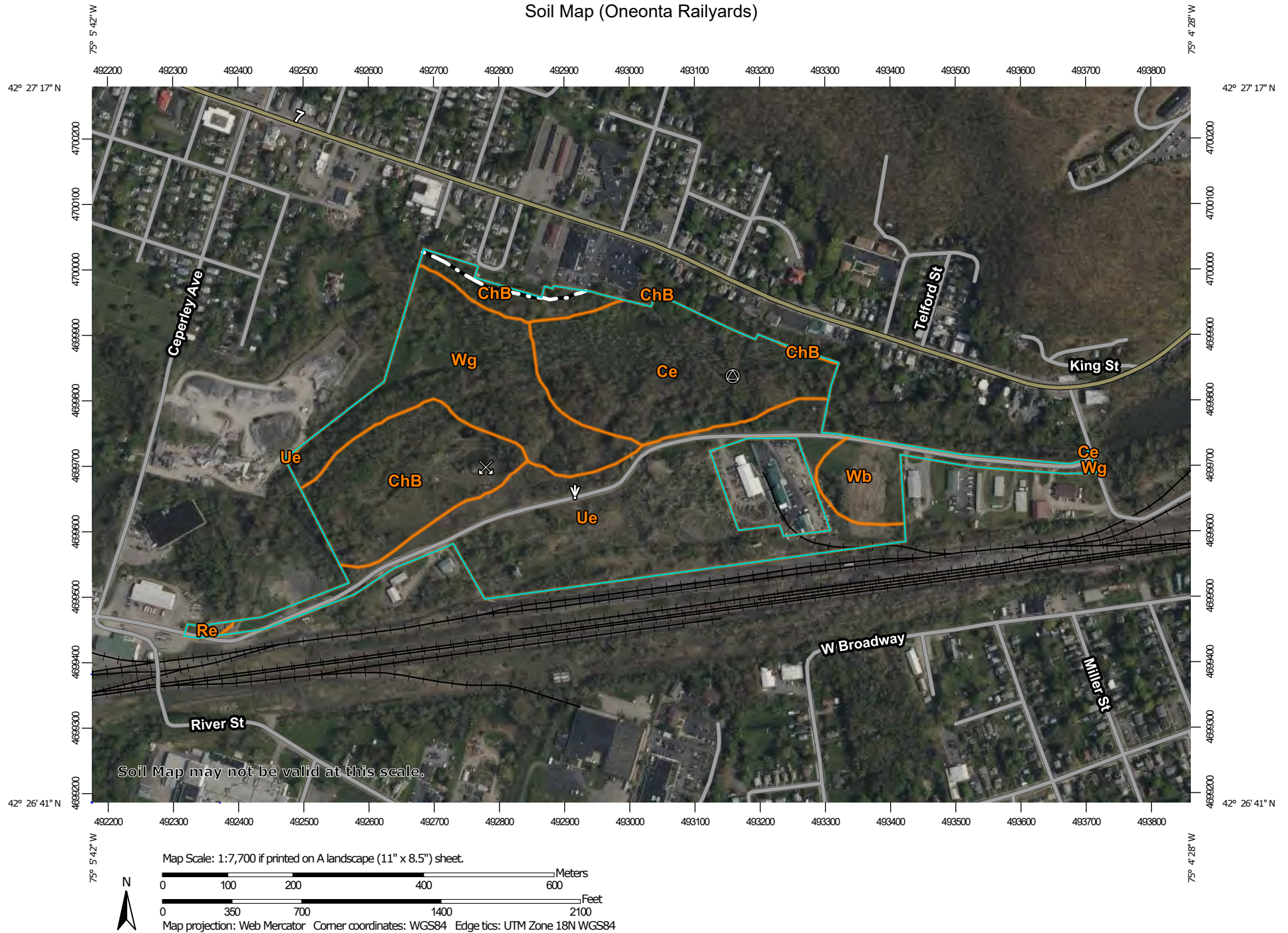
Custom Soil Resource Report

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

Soil Map

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

Custom Soil Resource Report Soil Map (Oneonta Railyards)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Otsego County, New York

Survey Area Data: Version 25, Sep 4, 2025

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

Date(s) aerial images were photographed: Apr 21, 2023—May 28, 2023

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 (Oneonta Railyards)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ce	Carlisle muck	17.0	21.6%
ChB	Chenango gravelly silt loam, 3 to 8 percent slopes	14.9	18.9%
Re	Red Hook silt loam	0.3	0.4%
Ue	Udorthents, smoothed	26.4	33.5%
Wb	Wakeville silt loam	4.9	6.2%
Wg	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	15.3	19.4%
Totals for Area of Interest		78.8	100.0%

Map Unit Descriptions (Oneonta Railyards)

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

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

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

Custom Soil Resource Report

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

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

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

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

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

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

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

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

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

Otsego County, New York

Ce—Carlisle muck

Map Unit Setting

National map unit symbol: 9w3w
Elevation: 970 to 1,750 feet
Mean annual precipitation: 38 to 46 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 105 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Carlisle and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Carlisle

Setting

Landform: Swamps, marshes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Deep organic material

Typical profile

H1 - 0 to 72 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 5.95 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F140XY011NY - Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Palms

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Unnamed soils

Percent of map unit: 5 percent

Alden

Percent of map unit: 3 percent

Landform: Depressions

Hydric soil rating: Yes

Edwards

Percent of map unit: 3 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

Chippewa

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Canandaigua

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Fonda

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Saprists

Percent of map unit: 2 percent

Landform: Swamps, marshes

Hydric soil rating: Yes

Aquents

Percent of map unit: 1 percent

Landform: Marshes

Hydric soil rating: Yes

ChB—Chenango gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9w40

Elevation: 970 to 1,750 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 105 to 145 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Valley trains, terraces

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 7 inches: gravelly silt loam

H2 - 7 to 27 inches: very gravelly loam

H3 - 27 to 72 inches: stratified extremely gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 2 percent

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A

Ecological site: F140XY021NY - Dry Outwash

Hydric soil rating: No

Minor Components

Castile

Percent of map unit: 3 percent

Hydric soil rating: No

Scio

Percent of map unit: 2 percent

Hydric soil rating: No

Valois

Percent of map unit: 2 percent

Hydric soil rating: No

Unadilla

Percent of map unit: 2 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 2 percent

Hydric soil rating: No

Deposit

Percent of map unit: 2 percent
Hydric soil rating: No

Trestle

Percent of map unit: 2 percent
Hydric soil rating: No

Re—Red Hook silt loam

Map Unit Setting

National map unit symbol: 9w6v
Elevation: 970 to 1,750 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 105 to 145 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Red hook and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Red Hook

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy glaciofluvial deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 31 inches: gravelly sandy loam
H3 - 31 to 72 inches: stratified very channery loam to gravelly loamy sand to gravelly silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Ecological site: F140XY022NY - Moist Outwash

Hydric soil rating: No

Minor Components

Castile

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent

Hydric soil rating: No

Atherton

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Chenango

Percent of map unit: 5 percent

Hydric soil rating: No

Ue—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9w7d

Elevation: 160 to 1,970 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 105 to 145 days

Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, smoothed and similar soils: 70 percent

Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Smoothed

Typical profile

H1 - 0 to 4 inches: gravelly sandy loam

H2 - 4 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 5.95 in/hr)

Depth to water table: About 36 to 72 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Minor Components

Chenango

Percent of map unit: 6 percent

Hydric soil rating: No

Valois

Percent of map unit: 6 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 6 percent

Hydric soil rating: Unranked

Hamplain

Percent of map unit: 6 percent

Hydric soil rating: No

Udorthents, refuse substratum

Percent of map unit: 6 percent

Hydric soil rating: Unranked

Wb—Wakeville silt loam

Map Unit Setting

National map unit symbol: 9w7x

Elevation: 970 to 1,750 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 105 to 145 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Wakeville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wakeville

Setting

Landform: Flood plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Linear

Parent material: Silty alluvium washed from areas of glacial drift derived mainly from shale, siltstone, and sandstone, with some limestone

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 29 inches: silt loam

H3 - 29 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Ecological site: F140XY014NY - Low Floodplain

Hydric soil rating: No

Minor Components

Otego

Percent of map unit: 5 percent

Hydric soil rating: No

Hamplain

Percent of map unit: 5 percent

Hydric soil rating: No

Wayland

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Unnamed soils

Percent of map unit: 5 percent

Fluvaquents

Percent of map unit: 5 percent

Landform: Flood plains

Hydric soil rating: Yes

Wg—Wayland soils complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2srgv
Elevation: 160 to 1,970 feet
Mean annual precipitation: 31 to 68 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wayland and similar soils: 60 percent
Wayland, very poorly drained, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D

Custom Soil Resource Report

Ecological site: F139XY009OH - Wet Floodplain

Hydric soil rating: Yes

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: mucky silt loam

Bg1 - 6 to 12 inches: silt loam

Bg2 - 12 to 18 inches: silt loam

C1 - 18 to 46 inches: silt loam

C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Frequent

Frequency of ponding: Frequent

Calcium carbonate, maximum content: 15 percent

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Ecological site: F139XY009OH - Wet Floodplain

Hydric soil rating: Yes

Minor Components

Wakeville

Percent of map unit: 10 percent

Landform: Flood plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Soil HSG Properties (ME) (Oneonta Railyards)

This report presents general information about hydrologic soil group (HSG) properties for the map unit components in the selected area. It shows map unit symbols and names, and components in each map unit, the percentage of each component in the map unit, horizon names and depth in inches, saturated hydraulic conductivity (Ksat), restriction, and water table depth ranges. The properties presented in this report are used to assign HSG based on criteria in Chapter 7 of the NRCS National Engineering Handbook (NEH), Part 630.

Soils are assigned to one of four hydrologic groups based on depth to water impermeable layer, depth to seasonal high water table (SHWT), and Ksat of the least transmissive layer above the water-impermeable layer.

Soils within a hydrologic group have similar runoff potential under similar storm and cover conditions. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen.

The four hydrologic soil groups are:

Custom Soil Resource Report

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.

Restriction

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The report indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. "Depth to top" is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Water Table

Water table refers to a saturated zone in the soil. The report indicates the portion of the year in which a water table is most likely to be a concern. The water table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. The kind of water table, apparent or perched, is given if a seasonal high water table exists in the soil. A water table is perched if free water is restricted from moving downward in the soil by a restrictive feature, in most cases a hardpan; a dry layer of soil underlies a wet layer. A water table is apparent if free water is present in all horizons of a soil, from its upper boundary to below 2 meters or to the depth of observation.

Report—Soil HSG Properties (ME) (Oneonta Railyards)

The properties presented in this report are used to assign HSG using Chapter 7 of the NRCS National Engineering Handbook (NEH), Part 630. It uses depth to water impermeable layer, depth to seasonal high water table (SHWT), and saturated hydraulic conductivity (Ksat) of the least transmissive layer above the water impermeable layer to determine HSG.

Custom Soil Resource Report

Soil HSG Properties (ME)—Otsego County, New York												
Map symbol and soil name	Pct. of map unit	Horizon Name	Depth (inches)	Ksat low (micro m/sec)	Ksat rv (micro m/sec)	Ksat high (micro m/sec)	Restriction depth Low (cm)	Restriction depth rv (cm)	Restriction depth high (cm)	Water table depth low (cm)	Water table depth rv (cm)	Water table depth high (cm)
Ce—Carlisle muck ChB—Chenango gravelly silt loam, 3 to 8 percent slopes												
Carlisle Chenango	75 85	H1	0-72 0-7	1.4000 4.0000	21.7000 23.0000	42.0000				0	0	30
ChB—Chenango gravelly silt loam, 3 to 8 percent slopes												
Chenango	85	H2	7-27	4.0000	23.0000	42.0000						
		H3	27-72	42.0000	92.0000	141.0000						
Re—Red Hook silt loam												
Red hook	80	H1	0-12	4.0000	9.0000	14.0000				15	31	46
		H2	12-31	4.0000	9.0000	14.0000						
		H3	31-72	1.4000	7.7000	14.0000						
Ue—Udorthents, smoothed												
Udorthents, smoothed	70	H1	0-4	0.4200	70.7100	141.0000				91	137	183
		H2	4-72	0.4200	21.2100	42.0000						
Wb—Wakeville silt loam												
Wakeville	75	H1	0-7	4.0000	9.0000	14.0000				15	31	46
		H2	7-29	4.0000	9.0000	14.0000						
		H3	29-72	4.0000	9.0000	14.0000						

Custom Soil Resource Report

Soil HSG Properties (ME)—Otsego County, New York												
Map symbol and soil name	Pct. of map unit	Horizon Name	Depth (inches)	Ksat low (micro m/sec)	Ksat rv (micro m/sec)	Ksat high (micro m/sec)	Restriction depth Low (cm)	Restriction depth rv (cm)	Restriction depth high (cm)	Water table depth low (cm)	Water table depth rv (cm)	Water table depth high (cm)
Wg—Wayland soils complex, 0 to 3 percent slopes, frequently flooded												
Wayland	60	A	0-6	1.0000	10.0000	99.9999				0	0	15
		Bg1	6-12	1.0000	10.0000	99.9999						
		Bg2	12-18	1.0000	10.0000	99.9999						
		C1	18-46	1.0000	10.0000	99.9999						
		C2	46-72	1.0000	10.0000	99.9999						
Wayland, very poorly drained	30	A	0-6	1.0000	10.0000	99.9999				0	0	0
		Bg1	6-12	1.0000	10.0000	99.9999						
		Bg2	12-18	1.0000	10.0000	99.9999						
		C1	18-46	1.0000	10.0000	99.9999						
		C2	46-72	1.0000	10.0000	99.9999						

Water Features (Oneonta Railyards)

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

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 four hydrologic soil groups are:

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.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. The kind of water table, apparent or perched, is given if a seasonal high water table exists in the soil. A water table is perched if free water is restricted from moving downward in the soil by a restrictive feature, in most cases a hardpan; there is a dry layer of soil underneath a wet layer. A water table is apparent if free water is present in all horizons from its upper boundary to below 2 meters or to the depth of observation. The water table kind listed is for the first major component in the map unit.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance

Custom Soil Resource Report

of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Custom Soil Resource Report

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>		<i>Ft</i>				
Ce—Carlisle muck											
Carlisle	A/D		Jan-Dec	0.0-1.0	6.0	Apparent	0.0-0.5	Very long (more than 30 days)	Frequent	—	None
ChB—Chenango gravelly silt loam, 3 to 8 percent slopes											
Chenango	A		Jan-Dec	—	—	—	—	—	None	—	None
Re—Red Hook silt loam											
Red hook	B/D		Jan-Dec	0.5-1.5	6.0	Apparent	—	—	None	—	None
Ue—Udorthents, smoothed											
Udorthents, smoothed	A		Jan-Dec	3.0-6.0	6.0	Apparent	—	—	None	—	None
Wb—Wakeville silt loam											
Wakeville	B/D		Jan-Dec	0.5-1.5	6.0	Apparent	—	—	None	Brief (2 to 7 days)	Occasional

Custom Soil Resource Report

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>		<i>Ft</i>				
Wg—Wayland soils complex, 0 to 3 percent slopes, frequently flooded											
Wayland	B/D		Jan-Jun	0.0-0.5	6.0	Apparent	—	—	None	Very brief (4 to 48 hours)	Frequent
			Jul-Sep	0.0-0.8	6.0	Apparent	—	—	None	—	
			Oct-Dec	0.0-0.5	6.0	Apparent	—	—	None	Very brief (4 to 48 hours)	Frequent
Wayland, very poorly drained	B/D		Jan-May	0.0	6.0	Apparent	0.0-0.5	Long (7 to 30 days)	Frequent	Very brief (4 to 48 hours)	Frequent
			Jun	0.0	6.0	Apparent	—	—	—	Very brief (4 to 48 hours)	Frequent
			Jul	0.0-0.5	6.0	Apparent	—	—	—	Very brief (4 to 48 hours)	Frequent
			Aug	0.0-0.5	6.0	Apparent	—	—	—	—	
			Sep	0.0	6.0	Apparent	—	—	—	—	
			Oct	0.0	6.0	Apparent	—	—	—	Very brief (4 to 48 hours)	Frequent
			Nov-Dec	0.0	6.0	Apparent	0.0-0.5	Long (7 to 30 days)	Frequent	Very brief (4 to 48 hours)	Frequent

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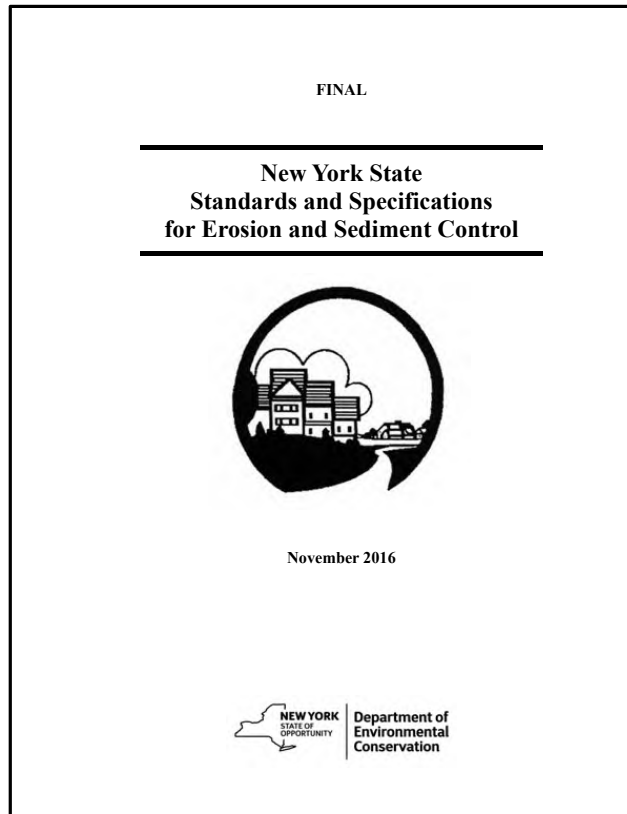
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APPENDIX F

NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS

Blue-Book “Lite”



Common Erosion and Sediment Control Standards For Code Municipal Enforcement Officers and Inspectors

For a Complete Copy of the Blue Book, please visit the NYS DEC website at:
<http://www.dec.ny.gov/chemical/29066.html>

New York State Department of Environmental Conservation



Blue Book “Lite”

Table of Contents

The *Blue Book “Lite”* is a compilation of the more commonly used erosion and sediment control practices from the unabridged *New York State Standards and Specifications for Erosion and Sediment Control*, the so-called “Blue Book.” These were compiled for training purposes because construction stormwater site inspectors need to be familiar with the standards and specifications from the “Blue Book,” and these would be more frequently encountered during inspections. The numbers in the Table (left column) represent the pages where the content (right column) would be found in the “Blue Book.” Go to <http://www.dec.ny.gov/chemical/29066.html> to view or download the full document on the New York State Department of Environmental Conservation Website.

1.1 - 1.3	Introduction (first 3 pages, i.e., in the above cited document)
1.4	Basic Principles of Erosion and Sediment Control (first of 2 pages)
2.13 - 2.22	Design Process for Erosion and Sediment Control Plans (10 pages)
2.25	Dust Control (1 page)
2.30 & 2.31	Stabilized Construction Access (2 pages)
3.2 & 3.3	Check Dam (2 pages)
3.23 & 3.24 & 3.26	Grassed Waterway (first 2 and fourth of 4 pages)
3.27	Lined Waterway (1 page)
4.22 & 4.23	Fiber Roll (2 pages)
4.39 & 4.40	Mulching (first 2 of 3 pages)
4.42 & 4.43	Permanent Construction Area Plantings (first 2 of 3 pages)
4.54 & 4.55	Stabilization with Sod (2 pages)
5.7 - 5.9	Compost Filter Sock (3 pages)
5.19	Sediment Basin (first of 23 pages)
5.46 - 5.48	Sediment Trap (first 3 of 8 pages)
5.54 & 5.56	Silt Fence (first and third of 3 pages)
5.57 - 5.59	Storm Drain Inlet Protection (first 3 of 6 pages)
5.63 & 5.64	Straw Bale Dike (2 pages)

SECTION 1—INTRODUCTION

Purpose & Scope

The purpose of this document is to provide minimum standards and specifications for meeting criteria set forth by the New York State Department of Environmental Conservation (NYS DEC) for stormwater discharges associated with construction activity. The standards and specifications provide criteria on minimizing erosion and sediment impacts from construction activity involving soil disturbance. They show how to use soil, water, plants, and products to protect the quality of our environment. These standards and specifications were developed in cooperation with the USDA Natural Resources Conservation Service, New York State Soil and Water Conservation Committee (NYSSWCC), NYS DEC and other state and local agencies for use by planners, design engineers, developers, contractors, landscape architects, property owners, and resource managers. Proper use of these standards will protect the waters of the state from sediment loads during runoff events.

Authority

These standards and specifications apply to lands within New York State where housing, industrial, institutional, recreational, or highway construction, and other land disturbances are occurring or imminent. They are statewide in scope and, in some cases, are somewhat generalized due to variations in climate, topography, geology, soils, and plant requirements. Feasible ways to minimize erosion and sedimentation are varied and complex. Following these standards and specifications is presumed to be in compliance with the SPDES general permit for construction activities. Alternative methods may be explored on a case specific basis and shall be discussed with NYS DEC regional staff.

The Environmental Protection Agency delegated stormwater responsibility for the National Pollutant Discharge Elimination System (NPDES) Permit to New York on October 1, 1992. New York State issued its first General Permit for stormwater discharges from construction activities on August 1, 1993. This permit was issued pursuant to Article 17, Titles 7, 8 and Article 70 of Environmental Conservation Law. At a minimum, an erosion and sediment control plan must be prepared for any construction activity that disturbs one or more acres and, in some special watersheds, 5,000 square feet.

Note: Performing activities within or adjacent to wetlands, streams and waterbodies may require permits from the New York State Department of Environmental Conservation (NYSDEC) pursuant to Article 15 (Protection of Waters), Article 24 (Freshwater Wetlands) and Article 25 (Tidal Wetlands) of the Environmental Conservation Law (ECL). Project owners should contact NYSDEC's Regional Division of Environmental Permits early in the site planning process to discuss the requirements for meeting permit issuance standards. Following the New York State Standards and Specifications for Erosion and Sediment Control may not ensure compliance with the above referenced sections of the ECL.

Erosion and Sediment Hazards Associated with Development

Many people may be adversely affected by development on relatively small areas of land. Uncontrolled erosion and sediment from these areas may cause considerable economic damage to individuals and society in general. Stream pollution and damages to public facilities and private homes are examples. Hazards associated with land disturbance include:

1. A large increase of soil exposed to erosion from wind and water;
2. Increased water runoff, soil movement, sediment accumulation and peak flows caused by:
 - a. Removal of plant cover and topsoil;
 - b. A decrease in the area of soil which can absorb water because of construction of streets, buildings, sidewalks, and parking lots;
 - c. Changes in drainage areas caused by grading operations, diversions, and streets;
 - d. Changes in volume and duration of water concentrations caused by altering steepness, distance, and surface roughness;
 - e. Soil compaction by heavy equipment, which can reduce the water intake of soils as much as 90 percent of the original rate; and,
 - f. Prolonged exposure of unprotected sites and disturbed areas to poor weather conditions.
3. Altering the groundwater regime that may adversely affect drainage systems, slope stability, survival of existing vegetation and establishment of new plants;

4. Exposing subsurface materials that are too rocky, too acid, or otherwise unfavorable for establishing plants;
5. Obstructing stream flow with new buildings, dikes, and landfills;
6. Improper timing and sequencing of construction and development activities; and,
7. Abandonment of sites before completion of construction.

How to Use This Book of Standards

This book of standards is organized in a manner to emphasize good planning and environmental site design at the onset of a project, followed by the design process noting the differences with different types of construction operations. Standards are presented in the order of proper site management in the beginning followed by erosion control, using runoff control and soil stabilization, and then sediment control practices.

The standards and specifications listed in this book have been developed over time to reduce the impact of soil loss from construction sites to receiving water bodies and adjacent properties. This book provides designers with details on how to plan a site for erosion and sediment control and how to select, size, and design specific practices to meet these resource protection objectives. The appendices at the end of this book contain additional information as guidance for site plan design and review, construction implementation, and site inspection. Review and inspection checklists are provided to aid planners and designers in meeting the standards requirements.

Section 2. Site Planning, Preparation, and Management

This section discusses the objectives of the erosion and sediment control plan. Site and off-site resources are identified and incorporated into a seven step design process. In addition, special considerations for different types of project development and their needs for erosion and sediment control planning are discussed. Typical site management standards are located in this section.

Section 3. Erosion Control Part 1- Runoff Control

This section provides a number of specific runoff control standards to meet a variety of project needs. Both temporary and permanent practices are presented to manage stormwater runoff to and within the site. The design of some of these practices can be completed by selecting dimensions based on tributary drainage areas; while others require more detailed design analysis

Section 4. Erosion Control Part 2- Soil Stabilization

This section presents detailed standards and specifications for soil stabilization, the second part of erosion control. It includes standards for grading activities, stabilization with seeding and mulching, use of stabilization matting, application of loose stabilization blankets and addresses special applications. Standards for lime and fertilizer application are also included. Bio-technical standards for live fascines, brush mattress and others, are presented for stabilizing steep slopes, road banks, and stream banks. Structural components are also included to aid where vegetative applications alone are inadequate to stabilize an area.

Section 5. Sediment Control

This section addresses the capture, retention and control of sediment within the boundaries of the disturbed construction site. Standards and specifications are included for perimeter controls, storm drain inlet protection, buffer filter strips, temporary sediment traps, tanks, tubes, bags and sediment basins and dewatering devices. A standard for polymer flocculation of dispersive soils is also included in this section.

Appendices

Appendix A. Revised Universal Soil Loss Equation

Soil types at construction sites play a predominant role in how the site should be constructed to control erosion. Knowledge of soil properties, particularly when soils are highly erosive, is essential. This appendix discusses soil properties and provides a method to calculate potential soil loss and provide a measure of reduction depending on slope, area, and protective cover.

Appendix B. Design Process for Erosion & Sediment Control Practices

This appendix demonstrates the design processes for a number of standard practices presented in this book. Specific site examples are used to show step by step procedures to complete detailed designs of the practices, including the appropriate construction specifications, maintenance, and inspection requirements. These processes will allow a designer to evaluate an existing condition or design to a specific level of performance higher than the minimum level presented in these standards.

Appendix C. Cost Analysis of Erosion & Sediment Control Practices

This appendix provides historical bid information for most of the practices contained in the manual. Sources included the NYS Department of Transportation, Monroe County SWCD, national periodicals, and erosion and sediment control cost data from other states. This information will assist a designer in preparing cost estimates for specific

erosion and sediment control plans.

Appendix D. Erosion Control for Small Residential Sites

Within New York State SPDES requirements, many small residential sites have to file for permit coverage. For those sites that require the preparation of a SWPPP which only requires erosion and sediment control plans, this appendix presents example plans for scenarios that can be used by the local authorities and site owners. Attaching the appropriate plan to the building permit assists the owner with compliance with the provisions of the permit.

Appendix E. Sample Checklist for Reviewing Erosion and Sediment Control Plans

This appendix includes a comprehensive checklist for use by all site plan reviewers (including planning board members, conservation board members, conservation district personnel, engineers, consultants, approval authorities, and others) when reviewing erosion and sediment control plans for completeness and proper management.

Appendix F. Construction Site Inspection & Maintenance Site Log Book

A proper site inspection, whether conducted by local authorities or project staff, is necessary to assess the site conditions and the practices implemented. This appendix includes a detailed checklist to assist inspectors in conducting a thorough evaluation of the site when judging the effectiveness of the erosion and sediment control measures.

Appendix G. Tree Species for New York State

This appendix identifies trees suitable for landscape and conservation plantings in New York State.

Appendix H. Glossary

This appendix presents a list of terms commonly used in site planning, design, erosion and sediment control, soil science, construction activities, streambank stabilization and corridor restoration, vegetation, engineering, hydrology and water quality.

Appendix I. Directories

This appendix presents listings of contact information and locations of federal, state, regional and local agencies, who may be involved with environmental and technical review of erosion and sediment control plans. These agencies may also provide data important to the development of stormwater management plans.

BASIC PRINCIPLES OF EROSION AND SEDIMENT CONTROL

The Erosion and Sedimentation Processes

The standards, specifications, and planning procedures presented in this document are intended to be utilized when development activities change the natural topography and vegetative cover of an area. Erosion and sediment control plans must be designed and constructed to minimize erosion and sediment problems associated with soil disturbance. To understand how erosion and sediment rates are increased requires an understanding of the processes themselves.

Soil erosion is the removal of soil by water, wind, ice, or gravity. This document deals primarily with the types of soil erosion caused by rainfall and surface runoff accelerated due to soil disturbance. Raindrops strike the soil surface at a velocity of approximately 25-30 feet per second and can cause splash erosion. Raindrop erosion causes particles of soil to be detached from the soil mass and splash into the air. After the soil particles are dislodged, they can be transported by surface runoff, which results when the soil becomes too saturated to absorb falling rain or when the rain falls at an intensity greater than the rate at which the water can enter the soil. Scouring of the exposed soil surface by runoff can cause further erosion. Runoff can become concentrated into rivulets or well-defined channels up to several inches deep. This advanced stage is called rill erosion. If rills and grooves remain unrepaired, they may develop into gullies when more concentrated runoff flows downslope.

Sediment deposition occurs when the rate of surface flow is insufficient for the transport of soil particles. The heavier particles, such as sand and gravel, transport less readily than the lighter silt and clay particles. Previously deposited sediment may be re-suspended by runoff from another storm and transported farther downslope. In this way, sediment is carried intermittently downstream from its upland point of origin.

Factors That Influence Erosion

The erosion potential of a site is determined by five factors; soil erodibility, vegetative cover, topography, climate, and season. Although the factors are interrelated as determinants of erosion potential, they are discussed separately for easy understanding.

1. **Soil Erodibility** – The vulnerability of a soil to erosion is known as erodibility. The soil structure, texture, and percentage of organic matter influence its erodibility. The most erodible soils generally contain high proportions of silt and very fine sand. The presence of clay (except for dispersive clay) or organic matter, tends to decrease soil erodibility. Clays are sticky and tend to bind soil particles together.

Organic matter helps to maintain stable soil structure (aggregates).

2. **Vegetative Cover** – Vegetation protects soil from the erosive forces of raindrop impact and runoff scour in several ways. Vegetation (top growth) shields the soil surface from raindrop impact while the root mass holds soil particles in place. Grass buffer strips can be used to filter sediment from the surface runoff. Grasses also slow the velocity of runoff, and help maintain the infiltration capacity of a soil. **The establishment and maintenance of vegetation are the most important factors in minimizing erosion during development.**
3. **Topography** – Slope length and steepness greatly influence both the volume and velocity of surface runoff. Long slopes deliver more runoff to the base of slopes and steep slopes increase runoff velocity. Both conditions enhance the potential for erosion to occur.
4. **Climate** – Climate also affects erosion potential in an area. Rainfall characteristics such as frequency, intensity, and duration directly influence the amount of runoff that is generated. As the frequency of rainfall increases, water has less chance to drain through the soil between storms. The soil will remain saturated for longer periods of time and stormwater runoff volume may be potentially greater. Therefore, erosion risks are high where rainfall is frequent, intense, or lengthy.
5. **Season** – Seasonal variation in temperature and rainfall defines periods of high erosion potential during the year. High erosion potential may exist in the spring when the surface soil first thaws and the ground underneath remains frozen. A low intensity rainfall may cause substantial erosion because the frozen subsoil prevents water infiltration. In addition, the erosion potential increases during the summer months due to more frequent, high intensity rainfall.

In summary, these six categories of construction activities highlight some of the variables that should be addressed in ESC plans.



Recognize that every construction project is unique. It may involve a totally new land disturbance or re-configuring and re-developing previous work. It could be located in an urban, suburban or rural area and may involve working with existing impervious areas. Regardless of these circumstances, the erosion and sediment control plan must be prepared to deal with all the potential adverse impacts that could occur to on-site and off-site water resources.

The majority of the standards contained in this book are applicable and adaptable to most of the construction activities previously discussed. However, some of the standards will not be applicable for all activities. The Erosion and Sediment Control Practices Matrix, Table 2.1, indicates which construction activities summarized above, where a particular standard practice is most likely suited for implementation.



Design Process for Erosion and Sediment Control Plans

The design of erosion and sediment control needs to be integrated with the stormwater plan for the project. Since every project is different in its topography, soils, geometry, hydrology, groundwater depths, and intended purpose, it is important to consider all of these attributes as well as post construction stormwater management as ESC plans are developed. A firm knowledge of the New York State Stormwater Management Design Manual criteria and requirements is helpful when integrating green infrastructure planning and practices for runoff reduction such as preservation of natural areas and soil restoration as well as the implementation of standard stormwater treatment practices such as infiltration basins and others. The following design steps detail the process and required elements for developing an ESC plan:

Step 1. Identify existing drainage patterns, drainage area boundaries, and slopes

Current drainage information for the project site, as well as off-site, needs to be obtained and verified through a site visit and survey. Field check drainage patterns, drainage area boundaries, vegetation and land use. Look for existing storm drains, culverts, underground utilities, and other drainage features. Evaluate flow onto, through, and off of the site for existing conditions. Examine the drainage areas to determine the size, slope, slope length, flow path, and, for areas with concentrated flow, the discharge. Decide if off-site flow can be diverted through or around the site. Using ESD principles and green infrastructure techniques, maintain or mimic the existing drainage patterns that give preference to sheet flow and small drainage areas.

Step 2. Identify areas of special concern

Areas of particular environmental concern, such as wetlands, streams, buffers, wooded areas, slopes 15 percent or steeper, and highly erodible and unique soils, need to be identified within both the project site and adjacent areas and shown on the plan. Other considerations include phosphorous impaired watershed areas; National Wetland Inventory; natural heritage areas; rare, threatened, and endangered species habitat; and impaired stream segments with a Total Maximum Daily Load for sediment. Areas of special concern must be verified with a site visit. Note any erosion, lack of vegetation, drainage problems, and other features that may be pertinent to the design. If an unmapped resource is found, contact the appropriate authority to determine additional regulatory requirements.

Step 3. Inventory site and layout development

The initial assessment of the layout needs to be based on the

existing features and proposed construction, minimizing the project's impervious area, acreage of soil disturbance and the encroachment on natural resources in accordance with the green infrastructure planning principles described in chapters 3 and 5 of the New York State Stormwater Management Design Manual and the environmental site design techniques noted earlier in this section. A site program plan has to provide space for the project water, sewer, stormwater facilities, parking, recreation areas and green space. A comprehensive approach to developing the erosion and sediment control and stormwater management plans will minimize changes from the natural hydrology. In addition, expansion of forest, wetland, and stream buffers needs to be considered for enhanced sediment control and improved water quality.

Step 4. Determine phasing requirements and design initial erosion and sediment controls

Depending on the scope of the project, phasing of sediment control and grading may be necessary (e.g., initial, interim, and final phase). Initial controls need to consider existing topography, drainage areas, ground cover, and access throughout the site. If possible, sediment controls installed during the initial phase should be designed to function for all phases of the project. The best designs incorporate careful phasing and sequencing into the overall erosion and sediment control plan and construction strategy. This is often evident in the project's contract construction schedule.

In designing erosion and sediment controls, consider possible locations for staging and stockpile areas and access or haul roads. If staging/stockpile areas are within the project's limit of disturbance, the proposed perimeter controls may suffice. However, if a soil stockpile creates a longer slope length or steeper slope, perimeter controls must be adjusted accordingly. Additionally, an access road may be required down a slope thereby concentrating flow that was previously sheet flow. Considerations must be made for handling this concentrated flow and stabilizing and maintaining the access road. The design and installation of erosion and sediment control practices must not impact areas identified for green infrastructure purposes. For example, compacting soils in areas designated for infiltration, or removing trees or other vegetation identified for stormwater management, is not permissible. However, infiltration basin locations may be used as sediment basins/traps where partial excavation is performed to a minimum limit of 18" above the bottom of the infiltration basin.

Table 2.1 identifies the erosion and sediment control practices contained in this book of standards and lists the primary purpose of each practice along with design criteria and associated practices that might be found used in combination with the listed practice. For example, rock outlet protection, sediment trap, and storm drain inlet are listed as associated practices for the earth dike practice.

Each practice application needs to be evaluated on a case-by-case basis for its associated practices due to the changing characteristics of the project.

The sequencing of a site must take into account the time and access needed to install the initial sediment controls. If earth dikes and a sediment basin are designed as initial controls, these must be completed before beginning other grading. This could require stockpiling the excavated material from the basin rather than using it immediately for fill on the site. Sequencing is also important to ensure that the basin is completed and stabilized prior to the construction of the berms. Additional sediment controls may be required if extensive clearing is needed to reach the proposed basin location.

Step 5. Identify interim drainage patterns, drainage areas, slopes; and design interim controls

Interim conditions are often overlooked yet are important considerations for erosion and sediment control design. Typically, evaluating interim conditions is more difficult than evaluating initial phase or final phase. Project plans always include existing and proposed site conditions. Unlike the initial or final phases, interim conditions are not definitive; they represent the in-between. Due to the shifts in drainage areas and changes in slope and exposure of sub-surface soils, drainage patterns and discharges for an interim phase may be entirely different from initial or final phase, and therefore the erosion and sediment controls may also need to be different. To design interim controls, apply the same procedures used to design initial phase sediment controls. Initial and final phase controls may need to be adjusted or modified to better correlate with the interim phase controls. Depending on the scope of the project, an interim phase erosion and sediment control plan may not be required.

Step 6. Identify proposed drainage patterns, drainage areas, slopes; and design final controls

Follow the same procedures used to design the initial phase erosion and sediment controls. Initial and interim phase controls may need to be adjusted or modified to better correlate with the final phase plans. As construction progresses, consider impacts to staging and stockpile areas and access roads. Also, consideration needs to be given to how the controls implemented for the final phase will be removed.

Step 7. Prepare the Construction Sequence

The sequence of construction describes how the plan will progress. It directs the installation and removal of the different erosion and sediment controls shown on the plan. Sequencing of the project needs to be considered throughout the entire design process. When writing a

sequence of construction, consider whether additional instructions will be helpful to ensure that the controls function as intended. Different types of construction activities will require different sequences for construction. If the disturbed area in any one particular phase of the construction work exceeds 5 acres at any one time, additional control efforts will be required and written acceptance of this plan from the Regional NYSDEC office or MS4 (for projects subject to a traditional land use control MS4) must be received and incorporated in the project documents.

Writing a sequence of construction requires the visualizing and the progression and connection of various site development activities (e.g. clearing, grubbing, grading, utility installation, maintenance of traffic, drainage systems, building systems, stream diversions, erosion and sediment control, stormwater management, etc.) to ensure that the erosion and sediment control practices will be installed and removed at the proper times, and function properly. Depending on the project's complexity, the sequence can be relatively simple or it can involve many small steps. Multiple steps can occur concurrently, while others must be sequential. Large projects that have been segmented into phases should have a separate sequence for each phase. Large projects often follow a prescribed critical path for the construction work. These paths are helpful in developing narratives to explain to contractors and inspectors why a certain erosion and sediment control practice was selected or why following the sequence is imperative to the proper progression of the construction and erosion control effectiveness.

The sequence of construction, at a minimum, must include the following:

- Schedule a pre-construction meeting with appropriate permitting authority
- Delineate resources to protect
- Establish staging area, construction entrance, topsoil stockpile, and concrete truck washout areas
- Protect post-construction practice areas during construction to preserve native soil permeability, install SMP's only after site is stabilized
- Clearing and grubbing as necessary for the installation of perimeter controls
- Establish method of spoils disposal (on-site or off)
- Construction and stabilization of perimeter controls
- Install initial runoff controls and stabilization
- Remaining clearing and grubbing within perimeter
- Road grading
- Grading for the remainder of the site or phase
- Utility installation and connections
- Construction of buildings, roads, and other construction
- Installation of permanent stormwater management measures
- Conduct soil restoration

- Final fine grading, landscaping and stabilization
- Removal of temporary erosion and sediment controls
- Restore and stabilize any disturbed areas remaining upon removal of temporary ESC measures

Most sequences of construction will be more detailed, especially for plans requiring stream diversion, ground water management, or the coordination between the removal of controls in one phase and the installation of different controls in a subsequent phase. If traffic control is a factor, then the erosion and sediment control plan should coordinate with the maintenance of the traffic plan. For subdivision projects, the sequence of construction must identify lots having sediment control practices that preclude the lot from being developed until the contributing drainage area has been final graded and stabilized. Each project is unique and the level of detail in the sequence of construction needs to be tailored to each specific project.

The Erosion and Sediment Control Practices Matrix was prepared as a quick reference for designers and reviewers to obtain major pertinent information about a practice. The matrix is alphabetical and is sectioned by each major control group in this book of standards. Each practice has listed its primary use on the site, the important site characteristics and criteria for application, the type of construction activity where it is best applied, and other associated practices that are often used with it to complement its performance.

The Construction Activity Key, shown below, assigns a number or number and letter to indicate a specific construction activity. Those symbols are listed in the Construction Activity column of the matrix to indicate the applicability of a practice to a particular type of construction. This information is presented as a guide for use and is not to be considered as limiting any particular practice to the activity listed.

Erosion and Sediment Control Practice Matrix Construction Activity Key

1. Linear Projects
 - a. Highway and Road Construction
 - b. Gas and Oil Pipeline, Water Supply Line, and Sanitary Sewer Line Construction
 - c. Wind Farm and Power Line Construction
 - d. Stream Restoration and Streambank Stabilization
 - e. Shoreline Stabilization
 - f. Flood Dike Systems
2. Residential Projects
 - a. Small scale
 - b. Large scale
3. Commercial/Industrial Development Projects
 - a. Small scale
 - b. Large scale
4. Institutional Construction Projects
5. Water Resource Projects
6. Large Overlot Grading Projects

Table 2.1
Erosion and Sediment Control Practices Matrix
Site Planning, Preparation and Management

Practice	Primary Purpose	Site Characteristics	Construction Activity*	Associated Practices
Concrete Truck Washout	Collect Waste	Concrete construction	All	Stabilized Access
Construction Road Stabilization	Control sediment	All construction routes	All	Dust control, temporary swales, temporary or permanent seeding
Dust Control	Stabilize soil	Access points, construction roads	1a,1b,2,3,4,6	Stabilized construction access, construction road stabilization
Protecting Vegetation During Construction	Preserve existing vegetation	Site specific	All	Recreational area improvement
Site Pollution Prevention	Manage waste	Site logistics	All	Those in this section
Stabilized Construction Access	Control sediment	Access points	All	Filter fence, construction road stabilization
Temporary Access Waterway Crossing	Prevent sediment	Streams and banks	All	Construction road stabilization, streambank protection
Winter Stabilization	Soil stabilization	Disturbed areas	All	Seeding, mulching, buffer strips
* See Erosion and Sediment Control Practice Matrix Construction Activity Key on page 2.15				

Table 2.2
Erosion and Sediment Control Practices Matrix
Erosion Control Part 1 - Runoff Control (See Section 3)

<u>Practice</u>	<u>Primary Purpose</u>	<u>Site Characteristics</u>	<u>Construction Activity</u>	<u>Associated Practices</u>
Check Dam	Control runoff	Drainage area $\leq$ 2 Ac.	All	Lined waterway, rock outlet protection
Construction Ditch	Divert runoff	Drainage area $\leq$ 10 Ac.	All	Sediment traps, storm drain inlet protection, sediment basin, level spreader
Dewatering Sump Pit	Control sediment	Site specific	All	Sediment trap, sediment basin
Diversion	Intercept and divert runoff	Minimum 10 year design Q	1a,2b,3b,4,5,6	Permanent seeding, rock outlet protection, flow spreader, sediment basin
Earth Dike	Control runoff	Drainage area $\leq$ 10 ac.	1a,1b,1c,2,3,4,5,6,	Sediment trap, rock outlet protection, sediment basin
Flow Diffuser	Control runoff	Minimum design Q = 10 yr. 24 hr.	1a,1b,1c,5,6	Seeding, sodding, land grading, diversion
Flow Spreader	Control runoff	Minimum design Q = 10 yr. 24 hr.	1a,1b,1c,5,6	Diversion, grassed waterway, construction ditch
Grade Stabilization Structure	Prevent erosion	Minimum design Q = 10 yr. 24 hr.	1d,1e,5,6	Permanent seeding, rock slope protection, structural stream-bank protection
Grassed Waterway	Convey runoff	Minimum 10 year design Q	2a,3b,5,6	Rock outlet protection, vegetated waterways, sediment basin, flow spreader
Lined Waterway (rock materials)	Convey runoff	Minimum design Q = 10 yr. 24 hr.	1a-c,2,3,4,5,6	Rock outlet protection, subsurface drain
Paved Flume	Convey runoff	Minimum design Q = 10 yr. 24 hr.	1a,3,4,6	Rock outlet protection
Perimeter Dike/Swale	Divert runoff	Drainage area $\leq$ 5 Ac.	1a-c,2a,3a,5,6	Sediment trap, flow spreader, check dam, temporary seeding
Pipe Slope Drain	Convey runoff down slope	Drainage area $\leq$ 3.5 Ac.	1a,1d,5,6	Rock outlet protection
Rock Outlet Protection	Prevent erosion	Rock varies with pipe discharge	All	Diversion, grassed waterway, sediment basin, sediment traps
Storm Drain Diversion	Divert runoff	On-site drainage area > 50% total drainage area	1a,2,3,4,6	Sediment trap/basin
Subsurface Drain	Intercept and convey drainage water	1" Drainage Coefficient	1a,2,3,4,6	Rock outlet protection, land grading, retaining wall
Water Bars	Divert runoff	Slope areas < 100 ft. width	1b,1c,5	Rock outlet protection, flow spreader
* See Erosion and Sediment Control Practice Matrix Construction Activity Key on page 2.15				

Table 2.3
Erosion and Sediment Control Practices Matrix
Erosion Control Part 2 - Soil Stabilization (See Section 4)

<u>Practice</u>	<u>Primary Purpose</u>	<u>Site Characteristics</u>	<u>Construction Activity</u>	<u>Associated Practices</u>
Anchored Stabilization Matting	Stabilize soil	Site specific	All, steep slopes	Seeding, topsoiling
Armored Slope and Channel Stabilization	Prevent erosion	Minimum design Q= 10 yr. 24 hr., velocity > 6 feet per second	1d,1e,1f	Live facines, live stakes, retaining walls
Branch Packing	Stabilize soil	Maximum 1.5:1 slopes	1d,5,6	Diversion, subsurface drain, temporary swale
Brush Layer	Stabilize soil	Site specific slopes	1d,1e,3,4,5,6	Rock slope protection, armored streambank protection
Brush Mattress	Stabilize soil	Stream bank slopes	1a, 6	Rock slope protection
Establishing Trees, Shrubs, and Vines	Stabilize soil	Site specific	All	Topsoiling, seeding, fertilizer application
Fertilizer Application	Promote seeding	Site specific	All	Seeding, mulching, topsoiling, land grading
Fiber Roll	Provide growth medium	Site specific	1d,1e,5	Live facines, live stakes
Land Grading	Stabilize soil	Site specific shaping	All	Topsoiling, subsurface drain, seeding
Lime Application	Stabilize soil	Site specific	All	Topsoiling, seeding
Live Crib Wall	Stabilize soil	Site specific	All	Retaining walls
Live Fascines	Stabilize soil	Max. 1.5:1 slope	1a,1d,1e,5,6	Diversion, seeding
Live Stakes	Stabilize soil	Site specific	1d,1e,4,5,6	Armored streambank protection, fiber roll
Loose Stabilization Blankets	Stabilize soil	Site Specific	All	Permanent and temporary seeding, Recreation area
Mulching	Stabilize soil	Site specific	All	Permanent and temporary seeding, Recreation area
Permanent Seeding for Construction Areas	Stabilize soil	Site specific	All	Surface roughening, topsoiling, sodding
Recreation Area Seeding	Protect areas/soils	Site specific	All	Permanent seeding, mulching, topsoiling
Retaining Walls	Stabilize soil	Site specific constraints	1a,2,3,4,6	Rock slope protection, permanent seeding, subsurface drain
* See Erosion and Sediment Control Practice Matrix Construction Activity Key on page 2.15				

Table 2.3 (Continued)
Erosion and Sediment Control Practices Matrix
Erosion Control Part 2 - Soil Stabilization (See Section 4)

<u>Practice</u>	<u>Primary Purpose</u>	<u>Site Characteristics</u>	<u>Construction Activity</u>	<u>Associated Practices</u>
Soil Restoration	Stabilize soil, promote infiltration	Compacted areas	All	Topsoiling, seeding
Stabilization of Sand and Gravel Pits	Stabilize soil	Site specific	1a,1c,3,4,5,6	Topsoiling, seeding
Stabilization With Sod	Stabilize soil	Need quick cover, aesthetics	2,3,4	Inlet protection, top soiling, permanent seeding
Surface Roughening	Stabilize soil	Construction slopes	All	Temporary seeding, permanent seeding, mulching
Temporary Seeding for Construction Areas	Stabilize soil	Site specific	All	Surface roughening, top soiling, sodding
Topsoiling and Amendments	Enhance growing conditions	Poor site soil characteristics	All	Surface roughening, temporary seeding, permanent seeding
Tree Revetment	Stabilize soil	Site specific	1d,1e	Armored streambank protection
Vegetated Gabions	Stabilize soil	Site specific	1a-e,2,3,4,5,6	Live cribwall, retaining wall
Vegetating Sand Dunes and Tidal Banks	Stabilize sand dunes	Sand dune reinforcement	1e, 2,3,4,5,6	Sediment trap, rock outlet, storm drain inlet protection
Vegetating Waterways	Stabilize soil	Site specific	2a,3b,5,6	Grassed waterways, permanent seeding
* See Erosion and Sediment Control Practice Matrix Construction Activity Key on page 2.15				

Table 2.4
Erosion and Sediment Control Practices Matrix
Sediment Control (See Section 5)

<u>Practice</u>	<u>Primary Purpose</u>	<u>Site Characteristics</u>	<u>Construction Activity</u>	<u>Associated Practices</u>
Buffer Filter Strip	Filter sediment	Turbid sheet flow	All	Storm drain inlets, water conveyances
Compost Filter Sock	Filter sediment	Turbid sheet flow	All	Storm drain inlets, water conveyances
Dewatering Device	Discharge clean water	Turbidity in sediment basin	All	Sediment basins, sediment traps
Geotextile Filter Bag	Filter sediment	Small areas, pumped	All	Subsurface drain, dewatering sump pit, buffer filter strip
Portable Sediment Tank	Retain sediment	16 times pump discharge	2a,3a,4	Sediment trap, sediment basin
Rock Dam	Trap sediment	Drainage area $\leq$ 50 Ac.	1a,1b,1c,2b3b,4,5,6	Rock outlet protection
Sediment Basin	Capture sediment	Drainage area $\leq$ 50 Ac.	1a,2b,3b,4,5,6	Rock outlet protection, temporary seeding
Sediment Dike	Capture sediment	Small disturbed areas	2a,2b,3a	Buffer filter strip, filter bag
Sediment Trap - Compost Sock	Trap sediment	Drainage area $\leq$ 5 Ac.	All	Seeding, sodding
Sediment Trap - Pipe Outlet	Trap sediment	Drainage area $\leq$ 5 Ac.	All	Sediment basin, rock outlet protection
Sediment Trap - Stone Outlet	Trap sediment	Drainage area $\leq$ 5 Ac.	All	Rock outlet protection
Silt Fence	Control sediment	2:1 slopes maximum, 50 ft. spacing	All	Straw bale dike
Storm Drain Inlet Protection - Excavated	Trap sediment	Drainage area $\leq$ 1 Ac.	1a,2,3,4,6	Sediment traps, storm drain diversion
Storm Drain Inlet Protection - Fabric	Trap sediment	Drainage area $\leq$ 1 Ac.	1a,2,3,4,6	Sediment traps, storm drain diversion
Storm Drain Inlet Protection - Inserts	Trap sediment	Drainage area $\leq$ 1 Ac.	1a,2,3,4,6	Sediment traps, storm drain diversion
Storm Drain Inlet Protection - Paved Surface	Trap sediment	Drainage area $\leq$ 1 Ac.	1a	Sediment traps, storm drain diversion
Storm Drain Inlet Protection - Stone and Block	Trap sediment	Drainage area $\leq$ 1 Ac.	2,3,4,6	Sediment traps, storm drain diversion
Straw Bale Dike	Control sediment	2:1 slopes maximum, 25 ft. spacing	All	Silt fence
* See Erosion and Sediment Control Practice Matrix Construction Activity Key on page 2.15				

Table 2.4 (Continued)
Erosion and Sediment Control Practices Matrix
Sediment Control (See Section 5)

<u>Practice</u>	<u>Primary Purpose</u>	<u>Site Characteristics</u>	<u>Construction Activity</u>	<u>Associated Practices</u>
Turbidity Curtain	Control sediment	Calm water	1b,1d,1e,1f,5	Sediment traps, basins, seeding, mulching
Water structures/barriers	Control sediment	Large area for placement	1d,1e,1f,5	Armored streambank protection, retaining walls
* See Erosion and Sediment Control Practice Matrix Construction Activity Key on page 2.15				

Table 2.5
Erosion Risk

Soil Type and Parameters	<u>Slope %</u>		
	0-5	5-15	>15
Gravelly, $K < 0.35$ Non-cohesive PI= NP, Fines: 0-10%	Low	Low	Med
Sandy, $K > 0.35$ PI= NP, Fines: 0-30%	Med	High	High
Silty, $K > 0.35$ PI= NP, Fines: 50+%	Med	High	Very High
Clay, $K < 0.35$ Cohesive PI=7+, Fines: 50+%	Low	Med	High
Dispersive Clay Soils	High	Very High	Extreme
Note: Erosion risk is the probability that the combination of parameters presented will generate a significant amount of soil loss. There are other factors that contribute to erosion, such as slope length and rainfall intensity and duration. Also, even though there may be low erosion risk, there can be a high risk to water quality when the soil disturbance is close to water resources. Each site needs to be evaluated on its own merit to determine actual soil loss. Methodology for this analysis is presented in Appendix A.			

STANDARD AND SPECIFICATIONS FOR DUST CONTROL



dust control (see Section 3).

Mulch (including gravel mulch) – Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.

Spray adhesives – These are products generally composed of polymers in a liquid or solid form that are mixed with water to form an emulsion that is sprayed on the soil surface with typical hydroseeding equipment. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations for the specific soils on the site. In no case should the application of these adhesives be made on wet soils or if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators and others working with the material.

Definition & Scope

The control of dust resulting from land-disturbing activities, to prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems.

Conditions Where Practice Applies

On construction roads, access points, and other disturbed areas subject to surface dust movement and dust blowing where off-site damage may occur if dust is not controlled.

Design Criteria

Construction operations should be scheduled to minimize the amount of area disturbed at one time. Buffer areas of vegetation should be left where practical. Temporary or permanent stabilization measures shall be installed. No specific design criteria is given; see construction specifications below for common methods of dust control.

Water quality must be considered when materials are selected for dust control. Where there is a potential for the material to wash off to a stream, ingredient information must be provided to the NYSDEC.

No polymer application shall take place without written approval from the NYSDEC.

Construction Specifications

A. Non-driving Areas – These areas use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.

Vegetative Cover – For disturbed areas not subject to traffic, vegetation provides the most practical method of

B. Driving Areas – These areas utilize water, polymer emulsions, and barriers to prevent dust movement from the traffic surface into the air.

Sprinkling – The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access route to provide short term limited dust control.

Polymer Additives – These polymers are mixed with water and applied to the driving surface by a water truck with a gravity feed drip bar, spray bar or automated distributor truck. The mixing ratios and application rates will be in accordance with the manufacturer's recommendations. Incorporation of the emulsion into the soil will be done to the appropriate depth based on expected traffic. Compaction after incorporation will be by vibratory roller to a minimum of 95%. The prepared surface shall be moist and no application of the polymer will be made if there is a probability of precipitation within 48 hours of its proposed use. Material Safety Data Sheets will be provided to all applicators working with the material.

Barriers – Woven geo-textiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.

Windbreak – A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

Maintenance

Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS



Definition & Scope

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction access shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 2.1 on page 2.31 for details.

Aggregate Size: Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Geotextile: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Geotextile: The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be

inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

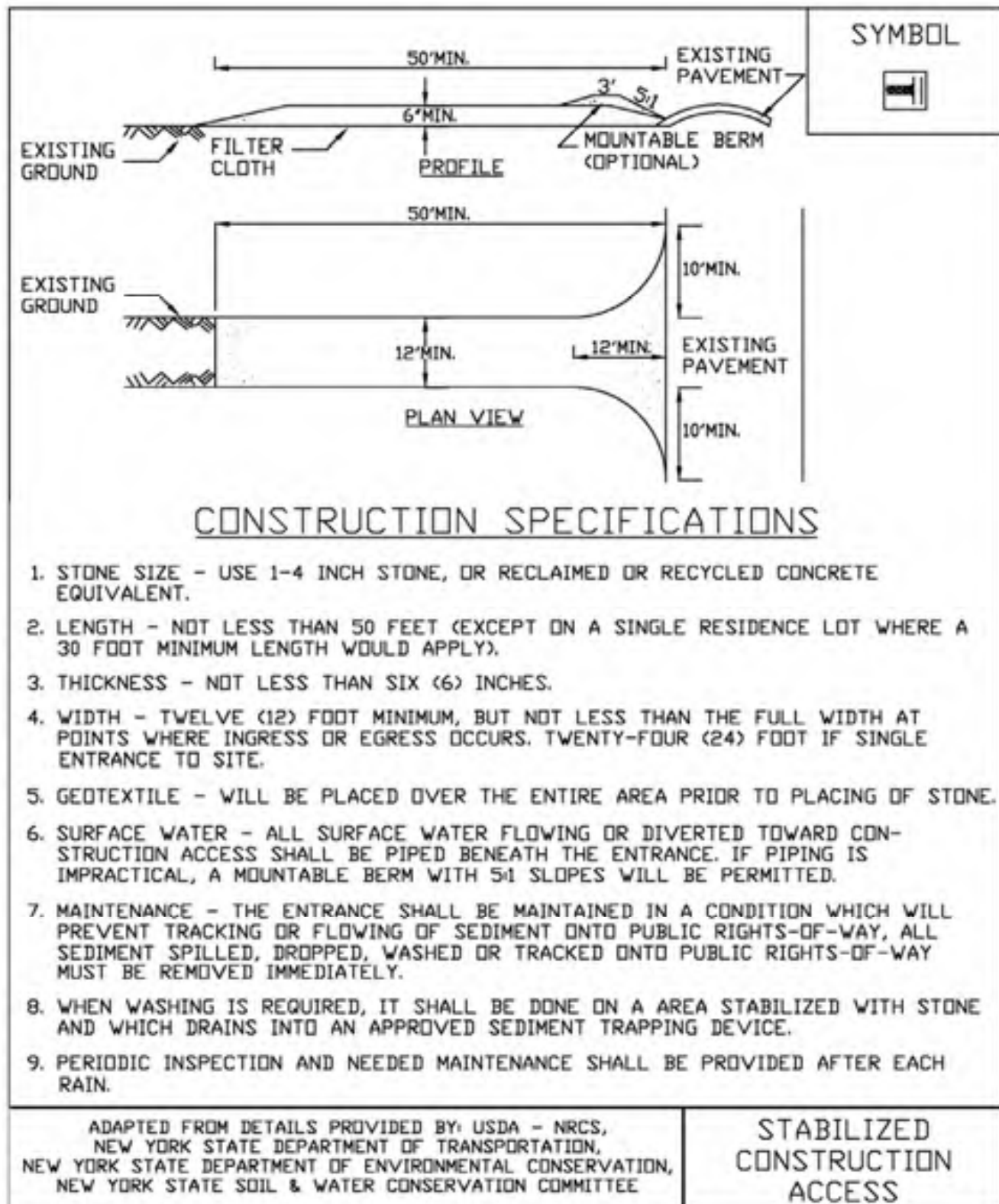
Fabric Properties ³	Light Duty ¹ Roads Grade Sub-grade	Heavy Duty ² Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	-
¹ Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.			
² Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.			
³ Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.			

Maintenance

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 2.1
Stabilized Construction Access



STANDARD AND SPECIFICATIONS FOR CHECK DAM



Definition & Scope

Small barriers or dams constructed of stone, bagged sand or gravel, or other durable materials across a drainageway to reduce erosion in a drainage channel by reducing the velocity of flow in the channel.

Conditions Where Practice Applies

This practice is used as a **temporary** and, in some cases, a **permanent** measure to limit erosion by reducing velocities in open channels that are degrading or subject to erosion or where permanent stabilization is impractical due to short period of usefulness and time constraints of construction.

Design Criteria

Drainage Area: Maximum drainage area above the check dam shall not exceed two (2) acres.

Height: Not greater than 2 feet. Center shall be maintained 9 inches lower than abutments at natural ground elevation.

Side Slopes: Shall be 2:1 or flatter.

Spacing: The check dams shall be spaced as necessary in the channel so that the crest of the downstream dam is at the elevation of the toe of the upstream dam. This spacing is equal to the height of the check dam divided by the channel slope.

Therefore:

$$S = \frac{h}{s}$$

Where:

S = spacing interval (ft.)
h = height of check dam (ft.)
s = channel slope (ft./ft.)

Example:

For a channel with
and 2 ft. high stone
they are spaced as

$$S = \frac{2 \text{ ft}}{0.04 \frac{\text{ft}}{\text{ft}}} = 50 \text{ ft}$$

a 4% slope
check dams,
follows:

For stone check dams: Use a well graded stone matrix 2 to 9 inches in size (NYS – DOT Light Stone Fill meets these requirements).

The overflow of the check dams will be stabilized to resist erosion that might be caused by the check dam. See Figure 3.1 on page 3.3 for details.

Check dams should be anchored in the channel by a cutoff trench 1.5 ft. wide and 0.5 ft. deep and lined with filter fabric to prevent soil migration.

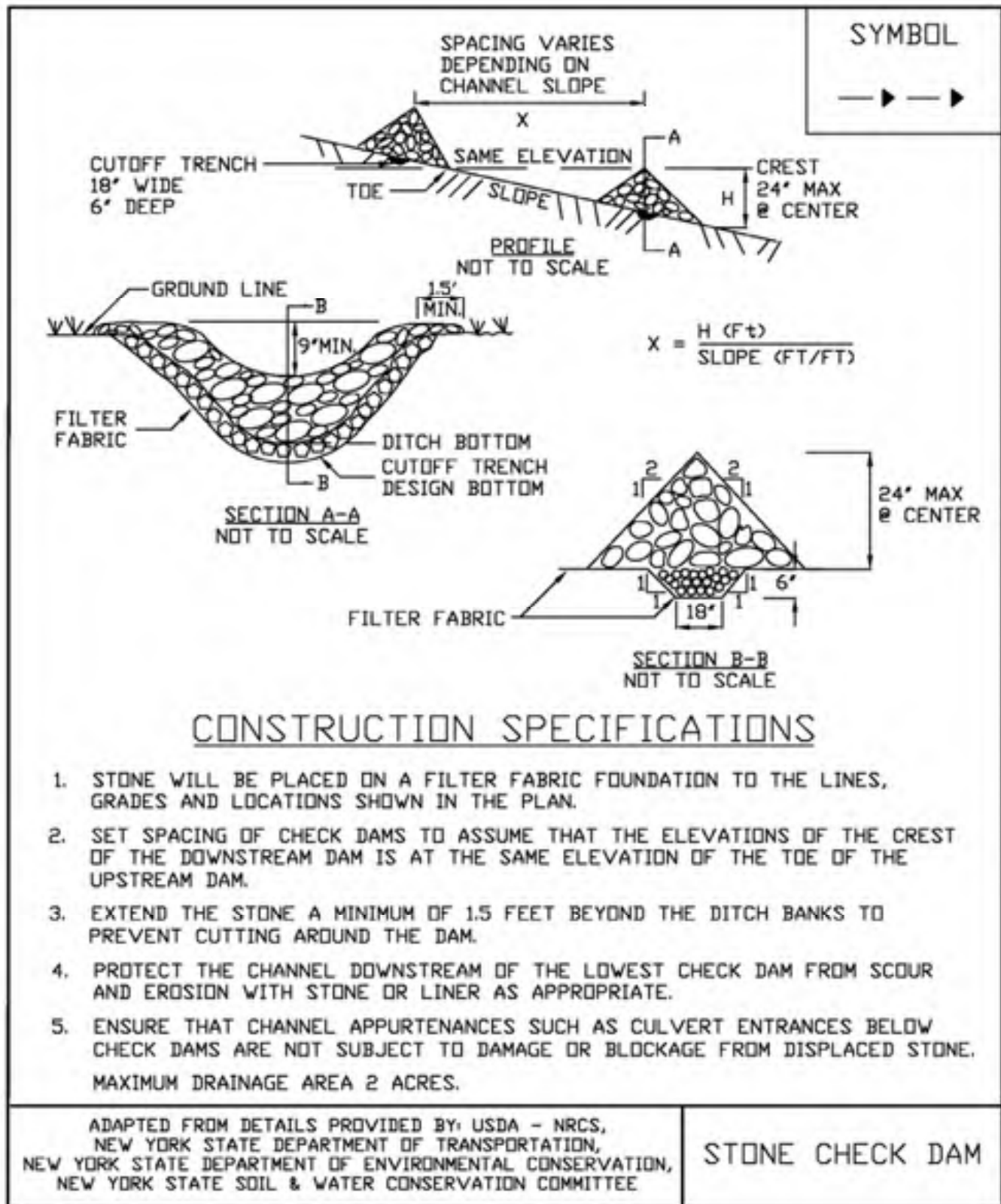
For filter sock or fiber roll check dams: The check dams will be anchored by staking the dam to the earth contact surface. The dam will extend to the top of the bank. The check dam will have a splash apron of NYS DOT #2 crushed stone extending a minimum 3 feet downstream from the dam and 1 foot up the sides of the channel. The compost and materials for a filter sock check dam shall meet the requirements shown in the standard for Compost Filter Sock on page 5.7.

Maintenance

The check dams should be inspected after each runoff event. Correct all damage immediately. If significant erosion has occurred between structures, a liner of stone or other suitable material should be installed in that portion of the channel or additional check dams added.

Remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam.

Figure 3.1
Stone Check Dam Detail



STANDARD AND SPECIFICATIONS FOR GRASSED WATERWAY



Definition & Scope

A natural or **permanent** man-made channel of parabolic or trapezoidal cross-section that is below adjacent ground level and is stabilized by suitable vegetation. The flow channel is normally wide and shallow and conveys the runoff down the slope without causing damage by erosion.

Conditions Where Practice Applies

Grass waterways are used where added vegetative protection is needed to control erosion resulting from concentrated runoff.

Design Criteria

Capacity

The minimum capacity shall be that required to confine the peak rate of runoff expected from a 10-year 24 hour frequency rainfall event or a higher frequency corresponding to the hazard involved. This requirement for confinement may be waived on slopes of less than one (1) percent where out-of-bank flow will not cause erosion or property damage.

Peak rates of runoff values used in determining the capacity requirements shall be computed by appropriate methods. Where there is base flow, it shall be handled by a stone center, subsurface drain, or other suitable means since sustained wetness usually prevents adequate vegetative cover. The cross-sectional area of the stone center or subsurface drain size to be provided shall be determined by using a flow rate of 0.1 cfs/acre or by actual measurement of the maximum base flow.

Velocity

Please see Table 3.1, Diversion Maximum Permissible Design Velocities on page 3.10, for seed, soil, and velocity variables.

Cross Section

The design water surface elevation of a grassed waterway receiving water from diversions or other tributary channels shall be equal to or less than the design water surface elevation in the diversion or other tributary channels.

The top width of parabolic waterways shall not exceed 30 feet and the bottom width of trapezoidal waterways shall not exceed 15 feet unless multiple or divided waterways, stone center, or other means are provided to control meandering of low flows.

Structural Measures

In cases where grade or erosion problems exist, special control measures may be needed such as lined waterways (see page 3.27), or grade stabilization measures (see page 3.21). Where needed, these measures will be supported by adequate design computations. For typical cross sections of waterways with riprap sections or stone centers, refer to Figure 3.8 on page 3.24.

The design procedures for parabolic and trapezoidal channels are available in the NRCS Engineering Field Handbook. Figure 3.9 on page 3.25 also provides a design chart for parabolic waterway.

Outlets

Each waterway shall have a stable outlet. The outlet may be another waterway, a stabilized open channel, grade stabilization structure, etc. In all cases, the outlet must discharge in such a manner as not to cause erosion. Outlets shall be constructed and stabilized prior to the operation of the waterway.

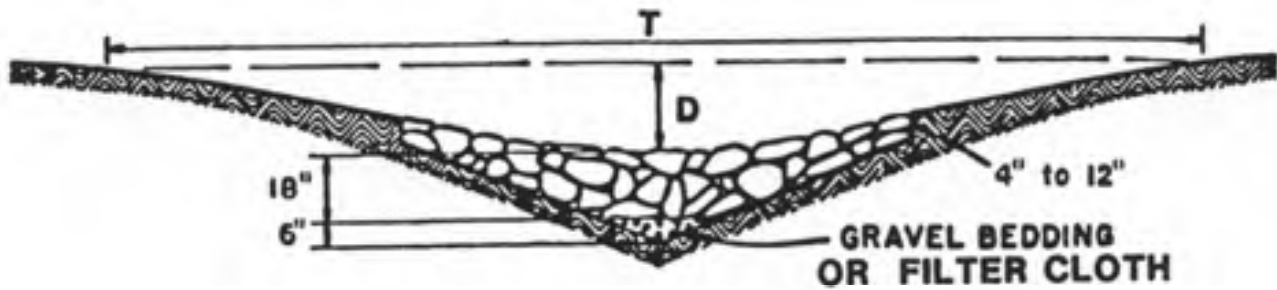
Stabilization

Waterways shall be stabilized in accordance with the appropriate vegetative stabilization standard and specifications, and will be dependent on such factors as slope, soil class, etc. See standard for Vegetating Waterways on Page 4.78.

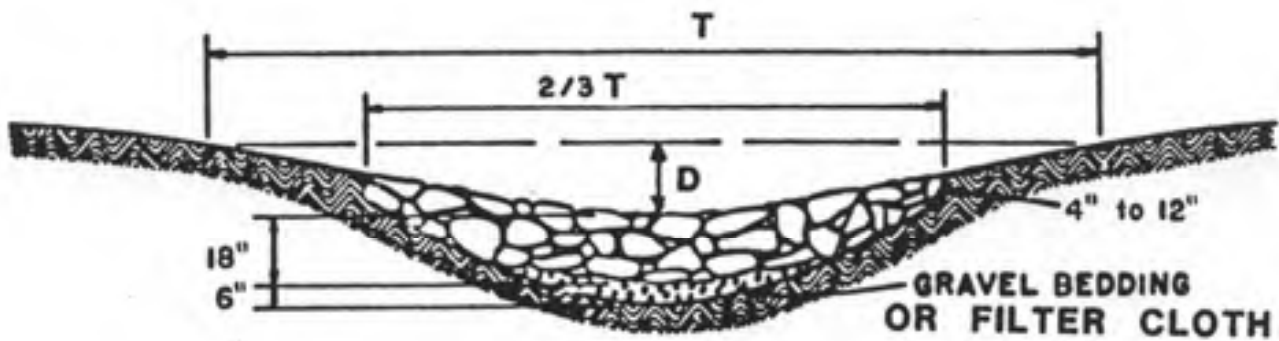
Construction Specifications

See Figure 3.10 on page 3.26 for details.

Figure 3.8
Typical Waterway Cross Sections Details

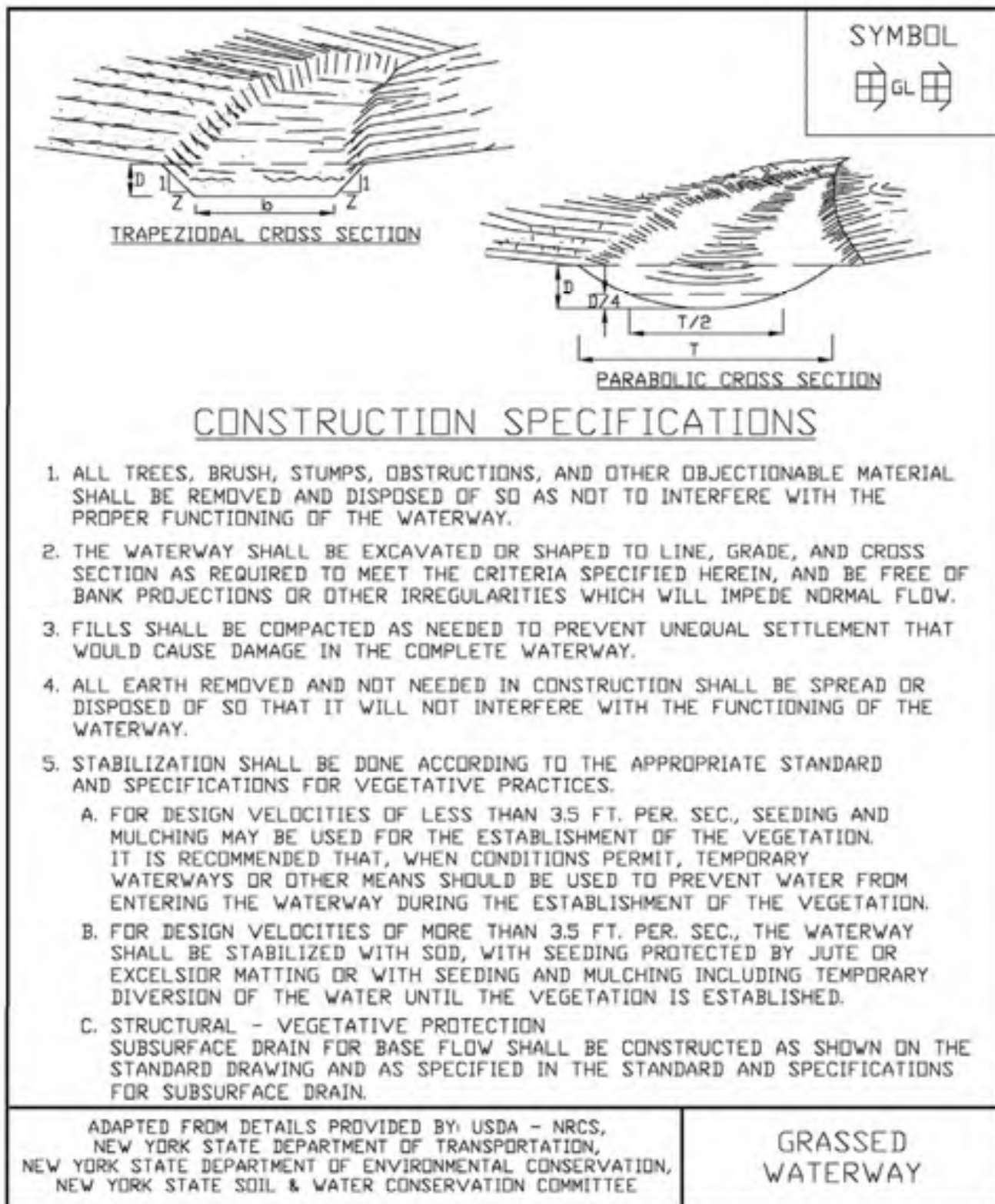


Waterway with stone center drain. "V" section shaped by motor grader.



Waterway with stone center drain. Rounded section shaped by bulldozer.

Figure 3.10
Grassed Waterway Detail



STANDARD AND SPECIFICATIONS FOR LINED WATERWAY



Definition & Scope

A **permanent** waterway or outlet with a lining of concrete, stone, or other durable, hardened material. The lined section extends up the side slopes to the designed depth. The earth above the permanent lining may be vegetated or otherwise protected.

The lined waterway is constructed to provide for the disposal of concentrated runoff without damage from erosion or flooding, where grassed waterways would be inadequate due to high velocities.

Conditions Where Practice Applies

This standard applies to waterways or outlets with linings of cast-in-place concrete, flagstone mortared in place, rock riprap, gabions, or similar permanent linings. It does not apply to irrigation ditch or canal linings, grassed waterways with stone centers or small lined sections that carry prolonged low flows, or to reinforced concrete channels. Lined waterways should not be used if they are directly discharging to C(T) or higher streams unless thermal impacts are mitigated by biotechnical practices (Section 4). The maximum capacity of the waterway flowing at design depth shall not exceed 100 cubic feet per second.

This practice applies where the following or similar conditions exist:

1. Concentrated runoff is such that a lining is required to control erosion.
2. Steep grades, wetness, prolonged base flow, seepage, or piping that would cause erosion.
3. The location is such that damage from use by people or animals precludes use of vegetated waterways or out-

lets.

4. Soils are highly erosive or other soil and climate conditions preclude using vegetation.
5. High value property or adjacent facilities warrant the extra cost to contain design runoff in a limited space.

Design Criteria

Capacity

1. The minimum capacity shall be adequate to carry the peak rate of runoff from a 10-year, 24-hour storm. Velocity shall be computed using Manning's equation with a coefficient of roughness "n" as follows:

Lined Material	"n"
Concrete (Type):	
Trowel Finish	0.015
Float Finish	0.019
Gunitite	0.019
Flagstone	0.022
Riprap	Determine from Figure 3.11 on page 3.30
Gabion	0.030

2. Riprap gradation and filter (bedding) are generally designed in accordance with criteria set forth in the National Cooperative Highway Research Program Report 108, available from the University Microfilm International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106, Publication No. PB-00839; or the Hydraulic Engineering Circular No. 11, prepared by the U.S. Bureau of Public Roads, available from Federal Highway Administration, 400 7th Street, S.W., Washington, D.C. 20590, HNG-31, or the procedure in the USDA-NRCS's Engineering Field Manual, Chapter 16.

Velocity

1. Maximum design velocity shall be as shown below. Except for short transition sections, flow with a channel gradient within the range of 0.7 to 1.3 of this flow's critical slope must be avoided unless the channel is straight. Velocities exceeding critical will be restricted to straight reaches.

STANDARD AND SPECIFICATIONS FOR FIBER ROLL



Definition & Scope

A fiber roll is a coir (coconut fiber), straw, or excelsior roll encased in netting of jute, nylon, or burlap to dissipate energy along streambanks, channels, and bodies of water and to reduce sheet flow on slopes.

Conditions Where Practice Applies

Fiber rolls are used where the water surface levels are relatively constant. Artificially controlled streams for hydropower are not good candidates for this technique. The rolls provide a good medium for the introduction of herbaceous vegetation. Planting in the fiber roll is appropriate where the roll will remain continuously wet.

Design Criteria

1. The roll is placed in a shallow trench dug below baseflow or in a 4 inch trench on the slope contour and anchored by 2" x 2", 3-foot long posts driven on each side of the roll (see Figure 4.8).
2. The roll is contained by a 9-gauge non-galvanized wire placed over the roll from post to post. Braided nylon rope (1/8" thick) may be used.
3. The anchor posts shall be spaced laterally 4 feet on center on both sides of the roll and driven down to the top of the roll.
4. Soil is placed behind the roll and planted with suitable herbaceous or woody vegetation. If the roll will be continuously saturated, wetland plants may be planted into voids created in the upper surface of the roll.
5. Where water levels may fall below the bottom edge of the roll, a brush layer of willow should be installed so

as to lay across the top edge of the roll.

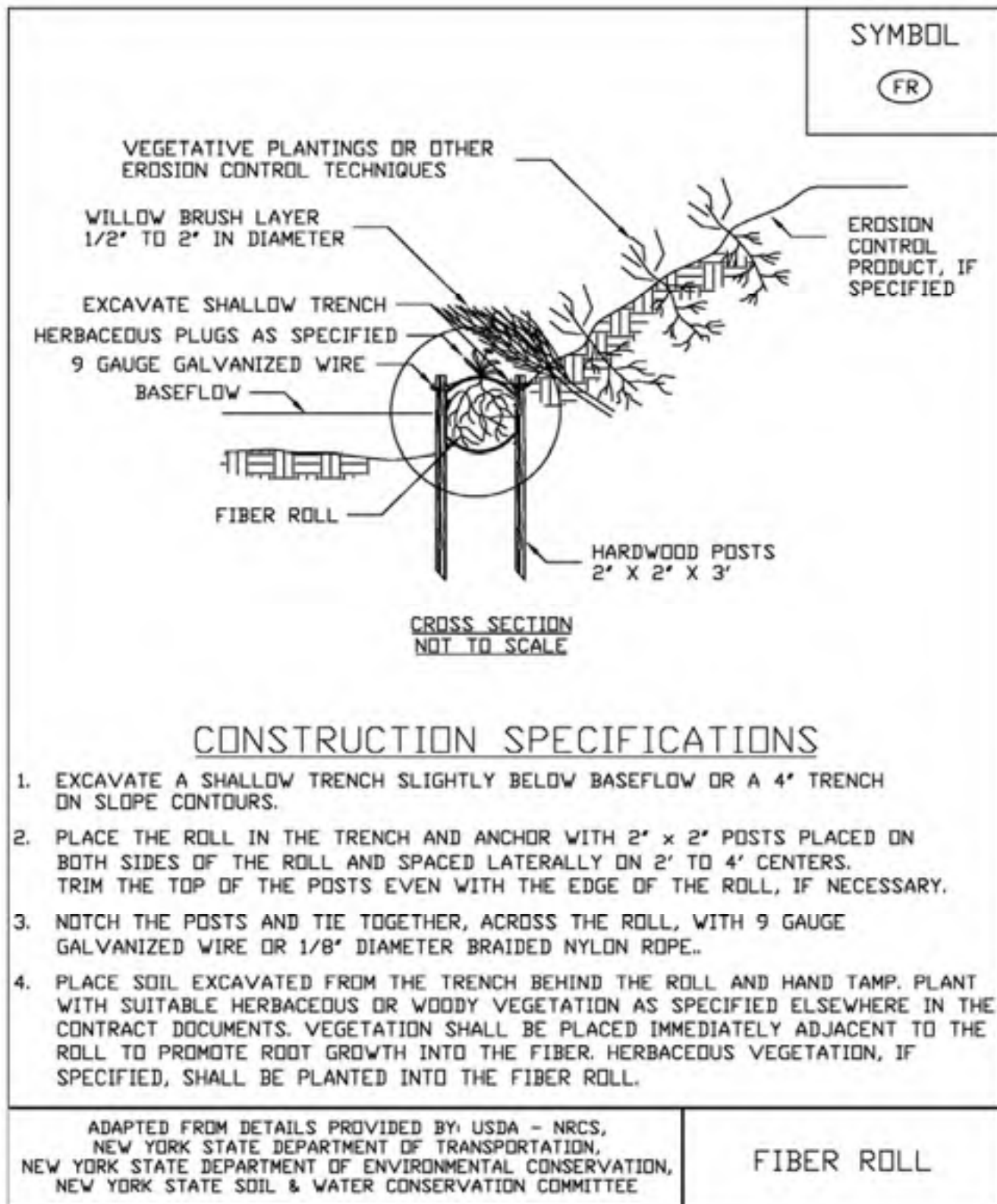
6. Where fiber rolls are used to reduce sheet flow on slopes they should be at least 12" in diameter and spaced according to the straw bale dike standard for sediment control.

Maintenance

Due to the susceptibility of plant materials to the physical constraints of the site, climate conditions, and animal populations, it is necessary to inspect installations frequently. This is especially important during the first year or two of establishment. Plant materials missing or damaged should be replaced as soon as possible. Sloughs or breaks in drainage pattern should be reestablished for the site as quickly as possible to maintain stability.



Figure 4.8
Fiber Roll



STANDARD AND SPECIFICATIONS FOR MULCHING



Definition and Scope

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch can also be used alone for temporary stabilization in non-growing months. Use of stone as a mulch could be more permanent and should not be limited to non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Hay mulch shall not be used in wetlands or in areas of permanent seeding. Clean straw mulch is preferred alternative in wetland application. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.



Table 4.2
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/yd. 60-90 lbs./roll	48" x 50 yds. or 48" x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	4' x 112.5' or 8' x 112.5'.	—	—	Use without additional mulch. Excellent for seeding establishment. Anchor as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING



Definition & Scope

Establishing **permanent** grasses with other forbs and/or shrubs to provide a minimum 80% perennial vegetative cover on areas disturbed by construction and critical areas to reduce erosion and sediment transport. Critical areas may include but are not limited to steep excavated cut or fill slopes as well as eroding or denuded natural slopes and areas subject to erosion.

Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12", see Soil Restoration Standard. The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply

ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-5-10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seeding is preferred. See Table 4.4, "Permanent Construction Area Planting Mixture Recommendations" for additional seed mixtures.

General Seed Mix:

	Variety	lbs./acre	lbs/1000 sq. ft.
Red Clover ¹ <u>OR</u>	Acclaim, Rally, Red Head II, Renegade	8 ²	0.20
Common white clover ¹	Common	8	0.20
<u>PLUS</u>			
Creeping Red Fescue	Common	20	0.45
<u>PLUS</u>			
Smooth Bromegrass <u>OR</u>	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10
¹ add inoculant immediately prior to seeding ² Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre. All seeding rates are given for Pure Live Seed (PLS)			

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

To compute Pure Live Seed multiply the “germination percent” times the “purity” and divide that by 100 to get Pure Live Seed.

$$\text{Pure Live Seed (PLS)} = \frac{\% \text{ Germination} \times \% \text{ Purity}}{100}$$

For example, the PLS for a lot of Kentucky Blue grass with 75% purity and 96% germination would be calculated as follows:

$$\frac{(96) \times (75)}{100} = 72\% \text{ Pure Live Seed}$$

For 10lbs of PLS from this lot =

$$\frac{10}{0.72} = 13.9 \text{ lbs}$$

Therefore, 13.9 lbs of seed is the actual weight needed to meet 10lbs PSL from this specific seed lot.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the Standard and Specifications for Mulching for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.



80% Perennial Vegetative Cover



50% Perennial Vegetative Cover

STANDARD AND SPECIFICATIONS FOR STABILIZATION WITH SOD



Definition & Scope

Stabilizing restored, exposed soil surfaces by establishing long term stands of grass with sod to reduce damage from sediment and runoff to downstream areas and enhance natural beauty.

Conditions Where Practice Applies

On exposed soils that have a potential for causing off site environmental damage where a quick vegetative cover is desired. Moisture, either applied or natural, is essential to success.

Design Criteria

1. Sod shall be bluegrass or a bluegrass/red fescue mixture or a perennial ryegrass for average sites. (CAUTION: Perennial ryegrass has limited cold tolerance and may winter kill.) Use turf type cultivars of tall fescue for shady, droughty, or otherwise more critical areas. For variety selection, contact Cornell Cooperative Extension Turf Specialist.
2. Sod shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch. Measurement for thickness shall exclude top growth and thatch.
3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section.
4. Sod shall be free of weeds and undesirable coarse weedy grasses. Wild native or pasture grass sod shall not be used unless specified.
5. Sod shall not be harvested or transplanted when

moisture content (excessively dry or wet) may adversely affect its survival.

6. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved by the contracting officer or his designated representative prior to its installation.

Site Preparation

Fertilizer and lime application rates shall be determined by soil tests. Under unusual circumstances where there is insufficient time for a complete soil test and the contracting officer agrees, fertilizer and lime materials may be applied in amounts shown in subsection 2 below. Slope land such as to provide good surface water drainage. Avoid depressions or pockets.

1. Prior to sodding, the surface shall be smoothed and cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.
2. **The soil should be tested to determine the amounts of amendments needed.** Where the soil is acid or composed of heavy clays, ground limestone shall be spread to raise the pH to 6.5. If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 20 lbs. of 5-5-10 (or equivalent) and mix into the top 3 inches of soil with the required lime for every 1,000 square feet. Soil should be moist prior to sodding. Arrange for temporary storage of sod to keep it shaded and cool.

Sod Installation

1. For the operation of laying, tamping, and irrigating for any areas, sod shall be completed within eight hours. During periods of excessively high temperature, the soil shall be lightly moistened immediately prior to laying the sod.
2. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to, and tightly wedged against, each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots. On sloping areas where erosion may be a problem, sod shall be laid with the long edges parallel to the contour and with

staggered joints.

3. Secure the sod by tamping and pegging, or other approved methods. As sodding is completed in any one section, the entire area shall be rolled or tamped to ensure solid contact of roots with the soil surface.
4. Sod shall be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Keep sod moist for at least two weeks.

Sod Maintenance

1. In the absence of adequate rainfall, watering shall be performed daily, or as often as deemed necessary by the inspector, during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done in the morning. Avoid excessive watering during applications.
2. After the first week, sod shall be watered as necessary to maintain adequate moisture and ensure establishment.
3. The first mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 and 3 inches unless otherwise specified. Avoid heavy mowing equipment for several weeks to prevent rutting.
4. If the soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply fertilizer three to four weeks after sodding, at a rate of 1 pound nitrogen/1,000 sq.ft. Use a complete fertilizer with a 2-1-1 ratio.
5. Weed Control: Target herbicides for weeds present. Consult current Cornell Pest Control Recommendations for Commercial Turfgrass Management or consult the local office of Cornell Cooperative Extension.
6. Disease Control: Consult the local office of the Cornell Cooperative Extension.

Additional References

1. Home Lawns, Establishment and Maintenance, CCE Information Bulletin 185, Revised November 1994. Cornell University, Ithaca, NY.
2. Installing a Sod Lawn. CCE Suffolk County, NY. Thomas Kowalsick February 1994, Revised January 1999. www.cce.cornell.edu/counties/suffolk/grownet

STANDARD AND SPECIFICATIONS FOR COMPOST FILTER SOCK



that 8" diameter socks may be used for residential lots to control areas less than 0.25 acres.

3. The flat dimension of the sock shall be at least 1.5 times the nominal diameter.
4. The **Maximum Slope Length** (in feet) above a compost filter sock shall not exceed the following limits:

Dia. (in.)	Slope %						
	2	5	10	20	25	33	50
8	225*	200	100	50	20	—	—
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50

* Length in feet



Definition & Scope

A **temporary** sediment control practice composed of a degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants associated with construction activity to prevent their migration offsite.

Condition Where Practice Applies

Compost filter socks can be used in many construction site applications where erosion will occur in the form of sheet erosion and there is no concentration of water flowing to the sock. In areas with steep slopes and/or rocky terrain, soil conditions must be such that good continuous contact between the sock and the soil is maintained throughout its length. For use on impervious surfaces such as road pavement or parking areas, proper anchorage must be provided to prevent shifting of the sock or separation of the contact between the sock and the pavement. Compost filter socks are utilized both at the site perimeter as well as within the construction areas. These socks may be filled after placement by blowing compost into the tube pneumatically, or filled at a staging location and moved into its designed location.

Design Criteria

1. Compost filter socks will be placed on the contour with both terminal ends of the sock extended 8 feet upslope at a 45 degree angle to prevent bypass flow.
2. Diameters designed for use shall be 12" – 32" except
5. The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.**
6. The compost filter sock fabric material shall meet the

7. Compost filter socks shall be anchored in earth with 2" x 2" wooden stakes driven 12" into the soil on 10 foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.
8. All specific construction details and material specifications shall appear on the erosion and sediment control constructions drawings when compost filter socks are included in the plan.
3. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired in the manner required by the manufacturer or replaced within 24 hours of inspection notification.
4. Biodegradable filter socks shall be replaced after 6 months; photodegradable filter socks after 1 year. Polypropylene socks shall be replaced according to the manufacturer's recommendations.
5. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the stabilization plan. For removal the mesh can be cut and the compost spread as an additional mulch to act as a soil supplement.

Maintenance

1. Traffic shall not be permitted to cross filter socks.
2. Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed of in accordance with the plan.

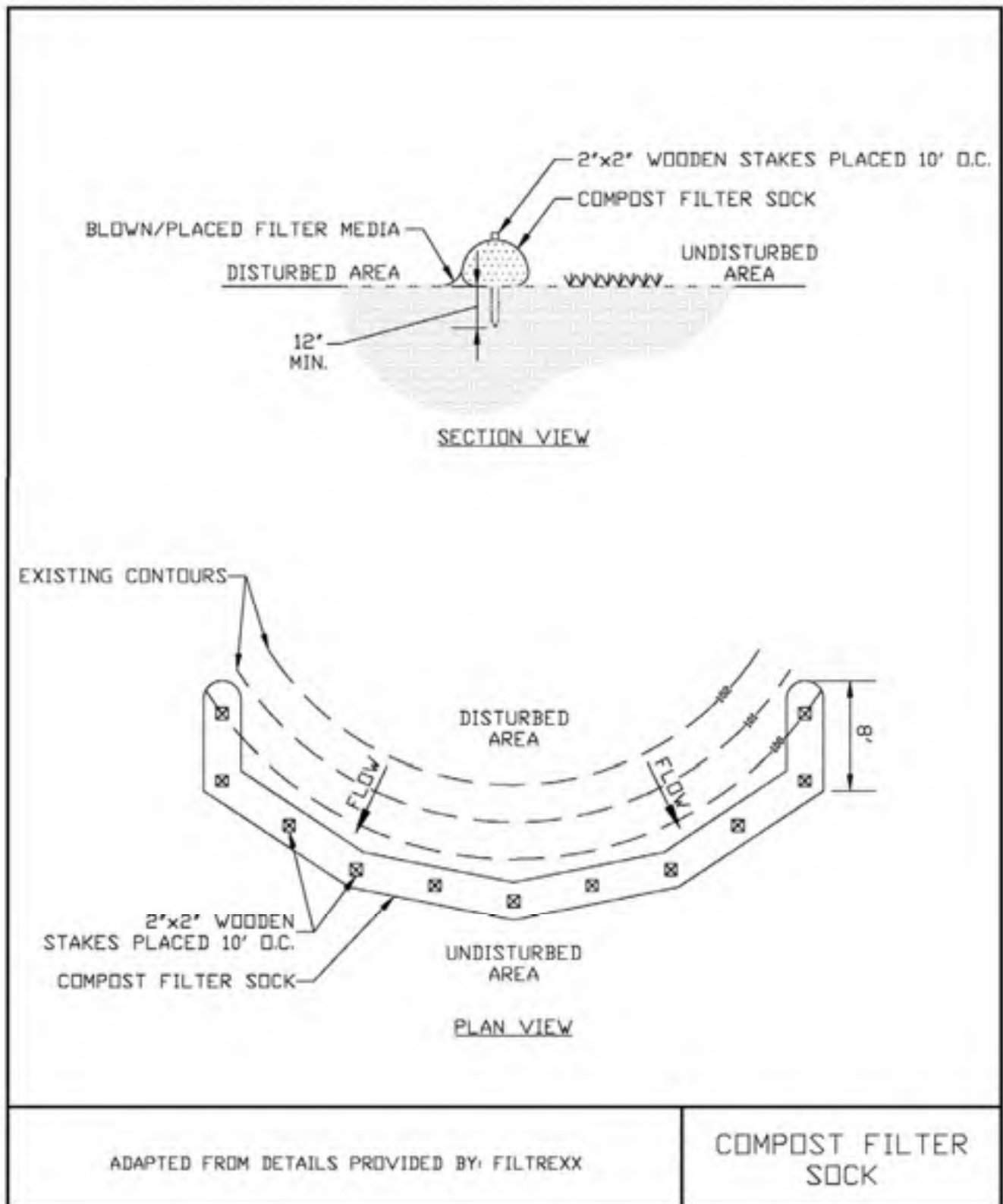
Table 5.1 - Compost Sock Fabric Minimum Specifications Table

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photodegradable	Photodegradable	Biodegradable	Photodegradable	Photodegradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Table 5.2 - Compost Standards Table

Organic matter content	25% - 100% (dry weight)
Organic portion	Fibrous and elongated
pH	6.0 – 8.0
Moisture content	30% - 60%
Particle size	100% passing a 1" screen and 10 - 50% passing a 3/8" screen
Soluble salt concentration	5.0 dS/m (mmhos/cm) maximum

Figure 5.2
Compost Filter Sock



STANDARD AND SPECIFICATIONS FOR SEDIMENT BASIN



Definition & Scope

A **temporary** basin with a barrier or dam constructed across a drainage way or at other suitable locations to intercept sediment-laden runoff and reduce the amount of sediment leaving the disturbed area in order to protect drainageways, properties, and rights-of-way below the sediment basin.

Conditions Where Practice Applies

A sediment basin is appropriate where physical site conditions or land ownership restrictions preclude the installation of other control measures to adequately control runoff, erosion, and sedimentation. However, it is required that other erosion control measures be used with the sediment basin. The basin may be used below construction operations which expose critical areas to soil erosion. The basin shall be maintained until the disturbed area is protected against erosion by permanent stabilization.

This standard applies to the installation of temporary sediment basins on sites where: (a) failure of the structure would not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities; (b) the drainage area does not exceed 50 acres; and (c) the basin is to be removed within 36 months after the beginning of construction of the basin.

Permanent (to function more than 36 months) sediment basins, or structures that temporarily function as a sediment basin but are intended for use as a permanent pool shall be classified as **permanent** structures and shall conform to criteria appropriate for permanent structures. These structures shall be designed and constructed to conform to NRCS Standard And Specification No. 378 for Ponds in the National Handbook of Conservation Practices and the New York State Department of Environmental Conservation, "Guidelines for the Design of Dams."

Design Criteria

Compliance with Laws and Regulations

Design and construction shall comply with state and local laws, ordinances, rules and regulations, including permits.

Location - Maximum Drainage Area = 50 acres

The sediment basin should be located to obtain the maximum storage benefit from the terrain and for ease of cleanout of the trapped sediment. It should be located to minimize interference with construction activities and construction of utilities. Whenever possible, sediment basins should be located so that storm drains may outfall or be diverted into the basin. **Do not locate basins in perennial streams.**

Size and Shape of the Basin

The sediment basin will contain two separate zones. The lowest zone is the sediment storage zone. This zone is sized for a volume equal to 1,000 cubic feet per disturbed acre over the course of the life of the project, contributing to the basin as measured from the bottom of the basin to the bottom of the dewatering zone. It shall have a minimum depth of 1 foot. Layered above this zone is the dewatering zone. This zone is sized for a minimum volume equal to 3,600 cubic feet per each acre draining to the basin. This volume is temporarily stored between the sediment storage zone and the crest of the principal spillway. This zone should be a minimum of 3 feet deep. See Figures 5.8 and 5.9 on pages 5.26 and 5.27. This 3,600 cubic feet per acre is equivalent to one inch of sediment per acre of drainage area. The entire drainage area is used for this computation, rather than the disturbed area above, to maximize trapping efficiency. The length to width ratio shall be 2:1 or greater, where length is the distance between the inlet and outlet. A wedge shape shall be used with the inlet located at the narrow end. See Figure 5.22 on page 5.41.

Surface Area

Research studies (Barfield and Clar 1985; Pitt, 2003) indicate that the following relationship between surface area and peak inflow rate gives a trapping efficiency of 75% for silt loam soils, and greater than 90% for loamy sand soils:

$$A = 0.01 Q_p \text{ or, } A = 0.015x \text{ D.A. (whichever is greater)}$$

where,

STANDARD AND SPECIFICATIONS FOR SEDIMENT TRAP



Definition & Scope

A **temporary** sediment control device formed by excavation and/or embankment to intercept sediment-laden runoff and trap the sediment in order to protect drainageways, properties, and rights-of-way below the sediment trap from sedimentation.

Conditions Where Practice Applies

A sediment trap is usually installed in a drainageway, at a storm drain inlet, or other points of collection from a disturbed area for one construction season.

Sediment traps should be used to artificially break up the natural drainage area into smaller sections where a larger device (sediment basin) would be less effective.

Design Criteria

If the drainage area to the proposed trap location exceeds 5 acres, or the trap is in place beyond one construction season, or any of the additional design criteria presented here cannot be met, a full Sediment Basin must be used. See Standard and Specification for Sediment Basin on page 5.19.

Drainage Area

The maximum drainage area for all sediment traps shall be 5 acres.

Location

Sediment traps shall be located so that they can be installed prior to grading or filling in the drainage area they are to protect. Traps must **not be located any closer than 20 feet** from a proposed building foundation if the trap is to func-

tion during building construction. Locate traps to obtain maximum storage benefit from the terrain and for ease of cleanout and disposal of the trapped sediment.

Trap Size

The volume of a sediment trap as measured at the elevation of the crest of the outlet shall be at least 3,600 cubic feet per acre of drainage area. A minimum length to width ratio of 2:1 should be provided. The volume of a constructed trap shall be calculated using standard mathematical procedures. The volume of a natural sediment trap may be approximated by the equation: Volume (cu.ft.) = 0.4 x surface area (sq.ft.) x maximum depth (ft.).

Trap Cleanout

Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to $\frac{1}{2}$ of the design depth of traps I-II, and $\frac{1}{3}$ the depth for trap III. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.

Embankment

All earth embankments for sediment traps shall not exceed five (5) feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments shall have a minimum four (4) foot wide top and side slopes of 2:1 or flatter. The embankment shall be compacted by traversing with equipment while it is being constructed. The embankment shall be stabilized with seed and mulch as soon as it is completed.

The elevation of the top of any dike directing water to any sediment trap will equal or exceed the maximum height of the outlet structure along the entire length of the trap.

Excavation

All excavation operations shall be carried out in such a manner that erosion and water pollution shall be minimal. Excavated portions of sediment traps shall have 1:1 or flatter slopes.

Outlet

The outlet shall be designed, constructed, and maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.

Sediment traps must outlet onto stabilized (preferable undisturbed) ground, into a watercourse, stabilized channel, or into a storm drain system. Distance between inlet and outlet should be maximized to the longest length practicable.

All traps must be seeded and mulched immediately after construction.

Trap Details Needed on Erosion and Sediment Control Plans

Each trap shall be delineated on the plans in such a manner that it will not be confused with any other features. Each trap on a plan shall indicate all the information necessary to properly construct and maintain the structure. If the drawings are such that this information cannot be delineated on the drawings, then a table shall be developed. If a table is developed, then each trap on a plan shall have a number and the numbers shall be consecutive.

The following information shall be shown for each trap in a summary table format on the plans.

1. Trap number
2. Type of trap
3. Drainage area
4. Storage required
5. Storage provided (if applicable)
6. Outlet length or pipe sizes
7. Storage depth below outlet or cleanout elevation
8. Embankment height and elevation (if applicable)

Type of Sediment Traps

There are three (3) specific types of sediment traps which vary according to their function, location, or drainage area.

- I. Pipe Outlet Sediment Trap
- II. Stone Outlet Sediment Trap
- III. Compost Filter Sock Sediment Trap

I. Pipe Outlet Sediment Trap

A Pipe Outlet Sediment Trap consists of a trap formed by embankment or excavation. The outlet for the trap is through a perforated riser and a pipe through the embankment. The outlet pipe and riser shall be made of steel, corrugated metal or other suitable material. The top of the embankment shall be at least 1 ½ feet above the crest of the riser. The preferred method of dewatering the sediment trap is by surface skimmer. See Dewatering Device Standard, page 5.10. If the riser alone is used for dewatering, the top 2/3 of the riser shall be perforated with one (1) inch nominal diameter holes or slits spaced six (6) inches vertically and horizontally placed in the concave portion of the corrugated pipe.

No holes or slits will be allowed within six (6) inches of the top of the horizontal barrel. All pipe connections shall be watertight. The riser shall be wrapped with ½ to ¾ inch hardware cloth wire then wrapped with filter cloth with a sieve size between #40-80 and secured with strapping or connecting band at the top and bottom of the cloth. The

cloth shall cover an area at least six (6) inches above the highest hole and six (6) inches below the lowest hole. The top of the riser pipe shall not be covered with filter cloth. The riser shall have a base with sufficient weight to prevent flotation of the riser. Two approved bases are:

1. A concrete base 12 in. thick with the riser embedded 9 in. into the concrete base, or
2. One quarter inch, minimum, thick steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or earth placed on it to prevent flotation. In either case, each side of the square base measurement shall be the riser diameter plus 24 inches.

Pipe outlet sediment traps shall be limited to a five (5) acre maximum drainage area. Pipe outlet sediment trap is interchangeable in the field with stone outlet provided that these sediment traps are constructed in accordance with the detail and specifications for that trap.

Select pipe diameter from the following table:
See details for Pipe Outlet Sediment Trap ST-I in Figure 5.25 and 5.26 on pages 5.49 and 5.50.

Optional sediment trap dewatering devices are shown on Figure 5.29 on Page 5.53.

Minimum Sizes

Barrel Diameter¹ (in.)	Riser Diameter¹ (in.)	Maximum Drainage Area (ac.)
12	15	1
15	18	2
18	21	3
21	24	4
21	27	5
¹ Barrel diameter may be same size as riser diameter		



II. Stone Outlet Sediment Trap

A Stone Outlet Sediment Trap consists of a trap formed by an embankment or excavation. The outlet of this trap is over a stone section placed on level ground. The minimum length (feet) of the outlet shall be equal to four (4) times the drainage area (acres).

Required storage shall be 3,600 cubic feet per acre of drainage area.

The outlet crest (top of stone in weir section) shall be level, at least one (1) foot below top of embankment and no more than one (1) foot above ground beneath the outlet. Stone used in the outlet shall be small riprap (4 in. x 8 in.). To provide more efficient trapping effect, a layer of filter cloth should be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.

Stone Outlet Sediment Traps may be interchangeable in the field with pipe outlet sediment traps provided they are constructed in accordance with the detail and specifications for those traps. Stone outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

See details for Stone Outlet Sediment Trap ST-II in Figure 5.27 on page 5.51



III. Compost Sock Sediment Trap

A compost sock sediment trap consists of a trap formed by creating an enclosure of geotextile mesh tubes filled with a compost filter media. These traps are used in locations where there is no opportunity to direct runoff into larger traps or well vegetated areas. This could occur at site entrances and access points or in tight areas due to construction boundary limits.

Surface runoff can be directed to the trap with standard conveyance practices. Groundwater or surface ponding in low areas can be pumped into the compost sock sediment trap with appropriate energy dissipation at the pump outlet to prevent scour.

Design criteria for Compost Sock Sediment Trap

1. The maximum drainage area tributary to the trap shall be 5 acres.
2. The minimum settled height above ground shall be 2.0 feet formed by staking 3 compost filter socks in a pyramid as shown in Figure 5.28 on page 5.52.
3. The storage volume provided in the compost sock sediment trap shall be 3,600 cubic feet per tributary drainage acre.
4. If necessary, additional storage area can be created by excavating a sump 1 foot deep beginning at least 5 feet away from the inside sock.
5. All compost filter sock materials, mesh, and compost, will meet the material specifications listed in the Compost Filter Sock standard. No spillway is required.
6. Compost filter sock sediment traps shall be inspected weekly and after every rainfall event. Sediment shall be removed when it reaches one third, $\frac{1}{3}$, the height of the trap.
7. The maximum limit of use for a compost sock sediment trap is one (1) year. The existing trap shall be replaced if there is a need for a trap beyond that time limit.
8. Upon completion of the work, the compost sock sediment trap shall be removed. The compost within the socks may be used during cleanup as a vegetative growth medium in accordance with the site stabilization plan.



STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and

roll down. The area beyond the fence must be undisturbed or stabilized.

3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

Standard Silt Fence (SF) is fabric rolls stapled to wooden stakes driven 16 inches in the ground.
Reinforced Silt Fence (RSF) is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.
Super Silt Fence (SSF) is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

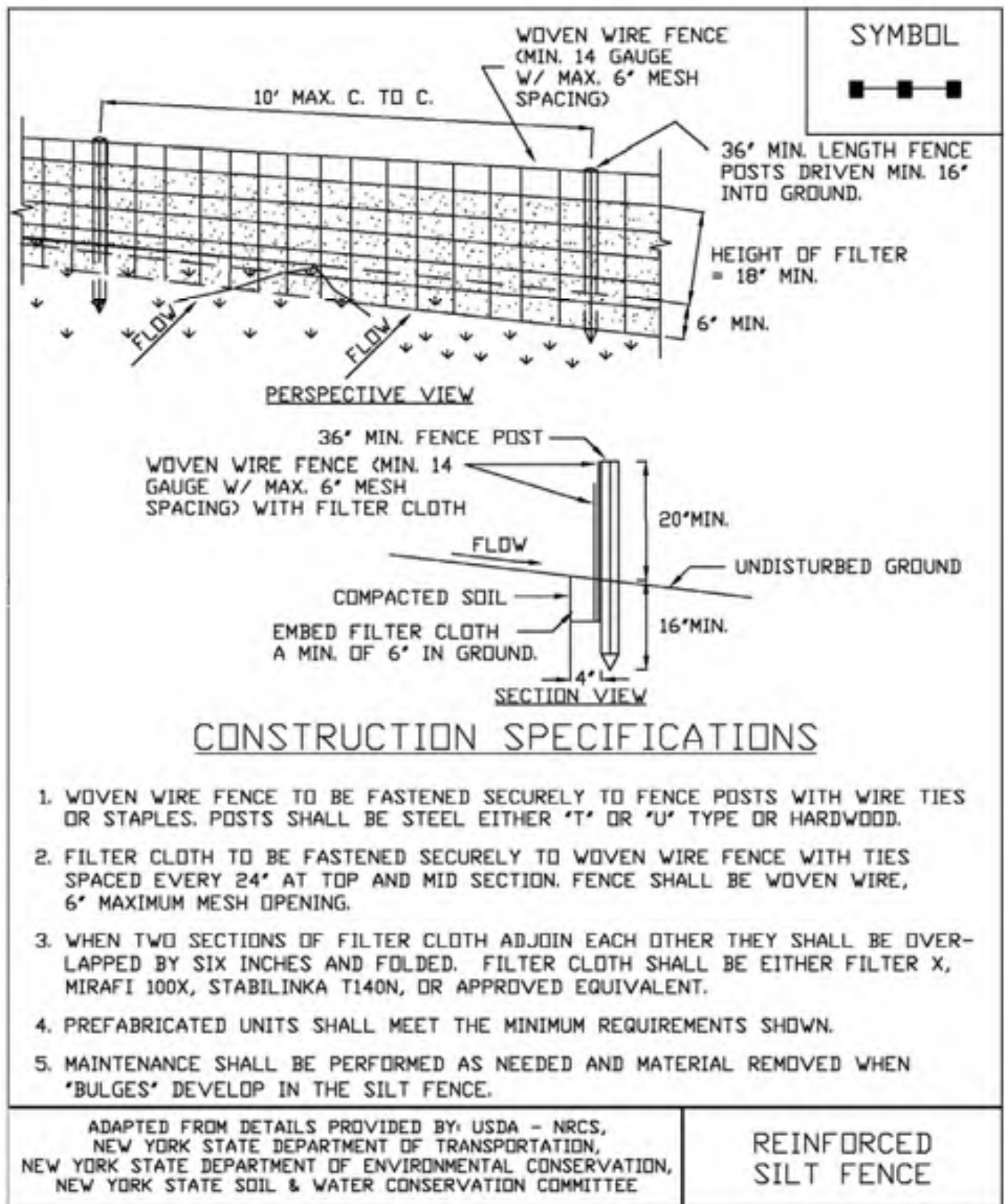
4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

**Figure 5.30
Reinforced Silt Fence**



STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION



Definition & Scope

A **temporary** barrier with low permeability, installed around inlets in the form of a fence, berm or excavation around an opening, detaining water and thereby reducing the sediment content of sediment laden water by settling thus preventing heavily sediment laden water from entering a storm drain system.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This practice shall be used with an upstream buffer strip if placed at a storm drain inlet on a paved surface. It may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are five (5) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

- I. Excavated Drop Inlet Protection
- II. Fabric Drop Inlet Protection
- III. Stone & Block Drop Inlet Protection
- IV. Paved Surface Inlet Protection
- V. Manufactured Insert Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre. Erosion control/temporary stabilization measures must be implemented on the disturbed

drainage area tributary to the inlet. The crest elevations of these practices shall provide storage and minimize bypass flow.

Type I – Excavated Drop Inlet Protection

This practice is generally used during initial overlot grading after the storm drain trunk line is installed.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved. This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection



This practice is generally used during final elevation grading phases after the storm drain system is completed.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to

unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

Type III – Stone and Block Drop Inlet Protection

This practice is generally used during the initial and intermediate overlot grading of a construction site.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet (“doughnut”). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all

materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilize in a manner appropriate to the site.

Type IV – Paved Surface Inlet Protection



This practice is generally used after pavement construction has been done while final grading and soil stabilization is occurring. These practices should be used with upstream buffer strips in linear construction applications, and with temporary surface stabilization for overlot areas, to reduce the sediment load at the practice. This practice includes sand bags, compost filter socks, geo-tubes filled with ballast, and manufactured surface barriers. Pea gravel can also be used in conjunction with these practices to improve performance. When the inlet is not at a low point, and is offset from the pavement or gutter line, protection should be selected and installed so that flows are not diverted around the inlet.



The drainage area should be limited to 1 acre at the drain inlet. All practices will be placed at the inlet perimeter or beyond to maximize the flow capacity of the inlet. Practices shall be weighted, braced, tied, or otherwise anchored to prevent movement or shifting of location on paved surfaces. Traffic safety shall be integrated with the use of this practice. All practices should be marked with traffic safety cones as appropriate. Structure height shall not cause flooding or by-pass flow that would cause additional erosion.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any broken or damaged components should be replaced. Check all materials for proper anchorage and secure as necessary.

Type V - Manufactured Insert Inlet Protection



The drainage area shall be limited to 1 acre at the drain inlet. All inserts will be installed and anchored in accordance with the manufacturers recommendations and design details. The fabric portion of the structure will equal or exceed the performance standard for the silt fence fabric. The inserts will be installed to preserve a minimum of 50 percent of the open, unobstructed design flow area of the storm drain inlet opening to maintain capacity for storm events.

STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE



quarter of an acre per 100 feet of dike and the length of slope above the dike shall be less than 100 feet.

Design Criteria

The above table is adequate, in general, for a one-inch rain-fall event. Larger storms could cause failure of this practice. Use of this practice in sensitive areas for longer than one month should be specifically designed to store expected runoff. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 5.34 on page 5.64 for details.

Definition & Scope

A **temporary** barrier of straw, or similar material, used to intercept sediment laden runoff from small drainage areas of disturbed soil to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Condition Where Practice Applies

The straw bale dike is used where:

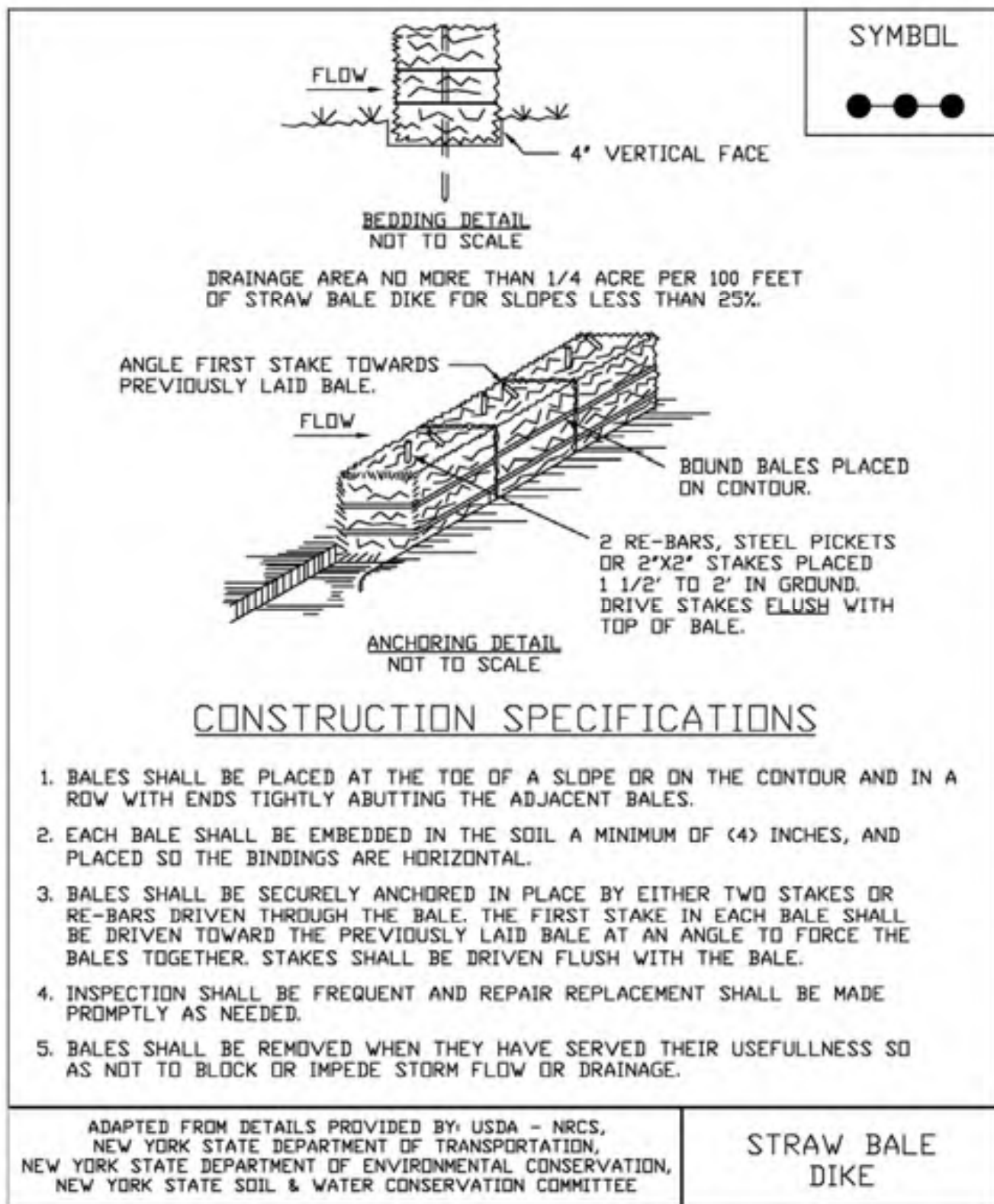
1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainageway above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed the following limits with the bale placed 10 feet from the toe of the slope:

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
3:1	33	50
4:1	25	75

Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage areas in this instance shall be less than one

Figure 5.34
Straw Bale Dike



APPENDIX G

CONTRACTOR CERTIFICATION FORM

CONTRACTOR CERTIFICATION

**COUNTY OF OTSEGO IDA
ROUNDHOUSE ROAD
REDEVELOPMENT SITE PREPARATION**

STORMWATER POLLUTION PREVENTION PLAN

Company Name: _____

Address: _____

Telephone: _____

Facsimile: _____

Scope of Work: _____

Please Check one:

Prime Contractor _____

Subcontractor _____

"I hereby certify under penalty of law 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 am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

Signature

Date

Print Name

Title

APPENDIX H
INSPECTION FORM