GENESEE COUNTY PLANNING BOARD REFERRALS
NOTICE OF FINAL ACTION

GCDP Referral ID	**T-07-PEM-08-23**
Review Date	**8/10/2023**
Municipality	**PEMBROKE, T.**
Board Name	**PLANNING BOARD**
Applicant's Name	**Geis Construction**
Referral Type	**Special Use Permit**
Variance(s)	
Description:	**Special Use Permit to construct a new travel plaza (convenience store, fuel sales, car wash, restaurant with drive-through service).**
Location	**Alleghany Rd. (NYS Rt. 77), Pembroke**
Zoning District	**Interchange (INT) District**

PLANNING BOARD RECOMMENDS:

APPROVAL WITH MODIFICATION(S)

EXPLANATION:

The required modifications are as follows: 1) The applicant obtains documentation from the NYS Department of Environmental Conservation (DEC) as to the project's impacts on threatened and endangered species; 2) Signage complies with the Town's zoning regulations; 3) Given that the project is located in an archaeological sensitive area, the applicant obtain documentation from the State Historic Preservation Office (SHPO) as to the project's impacts on archaeological resources; 4) The applicant obtains comments on the traffic impacts and the required driveway permit from NYS Department of Transportation (DOT); and 5) The applicant obtains all necessary permits from the U.S. Army Corps of Engineers (ACE) for wetlands on the property. With these required modifications, the proposed travel plaza should pose no significant county-wide or inter-community impact. It is recommended that the applicant submits the attached application for 9-1-1 Address Verification to the Genesee County Sheriff's Office to ensure that an address is assigned that meets Enhanced 9-1-1 standards.

Felipe A. [illegible]

Director

August 10, 2023

Date

If the County Planning Board disapproved the proposal, or recommends modifications, the referring agency shall NOT act contrary to the recommendations except by a vote of a majority plus one of all the members and after the adoption of a resolution setting forth the reasons for such contrary action. Within 30 days after the final action the referring agency shall file a report of final action with the County Planning Board. An action taken form is provided for this purpose and may be obtained from the Genesee County Planning Department.

SEND OR DELIVER TO:
GENESEE COUNTY DEPARTMENT OF PLANNING
3837 West Main Street Road
Batavia, NY 14020-9404
Phone: (585) 815-7901

DEPARTMENT USE ONLY:
GCDP Referral # T-07-PEM-08-23

* GENESEE COUNTY * PLANNING BOARD REFERRAL

RECEIVED
Genesee County
Dept. of Planning
8/3/2023

Required According to:
GENERAL MUNICIPAL LAW ARTICLE 12B, SECTION 239 L, M, N
(Please answer ALL questions as fully as possible)

1. REFERRING BOARD(S) INFORMATION

Board(s) Town of Pembroke Planning Board
Address 1145 Main Rd.
City, State, Zip Corfu, NY 14036
Phone (585) 599 - 1209 Ext.

2. APPLICANT INFORMATION

Name Geis Construction
Address 10029 Aurora-Hudson Rd.
City, State, Zip Streetsburo, Ohio 44241
Phone (216) 218 - 3505 Ext. Email

MUNICIPALITY: ☐ **City** ■ **Town** ☐ **Village** **of** Pembroke

3. TYPE OF REFERRAL: (Check all applicable items)

- ☐ Area Variance
- ☐ Use Variance
- ■ Special Use Permit
- ■ Site Plan Review
- ☐ Zoning Map Change
- ☐ Zoning Text Amendments
- ☐ Comprehensive Plan/Update
- ☐ Other:

Subdivision Proposal
- ☐ Preliminary
- ☐ Final

4. LOCATION OF THE REAL PROPERTY PERTAINING TO THIS REFERRAL:

A. Full Address Alleghany Rd. (NYS Rt. 77)
B. Nearest intersecting road Main Rd. (NYS Rt. 5)
C. Tax Map Parcel Number 15.-1-5
D. Total area of the property 49.6 Area of property to be disturbed 16.6
E. Present zoning district(s) Interchange (INT)

5. REFERRAL CASE INFORMATION:

A. Has this referral been previously reviewed by the Genesee County Planning Board?

■ NO ☐ YES If yes, give date and action taken

B. Special Use Permit and/or Variances refer to the following section(s) of the present zoning ordinance and/or law

SECTION 408 B1,2,3,4 & SECTION 504

C. Please describe the nature of this request To construct a Travel Plaza which includes store , fuel sales, car wash food and drive thru window

6. ENCLOSURES – Please enclose copy(s) of all appropriate items in regard to this referral

- ■ Local application
- ■ Site plan
- ☐ Subdivision plot plans
- ■ SEQR forms
- ☐ Zoning text/map amendments
- ☐ Location map or tax maps
- ☐ Elevation drawings
- ☐ Agricultural data statement
- ☐ New or updated comprehensive plan
- ☐ Photos
- ☐ Other:

7. CONTACT INFORMATION of the person representing the community in filling out this form (required information)

Name James Wolbert Title CEO / ZEO Phone (585) 599 - 1209 Ext.
Address, City, State, Zip 1145 Main Rd. Corfu, NY 14036 Email zoning-codes@townofpembroke.org

TOWN OF PEMBROKE
1145 MAIN ROAD
CORFU, NEW YORK 14036
585-599-4892

APPLICATION FOR:			
		___	ZONING APPEAL
X	SPECIAL USE PERMIT	___	LAND SEPARATION
___	TEMP. SPECIAL USE PERMIT	___	SUB DIVISION
___	USE VARIANCE	___	ZONE DISTRICT CHANGE
___	AREA VARIANCE	X	SITE PLAN REVIEW

DATE APPLIED FOR	
APPLICATION NUMBER	
REFERRED TO PLANNING	
REFERRED TO ZBA	
PUBLIC HEARING REQ.	

APPLICANT: GEIS CONSTRUCTION
ADDRESS: 10029 AURORA-HUDSON ROAD
STREETSBORO, OHIO 44241
TELEPHONE #: 216-218-3505

STREET LOCATION #: ALLEGHANY ROAD
TAX MAP PARCEL #: 15.00-1-5
ZONING DISTRICT: INTERCHANGE
SIZE OF PARCEL: 49.6 ACRES
CORNER LOT: ___

PROPERTY OWNER (IF OTHER THAN ABOVE)
NAME: INTERCHANGE DEVELOPMENT LLC
ADDRESS: 5818 BRADFORD CT
E. AMHERST NY 14051
TELEPHONE #: ___

CURRENT SET BACK OF BUILDING
FRONT: —
REAR: —
SIDE: —

PERMIT OR VARIANCE FOR:
X NEW CONSTRUCTION
___ ADDITION
___ SIGN
___ HOME OCCUPATION
___ OTHER

IF THIS APPLICATION IS FOR A VARIANCE PLEASE STATE THE SECTION OF THE ORDINANCE UNDER WHICH THE VARIANCE REQUESTED: ___

DESCRIBE REASON FOR VARIANCE: ___

DOES THIS PROJECT REQUIRE APPROVAL FROM THE FOLLOWING? CHECK THOSE THAT APPLY:

X	GENESEE CO. HEALTH DEPARTMENT	___	TOWN BOARD
___	GENESEE CO. SOIL & WATER	___	Z.B.A.
X	DEPARTMENT OF TRANSPORTATION	X	PLANNING BOARD
X	COUNTY PLANNING DEPARTMENT	___	PUBLIC HEARING
X	D.E.C.		

DESCRIPTION OF PROPOSED PROJECT OR REASON FOR PERMIT REQUEST
CONSTRUCT A NEW TRAVEL PLAZA

INSTRUCTIONS FOR COMPLETING THIS APPLICATION:
1. INCLUDE SITE SKETCH PLAN, PREFERABLY A LAND SURVEY WITH CURRENT AND PROPOSED SET BACKS.
2. IF APPLICANT IS NOT THE OWNER OF THE LAND ON WHICH THE PROPOSED PROJECT IS LOCATED, THEY ARE THEN REQUIRED TO OBTAIN WRITTEN PERMISSION FROM THE LAND OWNER FOR THE PROJECT.
3. A SEQR FORM (EAF) MUST BE INCLUDED WITH THE APPLICATION.
4. APPLICANT OR REPRESENTATIVE SHOULD ATTEND PLANNING BOARD AND/OR ZBA MEETING.

NOTE: IF THE REQUEST IS FOR A USE OR AREA VARIANCE, THE PLANNING BOARD'S ONLY ACTION WILL BE TO MAKE A RECOMMENDATION TO THE ZONING BOARD OF APPEALS FOR APPROVAL OR DISAPPROVAL.

APPLICANT SIGNATURE _____ **DATE** 7-31-23

Jeffrey Martin

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Travel Plaza		
Project Location (describe, and attach a general location map): Alleghany Road , Just south of NYS Thruway I90		
Brief Description of Proposed Action (include purpose or need): Construction of a new travel plaza including a convenience store, car wash,fueling stations and electric charging stations.		
Name of Applicant/Sponsor: Geis Construction	Telephone: 216.218.3508 E-Mail: jm@geisco.net	
Address: 10029 Aurora-Hudson Road		
City/PO: Streetsboro	State: Ohio	Zip Code: 44241
Project Contact (if not same as sponsor; give name and title/role): Jeffrey Martin, President	Telephone: 216.218.3508 E-Mail: jm@geisco.net	
Address: 10029 Aurora-Hudson Road		
City/PO: Streetsboro	State: Ohio	Zip Code: 44241
Property Owner (if not same as sponsor): Interchange Development, LLC	Telephone: E-Mail:	
Address: 5818 Bradford Court		
City/PO: East Amherst	State: NY	Zip Code: 14051

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☑Yes ☐No	Site Plan Approval	August 2023
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☐Yes ☑No		
e. County agencies ☑Yes ☐No	Genessse Co planning, Health Department	August 2023
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDOT - ROW work permit NYSDEC - Wetland review, Sanitary Sewer	August 2023
h. Federal agencies ☑Yes ☐No	USACOE - Wetland Review	August 2023

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes ☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Interchange

b. Is the use permitted or allowed by a special or conditional use permit? ☑ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Pembroke Central School District

b. What police or other public protection forces serve the project site?
Corfu Police, Genesee County, NYS Troopers

c. Which fire protection and emergency medical services serve the project site?
Pembroke Fire Department

d. What parks serve the project site?
Pembroke Town Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Commercial

b. a. Total acreage of the site of the proposed action? 49.6 acres
b. Total acreage to be physically disturbed? 16.6 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 49.6 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☑No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑Yes ☐No

If Yes,

i. Total number of structures 3

ii. Dimensions (in feet) of largest proposed structure: 30 height; 136 width; and 112 length

iii. Approximate extent of building space to be heated or cooled: 15,232 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☑No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____

iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No

If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐Yes ☐No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☑Yes ☐No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): Crossing of Murder Creek (NYSDEC wetland) in two locations

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
Two road crossings over Murder Creek are required. The existing North crossing consists of a single 30" HDPE Pipe. This crossing will be upgraded to two 48" embedded pipes. The south crossing will also consist of two 48" embedded pipes. The road will impact 0.03 acres of wetland.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☑No
If Yes, describe: Embedded pipes at the existing elevation

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☑Yes ☐No
If Yes:
- acres of aquatic vegetation proposed to be removed: 0.03
- expected acreage of aquatic vegetation remaining after project completion: 0.03
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): Embedded pipe crossing
- proposed method of plant removal: Backhoe
- if chemical/herbicide treatment will be used, specify product(s): None

v. Describe any proposed reclamation/mitigation following disturbance:
The embedded pipes will fill in naturally with wetland vegetation

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No
If Yes:
i. Total anticipated water usage/demand per day: TBD gallons/day
ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No
If Yes:
- Name of district or service area: Town of Pembroke Water District 1
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:
- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No
If, Yes:
- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No
If Yes:
i. Total anticipated liquid waste generation per day: TBD gallons/day
ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary sewer from restrooms and wash water from car wash

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:
- Name of wastewater treatment plant to be used: Pembroke WWTP
- Name of district: Pembroke Sanitary District 1
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project site? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

  If Yes:
  - Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:
- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 12.2 acres (impervious surface)

_____ Square feet or 49.6 acres (parcel size)

ii. Describe types of new point sources. Surface runoff from buildings, parking and roadways

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

On site bio-retention areas and wet pond with outlet control structure per NYSDEC Regulations

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☑No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:
- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☐ Evening ☐Weekend

☑ Randomly between hours of 6am to 7am.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing 0 Proposed TBD Net increase/decrease TBD

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☑No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: TBD

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): Local Grid

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 6am-9pm
- Saturday: 6am-9pm
- Sunday: 6am-9pm
- Holidays: 6am-9pm

ii. During Operations:

- Monday - Friday: 24 hours
- Saturday: 24 hours
- Sunday: 24 hours
- Holidays: 24 hours

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Typical Construction Noise

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☑ Yes ☐ No

Describe: Some clearing is required

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Similar light levels to the adjacent travel plazas

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☑ Yes ☐ No

Describe: Some clearing is required

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☑ Yes ☐ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

Diesel Truck Traffic

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☑ Yes ☐ No

If Yes:

i. Product(s) to be stored Gasoline and diesel fuel

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☑ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☑ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: 15 tons per Month (unit of time)
- Operation : 5 tons per Month (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: Temporary Dumpsters
- Operation: Recycle bins/ cardboard dumpsters

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: Licenced hauler to certified landfill
- Operation: Licenced hauler to certified landfill

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☑ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): NYS Thruway

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	12.2	-12.2
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	49.6	33	-16.6
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.5	0.5	0
• Wetlands (freshwater or tidal)	14.6	14.6	(-0.02)
• Non-vegetated (bare rock, earth or fill)	0	0	
• Other Describe: Lawn/ Landscaping	0	4.4	4.4

c. Is the project site presently used by members of the community for public recreation? ☐Yes ☑No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes ☑No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐Yes ☑No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes ☑No

If Yes:

i. Has the facility been formally closed? ☐Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes ☑No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes ☐No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐Yes ☑No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Romulus	29 %
Ovid	29 %
Canadagua	11 %

d. What is the average depth to the water table on the project site? Average: 0.5 feet

e. Drainage status of project site soils:

☐ Well Drained:	% of site
☑ Moderately Well Drained:	43 % of site
☑ Poorly Drained	57 % of site

f. Approximate proportion of proposed action site with slopes:

☑ 0-10%:	100 % of site
☐ 10-15%:	% of site
☐ 15% or greater:	% of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☑ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, NYS Wetland, Federal Waters, Fe... Approximate Size NYS Wetland (in a...
- Wetland No. (if regulated by DEC) AK-16

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☑ Yes ☐ No

k. Is the project site in the 500-year Floodplain? ☑ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☑ No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site:

Deer	Mice	Skunk
Rabbits	Chipmonk	Various Insects
Squirrels	Opposum	Various birds

n. Does the project site contain a designated significant natural community? ☐Yes ☑No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): _____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

If Yes:

i. Species and listing (endangered or threatened): Northern Long-eared Bat

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No

If Yes:

i. Species and listing: _____

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No

If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☑Yes ☐No

i. If Yes: acreage(s) on project site? 71% Prime

ii. Source(s) of soil rating(s): USDA prime and important farmland list

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☑ Yes ☐ No

If Yes:

i. Identify resource: Indian Falls

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

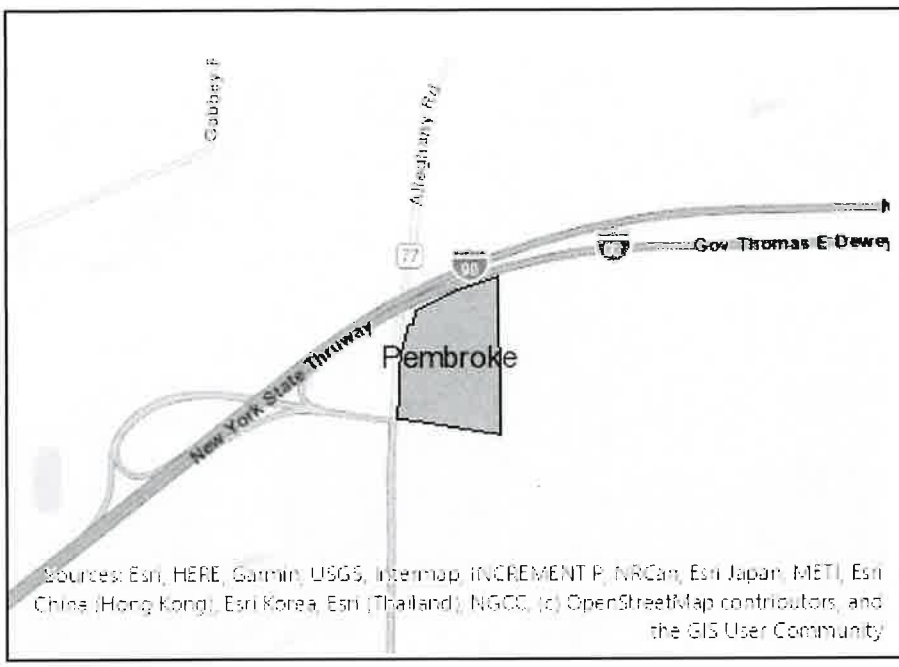
Applicant/Sponsor Name Michael Metzger Date 9/1/23

Signature _____ Title Agent

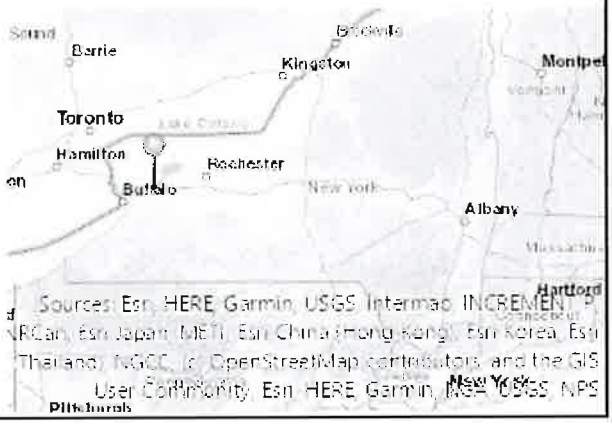
PRINT FORM

EAF Mapper Summary Report

Friday, July 28, 2023 3:07 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

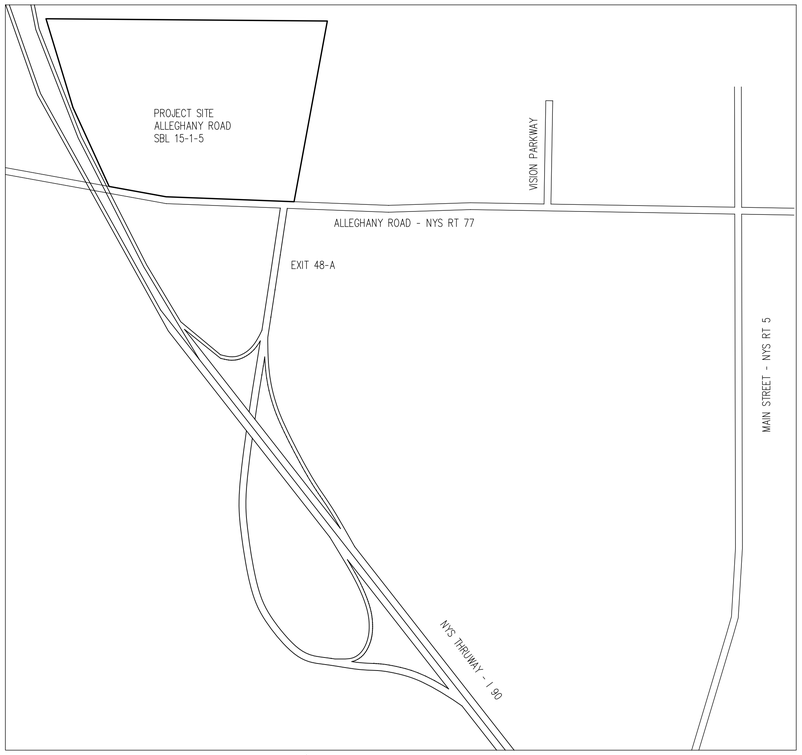


B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):300.7
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	AK-16
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.

E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Northern Long-eared Bat
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK



LOCATION MAP
NTS

SCHEDULE OF DRAWINGS:

1 CS-1 COVER SHEET
2 TOPOGRAPHIC SURVEY
3 EC-1 EROSION AND SEDIMENT CONTROL PLAN
4 SP-1 SITE PLAN
5 GD-1 GRADING AND DRAINAGE PLAN
6 SW-1 SANITARY AND WATER PLAN
7 DT-1 DETAILS
8 DT-2 DETAILS
9 DT-3 WATER DETAILS
10 DT-4 WATER DETAILS
11 DT-5 SANITARY DETAILS
12 DT-6 SANITARY DETAILS

OWNER:

INTERCHANGE DEVELOPMENT, LLC
5818 BRADFORD COURT
EAST AMHERST, NEW YORK 14051

DEVELOPER:

GEIS CONSTRUCTION
10020 AURORA-HUDSON ROAD
STREETSBORO, OHIO 44241

JEFF MARTIN (216) 218-3508

CIVIL ENGINEER:

METZGER CIVIL ENGINEERING, PLLC.
8245 SHERIDAN DRIVE
WILLIAMSVILLE, NEW YORK 14221

PHONE No. (716) 633-2601

METENG@ROADRUNNER.COM

METZGER CIVIL ENGINEERING, PLLC

SCALE:	NTS
DATE:	JULY 14, 2023
JOB NO:	M-2303
SHEET NO:	CS-1

TRUE NORTH LAND SURVEYING, PLLC
150 AERO DRIVE
BUFFALO, NEW YORK 14225
(716)631-5140 ~ Truenorthpllc@aol.com

AMEND:	
SURVEY DATE: 5-18-23	
©DRAWING DATE: 6-14-23	
SCALE: 1" = 80'	

PART OF LOT 5 SECTION ____ TOWNSHIP 12 RANGE 4 OF THE: Holland Land Company's SURVEY– Genesee COUNTY, N.Y.

SURVEY OF: Vacant Lot, Allegany Road (N.Y.S. Route 77), Town of Pembroke

SBL No. 15.00-1-5

NORTH

100' WETLAND BUFFER

SILT SOCK
(TYP)
(SEE DETAIL)

DI PROTECTION
(TYP)
(SEE DETAIL)

FUEL

CONC
WASH OUT
(SEE DETAIL)

CAR WASH

GAS
PUMPS

CONVENIENCE STORE

TEMP. CONSTRUCTION
ENTRANCE
(SEE DETAIL)

ALLEGHANY ROAD — ROUTE 77

NOTES

1) THIS PLAN IS BASED ON SURVEY BY TRUE NORTH SURVEY. THIS IS NOT A PROPERTY SURVEY.

Designed By:	ARH
Drawn By:	ARH
Checked By:	JCM
Cad File:	M2303

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

REVISION	BY/CK	DATE

METZGER
CIVIL
ENGINEERING, PLLC

8245 SHERIDAN DR.
WILLIAMSVILLE, NY 14221
PH: 716-633-2601
FAX: 716-633-2704

CIVIL ENGINEERING
LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING

STATE OF NEW YORK
MICHAEL J. METZGER
066788
LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN

SCALE:	1"=50'
DATE:	July 14, 2023
JOB NO:	M-2303
SHEET NO:	EC-1

C:\Users\mcown\OneDrive\MCE\M2303 Travel Plaza\dwg\Site 1.dwg, 8/1/2023 9:16:20 AM

ALLEGANY ROAD (N.Y.S. ROUTE 77)
(WIDTH VARIES)
(CORFU-INDIAN FALLS HIGHWAY, PART 2, S.H. 6245)
(FKA: PUBLIC ROAD)

NORTH

STORMWATER POND

100' WETLAND BUFFER

BIORETENTION AREA "A" – 23,100 SQ FT
FILTER 841.00 – BOTTOM 837.00

BIORETENTION AREA "A"

15' FILTER STRIP

40 SPACES 12'x78'

27 SPACES 12'x78'

32 SPACES 12'x78'

16 SPACES 12'x78'

21 SPACES 12'x78'

70'

30'

FUEL

OFFICE

53'

CAR WASH

EV CHARGING

BIORETENTION AREA "B" – 2,500 SQ FT
FILTER 841.00 – BOTTOM 837.00

47' 20' 48' GAS PUMPS 48'

CONVENIENCE STORE
136' x 112'

24'

22'

VACANT L
(NO KNOWN A
49.57± AC

2023.0'
N 00°49'30" W

S 13°56'16" W
153.4'

S 14°37'56" W
396.5'

S 01°33'37" W
240.7'

R.O.W. AS ORIGINALLY LAID OUT
PER MAP 263 (WIDTH VARIES)

Found Concrete Monument (Bent)

Pointed Fiber Optic

Ditch

Edge of Asphalt Pavement

Solid White Stripe

Gravel Rail

Double Yellow Stripe

Dashed White Stripe

Swale

Knoll

Pointed Gas (1 1/4" PLT)

Irregular Curb (Flush)

Concrete Apron

6" Concrete Curb

MAP 263, PARCEL 267

ALLEGANY ROAD – ROUTE 77

R46'

30'

56'

24'

BENCHMARK
HYDRANT TOP NUT
EL. 847.29

W5-1 W5-2 W5-3 W5-4 W5-5 W5-6 W5-7 W5-8 W5-9 W5-10 W5-11 W5-12 W5-13 W5-14 W5-15 W5-16 W5-17 W5-18 W5-19 W5-20 W5-21 W5-22 W5-23 W5-24 W5-25 W5-26 W5-27 W5-28 W5-29 W5-30 W5-31 W5-32 W5-33 W5-34 W5-35 W5-36 W5-37 W5-38 W5-39 W5-40 W5-41 W5-42 W5-43 W5-44 W5-45 W5-46 W5-47 W5-48 W5-49 W5-50 W5-51 W5-52 W5-53 W5-54 W5-55 W5-56 W5-57 W5-58 W5-59 W5-60 W5-61 W5-62 W5-63 W5-64 W5-65 W5-66 W5-67 W5-68 W5-69 W5-70 W5-71 W5-72 W5-73 W5-74 W5-75 W5-76 W5-77 W5-78 W5-79 W5-80 W5-81 W5-82 W5-83 W5-84 W5-85 W5-86 W5-87 W5-88 W5-89 W5-90 W5-91 W5-92 W5-93 W5-94 W5-95 W5-96 W5-97 W5-98 W5-99 W5-100 W5-101 W5-102 W5-103 W5-104 W5-105 W5-106 W5-107 W5-108 W5-109 W5-110 W5-111 W5-112 W5-113 W5-114 W5-115 W5-116 W5-117 W5-118 W5-119 W5-120 W5-121 W5-122 W5-123 W5-124 W5-125 W5-126 W5-127 W4-1 W4-2 W4-3 W4-4 W3-1 W3-2 W3-3 W3-4 W3-5 W3-6 W3-7 W3-8 W3-9 W3-10 W3-11 W3-12 W3-13

NOTES

1) THIS PLAN IS BASED ON SURVEY BY TRUE NORTH SURVEY. THIS IS NOT A PROPERTY SURVEY.

Designed By:	ARH
Drawn By:	ARH
Checked By:	JCM
Cad File:	M2303

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LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING

STATE OF NEW YORK
MARK J. METZGER
LICENSED PROFESSIONAL ENGINEER
No. 066746

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

SITE PLAN

SCALE:	1"=50'
DATE:	July 14, 2023
JOB NO:	M-2303
SHEET NO:	SP-1

C:\Users\mcown\OneDrive\MCE\M2303 Travel Plaza\dwg\Site 1.dwg, 8/1/2023 10:39:25 AM

ALLEGANY ROAD (N.Y.S. ROUTE 77)
(WIDTH VARIES)
(CORFU-INDIAN FALLS HIGHWAY; PART 2, S.H. 8245)
(PUBLIC ROAD)

NORTH

POND
NWL 836.00
100 YR 841.30
TOB 842.30

4 PIPES - 110'
24"ø HDPE @ 0.2%
EI 835.80
WI 835.58

100' WETLAND BUFFER

BIORETENTION AREA UNDERDRAIN
(SEE DETAIL)
INV 841.00

INV 836.00

INV 841.00
251' 18"ø HDPE @ 0.2%

CB 1
RIM 844.18
INV 841.50

CB 2
RIM 844.18
INV 841.83

165' 12"ø HDPE @ 0.2%

CB 3
RIM 844.16
INV 841.86

CB 4
RIM 844.16
INV 841.58

140' 12"ø HDPE @ 0.2%

291' 18"ø HDPE @ 0.2%

S.B.L. 15.00-1-6
REPUTED OWNER:
ANDREW LIPNICKY

VACANT LOT
(NO KNOWN ADDRESS)
49.57± ACRES

TWO 4'ø HDPE PIPES
55.26' LONG
TOP OF PIPE 839.00
FLOOR 836.75
PIPE INV 834.75
(SEE DETAIL)

TWO 4'ø HDPE PIPES
55.26' LONG
TOP OF PIPE 839.00
FLOOR 836.75
PIPE INV 834.75
(SEE DETAIL)

CB X
RIM 845.50
INV 842.05

120' 12"ø HDPE
@ 0.2%

CAR WASH

CB 5
RIM 844.18
INV 841.35

CB 5
RIM 844.20
INV 841.51

CB 6
RIM 844.20
INV 841.70

CB 7
RIM 844.50
INV 841.81

INV 841.00
175' 18"ø HDPE @ 0.2%

78' 12"ø HDPE
@ 0.2%

97' 12"ø HDPE
@ 0.2%

54' 12"ø HDPE
@ 0.2%

35' 12"ø HDPE
@ 0.2%

42' 12"ø HDPE
@ 0.2%

CB 8
RIM 843.50
INV 841.43

84' 12"ø HDPE
@ 0.2%

845.40

845.04

CONVENIENCE STORE

GAS PUMPS

CB 9
RIM 843.70
INV 841.60

CB 10
RIM 844.20
INV 841.88

CB 14
RIM 844.20
INV 841.92

55' 12"ø HDPE
@ 0.2%

INV 841.00
175' 18"ø HDPE @ 0.2%

CB 11
RIM 844.18
INV 841.35

129' 12"ø HDPE @ 0.2%

104' 12"ø HDPE @ 0.2%

CB 12
RIM 844.98
INV 841.60

CB 13
RIM 844.20
INV 841.81

+846.70 HP

FUEL

Pointed Fiber Optic

Found Concrete Monument (Bent)

R.O.W. VARIES (WIDTH VARIES) 140 OUT
TO OUT
FEE MAP 263.1 (WIDTH VARIES)

S 50°33'37" W
2.40'

MAP 263.1
PARCEL 261

Pointed Gas
(1 1/4" PLT)

Irregular Curb
(Flush)

Concrete
Apron

6" Concrete Curb

Irregular Curb
(Flush)

Ditch

Guard Rail
Edge of Asphalt Pavement
Edge of Travel Lane
Solid White Stripe
Double Yellow Stripe
Dashed White Stripe

W5-1 W5-2 W5-3 W5-4 W5-5 W5-6 W5-7 W5-8 W5-9 W5-10 W5-11 W5-12 W5-13 W5-14 W5-15 W5-16 W5-17 W5-18 W5-19 W5-20 W5-21 W5-22 W5-23 W5-24 W5-25 W5-26 W5-27 W5-28 W5-29 W5-30 W5-31 W5-32 W5-33 W5-34 W5-35 W5-36 W5-37 W5-38 W5-39 W5-40 W5-41 W5-42 W5-43 W5-44 W5-45 W5-46 W5-47 W5-48 W5-49 W5-50 W5-51 W5-52 W5-53 W5-54 W5-55 W5-56 W5-57 W5-58 W5-59 W5-60 W5-61 W5-62 W5-63 W5-64 W5-65 W5-66 W5-67 W5-68 W5-69 W5-70 W5-71 W5-72 W5-73 W5-74 W5-75 W5-76 W5-77 W5-78 W5-79 W5-80 W5-81 W5-82 W5-83 W5-84 W5-85 W5-86 W5-87 W5-88 W5-89 W5-90 W5-91 W5-92 W5-93 W5-94 & W5-95 NOT FOUND W5-96 W5-97 W5-98 W5-99 W5-100 W5-101 W5-102 W5-103 W5-104 W5-105 W5-106 W5-107 W5-108 W5-109 W5-110 W5-111 W5-112 W5-113 W5-114 W5-115 W5-116 W5-117 W5-118 W5-119 W5-120 W5-121 W5-122 W5-123 W5-124 W5-125 W5-126 W5-127 W5-128 W5-129 W5-130 W5-131 W5-132 W5-133 W5-134 W5-135 W5-136 W5-137 W5-138 W5-139 W5-140 W5-141 W5-142 W5-143 W5-144 W5-145 W5-146 W5-147 W5-148 W5-149 W5-150 W5-151 W5-152 W5-153 W5-154 W5-155 W5-156 W5-157 W5-158 W5-159 W5-160 W5-161 W5-162 W5-163 W5-164 W5-165 W5-166 W5-167 W5-168 W5-169 W5-170 W5-171 W5-172 W5-173 W5-174 W5-175 W5-176 W5-177 W5-178 W5-179 W5-180 W5-181 W5-182 W5-183 W5-184 W5-185 W5-186 W5-187 W5-188 W5-189 W5-190 W5-191 W5-192 W5-193 W5-194 W5-195 W5-196 W5-197 W5-198 W5-199 W5-200 W5-201 W5-202 W5-203 W5-204 W5-205 W5-206 W5-207 W5-208 W5-209 W5-210 W5-211 W5-212 W5-213 W5-214 W5-215 W5-216 W5-217 W5-218 W5-219 W5-220 W5-221 W5-222 W5-223 W5-224 W5-225 W5-226 W5-227 W5-228 W5-229 W5-230 W5-231 W5-232 W5-233 W5-234 W5-235 W5-236 W5-237 W5-238 W5-239 W5-240 W5-241 W5-242 W5-243 W5-244 W5-245 W5-246 W5-247 W5-248 W5-249 W5-250 W5-251 W5-252 W5-253 W5-254 W5-255 W5-256 W5-257 W5-258 W5-259 W5-260 W5-261 W5-262 W5-263 W5-264 W5-265 W5-266 W5-267 W5-268 W5-269 W5-270 W5-271 W5-272 W5-273 W5-274 W5-275 W5-276 W5-277 W5-278 W5-279 W5-280 W5-281 W5-282 W5-283 W5-284 W5-285 W5-286 W5-287 W5-288 W5-289 W5-290 W5-291 W5-292 W5-293 W5-294 W5-295 W5-296 W5-297 W5-298 W5-299 W5-300 W5-301 W5-302 W5-303 W5-304 W5-305 W5-306 W5-307 W5-308 W5-309 W5-310 W5-311 W5-312 W5-313 W5-314 W5-315 W5-316 W5-317 W5-318 W5-319 W5-320 W5-321 W5-322 W5-323 W5-324 W5-325 W5-326 W5-327 W5-328 W5-329 W5-330 W5-331 W5-332 W5-333 W5-334 W5-335 W5-336 W5-337 W5-338 W5-339 W5-340 W5-341 W5-342 W5-343 W5-344 W5-345 W5-346 W5-347 W5-348 W5-349 W5-350 W5-351 W5-352 W5-353 W5-354 W5-355 W5-356 W5-357 W5-358 W5-359 W5-360 W5-361 W5-362 W5-363 W5-364 W5-365 W5-366 W5-367 W5-368 W5-369 W5-370 W5-371 W5-372 W5-373 W5-374 W5-375 W5-376 W5-377 W5-378 W5-379 W5-380 W5-381 W5-382 W5-383 W5-384 W5-385 W5-386 W5-387 W5-388 W5-389 W5-390 W5-391 W5-392 W5-393 W5-394 W5-395 W5-396 W5-397 W5-398 W5-399 W5-400 W5-401 W5-402 W5-403 W5-404 W5-405 W5-406 W5-407 W5-408 W5-409 W5-410 W5-411 W5-412 W5-413 W5-414 W5-415 W5-416 W5-417 W5-418 W5-419 W5-420 W5-421 W5-422 W5-423 W5-424 W5-425 W5-426 W5-427 W5-428 W5-429 W5-430 W5-431 W5-432 W5-433 W5-434 W5-435 W5-436 W5-437 W5-438 W5-439 W5-440 W5-441 W5-442 W5-443 W5-444 W5-445 W5-446 W5-447 W5-448 W5-449 W5-450 W5-451 W5-452 W5-453 W5-454 W5-455 W5-456 W5-457 W5-458 W5-459 W5-460 W5-461 W5-462 W5-463 W5-464 W5-465 W5-466 W5-467 W5-468 W5-469 W5-470 W5-471 W5-472 W5-473 W5-474 W5-475 W5-476 W5-477 W5-478 W5-479 W5-480 W5-481 W5-482 W5-483 W5-484 W5-485 W5-486 W5-487 W5-488 W5-489 W5-490 W5-491 W5-492 W5-493 W5-494 W5-495 W5-496 W5-497 W5-498 W5-499 W5-500 W5-501 W5-502 W5-503 W5-504 W5-505 W5-506 W5-507 W5-508 W5-509 W5-510 W5-511 W5-512 W5-513 W5-514 W5-515 W5-516 W5-517 W5-518 W5-519 W5-520 W5-521 W5-522 W5-523 W5-524 W5-525 W5-526 W5-527 W5-528 W5-529 W5-530 W5-531 W5-532 W5-533 W5-534 W5-535 W5-536 W5-537 W5-538 W5-539 W5-540 W5-541 W5-542 W5-543 W5-544 W5-545 W5-546 W5-547 W5-548 W5-549 W5-550 W5-551 W5-552 W5-553 W5-554 W5-555 W5-556 W5-557 W5-558 W5-559 W5-560 W5-561 W5-562 W5-563 W5-564 W5-565 W5-566 W5-567 W5-568 W5-569 W5-570 W5-571 W5-572 W5-573 W5-574 W5-575 W5-576 W5-577 W5-578 W5-579 W5-580 W5-581 W5-582 W5-583 W5-584 W5-585 W5-586 W5-587 W5-588 W5-589 W5-590 W5-591 W5-592 W5-593 W5-594 W5-595 W5-596 W5-597 W5-598 W5-599 W5-600 W5-601 W5-602 W5-603 W5-604 W5-605 W5-606 W5-607 W5-608 W5-609 W5-610 W5-611 W5-612 W5-613 W5-614 W5-615 W5-616 W5-617 W5-618 W5-619 W5-620 W5-621 W5-622 W5-623 W5-624 W5-625 W5-626 W5-627 W5-628 W5-629 W5-630 W5-631 W5-632 W5-633 W5-634 W5-635 W5-636 W5-637 W5-638 W5-639 W5-640 W5-641 W5-642 W5-643 W5-644 W5-645 W5-646 W5-647 W5-648 W5-649 W5-650 W5-651 W5-652 W5-653 W5-654 W5-655 W5-656 W5-657 W5-658 W5-659 W5-660 W5-661 W5-662 W5-663 W5-664 W5-665 W5-666 W5-667 W5-668 W5-669 W5-670 W5-671 W5-672 W5-673 W5-674 W5-675 W5-676 W5-677 W5-678 W5-679 W5-680 W5-681 W5-682 W5-683 W5-684 W5-685 W5-686 W5-687 W5-688 W5-689 W5-690 W5-691 W5-692 W5-693 W5-694 W5-695 W5-696 W5-697 W5-698 W5-699 W5-700 W5-701 W5-702 W5-703 W5-704 W5-705 W5-706 W5-707 W5-708 W5-709 W5-710 W5-711 W5-712 W5-713 W5-714 W5-715 W5-716 W5-717 W5-718 W5-719 W5-720 W5-721 W5-722 W5-723 W5-724 W5-725 W5-726 W5-727 W5-728 W5-729 W5-730 W5-731 W5-732 W5-733 W5-734 W5-735 W5-736 W5-737 W5-738 W5-739 W5-740 W5-741 W5-742 W5-743 W5-744 W5-745 W5-746 W5-747 W5-748 W5-749 W5-750 W5-751 W5-752 W5-753 W5-754 W5-755 W5-756 W5-757 W5-758 W5-759 W5-760 W5-761 W5-762 W5-763 W5-764 W5-765 W5-766 W5-767 W5-768 W5-769 W5-770 W5-771 W5-772 W5-773 W5-774 W5-775 W5-776 W5-777 W5-778 W5-779 W5-780 W5-781 W5-782 W5-783 W5-784 W5-785 W5-786 W5-787 W5-788 W5-789 W5-790 W5-791 W5-792 W5-793 W5-794 W5-795 W5-796 W5-797 W5-798 W5-799 W5-800 W5-801 W5-802 W5-803 W5-804 W5-805 W5-806 W5-807 W5-808 W5-809 W5-810 W5-811 W5-812 W5-813 W5-814 W5-815 W5-816 W5-817 W5-818 W5-819 W5-820 W5-821 W5-822 W5-823 W5-824 W5-825 W5-826 W5-827 W5-828 W5-829 W5-830 W5-831 W5-832 W5-833 W5-834 W5-835 W5-836 W5-837 W5-838 W5-839 W5-840 W5-841 W5-842 W5-843 W5-844 W5-845 W5-846 W5-847 W5-848 W5-849 W5-850 W5-851 W5-852 W5-853 W5-854 W5-855 W5-856 W5-857 W5-858 W5-859 W5-860 W5-861 W5-862 W5-863 W5-864 W5-865 W5-866 W5-867 W5-868 W5-869 W5-870 W5-871 W5-872 W5-873 W5-874 W5-875 W5-876 W5-877 W5-878 W5-879 W5-880 W5-881 W5-882 W5-883 W5-884 W5-885 W5-886 W5-887 W5-888 W5-889 W5-890 W5-891 W5-892 W5-893 W5-894 W5-895 W5-896 W5-897 W5-898 W5-899 W5-900 W5-901 W5-902 W5-903 W5-904 W5-905 W5-906 W5-907 W5-908 W5-909 W5-910 W5-911 W5-912 W5-913 W5-914 W5-915 W5-916 W5-917 W5-918 W5-919 W5-920 W5-921 W5-922 W5-923 W5-924 W5-925 W5-926 W5-927 W5-928 W5-929 W5-930 W5-931 W5-932 W5-933 W5-934 W5-935 W5-936 W5-937 W5-938 W5-939 W5-940 W5-941 W5-942 W5-943 W5-944 W5-945 W5-946 W5-947 W5-948 W5-949 W5-950 W5-951 W5-952 W5-953 W5-954 W5-955 W5-956 W5-957 W5-958 W5-959 W5-960 W5-961 W5-962 W5-963 W5-964 W5-965 W5-966 W5-967 W5-968 W5-969 W5-970 W5-971 W5-972 W5-973 W5-974 W5-975 W5-976 W5-977 W5-978 W5-979 W5-980 W5-981 W5-982 W5-983 W5-984 W5-985 W5-986 W5-987 W5-988 W5-989 W5-990 W5-991 W5-992 W5-993 W5-994 W5-995 W5-996 W5-997 W5-998 W5-999 W5-1000

NOTES

1) THIS PLAN IS BASED ON SURVEY BY TRUE NORTH SURVEY. THIS IS NOT A PROPERTY SURVEY.

Designed By:	ARH
Drawn By:	ARH
Checked By:	JCM
Cad File:	M2303

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

REVISION	BY/CK	DATE

METZGER CIVIL ENGINEERING, PLLC
8245 SHERIDAN DR.
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LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING

STATE OF NEW YORK · MICHAEL R. METZGER · 096788 · LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

GRADING AND DRAINAGE PLAN

SCALE:	1"=50'
DATE:	July 14, 2023
JOB NO:	M-2303
SHEET NO:	GD-1

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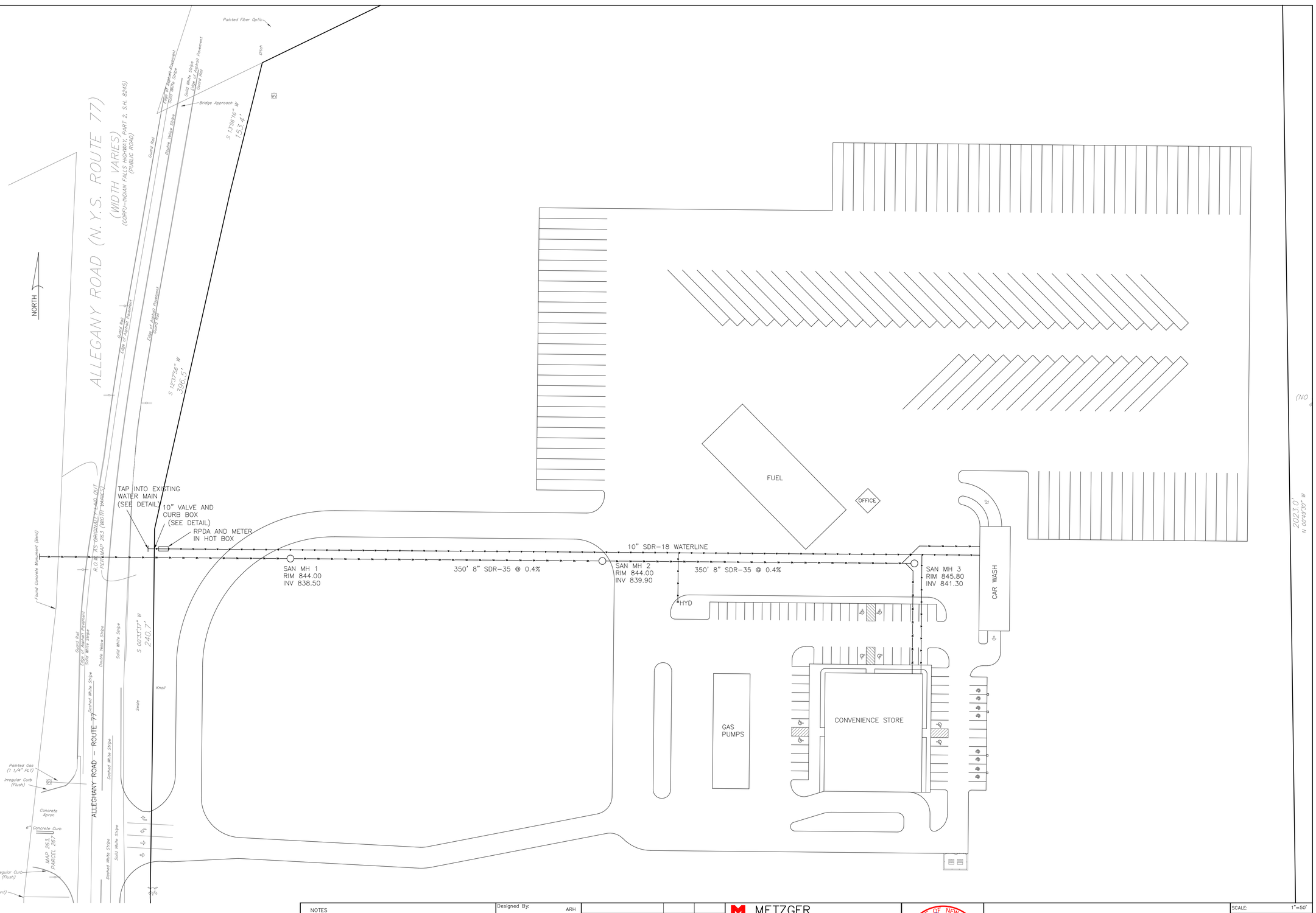

NOTES

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Drawn By:	ARH
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REVISION	BY/CK	DATE

METZGER CIVIL ENGINEERING, PLLC
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LAND PLANNING
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MUNICIPAL ENGINEERING

STATE OF NEW YORK MICHAEL METZGER 066758 LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

SANITARY AND WATER PLAN

SCALE:	1"=50'
DATE:	July 14, 2023
JOB NO:	M-2303
SHEET NO:	SW-1

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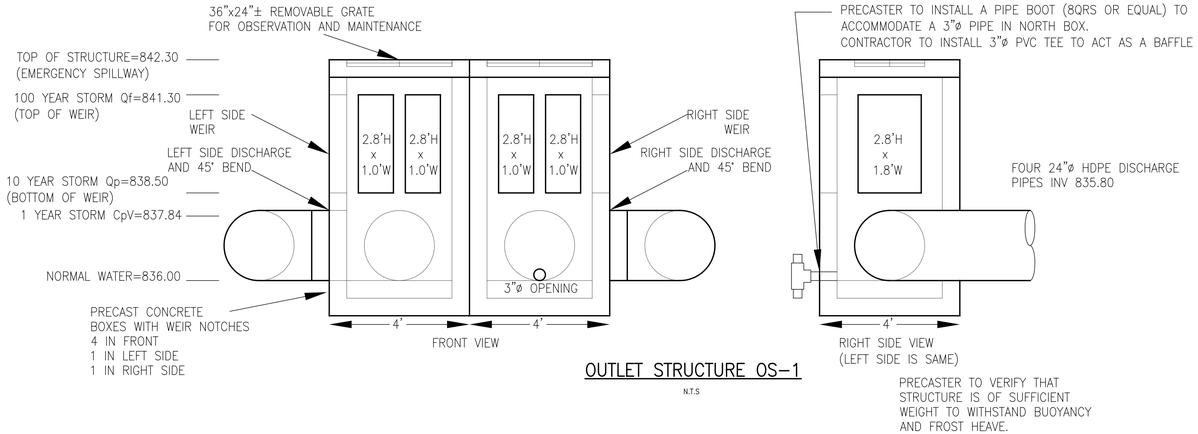
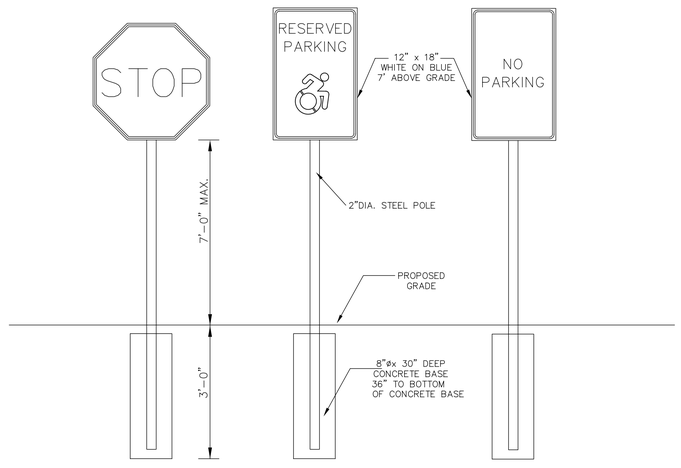


OUTLET STRUCTURE OS–1

N.T.S

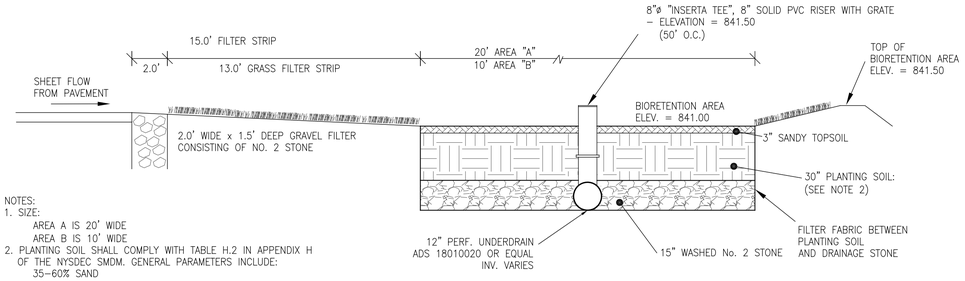


SIGNAGE

N.T.S.

HANDICAP SIGNAGE

N.T.S.



NOTES:
1. SIZE:
   AREA A IS 20' WIDE
   AREA B IS 10' WIDE
2. PLANTING SOIL SHALL COMPLY WITH TABLE H.2 IN APPENDIX H OF THE NYSDEC SMDM. GENERAL PARAMETERS INCLUDE:
   35–60% SAND
   30–55% SILT
   10–25% CLAY
   1–4% ORGANIC MATTER
3. CONTRACTOR SHALL PLANT THE ERNEST SEED COMPANY'S "RAIN GARDEN SEED MIX" IN BIORETENTION AREA WITH AN OVER CROP OF ANNUAL RYE GRASS AT A RATE OF 25–50 LBS/AC. SEED TO BE COVERED AND WATERED UNTIL ESTABLISHED.

BIO RETENTION AREAS DETAIL

N.T.S

Designed By:	ARH
Drawn By:	ARH
Checked By:	JCM
Cad File:	M2303

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

REVISION	BY/CK	DATE

METZGER CIVIL ENGINEERING, PLLC
8245 SHERIDAN DR.
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CIVIL ENGINEERING
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SITE DESIGN
MUNICIPAL ENGINEERING

STATE OF NEW YORK · MICHAEL V. METZGER · 066788 · LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

DETAILS – 1

SCALE:	AS NOTED
DATE:	July 14, 2023
JOB NO:	M–2303
SHEET NO:	DT–1

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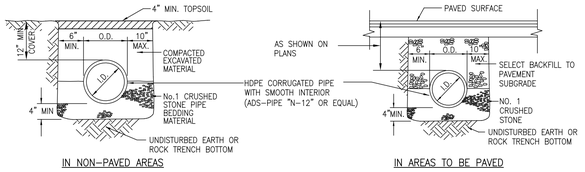
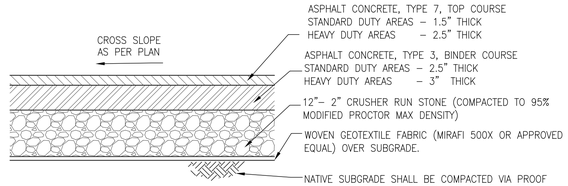


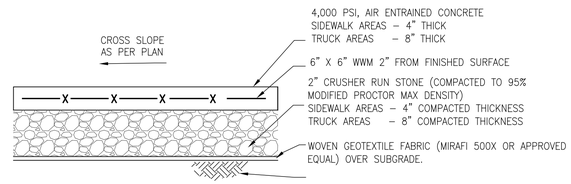
IN NON-PAVED AREAS IN AREAS TO BE PAVED

SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)
2" RUN OF CRUSHER STONE OR 2" RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6"LIFTS TO 90% DENSITY)
NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS

STORM SEWER TRENCH DETAILS
N.T.S.

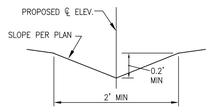


ASPHALT PAVING SECTION
N.T.S.



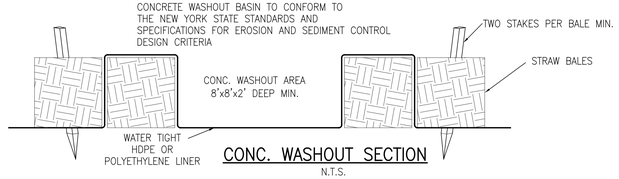
CONCRETE SECTION
N.T.S.

NOTES:
1. CONCRETE SHALL BE NYSDOT CLASS A, 4,000 PSI, MAX. SLUMP 4", AIR 5-7%, FIBERMESH
2. WELDED WIRE MESH (WWM) SHALL BE W2.9xW2.9, 6"x6".
3. INSTALL 2" DEEP MIN. SAW CUT CONTROL JOINTS @ 10' INTERVALS. WITHIN 24 HOURS OF PLACEMENT.
4. PROVIDE 1/2" PREFORMED BITUMINOUS EXPANSION JOINTS AT 30" O.C.
5. PROVIDE LIGHT BROOM FINISH WITH ¼" R. TOOLED EDGES.
6. ALL CONCRETE PLACED AS PART OF THIS CONTRACT SHALL BE SEALED AS SOON AS POSSIBLE AFTER INSTALLATION.

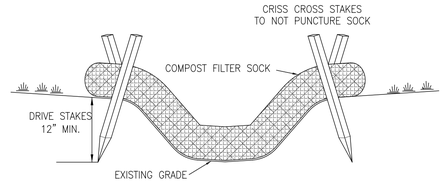


NOTES:
1) USE DIMENSIONS SHOWN IN THIS DETAIL UNLESS INDICATED OTHERWISE ON PLANS.
2) CONTRACTOR SHALL NOT OVER-EXCAVATE CHANNEL, SO AS TO, PREVENT EROSION.

TYPICAL SWALE
N.T.S.

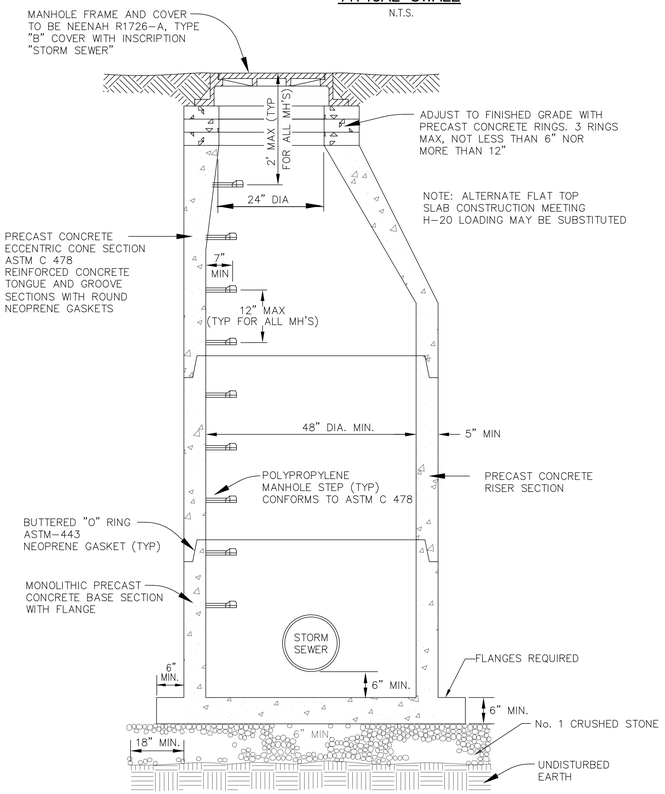


CONC. WASHOUT SECTION
N.T.S.

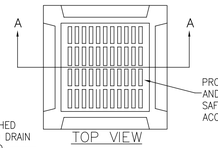


NOTES:
1. COMPOST FILTER SOCK MUST CONFORM TO NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (FILTREXX SILTSOXX OR APPROVED EQUAL).
2. INSTALL 3' LONG 2"x2" HARDWOOD STAKES AT 10' INTERVALS OR AS SPECIFIED BY THE SOCK MANUFACTURER.
3. WOODEN STAKES TO BE INSTALLED IN A CRISS CROSS PATTERN SO AS NOT TO PUNCTURE THE SOCK.
4. WOODEN STAKES TO BE DRIVEN AT LEAST 12" INTO GROUND.
5. ABUTTING ENDS MUST BE OVERLAPPED TO PROVIDE CONTINUOUS PROTECTION.
6. ALL SOCK SHALL BE 12".

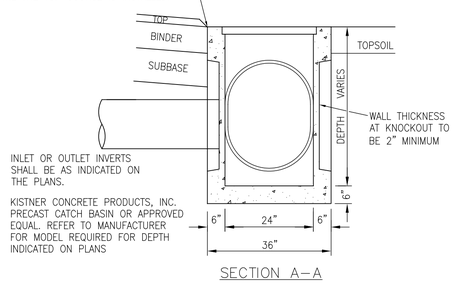
COMPOST FILTER "SILT SOCK" / CHECK DAM
N.T.S.



PRECAST CONCRETE STORM MANHOLE
N.T.S.



INSTALL ROADSIDE CATCH BASINS 7" BELOW CENTERLINE OF THE FINISHED ROADWAY. INSTALL BINDER FLUSH TO DRAIN UNTIL THE TOP COURSE IS INSTALLED.

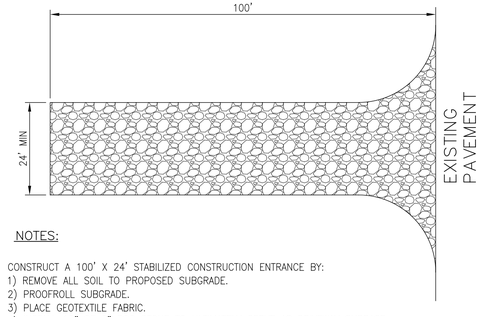


INLET OR OUTLET INVERTS SHALL BE AS INDICATED ON THE PLANS.

KISTNER CONCRETE PRODUCTS, INC. PRECAST CATCH BASIN OR APPROVED EQUAL. REFER TO MANUFACTURER FOR MODEL REQUIRED FOR DEPTH INDICATED ON PLANS

SECTION A-A

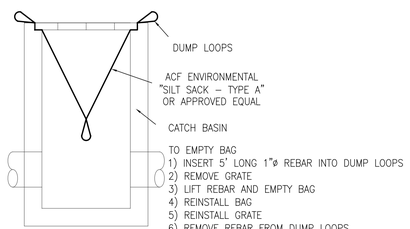
PRECAST CONCRETE CATCH BASIN
N.T.S.



NOTES:

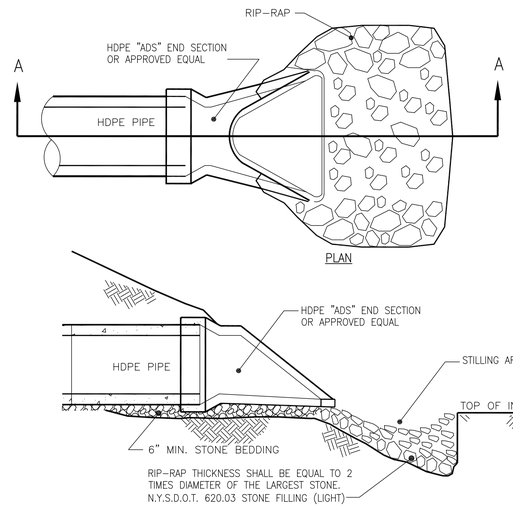
CONSTRUCT A 100' X 24' STABILIZED CONSTRUCTION ENTRANCE BY:
1) REMOVE ALL SOIL TO PROPOSED SUBGRADE.
2) PROOFROLL SUBGRADE.
3) PLACE GEOTEXTILE FABRIC.
4) INSTALL 12" OF 2" ROC STONE TO ULTIMATELY SERVE AS DRIVEWAY SUBBASE
5) SURFACE WATER--ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A SWALE OR MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
6) MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROCKLAND. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE ROADWAY MUST BE REMOVED IMMEDIATELY.
7) WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8) INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED CONTINUOUSLY DURING CONSTRUCTION.

STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.



TO EMPTY BAG
1) INSERT 5' LONG 1"ø REBAR INTO DUMP LOOPS
2) REMOVE GRATE
3) LIFT REBAR AND EMPTY BAG
4) REINSTALL BAG
5) REINSTALL GRATE
6) REMOVE REBAR FROM DUMP LOOPS

DI PROTECTION DETAIL
N.T.S.



PLAN

SECTION "AA"

END SECTION WITH RIP-RAP DETAIL
N.T.S.

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REVISION	BY/CK	DATE

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MUNICIPAL ENGINEERING

STATE OF NEW YORK MICHAEL C. METZGER 066788 LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA
TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

DETAILS – 2

SCALE:	AS NOTED
DATE:	July 14, 2023
JOB NO:	M-2303
SHEET NO:	DT-2

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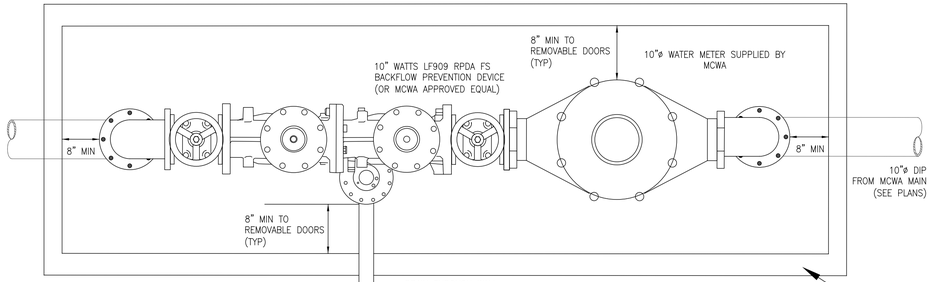
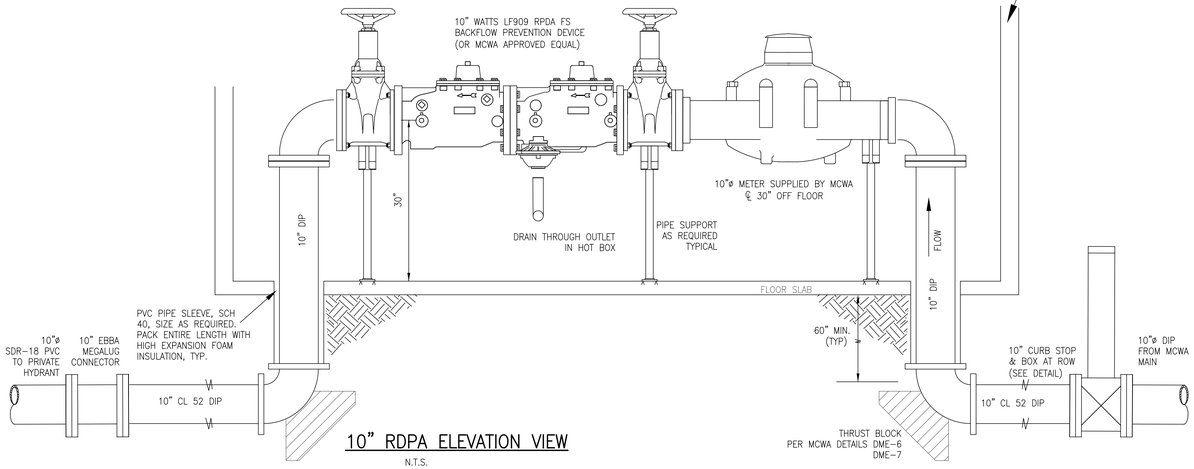


10" RPDA PLAN VIEW

N.T.S.

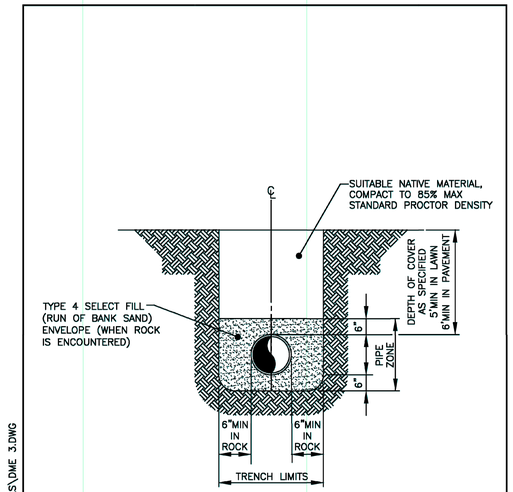


10" RDPA ELEVATION VIEW

N.T.S.

RPZ/DCDA MISCELLANEOUS NOTES:

1. AIR GAPS SHALL BE 2 TIMES THE DIAMETER OF THE DRAIN PORT WITH A MINIMUM OF 1".
2. MATERIALS USED, LOCATION AND MISCELLANEOUS APPURTENANCES SHALL BE GOVERNED BY THE MONROE COUNTY WATER AUTHORITY SPECIFICATIONS AND LOCAL ORDINANCES.
3. ALL DUCTILE IRON PIPE SHALL BE THICKNESS CLASS 52 UNLESS SPECIFIED OTHERWISE.
4. ALL DUCTILE IRON FITTINGS SHALL BE CLASS 350 ANSI/AWWA C110/A21.01-62 UNLESS SPECIFIED OTHERWISE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND VERIFYING ALL LOCATIONS, DIMENSIONS AND ELEVATIONS SHOWN.
6. DIMENSIONS SHOWN FOR THE WATER METER ARE STANDARD FOR THE SIZE AND MODEL SHOWN. ADEQUATE CLEARANCES MUST BE MAINTAINED ON ALL SIDES.
7. CLEARANCE DIMENSIONS SHOWN FOR THE DEVICES ARE NYSDOH STANDARDS.
8. DEVICES MUST BE PROPERLY SUPPORTED.



NOTE: EXCAVATION TO MEET OSHA REQUIREMENTS.

DIP TRENCH

NOT TO SCALE

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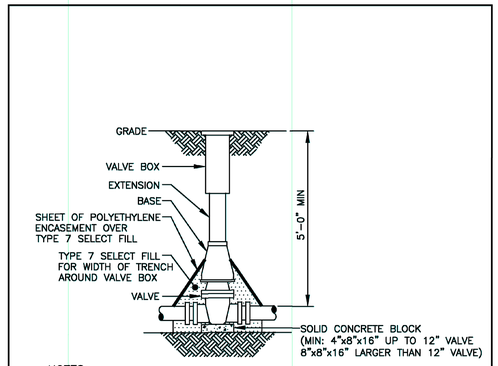
MONROE COUNTY WATER AUTHORITY ROCHESTER, NEW YORK	SEPT 2016 DATE
	DME 3



NOTES:

1. VALVE BOX SHALL BE CENTERED ON VALVE AND SET ON COMPACTED BACKFILL.
2. VALVE SHALL NOT SUPPORT VALVE BOX.
3. ALL VALVES SHALL BE OPEN LEFT EXCEPT:
   TOWN OF WEBSTER – VALVES 12" AND SMALLER SHALL OPEN RIGHT.
   TOWN OF HENRIETTA – SHALL OPEN RIGHT

VALVE

NOT TO SCALE

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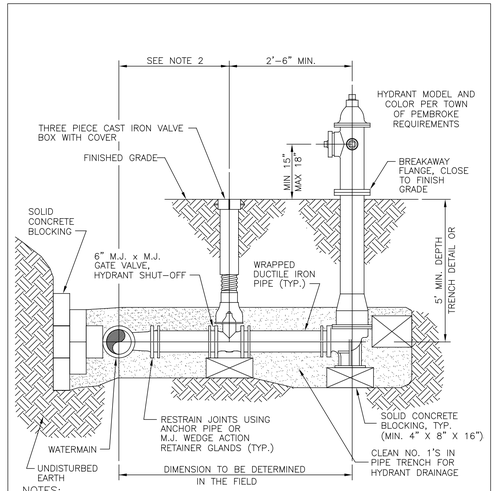
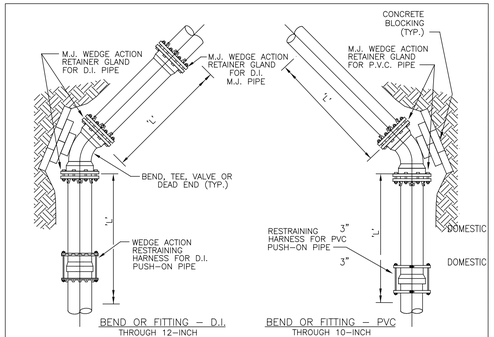
MONROE COUNTY WATER AUTHORITY ROCHESTER, NEW YORK	SEPT 2016 DATE
	DME 5



NOTES:

1. HYDRANT RISER SHALL BE INSTALLED PLUMB.
2. VALVE BOX SHALL NOT BE PLACED IN PAVEMENT.
3. HYDRANT FACE TO BE A MINIMUM OF 3' FROM THE BACK FACE OF ALL CURBS OR A MINIMUM OF 5' FROM ALL EDGES OF PAVEMENT (IF NO CURB).

STANDARD DETAIL
FIRE HYDRANT



BEND OR FITTING – D.I. THROUGH 12-INCH

BEND OR FITTING – PVC THROUGH 10-INCH

RESTRAINED JOINT SCHEDULE					
PIPE SIZE	PIPE TYPE	11.25° ELBOW 'L'	22.5° ELBOW 'L'	45° ELBOW 'L'	TEE BRANCH, 90° BEND, VALVE OR DEAD END 'L'
6"	PVC	13'	25'	50'	120'
8"	PVC	16'	30'	60'	160'
8"	DIP	10'	20'	38'	88'
12"	PVC	20'	39'	76'	220'

NOTES:

1. DIMENSION 'L' REPRESENTS THE LENGTH OF RESTRAINED PIPE REQUIRED IN FEET EACH SIDE OF THE PIPE FITTING.

PLAN

N.T.S.

STANDARD DETAIL
RESTRAINED JOINT SCHEDULE

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TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

DETAILS – 3

SCALE:	AS NOTED
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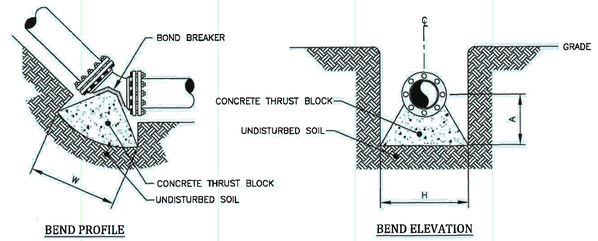
PIPE DIAMETER	BEND OR FITTING														
	11¼ DEGREE			22½ DEGREE			45 DEGREE			90 DEGREE			TEE*, CAP OR PLUG		
	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)	H (FT)	W (FT)	A (FT)
10"	2.0	2.0	1.5	2.5	2.5	1.5	3.0	4.0	2.0	4.0	5.5	2.5	3.5	4.5	2.0

* SIZE BLOCK BASED ON BRANCH DIAMETER.

SOIL BEARING STRENGTH - PSF

PSI TEST PRESSURE

HORIZONTAL AND VERTICAL UP THRUST BLOCKS

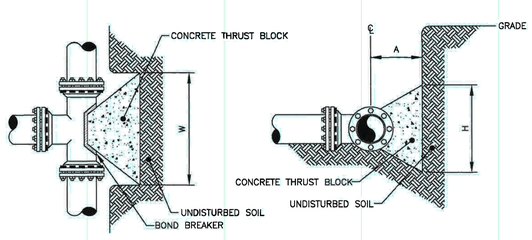


BEND PROFILE

BEND ELEVATION

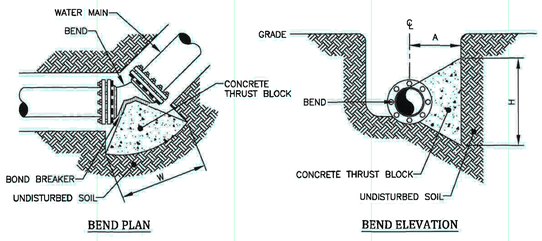
VERTICAL UP THRUST BLOCKS

NOT TO SCALE



TEE PLAN

TEE ELEVATION



BEND PLAN

BEND ELEVATION

HORIZONTAL THRUST BLOCKS

NOT TO SCALE

MONROE COUNTY WATER AUTHORITY ROCHESTER, NEW YORK

SEPT 2016 DATE

DME 6

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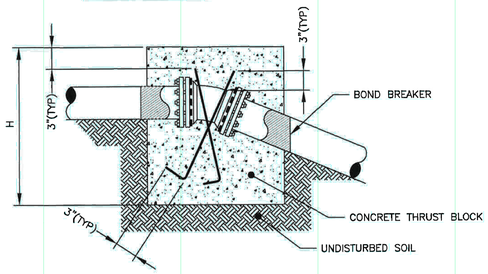
PIPE DIAMETER	BEND														
	11¼ DEGREE				22½ DEGREE				45 DEGREE				90 DEGREE			
	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)	L (FT)	W (FT)	H (FT)	VOL (CY)
10"	2.0	2.0	2.5	0.50	2.5	2.5	3.0	0.75	3.0	4.0	2.0	1.0	4.0	5.5	2.5	2.0

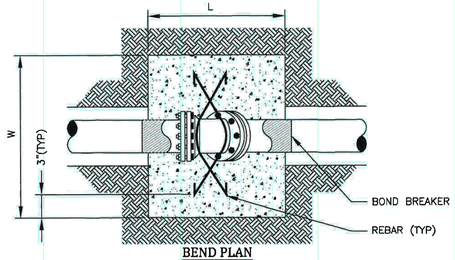
SOIL BEARING STRENGTH - PSF

PSI TEST PRESSURE

VERTICAL DOWN THRUST BLOCKS



BEND ELEVATION



BEND PLAN

NOTES:
1. THRUST BLOCKS SHALL BE CENTERED HORIZONTALLY ON BENDS.
2. VOLUMES SHOWN IN CHART ARE MINIMUMS.

VERTICAL DOWN THRUST BLOCKS

NOT TO SCALE

MONROE COUNTY WATER AUTHORITY ROCHESTER, NEW YORK

SEPT 2016 DATE

DME 7

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4" AND LARGER WATER SERVICE LINE NOTES

1. Water service lines shall be constructed in accordance with the regulations and specifications of the Water Authority.
2. Water service lines shall have a minimum of five feet of cover from finished grade in lawn areas and six feet of cover from finished grade in paved areas.
3. Water service lines shall be separated at least ten feet, measured from the outside of the pipes, from sewer mains or septic systems.
4. Water service lines shall be identified as:

DESCRIPTION	SIZE	MATERIAL[a]	TYPE [b]
MCWA Portion: from the water main to and including the control valve on the ROW/property/easement line	10"	D.I.P.*	CMB
Private Portion: from the control valve to the meter	10"	D.I.P.*	CMB

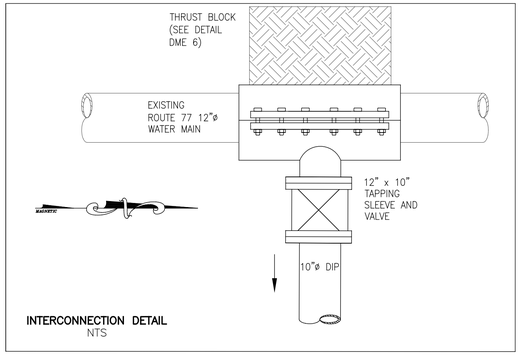
[a]Acceptable material is *Class 52 cement mortar lined Ductile Iron Pipe.
[b]Service Types include: Domestic = DS, Fire = FS, or Combined = CMB

5. The Water Authority's portion of the water service line shall be installed prior to the private portion of the service line.
6. Water meter(s) to be located on the interior of exterior walls(s) immediately upon service entrance into the building(s). A by-pass assembly is not required around the installation of 5/8-inch through 1-inch meters. 1 ½-inch + 2-inch Meter installations may require a by-pass assembly around the meter. Meter installation 3-inch or greater require a bypass assembly around the meter.
7. Water service lines sized 4-inches or greater shall be:
   - Pressure tested in accordance with the latest specifications of the Monroe County Water Authority. **A Water Authority representative must witness this test.**
   - Disinfected by using the continuous feed method according to AWWA Standard Specifications. After flushing and disinfecting the service line, water samples shall be collected in accordance with the Department of Health that has jurisdiction of the areas requirements. Approval and notification by the Health Department of passing health sample test(s) must be received before the service will be activated by the Water Authority.

MONROE COUNTY WATER AUTHORITY ROCHESTER, NEW YORK

DEC 2020 DATE

DME 26



INTERCONNECTION DETAIL
NTS

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TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

DETAILS – 4

SCALE:	AS NOTED
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SHEET NO:	DT-4

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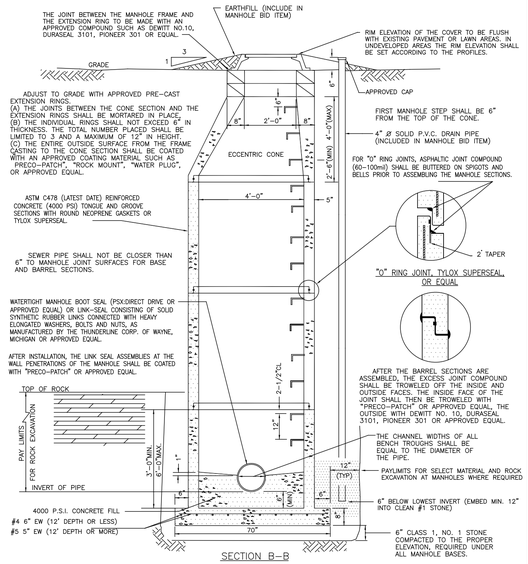
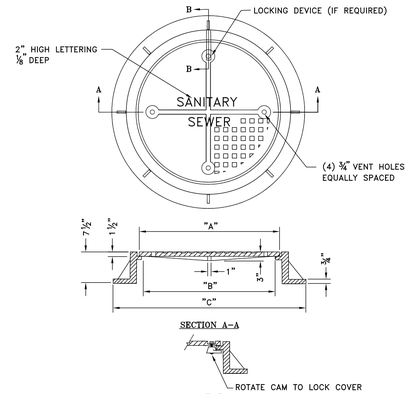
MONOLITHIC PRECAST BASE MANHOLES 4'–0" DIA. BASE FOR 15"ø SEWERS OR LESS (SECTION B–B)



STANDARD FRAME AND COVER (PRIVATE SEWER)



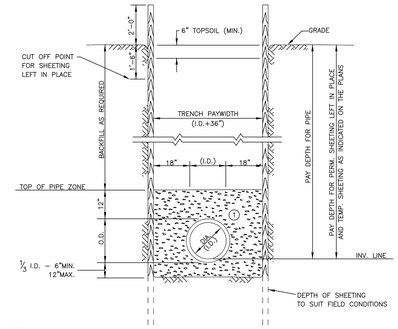
LOCKING DEVICE

TABLE				
PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	35"(MAX.)	150 LBS. ± 5%
			46"(MAX.)	

STANDARD FRAME AND COVER NOTES

1. MATERIAL ASTM A48 CLASS 30B CAST IRON.
2. UNIT MUST WITHSTAND H-20 WHEEL LOADING.
3. ALL DIMENSIONS ARE TO BE CONSIDERED MINIMUM WITH THE EXCEPTION OF THE COVER, WHICH MUST CONFORM EXACTLY TO MAINTAIN INTERCHANGEABILITY WITHIN THE COUNTY.
4. COVER WEIGHT 210 LBS. (MAX)
5. COATING NOT REQUIRED.
6. FRAMES AND COVERS SHALL HAVE MACHINED BEARING SURFACES.
7. LOCKING DEVICE MUST BE SITUATED TO ALLOW EASY REMOVAL OF COVER.
8. NO COMMERCIAL "BRAND NAME" LETTERING WILL BE ALLOWED ON THE EXPOSED SURFACE OF THE COVER.

SHEETED TRENCH



NOTES:

1. MAINTAIN 18" BETWEEN PIPE AND INSIDE FACE OF TEMPORARY SHEETING. IF SHEETING EXTENDS BELOW PIPE INVERT AS SHOWN, WHEN PVC PIPE MATERIAL IS USED, COMPACT MATERIAL (1) BEFORE PULLING THE SHEETING.
2. SHEETED TRENCH OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING EQUIPMENT.
3. SHEETING DRIVEN BELOW THE INVERT OF THE PIPE FOR BEDDING MATERIAL AND TOE SUPPORT WILL NOT BE CONSIDERED IN THE FORMULA FOR PAYMENT BUT SHOULD BE FIGURED BY THE CONTRACTOR IN DETERMINING HIS UNIT BID PRICE PER SQUARE FOOT OF SHEETING.
4. WHERE INDICATED ON THE PLANS OR AS ORDERED BY THE ENGINEER, TEMPORARY SHEETING WILL BE PAID FOR UNDER THE APPLICABLE BID ITEM. OTHER AREAS WHERE THE CONTRACTOR ELECTS TO USE TEMPORARY SHEETING NOT PREVIOUSLY AUTHORIZED BY THE ENGINEER SHALL BE AT HIS OPTION AND EXPENSE.

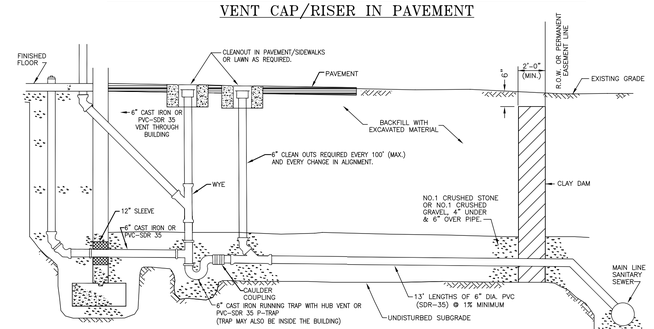
MATERIALS

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

(1) NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS (1)

TYPICAL COMMERCIAL SERVICE WITHOUT BASEMENT DETAIL VENT CAP/RISER IN PAVEMENT



NOTES:

1. PRIVATE INSPECTION WILL BE REQUIRED FOR USE.
2. ALL WORK MUST BE MEET STATE, COUNTY AND TOWN CODES.
3. PVC PIPE MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST ASTM SPECIFICATION D-3033/D-3034. CAST IRON PIPE MATERIAL SHALL BE EXTRA HEAVY AND IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A74-42.
4. SELECT BACKFILL REQUIRED UNDER PAVED AREAS.
5. COVER DEPTH ACHIEVED IF LESS THAN 4'-0" UNDER PAVED AREAS
6. MIN. DEPTH OF COVER 3'-0"
7. CLEAN OUT MEASUREMENTS SHALL START FROM CENTERLINE OF MAIN SEWER FOR NEWSIDE LATERALS AND FROM THE 6" CLEAN OUT FOR FAR SIDE CONNECTIONS. A CLEAN OUT MAY BE REQUIRED FOR ANY ABRUPT CHANGES IN LATERAL DIRECTION FLOW
8. A 6" CLEAN OUT IS REQUIRED AT THE END OF EVERY LATERAL THAT IS UNDER THE PAVEMENT LIMITS OR AT FAR SIDE OF OF PAVEMENT.
9. ANY SEWER LAID THROUGH OR OVER A SEPTIC TANK MUST BE CAST IRON (SEPTIC TANK MUST BE FILLED WITH BANK RUN GRAVEL)
10. ANY EXCAVATION TO BE LEFT OPEN OVERNIGHT SHALL BE COMPLETELY BARRICADED IN FENCING OR WHERE NECESSARY, COVERED WITH STEEL PLATES.
11. DOWN SPOUTS, SUMP PUMPS, AND FOOTING DRAINS ARE NOT PERMITTED TO BE CONNECTED TO THE LATERAL.
12. FOR NEW STRUCTURES, NO CONNECTION SHALL BE MADE UNTIL BUILDING ROOF IS ERECTED AND BASEMENT FLOOR IS POURED.

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Drawn By:	ARH
Checked By:	JCM
Cad File:	M2303

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STATE OF NEW YORK — MARVEL A. METZGER — 066786 — LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

DETAILS – 5

SCALE:	AS NOTED
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SHEET NO:	DT-5

GENERAL NOTES FOR SANITARY SEWER CONSTRUCTION

1. THE PRIVATE INSPECTOR MUST BE IN SITE AS REQUIRED BY SAID INSPECTOR AND IS TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF THE INSTALLATION OF ANY SEWER COMPONENT.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL STATE, COUNUTY AND TOWN RULES AND REGULATIONS.
3. ALL PERMITS REQUIRED BY THE FEDERAL, STATE, COUNTY, CITY AND/OR TOWN GOVERNMENTS TO PERFORM WORK MUST BE OBTAINED PRIOR TO THE START OF WORK, AND PAID FOR BY THE CONTRACTOR.
4. IF EASEMENT AND/OR OUT OF DISTRICT AGREEMENTS ARE REQUIRED, THEY MUST BE COMPLETE AND READY TO BE FILED BEFORE THE PROJECT WILL BE APPROVED FOR CONSTRUCTION.
5. THE CONTRACTOR SHALL COMPLY IN ALL RESPECTS TO THE INDUSTRIAL CODE PART (RULE NO.) 53 RELATING TO CONSTRUCTION, EXCAVATION, AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES, AS ISSUED BY THE STATE OF NEW YORK DEPARTMENT OF LABOR, BOARD OF STANDARD AND APPEALS.
6. THE CONSTRUCTION OF THE SANITARY SEWER FACILITIES SHALL BE UNDER THE SUPERVISION OF A PERSON OR FIRM QUALIFIED TO PRACTICE PROFESSIONAL ENGINEERING IN NEW YORK STATE UNDER THE EDUCATION LAW OF THE STATE, WHENEVER ENGINEERING SERVICES ARE REQUIRED BY SUCH LAW FOR SUCH PURPOSES.
7. WHERE SUCH SANITARY SEWER FACILITIES ARE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER, HE SHALL CERTIFY THAT THE CONSTRUCTED FACILITIES HAVE BEEN UNDER HIS SUPERVISION AND THAT THE WORK HAS BEEN FULLY COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING REPORTS, PLANS, SPECIFICATIONS, AND APPROVALS.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SITE SAFETY. THE CONTRACTOR'S EQUIPMENT AND METHODS OF OPERATION SHALL BE IN FULL COMPLIANCE WITH OSHA STANDARDS AND SATISFY ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY REGULATIONS.
9. THE CONTRACTOR IS ADVISED A TRENCH SHIELD AND/OR SHORING DESIGNED IN ACCORDANCE WITH OSHA STANDARDS SHALL BE USED IN ALL OPEN TRENCH EXCAVATIONS.
10. ANY CONTRACTOR AND/OR PLUMBER PERFORMING WORK IN A CONFINED SPACE (I.E. MANHOLES, WETWELLS, AND CHAMBERS) MUST CERTIFY TO THE TOWN THAT THEY HAVE THEIR OWN CONFINED SPACE ENTRY PROGRAM THAT MEETS OR EXCEEDS OSHA'S REGULATIONS. CERTIFICATION MUST BE NOTARIZED BY A NOTARY REPUBLIC.
11. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO IF MINOR ADJUSTMENTS MUST BE MADE IN THE PIPE ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
12. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED TREE EXPERT TO REMOVE, WHERE NECESSARY, BRANCHES WHICH INTERFERE WITH THE CONSTRUCTION OPERATION, OR TO REPAIR TREES HAVING SUFFERED DAMAGE BY CONSTRUCTION ACTIVITIES. THE COST INVOLVED IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
13. THE SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE CONFORMING TO THE LATEST REVISIONS OF AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) DESIGNATION D3034, SDR-35, INSTALLED IN ACCORDANCE WITH THE ASTM DESIGNATION D-2321-83A OR THE LATEST REVISION THEREOF, OR APPROVED EQUAL.
14. SEWERS SHALL BE LAID WITH STRAIGHT ALIGNMENT BETWEEN MANHOLES AND SHALL BE CHECKED BY USING A LASER BEAM OR LAMPING.
15. SHOULD A FLUID CONDITION BE ENCOUNTERED AT THE TRENCH BOTTOM, THE CONTRACTOR IS TO UNDERCUT THE TRENCH AND PROVIDE SUITABLE FILL MATERIAL (STONE & FABRIC) TO STABILIZE THE TRENCH BOTTOM.
16. SANITARY SEWER BEDDING MATERIAL SHALL BE NO.1 CRUSHED STONE WITH A GRADATION CONFORMING TO THE DOT SPECIFICATIONS.
17. BACKFILL SHALL BE OF A SUITABLE MATERIAL REMOVED FROM THE EXCAVATION EXCEPT WHERE OTHER MATERIAL IS SPECIFIED. DEBRIS, FROZEN MATERIAL, LARGE CLODS OR STONES, ORGANIC MATTER, OR OTHER UNSTABLE MATERIALS SHALL NOT BE USED FOR BACKFILL WITHIN TWO (2') FEET OF THE TOP OF THE PIPE.
18. ALL PIPES CROSSING UNDER PAVED AREAS ARE TO BE BACKFILLED TO SUB-GRADE WITH COMPACTED SELECT MATERIAL (NO.2 CRUSHED STONE) TO FIVE (5') FEET OUTSIDE THE PAVEMENT EDGES OR AS REQUIRED BY THE HIGHWAY PERMIT. IF ANY PROPOSED SEWER RUNS UNDER PAVED AREAS AND HAS LESS THAN FOUR (4) FEET OF COVER, THEN CONCRETE ENCASEMENT IS REQUIRED.
19. SEWERS PARALLEL TO WATERMAINS – TEN STATE STANDARDS, LATEST EDITION, CHAPTER 30, SECTION 38.31, PAGE 30-11: SEWERS SHALL BE LAID AT LEAST TEN (10') FEET (THREE (3) METERS) HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A TEN (10') FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY MAY ALLOW DEVIATION ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES (460 MM) ABOVE THE TOP OF THE SEWER. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE, BOTH THE WATER MAIN AND SEWER MUST BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS OF THE REGULATORY AGENCY AND BE PRESSURE TESTED TO 150 POUNDS PER SQUARE INCH (PSI) (L034 KPA) TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
20. SEWERS CROSSING WATERMAINS – TEN STATE STANDARDS, LATEST EDITION, CHAPTER 30, SECTION 38.32, PAGE 30-11 TO 30-12: SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18-INCHES (460 MM) BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE.
21. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED:

a. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE, AND SHALL BE PRESSURE TESTED AT 150 PSI (1034 KPA) TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.

b. EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS TEN (10') FEET (THREE (3) METERS) ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE REGULATORY AGENCY FOR USE IN WATER MAIN CONSTRUCTION.

c. THE SEWER SHALL BE ENCASED IN CONCRETE. TYPICAL FOR ENCASEMENT

22. THE MANHOLE COVERS ARE TO BEAR THE INSCRIPTION "SANITARY" AND COMPLY WITH THE STANDARD FRAME AND COVER DETAIL.
23. BUILDING SANITARY SEWER VENTS MUST BE INSTALLED IN THE BUILDING OR SIX (6) INCHES ABOVE FINISHED GRADE IN A GRASSY AREA WITH A MUSHROOM CAP. IF THE VENT IS IN A SIDEWALK OR PAVED AREA, THEN PROTECT WITH 6" DIAMETER BOLLARDS (2 MINIMUM).
24. CLEANOUTS (C.O.) ARE REQUIRED ON EVERY ONE HUNDRED FEET, AND AT EVERY CHANGE OF ALIGNMENT.
25. ABANDONED BUILDING SEWER CONNECTIONS FROM THE SITE, IF ANY, REQUIRE PROOF OF A PERMIT FOR DISCONNECTION PRIOR TO THE NEW CONNECTION BEING MADE.
26. THE FOLLOWING PERTAINS ONLY FOR DIRECT REPLACEMENT OF IN SERVICE SANITARY SEWERS:

a. EACH NEW PIPE JOINT SHALL BE ULTRASONIC TESTED AFTER IT IS LAID, BUT BEFORE THE NEXT PIPE IS LAID. ALL TESTS SHALL BE IN ACCORDANCE WITH THE TESTING EQUIPMENT MANUFACTURE RECOMMENDATIONS.

b. THE ULTRASONIC TEST SHALL BE PERFORMED IN LIEU OF THE HYDROSTATIC TEST.

c. A VIDEO INSPECTION OF THE ENTIRE SEWER SHALL BE PERFORMED IN LIEU OF THE AIR TEST. FORWARD THE VIDEO INSPECTION TAPE AND RELATED PAPERWORK TO DSM FOR REVIEW AND APPROVAL.

d. A DEFLECTION TEST IS REQUIRED IN ALL CASES.

27. FOR ALL SANITARY SEWER INSTALLATIONS, A WRITTEN CERTIFICATE OF CONSTRUCTION COMPLETENESS AND COMPLIANCE, INCLUDING THE RESULTS OF THE HYDROSTATIC LEAKAGE TEST, LAMP TEST, DEFLECTION TEST, AIR TEST, ETC. SHALL BE SUBMITTED WITHIN THIRTY (30) DAYS AFTER COMPLETION OF CONSTRUCTION.
28. FOR ALL PUBLIC AND PRIVATE 8" OR LARGER SANITARY SEWER INSTALLATIONS, THE DEVELOPER/CONTRACTOR MUST PROVIDE ONE (1) SET OF RECORD DRAWINGS ON "D" SIZE PAPER (24" X 36") AND IN AN ELECTRONIC FILE FORMAT (CD) COMPATIBLE WITH AUTOCAD, RELEASE 2007.
29. ALL PUBLIC SEWER EXTENSION PROJECTS THAT CONSIST OF MORE THAN 750 LF OF 8" PIPE OR LARGER, SHALL FURNISH A 2 YEAR MAINTENANCE BOND AS REQUIRED BY THE TOWN.
30. FINAL CERTIFICATION WILL BE ISSUED UPON THE FULL COMPLETENESS AND COMPLIANCE OF THE PROJECT INCLUDING ANY REQUIREMENT(S) OF I/I REMEDIAL WORK

3.02 AIR TESTS, ALIGNMENT, INSPECTION, INFILTRATION OR EXFILTRATION AND DEFLECTION REQUIREMENTS

A. Requirements

1. After backfilling and prior to the final acceptance of the project, the Contractor will be required to perform the following four tests on all sewers to be built under this project:

a) Air Tests
b) Alignment
c) Infiltration or Exfiltration
d) Deflection Test (15" dia. and smaller).

2. No more than 1,000 linear feet of installed sewer shall be allowed to remain untested.

3. In view of the fact that house laterals and riser pipes often contribute considerable infiltration, such laterals and risers are to be installed and capped, tied and blocked as the work progresses prior to the air testing of the lines.

4. The Contractor's testing procedures shall be completed in accordance with OSHA Standards for confined space entry. The Contractor will be required to provide and operate all equipment necessary for full compliance for his operation. Equipment such as gas detectors, safety harnesses, ventilating blowers, respirators etc. shall be provided by the contractor.

B. Air Tests (Required for All Diameters up to and including 36")

1) The procedure for air testing shall be as specified herein. The minimum allowable time for the test pressure to decrease from 3.5 psi to 3.0 psi shall be not less than as called for in the following table:

Minimum Acceptance Times For Length Shown (min:sec)

Pipe Diameter	Up to 100'	100-200 '	200-300'	300-400'
6"	2:50	2:50	2:50	2:51
8"	3:47	3:47	3:48	5:04
10"	4:43	4:43	5:56	7:54
12"	5:40	5:42	8:33	11:24
15"	7:05	8:54	13:21	17:48
18"	8:30	12:49	19:14	25:38
21"	9:55	17:27	26:11	34:54
24"	11:24	22:48	34:11	45:35
27"	14:25	28:51	43:16	57:42
30"	17:48	35:37	53:25	71:13
33"	21:33	43:56	64:38	86:10
36"	25:39	51:17	76:55	102:34

2) Pipe lines in sizes up to 36 inches in diameter can be air tested from manhole to manhole for distances not to exceed 400 ± feet.

3) In wet trenches where pumping to lower the water table is impractical, approved perforated pipe (with approved cap) shall be placed at each manhole to extend from a point 6 inches below the lowest invert to the top of the ground. Ground water elevations will be measured at each manhole in order to calculate the groundwater pressure acting on the pipe exterior. The initial air test pressure shall be increased as necessary to overcome the calculated groundwater pressure.

4) The testing procedure outlined shall be strictly adhered to during construction.

5) All testing equipment shall be supplied by the Contractor. For the Contractor's information, some of the major equipment required for air tests is the following:

a). Stop watch graduated in tenths of a second.
e) Compressor of 50 to 100 psi capacity.
f) Bulkheads for pipe.
g) Approximately 100 feet of 3/8" diameter air hose.
h) Pressure gauge – 0 to 5 psi graduated in 1/16th of a pound increments.
i) Three 3/8 inch diameter check valves.

C. Visual Inspection

1. All Sewers under 36" in diameter shall be lamped manhole to manhole prior to final acceptance. The lamp shall have an output of between 250 and 500 candlepower. Lamping shall be performed after the sewer has been flushed and the inside surface wet to allow for light reflection. If fifty percent (50%) of the lamp cannot be seen from the other manhole, the contractor will be required to televise that section at his expense.

2. All pipes 36" in diameter and larger shall be entered and visually inspected by the Engineer prior to installation. All equipment required for the inspection shall be furnished by the Contractor. After installation is totally complete, the contractor shall complete an internal television inspection of the pipe conduit,. the television inspection shall be completed with the engineer present and a full inspection shall be recorded on a vhs tape. a copy of said tape shall be provided to the engineer. some items of inspection are as follows:

a) Pipe free from obstructions and debris
b) Pipe free from cracks
c) Pipe joints properly sealed
d) Pipe invert is smooth and free of sags or high points
e) Hookups, diversions and connections properly made
f) Concrete pipe walls free from structural defects
g) Pipes and joints free from visible signs of leakage
h) Specified coatings properly installed.

3. Pipe sections and joints not meeting all of the above requirements shall be replaced or repaired as directed by the engineer at the contractors expense.

D. Infiltration Tests (Applicable Only if Ground Water is Above Pipe)

1. Infiltration tests for all sewers to be constructed under this project shall not exceed 100 gallons per inch diameter per mile of sewer, per 24 hours. Each individual run of sewer (from one manhole to the next manhole) shall comply with the allowable rate of infiltration. All equipment for the tests shall be furnished by the Contractor.

2. The allowable rate of infiltration given in gallons per mile is not to be construed as a commitment on the part of the Owner to accept an entire line, where overall infiltration is less than the allowable, while one or more runs contribute excessive infiltration.

3. The infiltration test is intended to measure the water tightness of a sewer, as related to the infiltration of ground water, and, therefore, is only applicable if the water table level is 2 feet above the top of the pipe.

a) Approved perforated pipe (with an approved cap) shall be placed at each manhole to extend from a point 6 inches below the lowest invert to the top of the ground. Ground water elevations will be measured at each manhole so that the ground water level an be correlated with the infiltration measurements.

b) Before conducting the tests, the water table should be allowed to stabilize at its normal level such that the water completely surrounds the pipe during the test period. The test is usually conducted between adjacent manholes with the upstream end of the sewer bulkheaded in a suitable manner to isolate the test section. All service laterals, stubs and fittings should be properly plugged or capped at the connections to the test pipe section to prevent the entrance of ground water at these locations.

c) A V notch weir or other suitable measuring device should be installed in the inlet pipe to the downstream manhole. Infiltrating water is then allowed to build up and level off behind the weir until steady, uniform flow is obtained. When steady flow occurs over the weir, leakage is determined by direct reading consecutively for five (5) days from graduations on the weir and converting the flow quantity to gallons per unit length of pipe per unit of time.

d) An important factor in applying the test criteria is to properly correlate the variable water head over the length of sewer being tested to the high ground water level. The downstream end of the test section will almost always be subjected to a greater external water pressure than the upstream end. To compensate for this variable external pressure, the test pressure should be that pressure corresponding to the average head of water over the test section. A minimum of 2 feet of water over the pipe is required at the upper manhole before the infiltration test will be allowed.

4. After the advent of the first wet weather season, and prior to the acceptance of the project, the owner will require that sections showing excessive infiltration be tested again and defective pipes, manholes, and connections be replaced or repaired at the contractors expense

5. When a sewer run between two consecutive manholes or chambers is found to contribute infiltration at a rate above the allowable, inspection by television or other cameras may be made by the Contractor and at the contractors expense during wet weather, so that the defective section of sewer can be located and repaired. Each individual run of sewer (from one manhole to the next manhole) shall comply with the allowable rate of infiltration of 100 gallons per inch diameter per mile of sewer per 24 hours.

A. Exfiltration Tests

1. The exfiltration test for all diameter sewers shall be as described below. Although actual infiltration will normally be less than that indicated by the water exfiltration test, the test does provide a positive means of subjecting the completed sewer system to an actual pressure test. Since sanitary sewers are not designed or expected to operate as a pressure system, care must be exercised in conducting the test and correlating the results with the allowable exfiltration limit. All equipment required for the tests shall be furnished by the contractor.

a) The test is usually conducted between adjacent manholes. Prior to the test, all service laterals, stubs and fittings within the test section should be plugged or capped and adequately braced or blocked to withstand the water pressure resulting from the test.

b) If manholes are to be included in the test, the inlet pipe to each manhole should be bulkheaded and the test section filled with water through the upstream manhole. To allow air to escape from the sewer, the flow should be at a steady rate until the water level in the upstream manhole provides an average pressure of 5 psi (11.6' head) at the center point of the test section or the upstream manhole is filled. If necessary, provisions should be made to bleed off entrapped air during the filling of the test section.

c) Once the test section is filled, the water should be allowed to stand for an adequate period of time (one day minimum) to allow for water absorption by the pipe and manhole. After water absorption has stabilized, the water level in the upstream manhole is brought up to the proper test level and this level established by measuring down from the manhole cover or other convenient datum point. After 24 hours, the water elevation should be measured from the same reference point and the loss of water during the test period calculated, or the water can be restored to the level existing at the beginning of the test, and the amount added used to determine the leakage.

d) To exclude both manholes from the test it is necessary to bulkhead the outlet pipe of the upstream manhole. Provision must be made in the bulkhead for filling the pipe and expelling trapped air.

e) The water level at the upstream manhole shall be computed and varies above the top of the pipe. Since the sewer is installed on a grade, the test section downstream will most likely be subjected to a greater pressure. Therefore, the test pressure head at the upstream manhole should be adjusted such that the maximum pressure on the pipe being tested is no greater than 10 psi.

3. When a sewer run between two consecutive manholes or chambers is found to exfiltrate at a rate above the allowable, inspection by television or other cameras may be made by the Contractor during wet weather, so that the defective section of sewer can be located and repaired. Each individual run of sewer (from one manhole to the next manhole) shall comply with the allowable rate of infiltration of 100 gallons per inch diameter per mile of sewer per 24 hours.

B. Deflection Test

All PVC sewers constructed under this project shall be internally checked, no earlier than 30 calendar days after the trenches are backfilled, with a five percent (5%) deflection "go-no-go pig" to determine if the pipes are deflecting excessively. Any section of pipe unable to pass the deflection test "pig test" shall be removed and replaced at the contractors expense.

Deflection testing mandrels or pig shall be pulled through the pipe by hand or hand operated winch. Power winches or drives are not permitted.

C:\Users\mcwin\OneDrive\MCE\M2303 Travel Plaza\dwg\Site 1.dwg, 7/27/2023 2:51:40 PM

Designed By:	ARH
Drawn By:	ARH
Checked By:	JCM
Cad File:	M2303

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

REVISION	BY/CK	DATE

METZGER CIVIL ENGINEERING, PLLC
8245 SHERIDAN DR.
WILLIAMSVILLE, NY 14221
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FAX: 716-633-2704
CIVIL ENGINEERING
LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING

STATE OF NEW YORK MICHAEL R. METZGER 066786 LICENSED PROFESSIONAL ENGINEER

TRAVEL PLAZA

TOWN OF PEMBROKE, GENESEE COUNTY, NEW YORK

DETAILS – 6

SCALE:	AS NOTED
DATE:	July 14, 2023
JOB NO:	M-2303
SHEET NO:	DT-6

T-07-PEM-08-23


15.-1-21
15.-1-6
15.-1-28
15.-1-5
15.-1-22.21
15.-1-22.12
15.-1-23.1
Interstate 90 U-Turn
Alleghany Rd
Alleghany Rd
Alleghany Rd
15.-1-3
Interstate 90 Eastbound
Alleghany Road to Interstate 90
15.-1-29
15.-1-24.2
15.-1-2

GEIS COMPANIES

HORIZON ACRES ASSOCIATES, INC

TRAVLE PLAZA

PEMBROKE, NY

26 JUNE, 2023

GEIS COMPANIES

HORIZON ACRES ASSOCIATES, INC

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HORIZON ACRES ASSOCIATES, INC

TRAVLE PLAZA

26 JUNE, 2023

PEMBROKE, NY

METZGER CIVIL ENGINEERING, PLLC

August 1, 2023

Mr. James Wolbert
Code Enforcement Officer
Town of Pembroke
1145 Main Road
Pembroke, NY 14036

Re: Travel Plaza
Alleghany Road
Site Plan Application

Dear Mr. Wolbert:

On behalf of the developer, Geis Construction, we are pleased to submit the following in support of this project:

- Engineered plan set - 2 sets

- Topographic survey sheets – (included in plan set)

- Photometric Plan – 2 sets

- Stormwater Pollution Prevention Plan (SWPPP) - 2 copies

- Engineers Report - 2 copies

- Full Environmental Assessment Form – 2 copies

- Town of Pembroke Site Plan Application Form - 2 copies

Should you have any questions please do not hesitate to contact Mike Metzger or myself at 716-633-2601 or via email at meteng@roadrunner.com.

Yours truly,

Al Hopkins
Senior Designer

cc: Jeff Martin, Geis Construction (via email)

8245 Sheridan Drive, Williamsville, NY 14221 **Phone 716-633-2601/Fax 716-633-2704**

ENGINEER'S REPORT
for

Route 77
Travel Plaza
Town of Pembroke
New York

July 28, 2023

Prepared for:
Geis Construction
10020 Aurora-Hudson Road
Streetsboro, Ohio 44241

Project M-2303

Prepared by:
Metzger Civil Engineering, PLLC
8245 Sheridan Drive
Williamsville, NY 14221
Phone 716-633-2601
meteng@roadrunner.com

Michael J. Metzger, P.E.
License No. 066786

Project Description:

The project consists of the construction of a new travel plaza to accommodate visitors near the Pembroke exit of the New York State I-90 Thruway. The project will include roadways, parking and related infrastructure to service a new convenience store, car wash, fueling stations and electric charging stations. The new development will sit on a 49.60 acre parcel which is currently undeveloped. The land has been disturbed by past agricultural usage.

Wetlands:

The site contains several wetlands. Murder Creek transects the site. The wetlands have been studied and delineated and flagged by a wetland Biologist. The wetland flags have been surveyed by the project surveyor and are reflected on the plan drawings. A 100' buffer to the NYSDEC wetlands (where appropriate) has also been shown on the design plans.

The site has been designed to provide as little impact to the wetlands and the buffer to the greatest extent possible.

The entrance roads must cross the wetland to access the site. They have been designed to cross the wetlands at the narrowest point possible as shown on the design plans. Murder Creek must be crossed at two points. Embedded pipe crossings have been designed per USACOE requirements and are detailed on the design plans.

Water Supply System:

The potable water needs shall be met by a service tapped off of the existing municipal water main on Alleghany Road (Route 77). The distance from Route 77 will warrant the installation of a private fire hydrant on site. The hydrant will also be tapped off the existing municipal water main on Alleghany Road. Construction, inspection and testing of the new water services will be in conformance with all applicable Town, Monroe County Water Authority, AWWA, New York State Health Department, and the "Ten State" standards.

Septic System:

The sanitary needs shall be handled by a connection to a new gravity sewer along Alleghany Road (Route 77) as shown on the design plans. Construction, inspection and testing will be in conformance with all Town, Genesee County, and "Ten State" standards. Details of the sanitary sewer installation are shown on MCE detail sheets.

Storm Drainage System:

Drainage of surface water runoff will be accomplished via a proposed network consisting of roof gutters and downspouts, and a storm drainage system utilizing catch basins, and piping.

The stormwater management system is designed to collect stormwater from the parking lot and building areas and direct the water to one of two on site bioretention areas which will be then be discharged to the wet detention pond. Water is to be directed through a rock dispersion system to a bioretention area and then to a wet detention basin prior to discharge through a controlled outlet structure.

In accordance with Phase II of the New York State Department of Environmental Conservation's Stormwater General Permit, each bioretention area receives and pretreats water from the gravel stilling system and allows the water to pass through the sandy topsoil layer, planting soil bed and stone discharge layer. This bioretention area provides treatment and filtration of stormwater prior to discharge into a wet detention basin. The bioretention areas were designed in general conformance with New York State Department of Environmental Conservation Stormwater Management Design Manual.

The wet detention basin has been designed with a outlet control structure. The outlet structure has been designed to detain water from storm events to back up into the wet detention basin. The basin will receive and detain flows until the storm subsides and allows the basin to drain through the reduced outlet in the structure. The basin has been sized to detain the stormwater from all storm events from a 1 year to a 100 year storm event as required by the New York State Department of Environmental Conservation requirements. The outlet piping has been limited in size to detain the post development flows to be well below the pre development levels during heavy storm events.

A "Notice of Intent" has been prepared will be submitted to the NYSDEC prior to construction. Complete drainage calculations are included in the SWPPP.

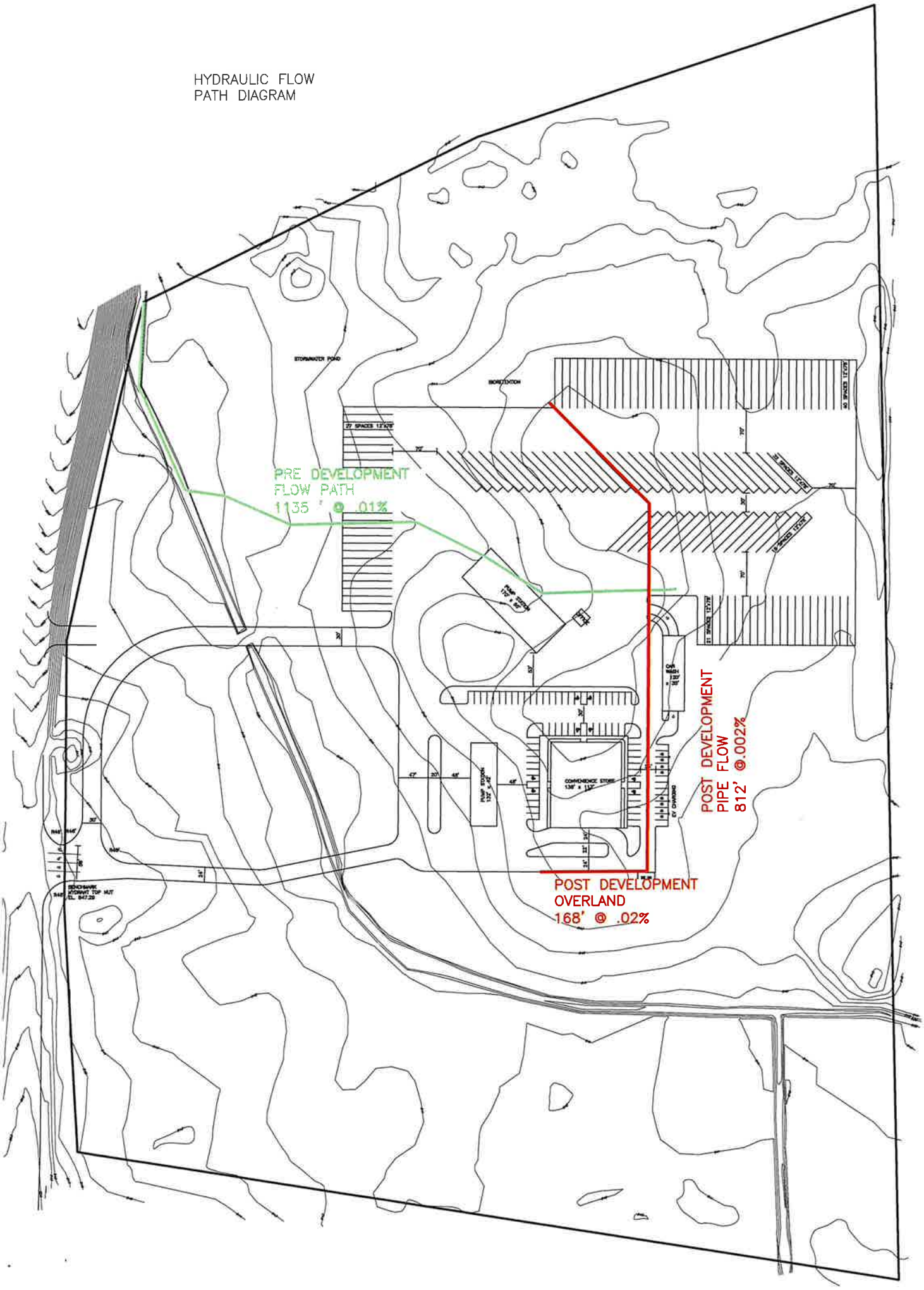
ENGINEER'S REPORT

APPENDIX A

PRE AND POST DEVELOPMENT

HYDRAULIC FLOW MAP

HYDRAULIC FLOW
PATH DIAGRAM



ENGINEER'S REPORT

APPENDIX B

Pre development flows

USDA TR-55 Method

WinTR-55 Current Data Description

--- Identification Data ---

User: ARH
Project:
SubTitle: Pre dev
State: New York
County: Erie
Filename: C:\Users\mcewn\OneDrive\MCE\M2303 Travel Plaza\docs\Pre.w55

Date: 7/18/2023
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Area A Pre		Outlet	49.6	72	.498

Total area: 49.60 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Pre dev
Erie County, New York

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Pre dev
Erie County, New York

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)	25-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)
SUBAREAS				
Area A Pre	38.62	56.44	130.82	5.40
REACHES				
OUTLET	38.62	56.44	130.82	5.40

ARH

Pre dev
Erie County, New York

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 10-Yr (cfs)	(hr)	25-Yr (cfs)	(hr)	100-Yr (cfs)	(hr)	1-Yr (cfs)	(hr)
SUBAREAS								
Area A Pre	38.62	12.22	56.44	12.20	130.82	12.18	5.40	12.27
REACHES								
OUTLET	38.62		56.44		130.82		5.40	

ARH

Pre dev
Erie County, New York

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Area A Pre	49.60	0.498	72	Outlet	

Total Area: 49.60 (ac)

ARH

Pre dev
Erie County, New York

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Area A Pre							
SHEET	100	0.0100	0.240				0.378
SHALLOW	1035	0.0220	0.050				0.120
						Time of Concentration	.498

ARH

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Erie County, New York

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Area A Pre	Brush - brush, weed, grass mix	(fair)	B	6.6	56
	Brush - brush, weed, grass mix	(fair)	C	14.6	70
	Brush - brush, weed, grass mix	(fair)	D	28.4	77
	Total Area / Weighted Curve Number			49.6	72

ENGINEER'S REPORT

APPENDIX C

Post development flows

USDA TR-55 Method

WinTR-55 Current Data Description

--- Identification Data ---

User: ARH
Project:
SubTitle: Post dev
State: New York
County: Erie
Filename: C:\Users\mcewn\OneDrive\MCE\M2303 Travel Plaza\docs\Post.w55

Date: 7/18/2023
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Area A Pos		Outlet	49.6	78	0.1

Total area: 49.60 (ac)

--- Storm Data ---

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Post dev
Erie County, New York

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Post dev
Erie County, New York

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)	25-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)
SUBAREAS				
Area A Pos	98.91	134.13	272.90	25.27
REACHES				
OUTLET	98.91	134.13	272.90	25.27

ARH

Post dev
Erie County, New York

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 10-Yr (cfs)	(hr)	25-Yr (cfs)	(hr)	100-Yr (cfs)	(hr)	1-Yr (cfs)	(hr)
SUBAREAS								
Area A Pos	98.91	11.94	134.13	11.93	272.90	11.93	25.27	12.01
REACHES								
OUTLET	98.91		134.13		272.90		25.27	

ARH

Post dev
Erie County, New York

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Area A Pos	49.60	0.100	78	Outlet	

Total Area: 49.60 (ac)

ARH

Post dev
Erie County, New York

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Area A Pos							
SHALLOW	168	0.0200	0.025				0.016
CHANNEL	812	0.0020	0.012	1.76	4.73	2.855	0.079
					Time of Concentration		0.1

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Erie County, New York

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Area A Pos	Paved parking lots, roofs, driveways		B	1.6	98
	Paved parking lots, roofs, driveways		C	3.6	98
	Paved parking lots, roofs, driveways		D	7	98
	Brush - brush, weed, grass mix	(fair)	B	5	56
	Brush - brush, weed, grass mix	(fair)	C	11	70
	Brush - brush, weed, grass mix	(fair)	D	21.4	77
	Total Area / Weighted Curve Number			49.6	78

ENGINEER'S REPORT

APPENDIX D

STORMWATER POND CALCULATIONS

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8245 Sheridan Drive
Williamsville, New York 14221
Phone: 716-633-2601, Fax: 716-633-2704

Project:	Travel Plaza,Allegany Road, Pembroke,	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

County: Genesee

TR-55 Pre-Development Summary

STORM 1-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		5.40
This Pond	49.6	100.0	0.2	5.40

STORM 10-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		38.62
This Pond	49.6	100.0	1.0	38.62

STORM 100-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		130.82
This Pond	49.6	100.0	3.0	130.82

Storm Event	Rainfall P, inches	Initial Abstraction Ia = 0.2S, inches	Potential Retention S=(1000/CN)-10 inches	CN	Runoff Amount, Inches Qd = (P-Ia)^2 / ((P-Ia)+S)
1-yr	1.87	0.78	3.89	72	0.24
10-yr	3.25	0.78	3.89	72	0.96
100-yr	6.00	0.78	3.89	72	2.99

Rainfall Distribution = TYPE II

Time of Concentration, $Tc_{(Hours)}$ = 0.50

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Phone: 716-633-2601, Fax: 716-633-2704

Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

TR-55 Post Development Summary

STORM 1-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		25.27
This pond	49.60	100.0	0.4	25.27

STORM 10-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		98.91
This pond	49.6	100.0	1.3	98.91

STORM 100-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		272.90
This pond	49.6	100.0	3.6	272.90

Storm Event	Rainfall P, inches	Initial Abstraction Ia = 0.2S, inches	Potential Retention S=(1000/CN)-10 inches	CN	Runoff Amount, Inches Qd = (P-Ia)^2 / ((P-Ia)+S)
1-yr	1.87	0.56	2.82	78	0.41
10-yr	3.25	0.56	2.82	78	1.31
100-yr	6.00	0.56	2.82	78	3.58

Rainfall Distribution = TYPE II

Time of Concentration, $Tc_{(Hours)}$ = 0.10

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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Storage Volume Estimation

Taken from NYS Stormwater Management Design Manual (NYS-SMDM) Appendix B

Area Final Phase = 49.6 Acres

	Channel Protection Cp_v 1 YR / 24-Hour Extended Detention	
Ia / P (From Post Development Summary Sheet, 1yr storm)	0.30	
Post Development Time of Concentration,Tc (From TR-55 Calcs)	0.10	hours
Unit Peak Discharge, qu (from TR-55 Exhibit 4-II, attached)	880	cfs/sqmi/inch
Ratio of Outflow to Inflow, qo/qi (NYS-SMDM Figure B.1, attached)	0.018	
Ratio of Storage Volume to Runoff Volume, vs/vr		
vs/vr = 0.682 - 1.43(qo/qi) + 1.64 (qo/qi)^2 - 0.804 (qo/qi)^3 =	0.66	
Pos-Dev Runoff Amount, Q_d (From Post Development Summary Sheet)	0.4	inches
Req'd Storage Volume$_{(acre\text{-}feet)}$, vs = $((v_s/v_r)\ (Q_{d,\ inches})\ (A,\ acres))$ / 12 inches/foot	1.1	acre-feet
Req'd Storage Volume$_{(cubic\ feet)}$, vs = vs $_{(acre\text{-}feet)}$ x 43560 sq.ft./acre	48,872	cubic feet
Cp_v-ED Average release rate over 24 hours = vs $_{(cubic\ feet)}$ / 86400 seconds/24 hrs	0.57	cfs

	Overbank Flood Q_p 10YR	Extreme Flood Q_f 100 YR	
Pre-Dev Peak Flow Q_O (From TR-55 Output)	38.62	130.82	cfs
Pos-Dev Peak Flow Q_I (From TR-55 Output)	98.91	272.90	cfs
Pos-Dev Runoff Amount, Q_d (From Post Development Summary Sheet)	1.31	3.58	inches
Ratio of Pre-Dev Peak Flow to Pos-Dev Peak Flow,Q_O/Q_I	0.39	0.48	
Ratio of Storage Volume to Runoff Volume, 'V_S/V_R (From TR-55 Fig 6-1, Type II, attached)	0.32	0.29	
Req'd Storage Volume$_{(acre\text{-}feet)}$, Vs = $[((V_s/V_r)\ (Q_{d,\ inches})\ (A,\ acres))$ / 12 in./ft.]	1.73	4.29	acre-feet
Req'd Storage Volume$_{(cubic\ feet)}$, Vs = Vs $_{(acre\text{-}feet)}$ x 43560 sq.ft./acre	75,483	186,869	cubic feet

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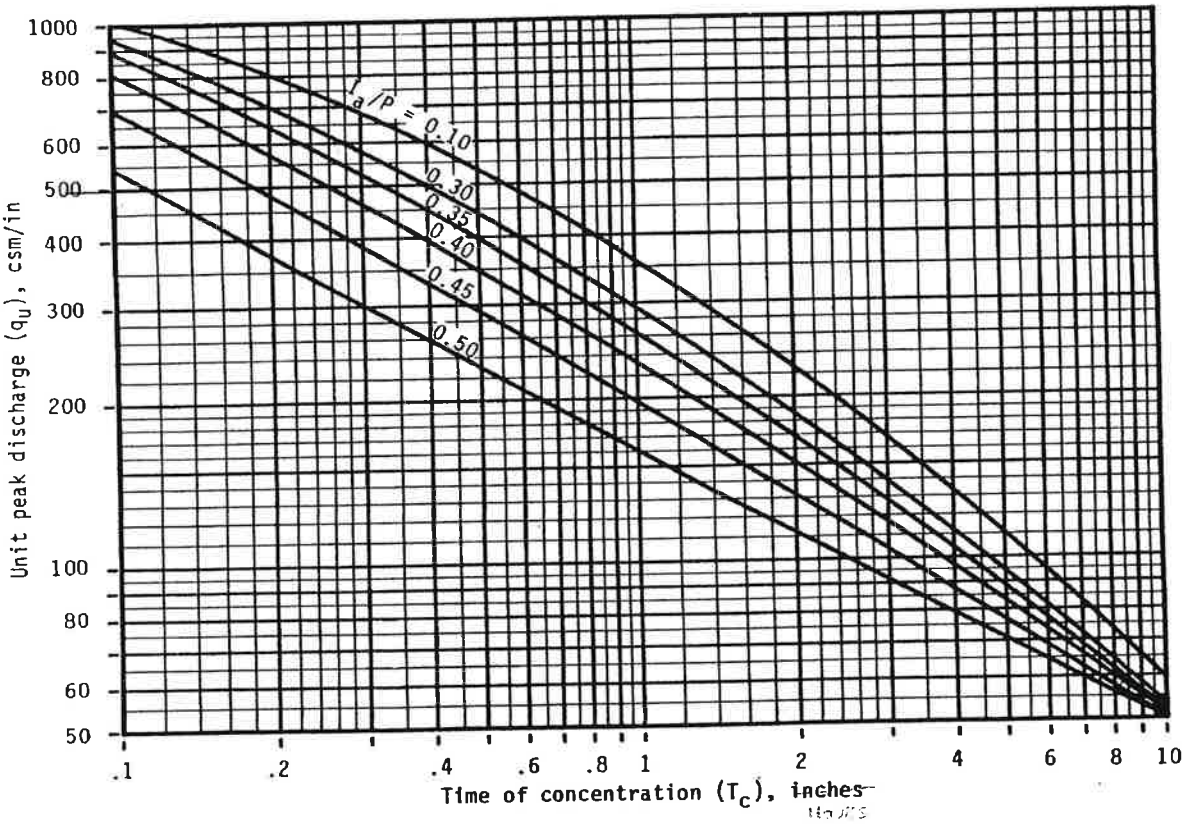
Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Storage Volume Estimation - Continued

4-6

Exhibit 4-II: Unit peak discharge (q_u) for SCS type II rainfall distribution



(210-VI-TR-55, Second Ed., June 1986)

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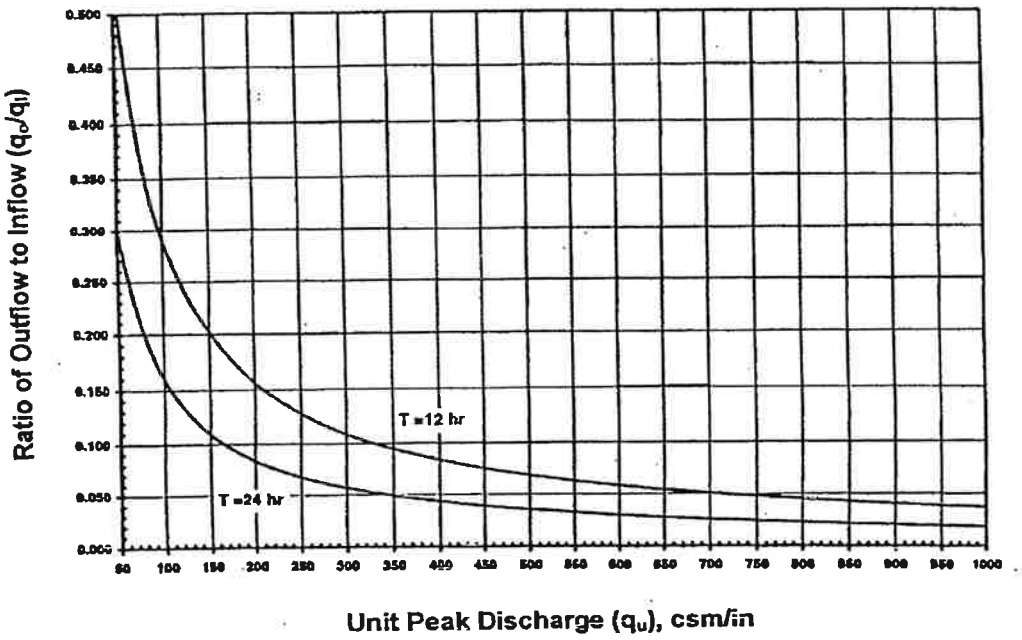
Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Figure B.1 Detention Time vs. Discharge Ratios (Source: MDE, 2000)



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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Storage Volume Estimation - Continued

Input requirements and procedures

Use figure 6-1 to estimate storage volume (V_s) required or peak outflow discharge (q_o). The most frequent application is to estimate V_s, for which the required inputs are runoff volume (V_r), q_o, and peak inflow discharge (q_i). To estimate q_o, the required inputs are V_r, V_s, and q_i.

Estimating V_s

Use worksheet 6a to estimate V_s, storage volume required, by the following procedure.

1. Determine q_o. Many factors may dictate the selection of peak outflow discharge. The most common is to limit downstream discharges to a desired level, such as predevelopment discharge. Another factor may be that the outflow device has already been selected.
2. Estimate q_i by procedures in chapters 4 or 5. Do not use peak discharges developed by any other procedure. When using the Tabular Hydrograph method to estimate q_i for a subarea, only use

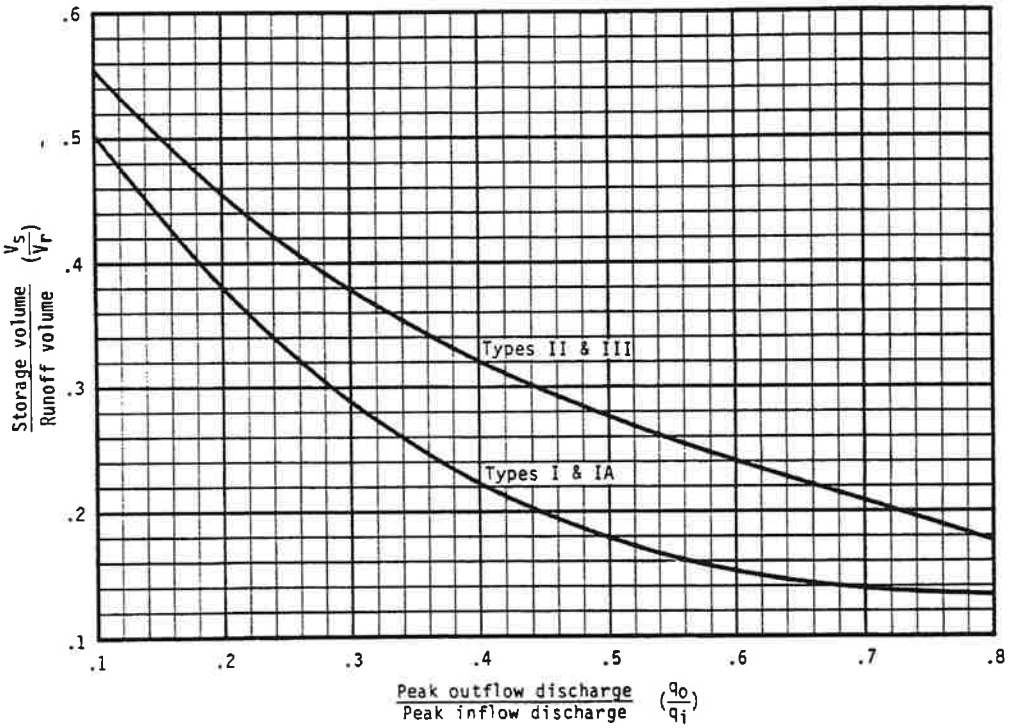

Figure 6-1.—Approximate detention basin routing for rainfall types I, IA, II, and III.

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Phone: 716-633-2601, Fax: 716-633-2704

Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	07/18/23
Location:	Pond A	Checked:	JCM	Date:	

Water Quality and Pond Volumes

Water Quality Volume, WQv

From NYS Stormwater Management Design Manual (NYS-SMDM), Section 4

WQv = (P*Rv*A) / 12

P=90% Rainfall Event No. for WNY	1.00				
I = Impervious cover	25.0	Percent			
Rv = 0.05 + 0.009 * I	0.28				
A = Site area	49.60	acres			
Total WQv Required =			**1.14**	acre-feet =	**49,513** cf
Total Minimum Req'd Permanent Pool Volume, PPV = Total WQv x 50%			0.57	acre-feet =	24,757 cf
Req'd Forebay (Pretreatment) Volume = Total WQv x 10% =			0.114	acre-feet =	4,951 cf
Req'd Permanent Pool Volume in the "Wet Pool" = Total PPV - Req'd Forebay Volume =			0.455	acre-feet =	19,805 cf

Is "Wet Pool" Volume Provided = or > the Total WQv Required? Yes, 100% of WQv Provided In Wet Pool, Therefore, WQv-ED Not Req'd

Req'd WQv-ED Volume (i.e, volume above Normal Water Level) =Total WQv x 50% =		acre-feet =	cf
WQv-ED Average release rate over 24 hours = WQv-ED (cubic feet) / 86400 secs/24 hrs =		c.f.s.	

Pond Levels and Volumes

Pond A	HWE, ft	HWE Area, sf	LWE, ft	LW Area, sf	water depth, ft	Avg. Area, sf	Vol. Provided, cf	Vol. Req'd, cf	Vol.Prv acft	Difference
"Wet Pool"	836.00	26,383	830.00	11477	6.00	18,930	113,580	19,805	2.61	93,775
WQ_vED								None Req'd		
Cp_v	837.84	32,998	836.00	26383	1.84	29,691	54,631	48,872	1.25	5,759
Q_p	838.50	35,371	836.00	26383	2.50	30,877	77,193	75,483		1,710
Q_f	841.30	45,438	836.00	26383	5.30	35,910	190,325	186,869		3,456

Set Pond TOB @ EL. 842.3
Area @ TOB 49033 sf

WQv Storm Event Peak Flow Calculation (WQv Qp)

For Sizing Proprietary Pretreatment Structures If Used In Lieu Of Pretreatment Forebay

From NYS Stormwater Management Design Manual (NYS-SMDM), Appendix B.2

Post Development Time of Concentration,Tc (From TR-55 Calcs)	0.10	hr
Initial Abstraction, Ia (From Post Development Summary Sheet)	0.56	
Ia / P (Where P=90% Rainfall Event No. from WQv calcs above)	0.56	
Unit Peak Discharge, qu (from TR-55 Exhibit 4-II, attached)	500	cfs/sqmi/inch
WQv in watershed inches = [WQv (acre-feet) / Area (acres)] x 12 inches/foot	0.28	inches
A = area in square miles	0.0775	sq. miles

WQv Qp (cfs) = qu (cfs/sq.miles/inch) x A (sq.miles) x WQv (inches)

Wqv Peak Discharge Qp =	10.7	cfs
Required pretreatment = 10% of total Wqv	1.07	cfs

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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	07/18/23
Location:	Pond A	Checked:	JCM	Date:	

Outlet Control Structure Design

	Water Elevations	Allowable Discharge Rates, Qo			
Normal Water Level	836.00				
Water Quality Volume Extended Detention, WQv-ED			cfs	for 24 hour release	**<-- Not Req'd**
Stream Channel Protection "Cpv" 1 year storm	837.84	0.57	cfs	for 24 hour release	
Overbank Flood Control Criteria "Qp" 10 year storm	838.50	38.62	cfs		
Extreme Flood Control Criteria "Qf" 100 year storm	841.30	130.82	cfs		
Top of Bank / emergency spillway elevation	842.30				

Heads, $h_{(feet)}$, for Calculating Flows Through Various Orifices		
When Water Elev. Is @	Primary Orifice, h =	Secondary Orifice, h =
WQv-ED		
Cpv	1.72	
Qp	2.38	
Qf	6.17	

No. of Outlet Control Orifices Provided = 1

	Primary Drawdown Orifice For WQv and/or Cpv	Secondary Drawdown Orifice For Cpv (as needed)	
Orifice diameter (Note: Minimum per NYS-SMDM = 0.25')	0.25	0.25	ft
Area of pipe or slot = A	0.05	0.05	sq ft
Orifice coefficient = C	0.61	0.61	
Acceleration due to gravity = g	32.20	32.20	ft/sec^2

Torricelli Equation - Orifice Calculations

	Orifice Discharge Rates, Q=CA(2gh)^.5				
When Water Elevations are at the following stages --->	**WQv**	**Cp_v**	**Qp**	**Q_f**	
Actual Discharge Rate Through Primary Orifice For WQv and/or Cpv Drawdown @ Various Heads =		0.31	0.37	0.60	cfs
Actual Discharge Rate Through Secondary Orifice For Cpv Drawdown (as needed) @ Various Heads =					cfs
Actual Cumulative Discharge Rates, Q =		0.31	0.37	0.60	cfs

Weir Calculations (TR-55 Ch. 6)

		Hw, ft	Qo, cfs	Lw, ft	Total Actual Discharge Rates	
Qp	Discharge Qo=Qp-(Wqv +Cpv)	0.66	13.00	-----	Qp, cfs =	13.37
	$Lw=Qo/3.2*Hw^{1.5}$=	-----	-----	7.6		
Qf	Discharge Qo=Qf-(Wqv +Cpv)	3.46	130.22	-----	Qf, cfs =	130.82
	$Lw=Qo/2.67*Hw^{1.5}$=	-----	-----	7.6		

New Qp based on Weir Lw 0.04 Elev 837.88

Outlet Structure

Primary Orifice For WQv and/or Cpv Outlet Control	0.25	ft	=	diameter pipe at inv. elevation	836.00	ft
Secondary Orifice For Cpv Outlet Control	Not Req'd	ft	=	diameter pipe at inv. elevation	Not Req'd	ft
Overbank Flood Qp Outlet Control Weir	7.6	ft	=	Total Weir Opening at crest elevation	837.84	ft
Extreme Flood Qf Outlet Control Weir	7.6	ft	=	Total Weir Opening at Elevation	838.50	ft

Outlet Pipe Sizing

Diameter	Area, A	High	CL Outlet	Head	Coeffic.	Capacity, cfs	No. of	Total	Actual Qf
in Inches	Sq ft	Water Elev.	Elevation	in feet	C	Q =C x A x (2gh^0.5)	Outlet Pipes	Capacity, cfs	Discharge, cfs
24	3.14	842.30	837.00	5.30	0.60	34.82	4	139.30	130.82

ENGINEER'S REPORT

APPENDIX E

Green Infrastructure

Bioretention Area Calculations

NYSDEC Spreadsheets

Version 1.8
Last Updated: 11/09/2015

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

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?	

Design Point:	outlet	
P=	1.00	*inch*

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	49.60	12.20	25%	0.27	48,860	Bioretention
2						Bioretention
3						Bioretention
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	49.60	12.20	25%	0.27	**48,860**	**Subtotal 1**
Total	49.60	12.20	25%	0.27	**48,860**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

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

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	49.60	12.20	25%	0.27	48,860
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**49.60**	**12.20**	25%	0.27	48,860
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	49.60	12.20	25%	0.27	**48,860**

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	outlet

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft^3)	Precipitation (in)	Description
1	49.60	12.20	0.25	0.27	48859.80	1.00	Bioretention
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	25%	0.27	48,860	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					0	ft^3	

Soil Information

Soil Group	D		
Soil Infiltration Rate	2.00	*in/hour*	*Design as an infiltration bioretention practice*
Using Underdrains?	Yes	*Okay*	

Calculate the Minimum Filter Area

		Value	Units	Notes
WQv		48,860	ft^3	
Enter Depth of Soil Media	*df*	2.5	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	0.5	*ft/day*	
Enter Average Height of Ponding	*hf*	0.5	*ft*	*6 inches max.*
Enter Filter Time	*tf*	2.5	*days*	
Required Filter Area	***Af***	**32573**	ft^2	

Determine Actual Bio-Retention Area

Filter Width	20	*ft*	
Filter Length	1280	*ft*	
Filter Area	25600	ft^2	
Actual Volume Provided	38400	ft^3	

Determine Runoff Reduction

Is the Bioretention contributing flow to another practice?	Yes	Select Practice	Other/Standard SMP
RRv	15,360		
RRv applied	**15,360**	ft^3	***This is 40% of the storage provided or WQv whichever is less.***
Volume Treated	0	ft^3	*This is the portion of the WQv that is not reduced in the practice.*
Volume Directed	33,500	ft^3	This volume is directed another practice

ENGINEER'S REPORT

APPENDIX F

USDA SOILS MAP AND DESCRIPTIONS

Map Scale: 1:3,580 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	HSG	Acres in AOI	Percent of AOI
CaA	Canandaigua silt loam, 0 to 2 percent slopes	D	5.3	10.9%
CbA	Canandiagua mucky silt loam, 0 to 2 percent slopes	D	0.5	1.1%
GnA	Galen very fine sandy loam, 0 to 2 percent slopes	B	3.7	7.8%
GnB	Galen very fine sandy loam, 2 to 6 percent slopes	B	2.5	5.3%
IoA	Ilion silt loam, 0 to 3 percent slopes	D	1.8	3.8%
Ld	Lamson very fine sandy loam	D	4.3	8.9%
OvB	Ovid silt loam, 3 to 8 percent slopes	C	14.2	29.5%
RsA	Romulus silt loam, 0 to 3 percent slopes	D	14.1	29.3%
Wy	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	D	1.6	3.3%
Totals for Area of Interest			**48.2**	**100.0%**

B 13.1 %
C 29.5 %
D 57.4 %

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: Genesee County, New York
Survey Area Data: Version 23, Sep 10, 2022

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

Date(s) aerial images were photographed: Jun 15, 2020—Jun 17, 2020

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

Genesee County, New York

RsA—Romulus silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: p8xn
Elevation: 570 to 920 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Romulus

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy till derived from reddish calcareous shale, limestone, and sandstone, in places intermixed with glaciolacustrine deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 26 inches: silty clay loam
H3 - 26 to 72 inches: gravelly silt 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 moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D

Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

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

Lyons
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

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

Madalin
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

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

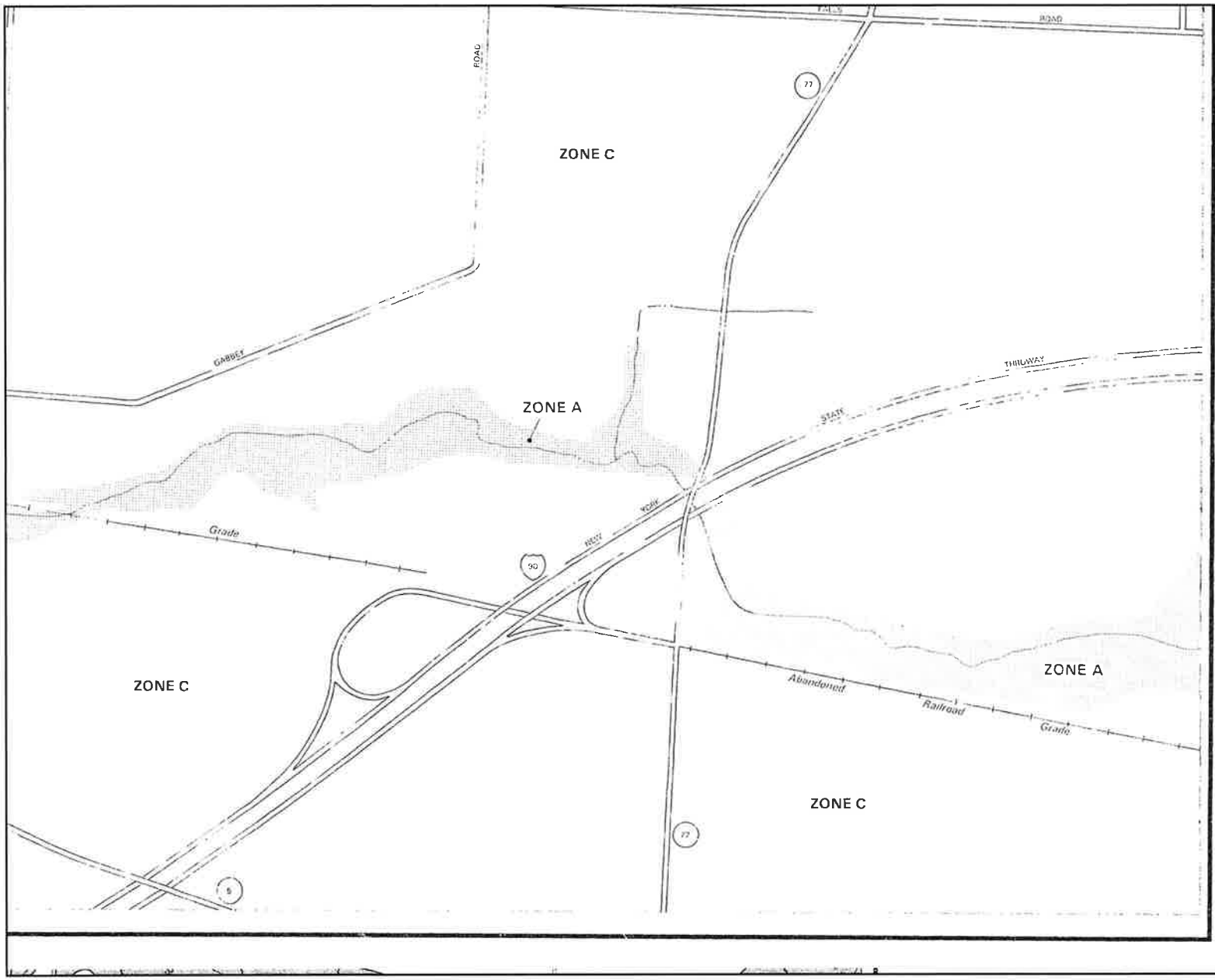
Data Source Information

Soil Survey Area: Genesee County, New York
Survey Area Data: Version 23, Sep 10, 2022

ENGINEER'S REPORT

APPENDIX G

FEMA FLOOD ZONE MAP



N

APPROXIMATE SCALE

1000 0

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

TOWN OF
PEMBROKE,
NEW YORK
GENESEE COUNTY

PANEL 5 OF 20

SEE MAP INDEX FOR PANELS NOT PRINTED

COMMUNITY-PANEL NUMBER
360283 0005 C

EFFECTIVE DATE:
JANUARY 20, 1984

Federal Emergency Management Agency

STORMWATER POLLUTION PREVENTION PLAN
FOR

Route 77
Travel Plaza
Town of Pembroke
New York

July 31, 2023

Project M-2303

Prepared by:
Metzger Civil Engineering, PLLC
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Michael J. Metzger, P.E.
License No. 066786

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h. Details
i. Inspection Schedule
j. Pollution Prevention Measures
k. Stormwater Discharges From Sources Other Than Construction
l. Identification of Elements of the Design Not In Conformance with the "Technical Standards"

Part III.B.2 Post Construction Stormwater Management Practice Component

a. Permanent Stormwater Management Practices
b. Site Map
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d. Soil test analysis
e. Infiltration test results
f. Post Construction O&M plan

Part III.B.3 Enhanced Phosphorus Removal Standards

a. Enhanced Phosphorus Removal Standards

APPENDICES

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C. Certification Statements
D. Stormwater Calculations
E. Green Infrastructure Planning and Design
F. Soils Map Data
G. Wetland Map

This Stormwater Pollution Prevention Plan was prepared and numbered in general conformance with the guidelines set forth in the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activities - Permit No. GP-0-20-001.

1a. Background Information:

The project consists of the construction of a new travel plaza to accommodate visitors near the Pembroke exit of the New York State I-90 Thruway. The project will include roadways, parking and related infrastructure to service a new convenience store, car wash, fueling stations and electric charging stations. The new development will sit on a 49.60 acre parcel which is currently undeveloped. The land has been disturbed by past agricultural usage.

1b. Site Map:

A site map has been included on the cover sheet of the plan set which is part of this SWPPP.

1c. Soils:

The site is shown on the Genesee County Soils Survey as having 9 different soil types. The primary soil types are Romulus silt loam (RsA) and Ovid silt loam (OvA) type soils. These soil types are classified as belonging to the hydrologic soil group (HSG) "D" and "c" respectively. Depth to bedrock is 7 to 20".

1d. Construction Phasing:

Sequencing for all phases:

1. Installation of a stabilized construction entrances.
2. Installation of silt protection on all areas downstream of proposed disturbance.
3. Clearing and grubbing.
4. Removal and stockpiling of topsoil and fill.
5. Construction of the bioretention area and stormwater pond.
6. Infrastructure construction (drainage, water and sanitary sewers).
7. Install temporary Drop Inlet protection per the design plans.
8. Excavation and construction of the roadways.
9. Building Construction.
10. Removal of the control measures upon establishment of grass as outlined herein.

1e. Pollution Prevention Measures:

A stabilized construction entrance will be required and maintained until the final paving has been installed as outlined by "New York State Guidelines for Erosion and Sediment Control section 5A.73". This entrance must be kept clean to ensure no mud is allowed to enter the public roadway. Dust must be controlled by sweeping and or truck washing. All truck tire wash water must be properly contained on site and concrete truck wash out must be contained and disposed of properly. Drop inlet protection and silt socks are to be installed as detailed on the design plans.

1f. Soil Stabilization:

The site will be seeded and grassed as soon as possible upon fine grading of any particular area. Any disturbed area or temporary stockpile left idle must be stabilized within 14 calendar days after last being worked. All sediment controls are to remain in place until turf has been established and the site is stabilized as defined in the SPDES General Permit.

1g. Site Map:

A site map and details have been included in the design plans for this site.

1h. Details:

The size, material specifications, maintenance and installation requirements of stormwater pollution prevention devices are given on the detail sheets for this project. Drop inlet protection is to be inspected daily by the contractor and emptied and repaired as needed. Silt sock is to be replaced when torn or if captured silt reached 50% of the sock height. The stabilized construction entrance shall be resurfaced before the stone becomes impregnated with silt to the point where trucks are tracking silt onto the roadway.

1i. Inspection schedule:

A "trained contractor" must be on site daily when soil disturbance activities are being performed and must inspect, clean and repair as required all stormwater pollution prevention devices on site.

The inspection of all stormwater pollution prevention devices will be the responsibility of a "qualified professional" before, during and after construction as outlined in the SPDES General Permit for Construction Activity GP-0-20-001 included in this SWPPP.

All devices must be in place prior to work in any upstream area and maintained at all times during construction. A "qualified inspector" must inspect all stormwater pollution prevention practices:

a. Prior to construction.
b. Every 7 days (minimum), twice every seven days if current site disturbance exceeds 5 acres in size.
c. Prior to issuance of the Notice of Termination.

1j. Pollution prevention measures:

The site is to be kept free of litter by providing on site waste receptacles. Contractors are to be instructed not to place litter in open excavations or the rear of open bed trucks.

Contractors are to ensure that construction chemicals are handled in strict compliance with OSHA standards. This includes proper storage containers and labeling of chemicals. On site storage of chemicals should be avoided whenever possible. Chemicals are to be protected from rain and wind. Chemical spills are to be reported immediately to NYSDEC spill response. Spill kits and /or absorbent materials must be kept on site and employees shall be trained in their use.

Long term on site storage of construction debris should be avoided whenever possible. On site construction debris is to be kept in a fashion to prevent the pollution via wind or stormwater runoff.

The site is to be serviced by two bioretention areas and a wet detention pond. Drop inlet protection will be placed around all storm inlets. A stabilized construction entrance is to be employed as noted on the design drawings. The "General Contractor" will ultimately be responsible for all subcontracted work, and therefore, the installation, maintenance and removal of SWPPP devices.

1k. Stormwater discharges from sources other than construction

Murder Creek runs through the site. The flows from Murder Creek will remain unchanged throughout construction.

1l. Elements that are NOT in compliance with New York State Standards and Specifications for Erosion and Sediment Control

The Erosion and Sediment Control elements for this site have been designed to be in general compliance with the New York State Standards and Specifications for Erosion and Sediment Control.

2a Permanent stormwater management practices

The site will have two bioretention areas and an on site wet detention pond. The pond will be served by an outlet control structure.

2b Site map

A site map has been provided as part of the overall engineering design.

2c. Stormwater analysis

A complete set of Stormwater calculations have been included as Appendix D of this plan.

2d. Soil Test Analysis

This site was tested in 1969 as part of a joint project by the United States Department of Agriculture, Soil Conservation Service and Cornell University. The results of their soil survey revealed that the primary soils found on this site have this profile:

0 - 12" – SILT loam

12 - 26" – silty Clay loam

26 -72" – gravelly SILT loam

Seasonal high groundwater is found at 0.5'

2e. Infiltration Test Results

The USDA states that the most limiting layer to transmit water is moderately low to moderately high:

0.06 - 0.20 inches per hour

2f. Post Construction Operation and Maintenance Plan

Practice	Frequency	By
Removal of Trash and Debris from the storm water piping	Continuous	Owner
Maintaining the bioretention Areas Plants and vegetation	Seasonally	Owner
Maintaining the ponds vegetation	Seasonally	Owner
Inspection of pond, catch basins, bioretention areas, outlet structure and storm piping	Annually	Owner
Cleaning of, catch basins, outlet structures and storm piping	As needed	Owner

Removal of accumulated silt From pond bottom	When silt reaches 50% of ponds capacity	Owner

3a. Enhanced Phosphorus Removal Standards

This site does not lie in any watershed identified in New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activities - Permit No. GP-0-20-00 and is therefore not subject to enhanced phosphorus removal standards.

APPENDIX A
NOTICE OF INTENT

STORMWATER POLLUTION PREVENTION PLAN

NOI for coverage under Stormwater General Permit for Construction Activity

version 1.35

(Submission #: HPW-FJVT-JRVEK, version 1)

Details

Originally Started By	Michael Metzger
Alternate Identifier	Travel Plaza
Submission ID	HPW-FJVT-JRVEK
Submission Reason	New
Status	Draft

Form Input

Owner/Operator Information

Owner/Operator Name (Company/Private Owner/Municipality/Agency/Institution, etc.)
Geis Construction

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

Owner/Operator Contact Person First Name
Jeffrey

Owner/Operator Mailing Address
10029 Aurora-Hudson Road

City
Streetsboro

State
Ohio

Zip
44241

Phone
914-906-3838

Email
jm@geisco.net

Federal Tax ID
852043967

Project Location

Project/Site Name
Travel Plaza

Street Address (Not P.O. Box)
Alleghany Road

Side of Street
East

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

State
NY

Zip
14036

DEC Region
8

County
GENESEE

Name of Nearest Cross Street
NYS I-90

Distance to Nearest Cross Street (Feet)
0'

Project In Relation to Cross Street
South

Tax Map Numbers Section-Block-Parcel
15.00-1-5

Tax Map Numbers
NONE PROVIDED

1. Coordinates

Provide the Geographic Coordinates for the project site. The two methods are:
- Navigate to the project location on the map (below) and click to place a marker and obtain the XY coordinates.
- The "Find Me" button will provide the lat/long for the person filling out this form. Then pan the map to the correct location and click the map to place a marker and obtain the XY coordinates.

Navigate to your location and click on the map to get the X,Y coordinates
43.00638115248746,-78.40320657558635

Project Details

2. What is the nature of this project?
New Construction

3. Select the predominant land use for both pre and post development conditions.

Pre-Development Existing Landuse
Pasture/Open Land

Post-Development Future Land Use
Commercial

3a. If Single Family Subdivision was selected in question 3, enter the number of subdivision lots.
NONE PROVIDED

4. In accordance with the larger common plan of development or sale, enter the total project site acreage, the acreage to be disturbed and the future impervious area (acreage)within the disturbed area.

*** ROUND TO THE NEAREST TENTH OF AN ACRE. ***

Total Site Area (acres)
49.60

Total Area to be Disturbed (acres)
16.60

Existing Impervious Area to be Disturbed (acres)
0

Future Impervious Area Within Disturbed Area (acres)
12.20

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

---

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

A (%)
0

B (%)
13.1

C (%)
29.5

D (%)
57.4

7. Is this a phased project?
No

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

Start Date
08/01/2023

End Date
12/20/2028

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

9a. Type of waterbody identified in question 9?
Stream/Creek On Site

Other Waterbody Type Off Site Description
NONE PROVIDED

9b. If "wetland" was selected in 9A, how was the wetland identified?
NONE PROVIDED

10. Has the surface waterbody(ies in question 9 been identified as a 303(d) segment in Appendix E of GP-0-20-001?
Yes

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

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters?
No

If No, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as D (provided the map unit name is inclusive of slopes greater than 25%), E or F on the USDA Soil Survey?
No

If Yes, what is the acreage to be disturbed?
NONE PROVIDED

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

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

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

17. Does any runoff from the site enter a sewer classified as a Combined Sewer?
No

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

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

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

Required SWPPP Components

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?
Yes

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)?
Yes

If you answered No in question 22, skip question 23 and the Post-construction Criteria and Post-construction SMP Identification sections.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual?
Yes

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

SWPPP Preparer
Metzger Civil Engineering, PLLC

Contact Name (Last, Space, First)
Metzger Michael

Mailing Address
8245 Sheridan Dr

City
Buffalo

State
NY

Zip
14221

Phone
7166332601

Email
meteng@roadrunner.com

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) Scan the signed form
4) Upload the scanned document
Download SWPPP Preparer Certification Form

Please upload the SWPPP Preparer Certification
NONE PROVIDED
Comment
NONE PROVIDED

Erosion & Sediment Control Criteria

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

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

Temporary Structural
Construction Road Stabilization
Dust Control
Silt Fence
Stabilized Construction Entrance
Storm Drain Inlet Protection

Biotechnical
None

Vegetative Measures
Seeding

Permanent Structural
Rock Outlet Protection

Other
Silt Sock

Post-Construction Criteria

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

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.
Preservation of Undisturbed Area
Preservation of Buffers
Reduction of Clearing and Grading
Locating Development in Less Sensitive Areas
Roadway Reduction
Sidewalk Reduction
Driveway Reduction
Cul-de-sac Reduction
Building Footprint Reduction
Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).
All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout). (Acre-feet)
1.12

29. Post-construction SMP Identification
Use the Post-construction SMP Identification section to identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity that were used to reduce the Total WQv Required (#28).

Identify the SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use the Post-Construction SMP Identification section to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29. (acre-feet)
0.352

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28)?
No

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

32. Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P) (0.95) (Ai) / 12, Ai=(s) (Aic)] (acre-feet)
0.351

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

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

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

33. SMPs
Use the Post-construction SMP Identification section to identify the Standard SMPs and, if applicable, the Alternative SMPs to be used to treat the remaining total WQv (=Total WQv Required in #28 - Total RRv Provided in #30).

Also, provide the total impervious area that contributes runoff to each practice selected.

NOTE: Use the Post-construction SMP Identification section to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question #29. (acre-feet)
2.61

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

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).
2.96

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)?
Yes

If Yes, go to question 36.

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

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

CPv Required (acre-feet)
1.12

CPv Provided (acre-feet)
1.25

36a. The need to provide channel protection has been waived because:
NONE PROVIDED

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

Overbank Flood Control Criteria (Qp)

Pre-Development (CFS)
38.62

Post-Development (CFS)
13.37

Total Extreme Flood Control Criteria (Qf)

Pre-Development (CFS)
130.82

Post-Development (CFS)
130.82

37a. The need to meet the Qp and Qf criteria has been waived because:
NONE PROVIDED

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?
Yes

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

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). (See question #32a) This space can also be used for other pertinent project information.
Using the five step process outlined in the Stormwater Design Manual the minimum RRV is being met by Bio-retention area. The remaining WQV is being met by and on site wet detention pond with an outlet control structure.

Post-Construction SMP Identification

Runoff Reduction (RR) Techniques, Standard Stormwater Management Practices (SMPs) and Alternative SMPs

Identify the Post-construction SMPs to be used by providing the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

RR Techniques (Area Reduction)

Round to the nearest tenth

Total Contributing Acres for Conservation of Natural Area (RR-1)
0

Total Contributing Impervious Acres for Conservation of Natural Area (RR-1)
0

Total Contributing Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)
0

Total Contributing Impervious Acres for Sheetflow to Riparian Buffers/Filter Strips (RR-2)
0

Total Contributing Acres for Tree Planting/Tree Pit (RR-3)
0

Total Contributing Impervious Acres for Tree Planting/Tree Pit (RR-3)
0

Total Contributing Acres for Disconnection of Rooftop Runoff (RR-4)
0

RR Techniques (Volume Reduction)

Total Contributing Impervious Acres for Disconnection of Rooftop Runoff (RR-4)
0

Total Contributing Impervious Acres for Vegetated Swale (RR-5)
0

Total Contributing Impervious Acres for Rain Garden (RR-6)
0

Total Contributing Impervious Acres for Stormwater Planter (RR-7)
0

Total Contributing Impervious Acres for Rain Barrel/Cistern (RR-8)
0

Total Contributing Impervious Acres for Porous Pavement (RR-9)
0

Total Contributing Impervious Acres for Green Roof (RR-10)
0

Standard SMPs with RRv Capacity

Total Contributing Impervious Acres for Infiltration Trench (I-1)
0

Total Contributing Impervious Acres for Infiltration Basin (I-2)
0

Total Contributing Impervious Acres for Dry Well (I-3)
0

Total Contributing Impervious Acres for Underground Infiltration System (I-4)
0

Total Contributing Impervious Acres for Bioretention (F-5)
12.2

Total Contributing Impervious Acres for Dry Swale (O-1)
0

Standard SMPs

Total Contributing Impervious Acres for Micropool Extended Detention (P-1)
0

Total Contributing Impervious Acres for Wet Pond (P-2)
12.2

Total Contributing Impervious Acres for Wet Extended Detention (P-3)
0

Total Contributing Impervious Acres for Multiple Pond System (P-4)
0

Total Contributing Impervious Acres for Pocket Pond (P-5)
0

Total Contributing Impervious Acres for Surface Sand Filter (F-1)
0

Total Contributing Impervious Acres for Underground Sand Filter (F-2)
0

Total Contributing Impervious Acres for Perimeter Sand Filter (F-3)
0

Total Contributing Impervious Acres for Organic Filter (F-4)
0

Total Contributing Impervious Acres for Shallow Wetland (W-1)
0

Total Contributing Impervious Acres for Extended Detention Wetland (W-2)
0

Total Contributing Impervious Acres for Pond/Wetland System (W-3)
0

Total Contributing Impervious Acres for Pocket Wetland (W-4)
0

Total Contributing Impervious Acres for Wet Swale (O-2)
0

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

Total Contributing Impervious Area for Hydrodynamic
0

Total Contributing Impervious Area for Wet Vault
0

Total Contributing Impervious Area for Media Filter
0

"Other" Alternative SMP?
0

Total Contributing Impervious Area for "Other"
NONE PROVIDED

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

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

Manufacturer of Alternative SMP
NONE PROVIDED

Name of Alternative SMP
NONE PROVIDED

Other Permits

40. Identify other DEC permits, existing and new, that are required for this project/facility.
NONE PROVIDED

If SPDES Multi-Sector GP, then give permit ID
NONE PROVIDED

If Other, then identify
NONE PROVIDED

41. Does this project require a US Army Corps of Engineers Wetland Permit?
Yes

If "Yes," then indicate Size of Impact, in acres, to the nearest tenth
0.02

42. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned.
NONE PROVIDED

MS4 SWPPP Acceptance

43. Is this project subject to the requirements of a regulated, traditional land use control MS4?
No

If No, skip question 44

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

MS4 SWPPP Acceptance Form Download
Download form from the link below. Complete, sign, and upload.
MS4 SWPPP Acceptance Form

MS4 Acceptance Form Upload
NONE PROVIDED
Comment
NONE PROVIDED

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the certification form by clicking the link below. Complete, sign, scan, and upload the form.

Owner/Operator Certification Form (PDF, 45KB)

Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

NONE PROVIDED

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges From Construction Activity (GP-0-20-001)

Project Site Information

Project/Site Name

Owner/Operator Information

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

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First name | MI | Last Name

Signature | Date

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: _____

eNOI Submission Number: _____

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

Certification Statement - Owner/Operator

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

Owner/Operator First Name M.I. Last Name

_____

Signature

_____

Date

APPENDIX B

NYSDEC SPDES GENERAL PERMIT

STORMWATER POLLUTION PREVENTION PLAN

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

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

of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator

1-23-20

Authorized Signature

Date

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

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), 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 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, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. 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 GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department 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.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. 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 I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, 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 the *Stormwater Pollution Prevention Plan* ("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.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;

   (ii) Control stormwater *discharges*, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharges* from the site;

   (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;

   (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;

   (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 temporarily or permanently ceased, the application of soil 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 activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily 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**. 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 designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(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. **Prohibited *Discharges*.** The following *discharges* are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall 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 Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, 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 post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall 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 shall 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 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. 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 site discharges directly to tidal waters, or fifth order or larger streams.

(iv) *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 discharges directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) 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 discharges directly 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 Watershed

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (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 shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall 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 shall 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 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. 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 site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) *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 *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that *overbank* control is not required.

(v) 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 *discharge*s directly 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* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(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 Design Manual must be applied to all newly created pervious areas, or

(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or

(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or

(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice 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 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase 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 shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions 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 *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, such as:

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

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

3. There shall 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 standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general 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 the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities.*

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those 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"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

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

   c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name 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.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

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

   c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name 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.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive 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.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (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/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); or

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

(i) No Affect
(ii) No Adverse Affect
(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharges* from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.

3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

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

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

c. the final SWPPP has been prepared, and

d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

   a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

      (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

      (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

      (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor's or subcontractor's certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained 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.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..

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

6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of *a construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4,* the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. 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 I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:

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

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

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

d. to document the final construction conditions.

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

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   "I hereby certify 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"

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

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

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

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

b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall 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);

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

d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;

e. 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;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

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

h. 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;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. 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*;

k. 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

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. 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. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, 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.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

c. 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;

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

   (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;

   (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

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

   (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. 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 Design Manual;

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

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *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 conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

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 post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall 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 shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

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. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit 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 if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

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

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- New York State Erosion and Sediment Control Certificate Program holder
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

   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 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 E;

b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than 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 E;

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

d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

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

   b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

   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* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.

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

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

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

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

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

e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

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

g. 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;

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

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

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

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

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

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.

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

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

   a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

c. for post-construction stormwater management practices 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,

d. for post-construction stormwater management practices 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 policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

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). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall 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.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP 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 (5) 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.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

    a. For a corporation these forms shall be signed 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 permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) 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. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit 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.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, 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 shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

   It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. 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 shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, 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 conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

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

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, 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 reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

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

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
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)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - 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
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
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.

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 –means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means 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 - means a sewer that is designed to collect and convey both "sewage" and "stormwater".

Commence (Commencement of) Construction Activities - means 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.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, 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.

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

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

Direct Discharge (to a specific surface waterbody) - means that 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) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

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

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department's rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that 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 - means that 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.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

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

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term "plan" in "larger 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 (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Minimize – means 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 (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):

(i) Owned or operated by a State, city, town, 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;
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a *combined sewer*; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

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

New Development – means 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.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means 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 –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means 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 conditions.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means 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 - means 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 - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department 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 Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department 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 post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means 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 Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. 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) – means 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.).

Regulated, Traditional Land Use Control MS4 - means 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).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- 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),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- 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,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- 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*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means 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 – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name 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.

Streambank – as used in this permit, means 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) – means 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 post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions 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 – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that 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 Loads (TMDLs) - A TMDL is 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 on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. 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.6., 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 Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

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

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means 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 or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- 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 E
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.

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 watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- 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 projects, stormwater retrofits and stream restoration projects
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
- Cross-country ski trails and walking/hiking trails
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
- Sidewalk, bike path or walking path projects, 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.
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

Table 1 (Continued) 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:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *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 project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- 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

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- 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 E
- 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 E
- 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 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 larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- 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) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- 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 over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- 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 post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- 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

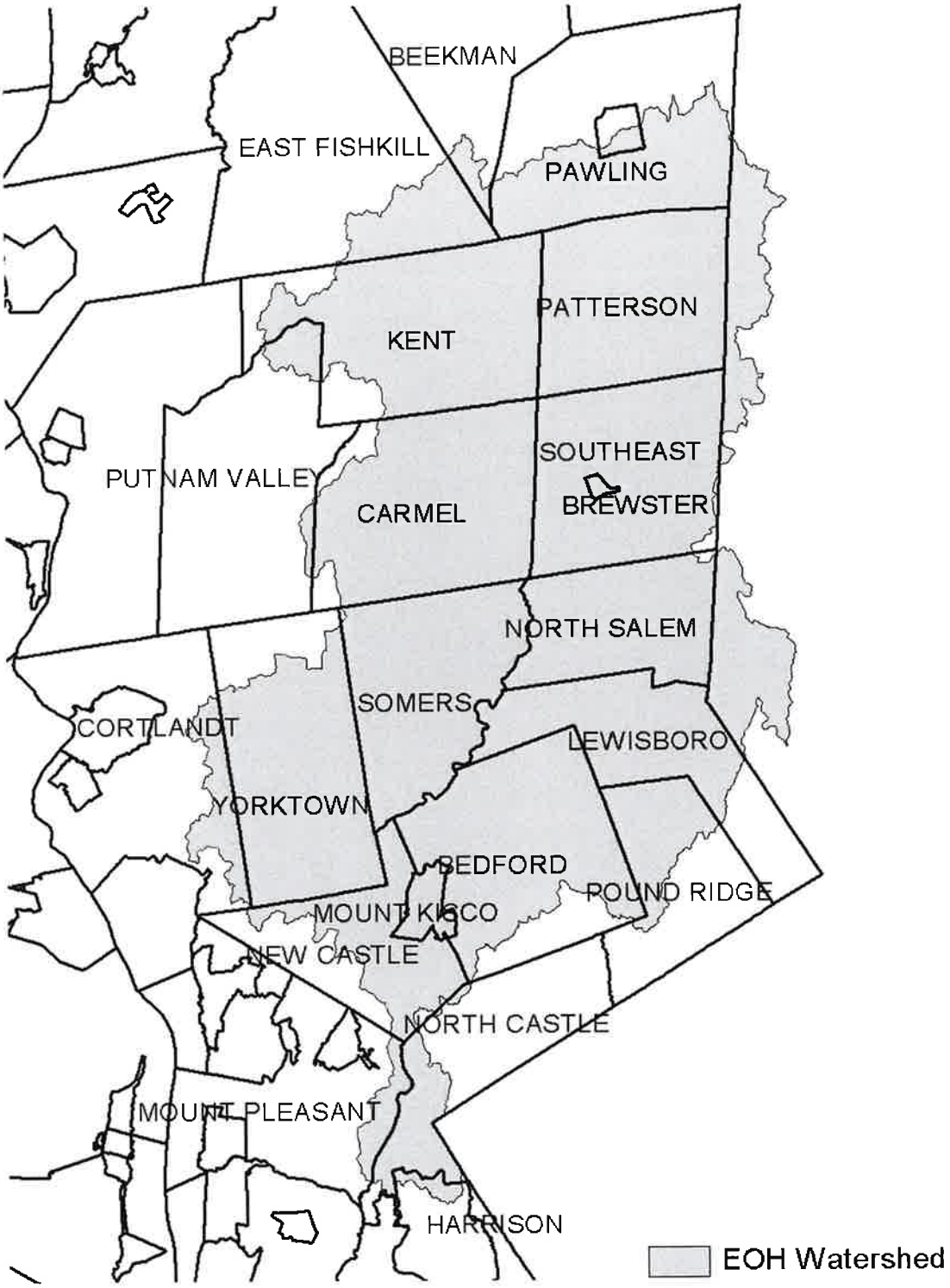


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

Figure 4 - Oscawana Lake Watershed

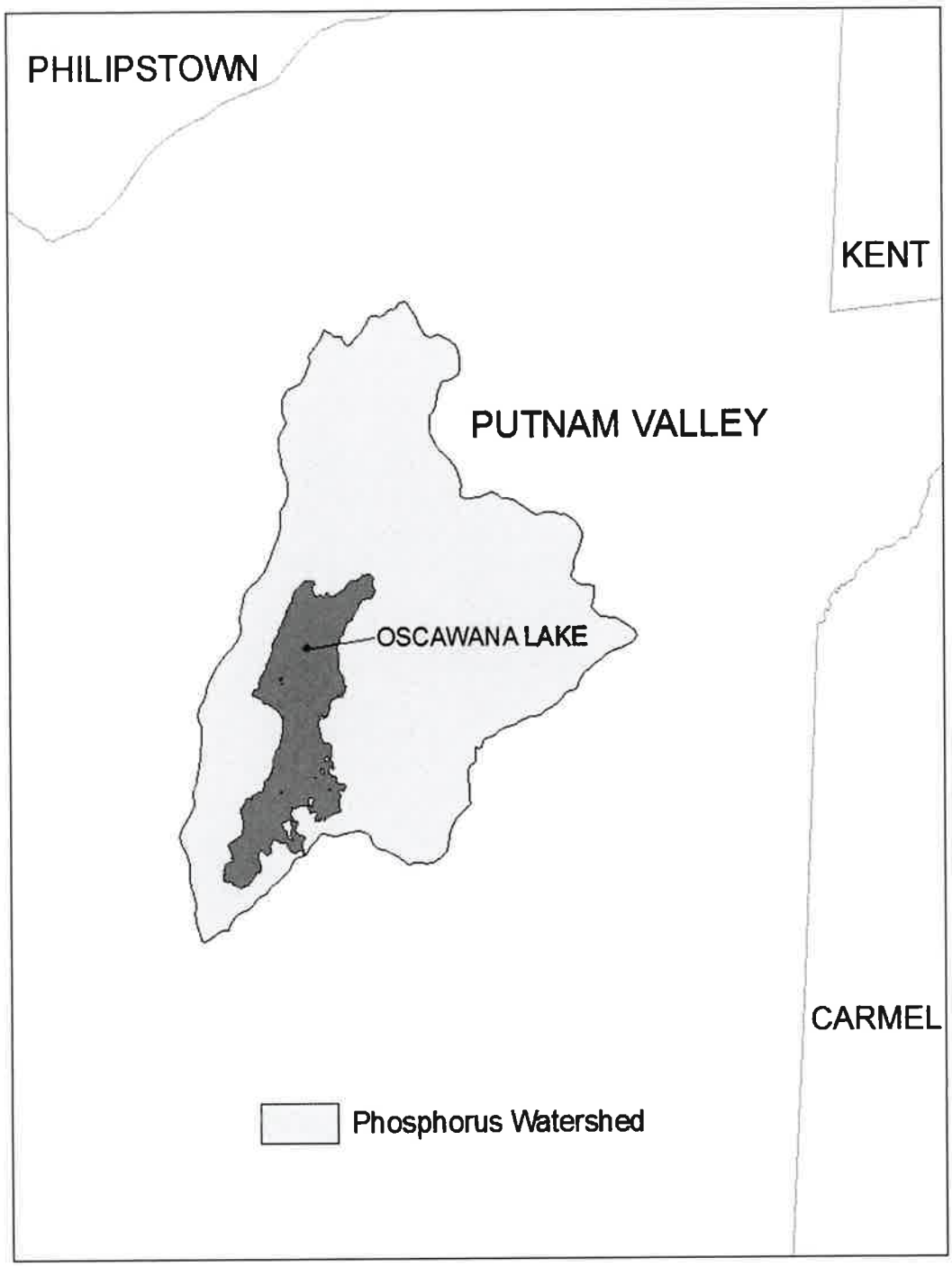
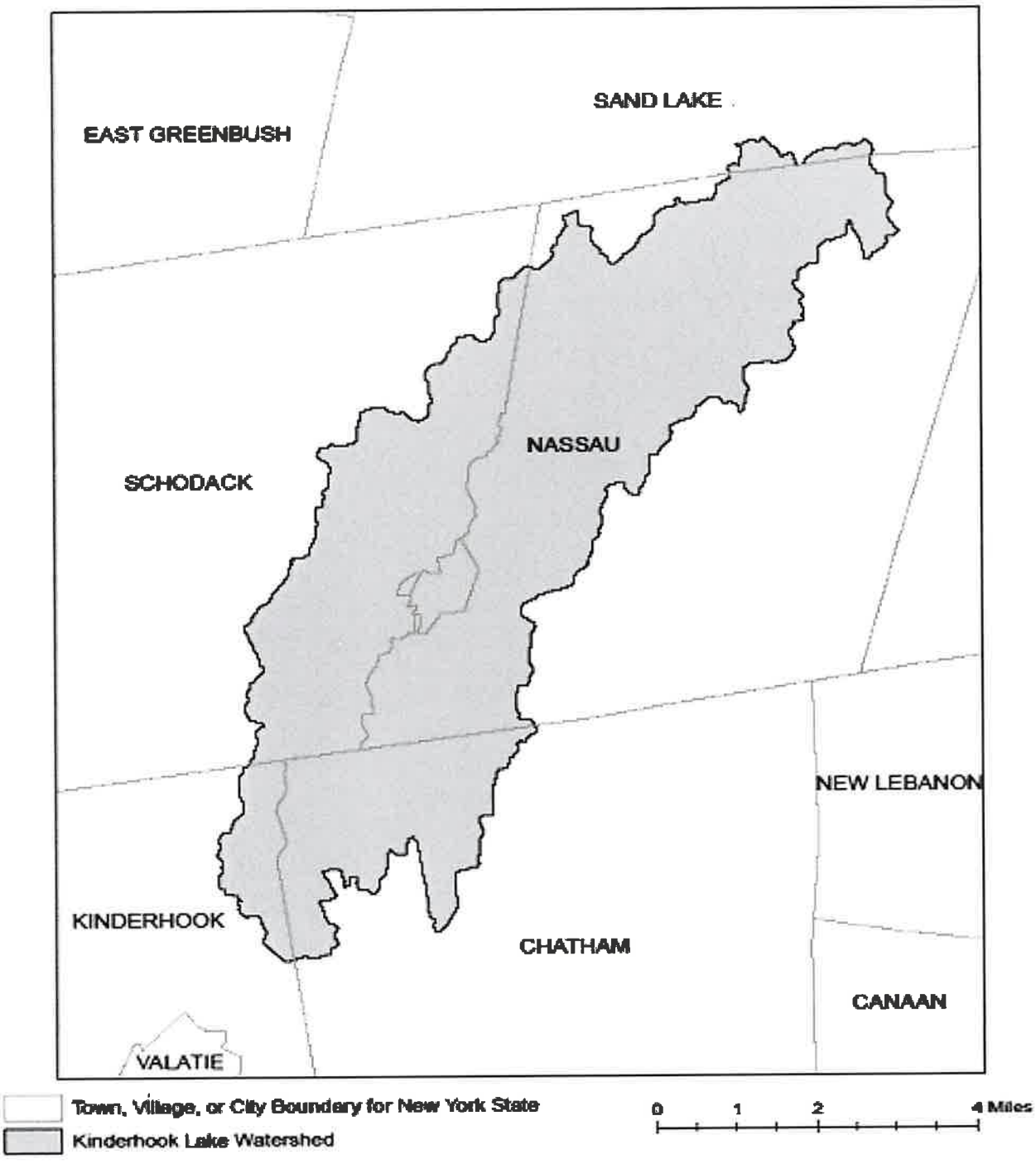


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

Region	Covering the following counties:	Division of Environmental Permits (DEP) Permit Administrators	Division of Water (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	100 Hillside Avenue, Suite 1w White Plains, NY 10603 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 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	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 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	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX C
CERTIFICATION STATEMENTS

STORMWATER POLLUTION PREVENTION PLAN

Stormwater Pollution Prevention Plan
Contractors Certification Statement

I, the undersigned, hereby certify that I have read and understand this Stormwater Pollution Prevention Plan (SWPPP) and have reviewed the related drawings and specifications prepared by Metzger Civil Engineering, PLLC.

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection.

I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards.

Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal. Civil and/or administrative proceedings.

_____
Name of Contracting Firm

_____
Address

_____
Phone Number

_____
Name of Trained individual
Responsible for SWPPP implementation

_____
Signature of Contracting Firm officer

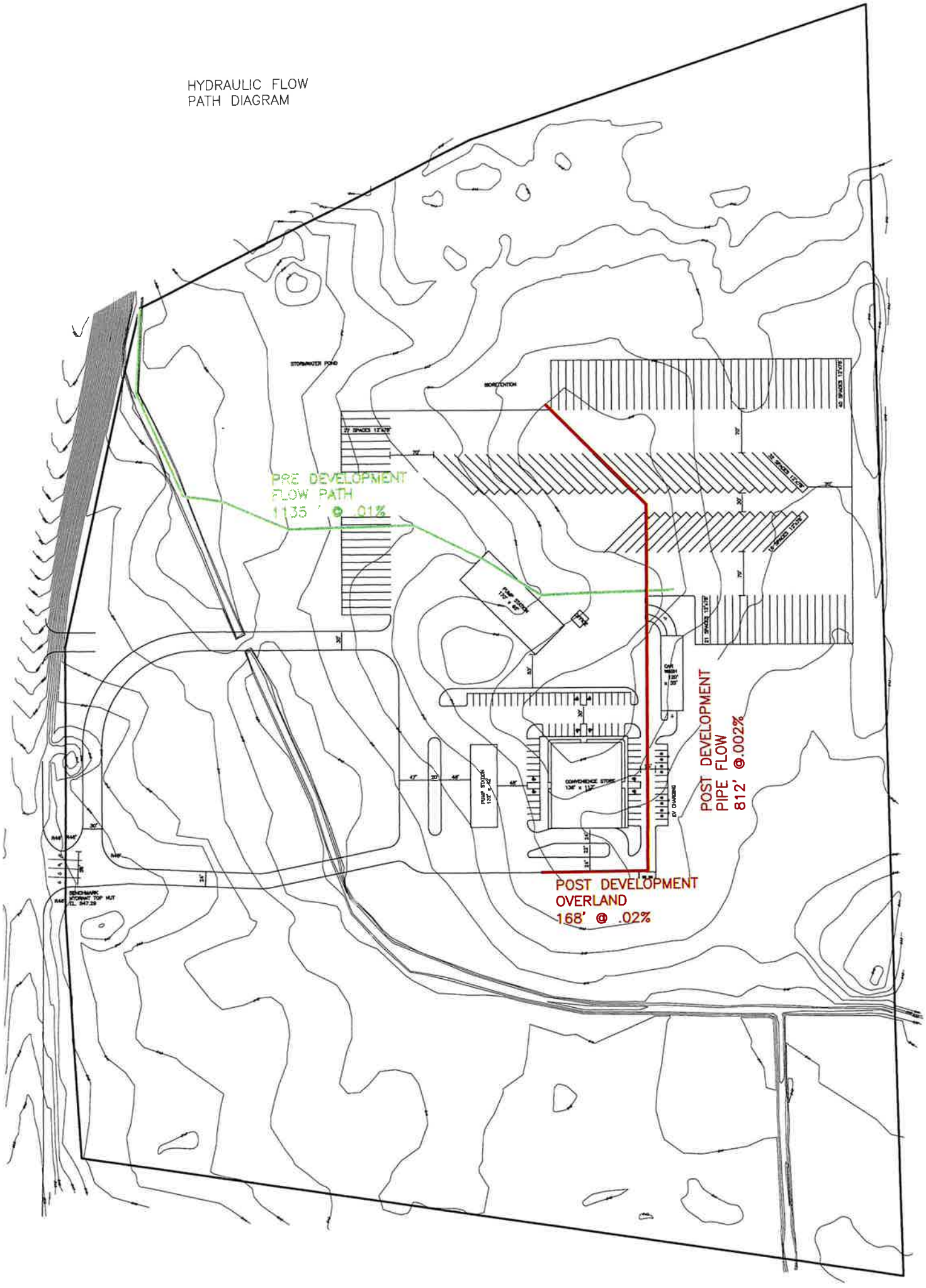
_____
Printed Name of Contacting Firm officer

_____
Date

APPENDIX D-1

Stormwater Calculations - Pre development
USDA TR-55 Method

HYDRAULIC FLOW
PATH DIAGRAM



WinTR-55 Current Data Description

--- Identification Data ---

User: ARH
Project:
SubTitle: Pre dev
State: New York
County: Erie
Filename: C:\Users\mcewn\OneDrive\MCE\M2303 Travel Plaza\docs\Pre.w55

Date: 7/18/2023
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Area A Pre		Outlet	49.6	72	.498

Total area: 49.60 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Pre dev
Erie County, New York

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Pre dev
Erie County, New York

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)	25-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)
SUBAREAS				
Area A Pre	38.62	56.44	130.82	5.40
REACHES				
OUTLET	38.62	56.44	130.82	5.40

ARH

Pre dev
Erie County, New York

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 10-Yr (cfs) (hr)	25-Yr (cfs) (hr)	100-Yr (cfs) (hr)	1-Yr (cfs) (hr)
SUBAREAS				
Area A Pre	38.62	56.44	130.82	5.40
	12.22	12.20	12.18	12.27
REACHES				
OUTLET	38.62	56.44	130.82	5.40

ARH

Pre dev
Erie County, New York

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Area A Pre	49.60	0.498	72	Outlet	

Total Area: 49.60 (ac)

ARH

Pre dev
Erie County, New York

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Area A Pre							
SHEET	100	0.0100	0.240				0.378
SHALLOW	1035	0.0220	0.050				0.120
					Time of Concentration		.498

ARH

Pre dev
Erie County, New York

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Area A Pre	Brush - brush, weed, grass mix	(fair)	B	6.6	56
	Brush - brush, weed, grass mix	(fair)	C	14.6	70
	Brush - brush, weed, grass mix	(fair)	D	28.4	77
	Total Area / Weighted Curve Number			49.6	72

APPENDIX D-2

Stormwater Calculations - Post Developement

USDA TR-55 Method

WinTR-55 Current Data Description

--- Identification Data ---

User: ARH
Project:
SubTitle: Post dev
State: New York
County: Erie
Filename: C:\Users\mcewn\OneDrive\MCE\M2303 Travel Plaza\docs\Post.w55

Date: 7/18/2023
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Area A Pos		Outlet	49.6	78	0.1

Total area: 49.60 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Post dev
Erie County, New York

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.2	2.69	3.25	3.84	4.48	6.0	1.8

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

ARH

Post dev
Erie County, New York

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 10-Yr (cfs)	25-Yr (cfs)	100-Yr (cfs)	1-Yr (cfs)
SUBAREAS				
Area A Pos	98.91	134.13	272.90	25.27
REACHES				
OUTLET	98.91	134.13	272.90	25.27

ARH

Post dev
Erie County, New York

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 10-Yr (cfs) (hr)	25-Yr (cfs) (hr)	100-Yr (cfs) (hr)	1-Yr (cfs) (hr)
SUBAREAS				
Area A Pos	98.91 11.94	134.13 11.93	272.90 11.93	25.27 12.01
REACHES				
OUTLET	98.91	134.13	272.90	25.27

ARH

Post dev
Erie County, New York

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Area A Pos	49.60	0.100	78	Outlet	

Total Area: 49.60 (ac)

ARH

Post dev
Erie County, New York

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Area A Pos							0.016
SHALLOW	168	0.0200	0.025				
CHANNEL	812	0.0020	0.012	1.76	4.73	2.855	0.079
					Time of Concentration		0.1

ARH

Post dev
Erie County, New York

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Area A Pos	Paved parking lots, roofs, driveways		B	1.6	98
	Paved parking lots, roofs, driveways		C	3.6	98
	Paved parking lots, roofs, driveways		D	7	98
	Brush - brush, weed, grass mix	(fair)	B	5	56
	Brush - brush, weed, grass mix	(fair)	C	11	70
	Brush - brush, weed, grass mix	(fair)	D	21.4	77
	Total Area / Weighted Curve Number			49.6	78

APPENDIX D - 3

Stormwater Calculations

STORMWATER POLLUTION PREVENTION PLAN

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8245 Sheridan Drive
Williamsville, New York 14221
Phone: 716-633-2601, Fax: 716-633-2704

Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	
County:	Genesee				

TR-55 Pre-Development Summary

STORM 1-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		5.40
This Pond	49.6	100.0	0.2	5.40

STORM 10-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		38.62
This Pond	49.6	100.0	1.0	38.62

STORM 100-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		130.82
This Pond	49.6	100.0	3.0	130.82

Storm Event	Rainfall P, inches	Initial Abstraction Ia = 0.2S, inches	Potential Retention S=(1000/CN)-10 inches	CN	Runoff Amount, Inches Qd = (P-Ia)^2 / ((P-Ia)+S)
1-yr	1.87	0.78	3.89	72	0.24
10-yr	3.25	0.78	3.89	72	0.96
100-yr	6.00	0.78	3.89	72	2.99

Rainfall Distribution = TYPE II

Time of Concentration, $Tc_{(Hours)}$ = 0.50

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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

TR-55 Post Development Summary

STORM 1-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		25.27
This pond	49.60	100.0	0.4	25.27

STORM 10-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		98.91
This pond	49.6	100.0	1.3	98.91

STORM 100-Yr

Area or Reach Identifier	Drainage Area (acres)	% of site	Runoff Amount, Qd (in)	Peak Flow Rate (cfs)
Entire Site	49.60	100		272.90
This pond	49.6	100.0	3.6	272.90

Storm Event	Rainfall P, inches	Initial Abstraction Ia = 0.2S, inches	Potential Retention S=(1000/CN)-10 inches	CN	Runoff Amount, Inches Qd = (P-Ia)^2 / ((P-Ia)+S)
1-yr	1.87	0.56	2.82	78	0.41
10-yr	3.25	0.56	2.82	78	1.31
100-yr	6.00	0.56	2.82	78	3.58

Rainfall Distribution = TYPE II

Time of Concentration, $Tc_{(Hours)}$ = 0.10

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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Storage Volume Estimation

Taken from NYS Stormwater Management Design Manual (NYS-SMDM) Appendix B

Area Final Phase = 49.6 Acres

	Channel Protection Cp_v 1 YR / 24-Hour Extended Detention	
Ia / P (From Post Development Summary Sheet, 1yr storm)	0.30	
Post Development Time of Concentration,Tc (From TR-55 Calcs)	0.10	hours
Unit Peak Discharge, qu (from TR-55 Exhibit 4-II, attached)	880	cfs/sqmi/inch
Ratio of Outflow to Inflow, qo/qi (NYS-SMDM Figure B.1, attached)	0.018	
Ratio of Storage Volume to Runoff Volume, vs/vr		
vs/vr = 0.682 - 1.43(qo/qi) + 1.64 (qo/qi)^2 - 0.804 (qo/qi)^3 =	0.66	
Pos-Dev Runoff Amount, Q_d (From Post Development Summary Sheet)	0.4	inches
Req'd Storage Volume(acre-feet), $vs = ((v_s/v_r)\ (Q_{d,\ inches})\ (A,\ acres)) / 12$ inches/foot	1.1	acre-feet
Req'd Storage Volume(cubic feet), vs = vs (acre-feet) x 43560 sq.ft./acre	48,872	cubic feet
Cp_v-ED Average release rate over 24 hours = vs (cubic feet) / 86400 seconds/24 hrs	0.57	cfs

	Overbank Flood Q_p 10YR	Extreme Flood Q_f 100 YR	
Pre-Dev Peak Flow Q_O (From TR-55 Output)	38.62	130.82	cfs
Pos-Dev Peak Flow Q_I (From TR-55 Output)	98.91	272.90	cfs
Pos-Dev Runoff Amount, Q_d (From Post Development Summary Sheet)	1.31	3.58	inches
Ratio of Pre-Dev Peak Flow to Pos-Dev Peak Flow, Q_O/Q_I	0.39	0.48	
Ratio of Storage Volume to Runoff Volume, V_S/V_R (From TR-55 Fig 6-1, Type II, attached)	0.32	0.29	
Req'd Storage Volume(acre-feet), $Vs = [((V_s/V_r)\ (Q_{d,\ inches})\ (A,\ acres)) / 12$ in./ft.]	1.73	4.29	acre-feet
Req'd Storage Volume(cubic feet), Vs = Vs (acre-feet) x 43560 sq.ft./acre	75,483	186,869	cubic feet

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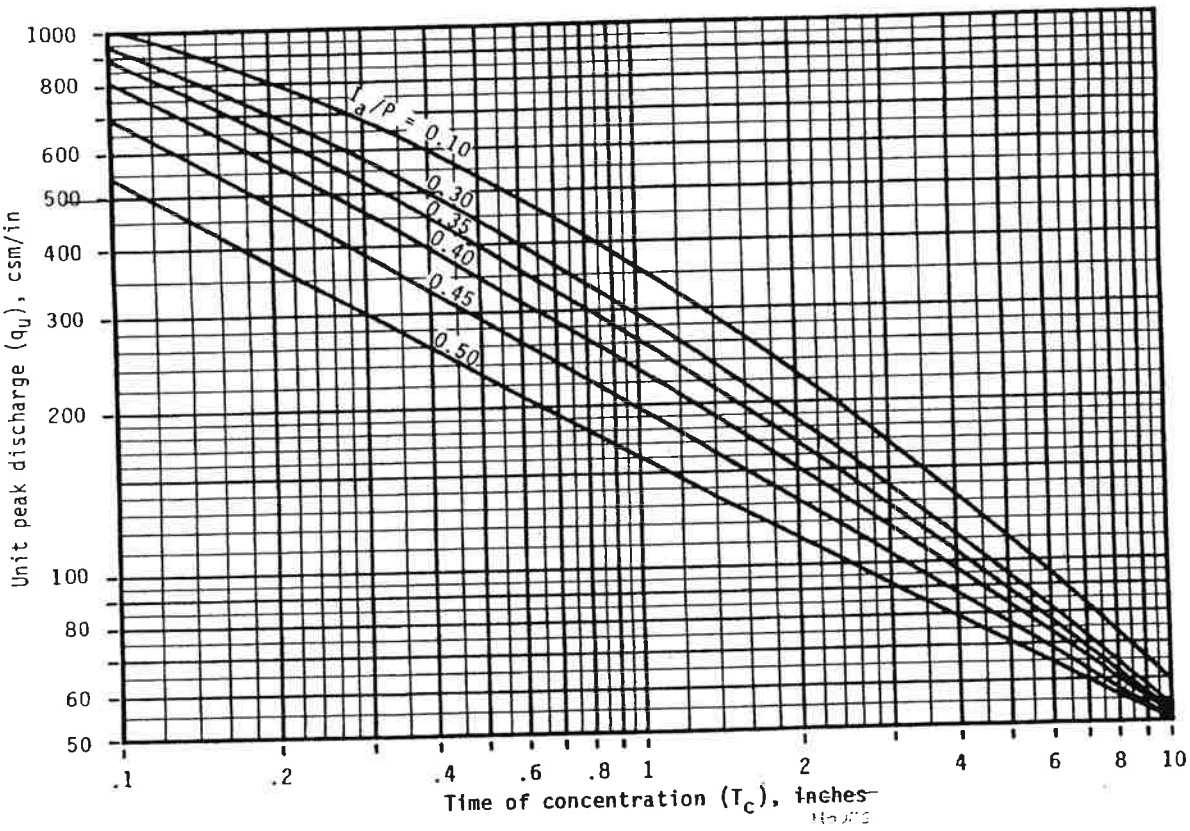
Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Storage Volume Estimation - Continued

4-6

Exhibit 4-II: Unit peak discharge (q_u) for SCS type II rainfall distribution



(210-VI-TR-55, Second Ed., June 1986)

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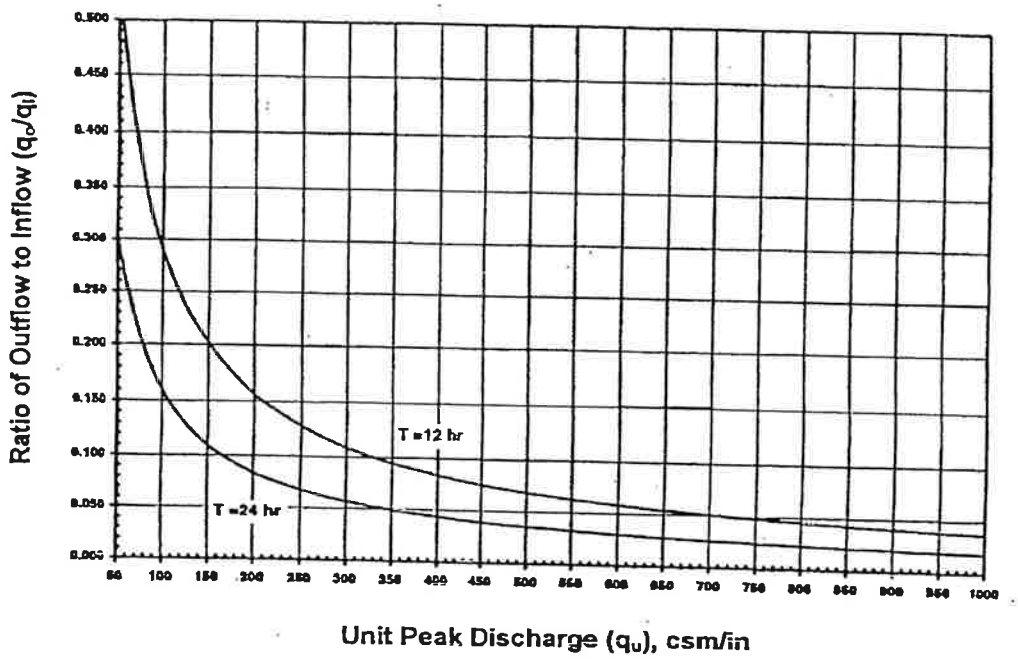
Phone: 716-633-2601, Fax: 716-633-2704

Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Figure B.1 Detention Time vs. Discharge Ratios (Source: MDE, 2000)



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Phone: 716-633-2601, Fax: 716-633-2704

Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	7/18/2023
Location:	Pond A	Checked:	JCM	Date:	

Storage Volume Estimation - Continued

Input requirements and procedures

Use figure 6-1 to estimate storage volume (V_s) required or peak outflow discharge (q_o). The most frequent application is to estimate V_s, for which the required inputs are runoff volume (V_r), q_o, and peak inflow discharge (q_i). To estimate q_o, the required inputs are V_r, V_s, and q_i.

Estimating V_s

Use worksheet 6a to estimate V_s, storage volume required, by the following procedure.

1. Determine q_o. Many factors may dictate the selection of peak outflow discharge. The most common is to limit downstream discharges to a desired level, such as predevelopment discharge. Another factor may be that the outflow device has already been selected.
2. Estimate q_i by procedures in chapters 4 or 5. Do not use peak discharges developed by any other procedure. When using the Tabular Hydrograph method to estimate q_i for a subarea, only use

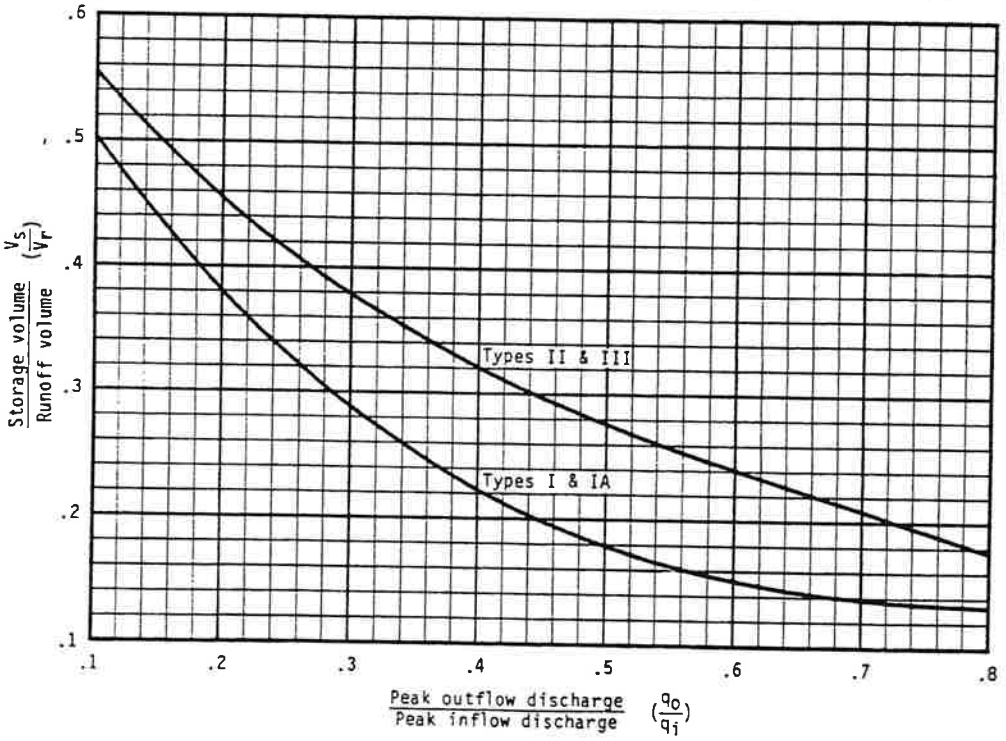

Figure 6-1.—Approximate detention basin routing for rainfall types I, IA, II, and III.

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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	07/18/23
Location:	Pond A	Checked:	JCM	Date:	

Water Quality and Pond Volumes

Water Quality Volume, WQv

From NYS Stormwater Management Design Manual (NYS-SMDM), Section 4

WQv = (P*Rv*A) / 12

P=90% Rainfall Event No. for WNY	1.00			
I = Impervious cover	25.0	Percent		
Rv = 0.05 + 0.009 * I	0.28			
A = Site area	49.60	acres		
Total WQv Required =			**1.14** acre-feet =	**49,513** cf
Total Minimum Req'd Permanent Pool Volume, PPV = Total WQv x 50%			0.57 acre-feet =	24,757 cf
Req'd Forebay (Pretreatment) Volume = Total WQv x 10% =			0.114 acre-feet =	4,951 cf
Req'd Permanent Pool Volume in the "Wet Pool" = Total PPV - Req'd Forebay Volume =			0.455 acre-feet =	19,805 cf

Is "Wet Pool" Volume Provided = or > the Total WQv Required? Yes, 100% of WQv Provided In Wet Pool, Therefore, WQv-ED Not Req'd

Req'd WQv-ED Volume (i.e, volume above Normal Water Level) =Total WQv x 50% = _____ acre-feet = _____ cf

WQv-ED Average release rate over 24 hours = WQv-ED (cubic feet) / 86400 secs/24 hrs = _____ c.f.s.

Pond Levels and Volumes

Pond A	HWE, ft	HWE Area, sf	LWE, ft	LW Area, sf	water depth, ft	Avg. Area, sf	Vol. Provided, cf	Vol. Req'd, cf	Vol.Prv acft	Difference
"Wet Pool"	836.00	26,383	830.00	11477	6.00	18,930	113,580	19,805	2.61	93,775
WQ_vED								None Req'd		
Cp_v	837.84	32,998	836.00	26383	1.84	29,691	54,631	48,872	1.25	5,759
Q_p	838.50	35,371	836.00	26383	2.50	30,877	77,193	75,483		1,710
Q_f	841.30	45,438	836.00	26383	5.30	35,910	190,325	186,869		3,456
Set Pond TOB @ EL.		842.3								
Area @ TOB		49033 sf								

WQv Storm Event Peak Flow Calculation (WQv Qp)

For Sizing Proprietary Pretreatment Structures If Used In Lieu Of Pretreatment Forebay

From NYS Stormwater Management Design Manual (NYS-SMDM), Appendix B.2

Post Development Time of Concentration,Tc (From TR-55 Calcs)	0.10	hr
Initial Abstraction, Ia (From Post Development Summary Sheet)	0.56	
Ia / P (Where P=90% Rainfall Event No. from WQv calcs above)	0.56	
Unit Peak Discharge, qu (from TR-55 Exhibit 4-II, attached)	500	cfs/sqmi/inch
WQv in watershed inches = [WQv (acre-feet) / Area (acres)] x 12 inches/foot	0.28	inches
A = area in square miles	0.0775	sq. miles
WQv Qp (cfs) = qu (cfs/sq.miles/inch) x A (sq.miles) x WQv (inches)		
Wqv Peak Discharge Qp =	10.7	cfs
Required pretreatment = 10% of total Wqv	1.07	cfs

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Project:	Travel Plaza,Allegany Road, Pembroke.	By:	ARH	Date:	07/18/23
Location:	Pond A	Checked:	JCM	Date:	

Outlet Control Structure Design

	Water Elevations	Allowable Discharge Rates, Qo			
Normal Water Level	836.00				
Water Quality Volume Extended Detention, WQv-ED			cfs	for 24 hour release	<-- Not Req'd
Stream Channel Protection "Cpv" 1 year storm	837.84	0.57	cfs	for 24 hour release	
Overbank Flood Control Criteria "Qp" 10 year storm	838.50	38.62	cfs		
Extreme Flood Control Criteria "Qf" 100 year storm	841.30	130.82	cfs		
Top of Bank / emergency spillway elevation	842.30				

Heads, $h_{(feet)}$, for Calculating Flows Through Various Orifices

When Water Elev. Is @	Primary Orifice, h =	Secondary Orifice, h =
WQv-ED		
Cpv	1.72	
Qp	2.38	
Qf	6.17	

No. of Outlet Control Orifices Provided =	1	
Primary Drawdown Orifice For WQv and/or Cpv	Secondary Drawdown Orifice For Cpv (as needed)	
0.25	0.25	ft
0.05	0.05	sq ft
0.61	0.61	
32.20	32.20	ft/sec^2

Orifice diameter (Note: Minimum per NYS-SMDM = 0.25')
Area of pipe or slot = A
Orifice coefficient = C
Acceleration due to gravity = g

Torricelli Equation - Orifice Calculations

When Water Elevations are at the following stages --->	Orifice Discharge Rates, Q=CA(2gh)^.5				
	WQv	Cp_v	Qp	Q_f	
Actual Discharge Rate Through Primary Orifice For WQv and/or Cpv Drawdown @ Various Heads =		0.31	0.37	0.60	cfs
Actual Discharge Rate Through Secondary Orifice For Cpv Drawdown (as needed) @ Various Heads =					cfs
Actual Cumulative Discharge Rates, Q =		0.31	0.37	0.60	cfs

Weir Calculations (TR-55 Ch. 6)

Qp Discharge Qo=Qp-(Wqv +Cpv)
Lw=Qo/3.2*Hw$^{1.5}$=

Qf Discharge Qo=Qf-(Wqv +Cpv)
Lw=Qo/2.67*Hw$^{1.5}$=

Hw, ft	Qo, cfs	Lw, ft	Total Actual Discharge Rates	
0.66	13.00	-----	Qp, cfs =	13.37
-----	-----	7.6		
3.46	130.22	-----	Qf, cfs =	130.82
-----	-----	7.6		

New Qp based on Weir Lw 0.04 Elev 837.88

Outlet Structure

Primary Orifice For WQv and/or Cpv Outlet Control	0.25	ft	=	diameter pipe at inv. elevation	836.00 ft
Secondary Orifice For Cpv Outlet Control	Not Req'd	ft	=	diameter pipe at inv. elevation	Not Req'd ft
Overbank Flood Qp Outlet Control Weir	7.6	ft	=	Total Weir Opening at crest elevation	837.84 ft
Extreme Flood Qf Outlet Control Weir	7.6	ft	=	Total Weir Opening at Elevation	838.50 ft

Outlet Pipe Sizing

Diameter in Inches	Area, A Sq ft	High Water Elev.	CL Outlet Elevation	Head in feet	Coeffic. C	Capacity, cfs Q =C x A x (2gh^0.5)	No. of Outlet Pipes	Total Capacity, cfs	Actual Qf Discharge, cfs
24	3.14	842.30	837.00	5.30	0.60	34.82	4	139.30	130.82

APPENDIX E

Green Infrastructure Planning and Design

STORMWATER POLLUTION PREVENTION PLAN

GREEN INFRASTRUCTURE PLANNING AND DESIGN

The New York State Stormwater Management Design Manual (January, 2015) outlines a five-step process that planners and designers must use to address runoff reduction from development sites. This process involves consideration of stormwater management through site planning and consideration of green infrastructure techniques, as well as standard stormwater management practices in an effort to achieve reduction in runoff volumes from the developed site and improve the quality of stormwater discharges from the project site. The five steps include:

1. Site Planning to preserve natural features and reduce impervious cover,
2. Calculation of the Water Quality Volume (WQv) for the site,
3. Incorporation of Green Infrastructure techniques and standard SMP's with Runoff Reduction Volume (RRv) capacity,
4. Use of Standard SMP's, where applicable, to treat the portion of water quality volume not addressed by Step 3 (Green Infrastructure techniques and standard SMP's with Runoff Reduction Volume (RRv) capacity); and
5. Design of volume and peak rate control practices where required.

The following sections discuss how this five-step process was used for this project.

Step 1: Site Planning

A. Conserve Natural Areas

1. Preservation of Undisturbed Areas

   A vast amount of the land on site is either wetland or wetland buffer. These areas have been deliberately avoided and will remain as natural areas.

2. Preservation of Buffers

   The majority of the wetlands will be avoided which will provide a large buffer.

3. Reduction of Clearing and Grading

   The project has been designed to limit clearing and grading to the minimum amount needed for roadways, buildings, utilities and stormwater management facilities.

4. Locating Development in Less Sensitive Areas

   The parcel contains wetlands. This more sensitive area will be left mostly undeveloped.

5. Open Space Design

   This is a commercial site and not a candidate for an open space design.

6. Soil Restoration

   Restoration of soils for proposed grassed areas, will be as required by the NYS Stormwater Management Design Manual.

B. Reduce Impervious Cover

1. Roadway Reduction

   The roadways have been designed to meet the minimum amount needed for the proposed development and fire codes.

2. Sidewalk Reduction

   This project has no proposed sidewalks.

3. Driveway Reduction

   The driveways are designed to ensure the driveways are as narrow as possible.

4. Cul-de-sac Reduction

   The site has no culs-de-sac.

5. Building Footprint Reduction

   The footprints have designed to the minimum size needed for the intended use.

6. Parking Reduction

   Parking has been designed to the minimum needed to serve the buildings.

Step 2: Determine Water Quality Volume (WQv)

The water quality volume of the site has been calculated by the methods specified in the manual: The calculations are provided on the attached spreadsheet.

Step 3: Runoff Reduction by Applying Green Infrastructure Techniques and Standard SMP's with Runoff Reduction Volume (RRv) capacity

1. Conservation of Natural Areas

   The west, north and southern portions parcel contains wetland. The majority of this area has been deliberately avoided and will remain as natural areas.

2. Sheet flow to Riparian Buffers or Filter Strips

   A filter strip has been designed to sheet flow into the bioretention area.

3. Vegetated Open Swales

   The site does not lend itself to open swales.

4. Tree Planting / Tree Box

   The trees will remain within the majority of the wetland and buffer areas and will be preserved.

5. Disconnection of Rooftop Runoff

   This is a commercial site. The rainwater from the rooftops will be directed to a bio retention area and then a wet detention area with an outlet control structure.

6. Stream Daylighting

   Not Applicable to this project, as there are no piped streams running through the site.

7. Rain Garden

   The project is commercial in nature. The use of rain gardens would not be practical.

8. Green Roof

   This project consists of commercial structures with traditional roof styling and are not conducive to the use of green roofs.

9. Stormwater Planters

   The intended use of this project does not allow for stormwater planters.

10. Rain Tanks / Cisterns

    The project is commercial in nature. The use of rain tanks would not be practical.

11. Porous Pavement

    Due to the severe weather, frost heave and the need for snow plowing in Western New York, porous pavement is not practical.

12. Standard SMP's with RRv Capacity

    Infiltration Practice, Bioretention Practice, Dry Swale (Open Channel Practice)

    This site uses bioretention areas to provide the needed Green Infrastructure.

Step 4: Apply Standard SMP's To Address Remaining WQv and
Step 5: Apply Volume and Peak Rate Control Practices

The Standard SMP's from the NYS Stormwater Management Design Manual include: Stormwater Ponds, Stormwater Wetlands, Filters, Infiltration, and Open Channels.

For this project, a wet detention pond was designed to address the remaining WQv for the site, as well as provide volume and peak rate controls. A complete set of Stormwater Calculations have been prepared. Bioretention areas will provide pretreatment and filtration of stormwater prior to discharging the water to the wet pond. Stormwater will be discharged from the wet pond through an outlet control structure.

The pond will receive and detain flows until the storm subsides and allows the pond to drain through the outlet control structure. The pond has been designed, in accordance with the New York State Stormwater Management Design Manual, to allow for sufficient storage to attenuate and release stormwater from the developed site at discharge rates not exceeding the pre-developed rates for the following conditions:

- Channel Protection Volume Requirements: Attenuate 1-year post development peak discharge to 1-year pre-development peak discharge.
- Overbank Flood Requirements: Attenuate 10-year post development peak discharge to 10-year pre-development peak discharge.
- Extreme Flood Requirements: Attenuate 100-year post development peak discharge to 100-year pre-development peak discharge.

Summary:
The stormwater management system for this project has been designed to incorporate Green Infrastructure Techniques through planning measures as discussed above.
The RRv achieved by these practices meets the minimum RRv required for the site. Supporting calculations are given on the attached spreadsheets.

The remaining WQv will be treated by an on site stormwater detention pond with outlet control structures. Therefore the site complies with the requirements set forth in the New York State Department of Environmental Conservations Stormwater Design Manual.

Version 1.8

Last Updated: 11/09/2015

Total Water Quality Volume Calculation

WQv(acre-feet) = [(P)(Rv)(A)] /12

Is this project subject to Chapter 10 of the NYS Design Manual (i.e. WQv is equal to post-development 1 year runoff volume)?.....		
Design Point:	outlet	
P=	1.00	*inch*

Breakdown of Subcatchments

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Description
1	49.60	12.20	25%	0.27	48,860	Bioretention
2						Bioretention
3						Bioretention
4						
5						
6						
7						
8						
9						
10						
Subtotal (1-30)	49.60	12.20	25%	0.27	**48,860**	**Subtotal 1**
Total	49.60	12.20	25%	0.27	**48,860**	**Initial WQv**

Identify Runoff Reduction Techniques By Area

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

Recalculate WQv after application of Area Reduction Techniques

	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Runoff Coefficient Rv	WQv *(ft^3)*
"<<Initial WQv"	49.60	12.20	25%	0.27	48,860
Subtract Area	0.00	0.00			
WQv adjusted after Area Reductions	**49.60**	**12.20**	25%	0.27	48,860
Disconnection of Rooftops		0.00			
Adjusted WQv after Area Reduction and Rooftop Disconnect	49.60	12.20	25%	0.27	**48,860**

Bioretention Worksheet

(For use on HSG C or D Soils with underdrains)

Af=WQv*(df)/[k*(hf+df)(tf)]

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft3)
df	Depth of the Soil Medium (feet)
hf	Average height of water above the planter bed
tf	Volume Through the Filter Media (days)

k — The hydraulic conductivity [ft/day], can be varied depending on the properties of the soil media. Some reported conductivity values are: ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil*** (0.5 ft/day (Claytor &

Design Point:	**outlet**						
Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area (Acres)**	**Impervious Area (Acres)**	**Percent Impervious %**	**Rv**	**WQv (ft^3)**	**Precipitation (in)**	**Description**
1	49.60	12.20	0.25	0.27	48859.80	1.00	Bioretention
Enter Impervious Area Reduced by Disconnection of Rooftops		**0.00**	25%	0.27	48,860	<<WQv after adjusting for Disconnected Rooftops	
Enter the portion of the WQv that is not reduced for all practices routed to this practice.					**0**	ft^3	

Soil Information			
Soil Group	**D**		
Soil Infiltration Rate	**2.00**	*in/hour*	*Design as an infiltration bioretention practice*
Using Underdrains?	**Yes**	*Okay*	

Calculate the Minimum Filter Area				
		Value	**Units**	**Notes**
WQv		48,860	ft^3	
Enter Depth of Soil Media	*df*	**2.5**	*ft*	*2.5-4 ft*
Enter Hydraulic Conductivity	*k*	**0.5**	*ft/day*	
Enter Average Height of Ponding	*hf*	**0.5**	*ft*	*6 inches max.*
Enter Filter Time	*tf*	**2.5**	*days*	
Required Filter Area	***Af***	**32573**	ft^2	

Determine Actual Bio-Retention Area			
Filter Width	**20**	*ft*	
Filter Length	**1280**	*ft*	
Filter Area	25600	ft^2	
Actual Volume Provided	38400	ft^3	

Determine Runoff Reduction				
Is the Bioretention contributing flow to another practice?		**Yes**	Select Practice	**Other/Standard SMP**
RRv	15,360			
RRv applied	**15,360**	ft^3	***This is 40% of the storage provided or WQv whichever is less.***	
Volume Treated	0	ft^3	*This is the portion of the WQv that is not reduced in the practice.*	
Volume Directed	33,500	ft^3	This volume is directed another practice	

APPENDIX F

Site Soils Map Data

STORMWATER POLLUTION PREVENTION PLAN

Map Scale: 1:3,580 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	HSG	Acres in AOI	Percent of AOI
CaA N	Canandaigua silt loam, 0 to 2 percent slopes	D	5.3	10.9%
CbA N	Canandiagua mucky silt loam, 0 to 2 percent slopes	D	0.5	1.1%
GnA P	Galen very fine sandy loam, 0 to 2 percent slopes	B	3.7	7.8%
GnB P	Galen very fine sandy loam, 2 to 6 percent slopes	B	2.5	5.3%
IoA N	Ilion silt loam, 0 to 3 percent slopes	D	1.8	3.8%
Ld N	Lamson very fine sandy loam	D	4.3	8.9%
OvB P	Ovid silt loam, 3 to 8 percent slopes	C	14.2	29.5%
RsA P	Romulus silt loam, 0 to 3 percent slopes	D	14.1	29.3%
Wy N	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	D	1.6	3.3%
Totals for Area of Interest			**48.2**	**100.0%**

B 13.1 %
C 29.5 %
D 57.4 %

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: Genesee County, New York
Survey Area Data: Version 23, Sep 10, 2022

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

Date(s) aerial images were photographed: Jun 15, 2020—Jun 17, 2020

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

Genesee County, New York

RsA—Romulus silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: p8xn
Elevation: 570 to 920 feet
Mean annual precipitation: 31 to 38 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 140 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Romulus

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy till derived from reddish calcareous shale, limestone, and sandstone, in places intermixed with glaciolacustrine deposits

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 26 inches: silty clay loam
H3 - 26 to 72 inches: gravelly silt 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 moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D

Ecological site: F101XY014NY - Wet Till Depression
Hydric soil rating: Yes

Minor Components

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

Lyons
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

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

Madalin
Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

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

Data Source Information

Soil Survey Area: Genesee County, New York
Survey Area Data: Version 23, Sep 10, 2022

APPENDIX G

Wetland Map

STORMWATER POLLUTION PREVENTION PLAN

Figure 6: Wetland Delineation Map
0 Alleghany Road
Town of Pembroke Genesee County, New York