STORMWATER POLLUTION CONTROL PLAN (SWPCP)

CT SOLAR PDF LLC

TOWN OF NORTH HAVEN
NEW HAVEN COUNTY, CONNECTICUT

IN COMPLIANCE WITH THE

CONNECTICUT GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES (DEEP-WPED-GP-015)

Prepared for:

Nokomis Energy
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Prepared by:

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June 2023

STATE OF CONNECTICUT
CHAD E. ALBERTH
36403
LICENSED PROFESSIONAL ENGINEER
06/12/23

This Stormwater Pollution Control Plan (SWPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges from Construction Activities and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (2002 E&S Guidelines).

Table of Contents

List of Applicable Figures / Plans

Development & Contents of Plan

The Project Plan consists of site plan drawings and a narrative. The Plan was prepared in accordance with sound engineering practices, and is consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (2002 E&S Guidelines), the 2004 Connecticut Stormwater Quality Manual (2004 SWQ Manual), and any applicable requirements of this general permit.

Site Description

Site Description

The property contains four existing parcels. The Nokomis Energy is proposing a solar facility is to be located within two existing parcels. The solar facility will be located at 195 McDermott Road in the Town of North Haven, New Haven County, Connecticut. The proposed solar facility site area is approximately 3.88 acres and contains rooftop, carport canopy, and ground mounted solar facilities. This report details the analysis for the ground mounted solar panels since the rooftop and carport canopy solar areas will be in existing impervious areas. Ground mounted panels will be spaced 30.00 feet apart center to center within this solar array portion. The total area of proposed disturbance is approximately 1.4 acres and 245 square feet of new impervious area in the form of a concrete equipment pad that will be added to the site.

The Project proposes one 1.45-MW ac Solar Generating Facility (SGF) that includes construction of rooftop, carport canopy, and ground mounted solar array fields, solar equipment pad installation, and solar panel related electrical wire installation. Overall, the SGF development is low impact, environmentally sensitive, and effective in attenuating overland flow, while maintaining/improving the existing conditions.

The general scope of work for the Project which may result in soil disturbance includes, but is not limited to, site clearing, grading, utility installation, equipment pad installation, solar panel installation, electrical wire installation, and stormwater treatment areas.

There are no discharges to impaired waters or coastal waters in the Project area. The Project is not located within an Aquifer Protection Area (APA). The Project's outfall does not discharge into a river within the National Wild and Scenic Rivers System for Connecticut. There are no known endangered/threatened species present within the Project area.

The Project Site is located at the Medtronic facility containing buildings, parking lots, and grassland areas. The Project Site topography is moderately flat sloping from east to northwest.

Estimated Disturbed Area

The total area for this Project site is approximately 3.88 acres on two parcels. Of this area 1.4 acres will be disturbed by construction activities. Construction is less than 5 acres, therefore, construction phasing is not needed. The Project will require a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from the CTDEEP.

Estimated Runoff Curve Numbers and Runoff Rate

The weighted Curve Number (CN) for both pre and post development is 80.

The disturbed Project area is located within one distinct drainage area. The following is a summary

of the weighted CN and the drainage area breakdown in pre- and post-development conditions.

Weighted Curve Number

PRE-DEVELOPMENT CONDITIONS			POST-DEVELOPMENT CONDITIONS		
Cover Description	CN	Area (sf.)	Cover Description	CN	Area (sf.)
75% Grass Cover Good (HSG D)	80	48,079	75% Grass Cover Good (HSG D)	80	47,834
			Equipment Pad (HSG D)	98	245
Total:	48,079 sf.		Total:	48,079 sf.	

Drainage Area Cover

PRE-DEVELOPMENT CONDITIONS			POST-DEVELOPMENT CONDITIONS		
Cover Description	CN	Area (sf.)	Cover Description	CN	Area (sf.)
75% Grass Cover Good (HSG D)	80	48,079	75% Grass Cover Good (HSG D)	80	47,834
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Total:	48,079 sf.		Total:	48,079 sf.	

Receiving Waters

The name of the receiving water body for the Project is Little River, which drains to Quinnipiac River and ultimately to the New Haven Harbor.

Extent of Wetlands on Site

There are no wetlands on the Project Site.

Construction Sequencing

The Contractor will be given approximately one year for the construction of the Project, which shall be revised as necessary to keep the Plan current.

The suggested sequence of construction is as follows:

1. Establish tree removal and disturbance workspace limits; identify and mark sensitive receptors including natural resources and down gradient drainage infrastructure.

2. Installation of all erosion and sediment control measures and associated work shall be performed in accordance with the 2002 Connecticut Guidelines For Soil Erosion and Sediment Control.

3. Prior to usage, construct and stabilize the construction entrance in the locations indicated on the erosion control plan sheet. Maintain the stabilized construction entrance until all disturbed areas are stabilized.

4. Prior to earth disturbance activity, properly install and maintain perimeter sediment barriers such as silt sock, silt fencing and/or other approved erosion control barriers as shown on the drawings.

5. Clear timber, brush, and complete tree removal; grubbing shall not be completed until just prior to preliminary grading in a future phase.

6. Complete access road construction, equipment and solar array installation per the provided plan sets.

7. Stabilize any necessary equipment storage and laydown areas with matting, crushed stone, or gravel subbase as necessary to minimize rutting and avoid ponding of stormwater.

8. Within 7 days of the cessation of earth disturbance activities in an area that will not be worked for more than 7 days, stabilize any exposed soil with mulch, or other non-erodible cover. Stabilize areas within 50 feet of a wetland or waterbody within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first.

9. Winter construction is construction activity performed during the period from November 1 through April 15. if disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions. for winter stabilization, hay mulch is applied at twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. mulch may not be spread on top of snow. All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an

appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department. Mulch netting must be used to anchor mulch on all slopes greater than 8% unless erosion control blankets or erosion control mix is being used on these slopes.

10. Inspect and repair erosion control measures daily in areas of active construction; otherwise weekly and before and after a rainfall event of 0.5-inches or greater within a 24-hour period and prior to completing stabilization measures. remove accumulated sediment when it reaches 1/3 of the height of the barrier.

11. Repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

12. Keep a log (report) summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, bmp needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

13. The log must be made accessible to department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

14. Monitor public roads for signs of tracking or spilling of spoil material and clean-up as necessary.

15. Maintain all temporary erosion controls and sediment barriers until vegetation has been established over 90% of the area to be revegetated. Reseed sparsely vegetated areas as necessary.

16. Remove and properly dispose of all temporary erosion and sedimentation control measures within 30 days after all future phases and when the site is permanently stabilized.

17. Contractor will be responsible for following procedures found in the 2002 Connecticut Guidelines For Soil Erosion And Sediment Control.

Control Measures

The Project will use silt fence, concrete washout and soil stockpile area for erosion control measures within the ground mounted solar facility area. Erosion control measures are shown on the site plan.

Impaired Waters

There are no impaired waters on or near the Project area per the CT305b CT Geodata Portal.

Erosion and Sedimentation Controls

The following timelines will be followed for the proposed construction activities:

- The Contractor shall stabilize disturbed areas with temporary or permanent measures as quickly as possible after the land is disturbed.

- Areas that remain disturbed but inactive for at least 30 days shall receive temporary seeding or soil protection within seven (7) days.

- Areas that will be disturbed past the planting season will be covered with a long-term, non-vegetative stabilization method that will provide protection through the winter.

- If construction activities are completed to final grade, permanent seeding shall take place within seven (7) days.

The Project will require a Preconstruction Meeting with the Contractor. The Contractor is required to review and understand the Contract Plans and Specifications. In the review of the E&S plan at all disturbed locations for compliance with the Stormwater Permit requirements for a double row of sediment control barriers.

Double Row of Erosion and Sediment Control Barriers

- A double row of sediment control barrier shall be utilized between any disturbed area and downgradient wetland or watercourse within 50 feet, unless there would be an adverse impact to adjacent wetlands/watercourses due to installation of a double row (i.e., would result in larger wetland/watercourse impact.)
- Additional erosion control barriers (double row of SCS) may also be required within the Project area. Factors to be reviewed by the Engineer include but are not limited to: the contributing disturbed area, drainage area, slope, length of slope, and flow conditions to maintain sheet flow. If determined necessary, the Engineer will direct the Contractor to install and maintain additional rows of erosion control barrier (or equivalent).

Soil Stabilization and Protection

Temporary and permanent soil stabilization will take place during the Project construction. Soil stockpile will be located on Site in the ground mounted solar array area. Vegetation shall be preserved to the maximum extent possible. Any disturbed portions of the Site shall be minimized throughout the duration of the construction activities.

Temporary Stabilization Practices

Temporary or permanent vegetation or other ground cover shall be maintained at all times in all areas of the site, except those undergoing active disturbance. The following items shall be used but are not limited to:

- Sedimentation Control System (SCS): SCS shall be placed at the toe of the slope or as directed by the Qualified Inspector.

- Anti-Tracking Pads: Construction entrances (gravel anti-tracking pads) shall be constructed at truck access/exit points to off-road route. Access road(s) should grade away from the main roadway or waterbody.

- Dust Control: Routine sweeping and application of dust suppression agents, including but not limited to, water and calcium chloride, over exposed subbase shall be completed for dust control. Additional measures may be necessary to minimize dust within the Project limits and within staging and stockpile areas.

- Temporary Seeding: Areas that will remain disturbed but inactive for at least 14 calendar days shall receive temporary seeding or soil protection within 7 days**.**

Stabilization practices shall be implemented after completion, as final grades are reached, within seven (7) days.

Temporary seeding shall be spread over any disturbed areas which will remain inactive for at least 30 days. Areas to remain disturbed through winter shall be protected with non-vegetative stabilization measures. The Contractor must provide an Erosion and Sedimentation Control plan for each winter season during construction operations.

The Contractor may elect to utilize other controls in conformance with the 2002 E&S Guidelines, as approved by the Qualified Inspector. The Contractor will be required to provide the necessary details for any erosion controls not specifically called for on the Project plans.

During construction, all areas disturbed by the construction activity that have not been stabilized, structural control measures, and locations where vehicles enter or exit the site shall be inspected at least once a week and within 24 hours of the end of a storm that generates a discharge. For storms that end on a weekend, holiday, or other time in which normal working hours will not commence within 24 hours, an inspection is required within 24 hours following any storm in which 0.5 inches or greater of rain occurs. For lesser storms, inspection shall occur immediately

upon the start of subsequent normal working hours.

Permanent Stabilization Practices

During construction, the following methods of permanent stabilization shall be installed:

- Topsoiling: In conjunction with permanent seeding, once final grades have been established, topsoil shall be applied to provide a suitable growth medium for vegetation.

- Permanent Seeding: Once soils have been brought to final grade; permanent seeding shall be used to stabilize the soil with a vegetative cover**.** Disturbed areas below the wetland limit shall be seeded with the appropriate seed mix. Once the site has achieved final stabilization for at least one full growing season (April – October) in the year following the end of construction, the Contractor shall have the site inspected by a Qualified Inspector to confirm such stabilization is maintained. The Qualified Inspector shall indicate compliance with this requirement on the Notice of Termination form.

Maintenance

During construction the contractor shall maintain, in good and effective operating conditions, all erosion and sediment control measures, including vegetation, and all other protective measures identified in the Plan.

All construction activities and related activities shall conform to the requirements of the 2002 Connecticut Guidelines For Soil Erosion and Sediment Control. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourses, water body, and conduit carrying stormwater. The Contractor shall limit, in so far as possible, the surface area of earthen materials exposed by construction activity and immediately provide temporary and permanent pollution control to prevent soil erosion and contamination on the site. Water pollution control provisions and Required Best Management Practices shall be administered during construction. Control measures shall be inspected and maintained in accordance with the 2002 E&S Guidelines and as directed by the Qualified Inspector.

Dewatering Wastewaters

Dewatering Guidelines

No dewatering is anticipated for the Project. Should dewatering be necessary, pumps used shall not be allowed to discharge directly into a wetland, watercourse, or stormwater drainage system. Prior to any dewatering, the Contractor must submit to the Engineer a written proposal for specific methods and devices to be used and must obtain the Engineer's written approval of such methods and devices, including, but not limited to, the pumping of water into a temporary sedimentation basin, providing surge protection at the inlet or outlet of pumps, floating the intake of a pump, or any other method for minimizing and retaining the suspended solids. If the Qualified Inspector determines that a pumping operation is causing turbidity problems, the Contractor shall halt said operation until a means of controlling the turbidity is submitted by the Contractor in writing to the Engineer, approved in writing by the Engineer and implemented by the Contractor.

No discharge of dewatering wastewater shall contain or cause a visible oil sheen, floating solids or foaming in the receiving water. If required, all activities are to be performed in compliance with the Department's Standard Specifications.

Post-Construction Stormwater Management

Post-Construction Guidelines

After the Project is complete, the Owner / Owner's Representative will perform the following maintenance and restorative measures:

- Litter/debris and sweepings will be removed from the site regularly.
- Mowing and maintenance of the turf areas and vegetated areas will occur, as needed.
- Identify, inspect, and maintain all stormwater quality BMPs included within the Project.

Post Construction Performance Standards and Control Measure

The existing site has stormwater control BMPs associated with the previously approved and permitted construction. With the solar redevelopment of a portion of the overall property an additional 245 square foot impervious concrete equipment pad will be located within the Project limits. This small additional impervious area will have no effect on the overall Project area runoff. An infiltration trench will capture and treat runoff from the proposed equipment pad. While the infiltration trench is not a rate reduction BMP, the infiltration trench will reduce runoff associated with the small additional impervious area. Stormwater calculations are provided within the Stormwater Management Report that indicate that the Project will generate no additional runoff.

Water Quality Volume

The 245 square foot concrete equipment pad will require 13 cubic feet of water quality volume storage (WQV). The infiltration trench has been designed to have a storage capacity of 22 cubic feet which exceeds the WQV requirement

Suspended Solids and Floatable Removal

This Project does not require the treatment of suspended solids or removal of floatables.

Velocity Dissipation

All stormwater runoff will remain in the current pre-development condition leaving the Project area.

Other Controls (Non-Structural)

Waste Disposal

Construction site waste shall be properly managed and disposed of during the entire construction period.

The following is applicable:

- A waste collection area will be designated. The selected area will minimize truck travel through the site and will not drain directly to the adjacent wetlands.
- Waste collection shall be scheduled regularly to prevent the containers from overfilling.
- Spills shall be cleaned up immediately.
- Defective containers that may cause leaks or spills will be identified through regular inspection. Any found to be defective will be repaired or replaced immediately.
- Any stockpiling of materials should be confined to the designated area as approved by the Qualified Inspector.

Washout Areas

Washout of applicators, containers, vehicles, and equipment for concrete shall be conducted in a designated washout area. No surface discharge of washout wastewaters from the area will be allowed. All concrete wash water will be directed into a container or pit such that no overflows can occur. Washout shall be conducted in an entirely self-contained system and will be clearly designed and flagged or signed where necessary. The washout area shall be located outside of any buffers and at least 50 feet from any stream, wetland or other sensitive water or natural resources as determined or designated by the Department's Office of Environmental Planning or the Project Qualified Inspector.

Washout Area(s) will be site located by the Contractor, approved by the Qualified Inspector and the SWPCP revised, as appropriate. The "Concrete Washout Area" detail shows the recommended method of construction for the washout area. The designated area shall be designed and maintained such that no overflows can occur during rainfall or after snowmelt.

Anti-tracking Pads and Dust Control

Off –site vehicle tracking of sediments and the generation of dust shall be minimized. Temporary anti-tracking pads from the active work site to the existing pavement will be installed and maintained at the locations shown on the plans.

The Contractor shall:

- Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces.
- Provide periodic top dressing with additional stone or additional length as conditions demand.
- Repair any measures used to trap sediment as needed.
- Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces.
- Ensure roads adjacent to a construction site are left clean at the end of each day.

If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then the contractor shall either:

- Increase the length of the construction entrance,
- Modify the construction access road surface, or
- Install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

For construction activities which cause airborne particulates, wet dust suppression shall be utilized. Construction site dust will be controlled by sprinkling the ground surface with water until it is moist on an as-needed basis. The volume of water sprayed shall be such that it suppresses dust yet also prevents the runoff of water.

Maintaining and Storing Vehicles and Equipment- Storage of Chemicals & Petroleum Products

The Contractor shall take measures to prevent any contamination to wetlands and watercourses while maintaining and storing construction equipment on the site. All chemical and petroleum containers stored on site shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those stored in containers of 100-gallon capacity or more, in which case double-walled tanks will suffice. Accumulation of rainwater within secondary containment must be visually inspected for sheen prior to being discharged. If any sheen is identified; the accumulated water must be removed by the Contractor to an appropriate off-site location.

Inspections

The Qualified Inspector will conduct site inspections once a week or after any rain event of 0.5 or greater. The Qualified Inspector conducting inspections shall fill out a Site Inspection Report for each inspection described below. Each report shall be retained as a part of the SWPCP. The report shall include a statement that, in the judgment of the Qualified Inspector(s) conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the Plan and permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance.

Routine Inspections

The Permittee will maintain a rain gauge on-site to document rainfall amounts. During construction, all areas disturbed by the construction activity that have not been stabilized, all erosion and sediment control measures, structural control measures, soil stockpile areas, washout areas, and locations where vehicles enter or exit the site shall be inspected for evidence of or the potential for pollutant entering the drainage systems and impacts to the receiving waters at least every seven (7) calendar days and within 24 hours of the end of a storm that generates a discharge.

For storms that end on a weekend, holiday, or other time in which normal working hours will not commence within 24 hours, an inspection is required within 24 hours following any storm in which 0.5 inches or greater of rain occurs. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least weekly until final stabilization has been achieved.

The following items shall be inspected as described below:

Item	Procedure
Sedimentation Control System (SCS)	The SCS shall be inspected to ensure that the fence line is intact with no breaks or tears. The fence shall be firmly anchored to the ground. Areas where the fence is excessively sagging or where support posts are broken or uprooted shall be noted. Depth of sediment behind the fence shall be noted if sediment needs to be removed
Concrete Washout Area	Containers or pits shall be inspected at least once a week to ensure structural integrity, adequate holding capacity and will be repaired prior to future use if leaks are present. The

	contractor shall remove hardened concrete waste when it accumulates to a height of ½ of the container or pit or as necessary to avoid overflows. All concrete waste shall be disposed of in a manner consistent with all applicable laws, regulations and guidelines.
Anti-tracking Pad	Locations where vehicles enter or exit the site shall be inspected for evidence of off-site tracking.
Dust Control	Measures shall be taken for the purpose of allaying (diminishing) dust conditions. Measures may include the use of sweeping equipment and/or the application of water or calcium chloride.
General	Construction areas and the perimeter of the site shall be inspected for any evidence of debris that may blow or wash off site or that has blown or washed off site. Construction areas shall be inspected for any spills or unsafe storage of materials that could pollute off site waters.

Post-Construction Inspection

Upon completion of construction activities and stabilization of the site, *the infiltration trench*, shall be cleaned of construction sediment or debris and the site inspected to confirm compliance with all post-construction stormwater management requirements. Sediment shall be properly disposed of in accordance with all applicable laws, regulations and guidelines. Any remaining sediment control system(s) SCS shall be removed prior to finalization and acceptance of the Project.

Final Stabilization Inspection

Once the site has achieved final stabilization, the site shall be inspected to confirm stabilization is maintained, and a Notice of Termination Form shall be submitted.

Keeping Plans Current

Revisions to Stormwater Pollution Control Plans

The contractor shall amend the Plan if the actions required by the Plan fail to prevent pollution or otherwise comply with provisions of the General Permit. The Plan shall also be amended whenever there is a change in contractors or sub-contractors at the site, or a change in design, construction, operation, or maintenance at the site which has not otherwise been addressed in the plan.

If the results of the inspections require modifications to the Stormwater Pollution Control Plan, the plans shall be revised as soon as practicable after the inspection. Such modifications shall provide for a timely implementation of any changes to non-engineered controls on the site within 24 hours and implementation of any changes to the plan within 3 (three) calendar days following the inspection. For Engineered measures, corrective actions shall be implemented on site within 7 (seven) days and incorporated into a revised Plan within 10 (ten) days of the date of inspection.

In no event shall the requirements to keep the Plan current or update a Plan, relieve the permittee and their contactor(s) of the responsibility to properly implement any actions required to protect the waters of the State and to comply with all conditions of the permit.

Contractors

General

This section shall identify all Contractors and Subcontractors who will perform on site actions which may reasonably be expected to cause or have the potential to cause pollution of the waters of the State.

Certification Statement

All contractors and subcontractors must sign the attached statement. All certifications will be included in the Stormwater Pollution Control Plan.

CT Solar PDF LLC
North Haven, CT

"I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as Contractor on the Project, I am covered by this General Permit, and must comply with the terms and conditions of this permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for this Project."

GENERAL CONTRACTOR

Signed:_____ Date:_____

Title:_____

Firm: _____ Telephone: _____

Address: _____

_____

SUBCONTRACTOR

Signed: _____ Date:_____

Title:_____

Firm:_____ Telephone:_____

Address:_____

_____

Summary

This Stormwater Pollution Control Plan (SWPCP) is prepared to comply with the requirements for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. Also, to be considered part of the SWPCP are the proposed construction plans, special provisions, and the 2002 Connecticut Guidelines for Erosion and Sediment Control (2002 E&S Guidelines) and 2004 Stormwater Quality Manual (2004 SWQ Manual).

List of Applicable Figures / Plans:

Appendix A – Figures

- *Location Map*

Appendix B – Plan Sheets

Appendix C – Project / Environmental Information

- *Soil Report*
- *Geotechnical Report*
- *Rainfall Information*

Appendix D – General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Appendix E – General Permit Application Form and Approval

Appendix F - Construction Inspection Reports

- *Blank Construction Inspection Report*
- *Project Construction Inspection Reports*

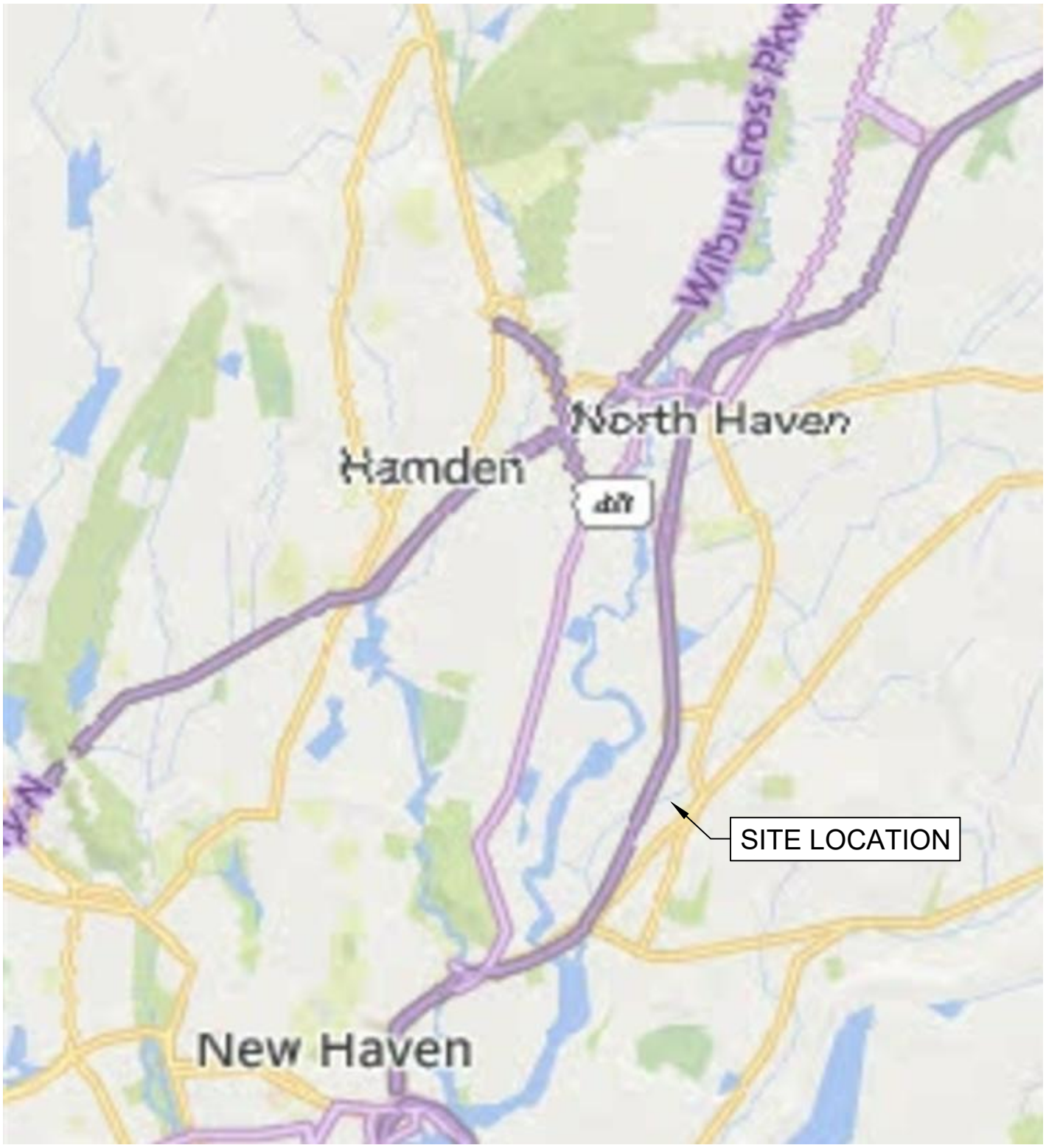
Appendix G – Notice of Termination Form

Appendix H – Operations & Maintenance Manual

Appendix I – Stormwater Management Report (Includes Drainage Calculations)

APPENDIX A – FIGURES

Location Map



Map Data Source: U.S. Geological Survey (USGS; http://www.usgs.gov)

2000 0 2000

SCALE: 1" = 2000'

N W E S

Engineer

VERDANTERRA

305 S PATERSON STREET
MADISON, WI 53703
608.709.0466
WWW.VERDANTERRA.COM

Project Title

CT SOLAR PDF LLC

Drawing Description

LOCATION MAP

USGS Quadrangle:	NORTH HAVEN, CT
Project Number:	07723003
Drawn By:	SML
Checked By:	SML
Scale:	1" = 2000'
Sheet Number:	FIGURE - 1

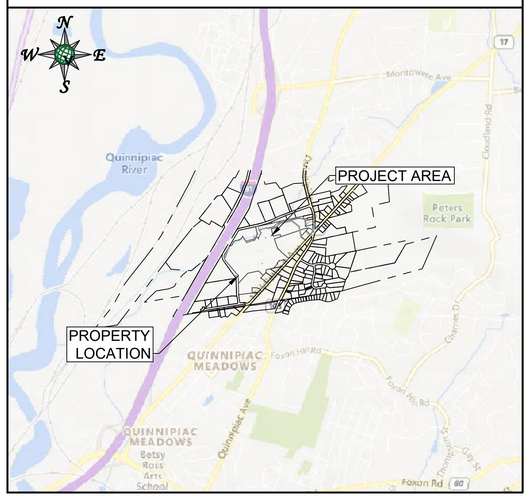
APPENDIX B – PLAN SHEETS

NOKOMIS ENERGY
CT SOLAR PDF, LLC
- SITE CIVIL PERMIT PLANS -

195 MCDERMOTT ROAD
NORTH HAVEN, CT 06473

JUNE 2023

VICINITY MAP



GRAPHIC SCALE

2000' 1000' 0 2000'

1" = 2,000'

OVERALL SITE MAP

GRAPHIC SCALE

500' 250' 0 500'

1" = 500'

TABLE OF DRAWINGS	
DWG NO.	TITLE
C0.00	COVER SHEET
C0.01	NOTES & LEGENDS
C1.00	OVERALL EXISTING CONDTIONS & DEMOLITION PLAN
C1.01	EXISTING CONDITIONS & DEMOLITION PLAN
C1.02	EXISTING CONDITIONS & DEMOLITION PLAN
C3.00	OVERALL GRADING PLAN
C3.01	GRADING PLAN
C3.02	GRADING PLAN
C5.00	DETAILS
C5.01	DETAILS
C6.01	EROSION & SEDIMENT POLLUTION CONTROL PLAN
C6.02	EROSION & SEDIMENT POLLUTION CONTROL PLAN
C6.03	EROSION & SEDIMENT POLLUTION CONTROL NOTES & DETAILS
C6.04	EROSION & SEDIMENT POLLUTION CONTROL DETAILS

PLAN REPRODUCTION WARNING:

THESE PLANS HAVE BEEN CREATED ON ANSI D (22" X 34") SHEETS. FOR REDUCTIONS REFER TO GRAPHIC SCALE.

THESE PLANS ARE INTENDED FOR FULL COLOR PLOTTING. ANY SET THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES.

ISSUED FOR PERMITTING

NOT FOR CONSTRUCTION

811 Know what's below. Call before you dig.

Revision | Date | No.

Seal

Engineer
VERDANTERRA
305 S PATERSON STREET
MADISON, WI 53703
608.709.0466
WWW.VERDANTERRA.COM

Applicant
NOKOMIS ENERGY
2836 Lyndale Ave S.
Suite #132
Minneapolis, MN 55408
612-470-3223

Property Owners:
United States Surgical Corp
15 Hampshire Street
Mansfield, MA 02048

Project Name:
CT SOLAR PDF, LLC

Project Number:
07522001

Scale: AS SHOWN | Drawn By: DK
Date: JUNE 2023 | Checked By: CWC/SML

Drawing Description:
COVER SHEET

Drawing Number:
C0.00

Sheet Number:
01 of 14

SURVEY NOTES:

1. PROPERTY BOUNDARIES AND EXISTING TOPOGRAPHIC DATA WERE TAKEN FROM A SURVEY ENTITLED **"PROPERTY / BOUNDARY SURVEY, LANDS OF UNITED STATES SURGICAL CORPORATION, MAP 3 LOTS 7 & 10, MAP 6 LOTS 26, 27, 28, & 29"** BY **MARTIN SURVEYING ASSOCIATES, LLC.** DATED 04/05/2023.
2. THE SURVEY WAS PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND "THE MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED JUNE 21, 1996; AMENDED OCTOBER 26, 2018.
3. THE TYPE OF SURVEY PERFORMED AND THE MAPPED FEATURES DEPICTED HEREON ARE IN ACCORDANCE WITH THE REQUIREMENTS OF A PERIMETER SURVEY AND IS INTENDED TO DEPICT THE OVERALL PARCEL AND TOPOGRAPHIC FEATURES WITHIN A SCOPE DEFINED BY THE CLIENT.
4. THE PROPERTY / BOUNDARY OPINION / DETERMINATION IS BASED UPON A RESURVEY OF MAP REFERENCE J-399-C.
5. THE HORIZONTAL DATUM FOR THIS PLAN IS REFERENCED TO THE **NAD83 CONNECTICUT** STATE PLANE COORDINATE SYSTEM, NAD83F ZONE, US SURVEY FEET,
6. THE HORIZONTAL BASELINE CONFORMS TO A CLASS A-2 ACCURACY.
7. THE NORTH ARROW AND BEARINGS ARE BASED UPON THE CONNECTICUT STATE COORDINATE SYSTEM N.A.D. 1983 (2011). THE ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) USING GEOID 18. COORDINATES AND ELEVATIONS WERE DETERMNIED FROM RTK GPS OBSERVATIONS MADE ON MARCH 2, 2023, USING THE CT DOT RTK NETWORK KNOWN AS ACORN (CTGU BASE), HAVING THE FOLLOWING VALUES:
   LATITUDE = N41°17'21.74228"
   LONGITUDE = W72°40'04.44433"
   ELLIPSOID HEIGHT = 18.108M
8. THE FEATURES DEPICTED HEREON ARE TEH RESULT OF A FIELD SURVEY CONDUCTED FEBRUARY THROUGH MARCH, 2023.
9. UNDERGROUND UTILITIES, STRUCTURES, AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON ARE BASED UPON OBSERVABLE SURFACE EVIDENCE WHILE CONDUCTING THE FIELD SURVEY. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE WHICH IS UNKNOWN TO MARTIN SURVEYING ASSOCIATES, LLC. ALL CONTRACTORS ARE REQUIRED TO CONTACT ALL-BEFORE-YOU-DIG AT 1-800-922-4455 FOR LOCATION AND OR STAKEOUT OF ANY UTILITY PRIOR TO ANY EXCAVATION.
10. THE TOPOGRAPHIC PORTION OF THIS SURVEY CONFORMS TO THE FOLLOWING STANDARDS.
    THE HORIZONTAL BASELINE CONFORMS TO A CLASS A-2 ACCURACY.
    THE VERTICAL BASELINE CONFORMS TO A CLASS V-2 ACCURACY.
    THE TOPOGRAPHIC FEATURES CONFORM TO A CLASS T-2 ACCURACY.
11. SOIL DATA IS REFERENCED TO THE NRCS SOIL SURVEY.

WETLAND NOTE:

1. THERE ARE NO WETLANDS DELINEATED ON SITE DURING A FIELD STUDY PERFORMED BY **DAVISON ENVIRONMENTAL** IN JANUARY 2023. FLAGS WERE PROVIDED TO LOCATE LITTLE RIVER.

FLOODPLAIN NOTE:

1. THE SUBJECT PROPERTY LIES WITHIN **ZONE X, AREA OF MINIMAL FLOODING** ACCORDING TO THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL NUMBER 09009C0453K, EFFECTIVE DATE OF MAY 16, 2017) PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

GENERAL NOTES:

1. THE PROJECT HORIZONTAL COORDINATE SYSTEM FOR THIS PLAN IS REFERENCED TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM, CT83F ZONE, US SURVEY FEET, NAD83.
2. THE VERTICAL DATUM FOR THIS PLAN IS REFERENCED TO NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88)
3. **TOPOGRAPHIC SURVEY INFORMATION DATA IS FROM LIDAR ELEVATIONS AVAILABLE FROM NATIONAL OCEANIC AND ATMOSPHERIC (NOAH) DATA.**
4. EXISTING UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIGSAFE SHALL BE NOTIFIED A MINIMUM OF 72-HOURS PRIOR TO COMMENCING ANY EXCAVATION.
5. THIS IS A PRELIMINARY DESIGN PLAN. FINAL DESIGN SHALL BE MODIFIED BY CONTRACTOR TO MATCH FINAL ELECTRICAL INTERCONNECTION STUDIES, EQUIPMENT PURCHASED, AND POSSIBLE PERMIT CONSTRAINTS REVEALED DURING PROJECT'S REVIEW.
6. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE PROJECT GEOTECHNICAL REPORT, AND ANY OTHER APPLICABLE TECHNICAL REPORTS. WHERE INDICATED, STATE AND/OR LOCAL STANDARD SPECIFICATIONS SHALL APPLY.
7. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL, STATE, AND FEDERAL LAWS, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING STATE AND FEDERAL REQUIREMENTS WITH RESPECT TO STORMWATER DISCHARGE.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITY LINES WITHIN OR ADJACENT TO THE CONSTRUCTION AREA. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
9. CONSTRUCTION SHALL NOT OCCUR IN ANY PUBLIC RIGHTS OF WAY, PUBLIC OR PRIVATE EASEMENTS, BEYOND THE LIMITS OF DISTURBANCE, OR OUTSIDE THE PROPERTY LIMITS WITHOUT NECESSARY PERMITS. ANY PUBLIC OR PRIVATE PROPERTY OR IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE COST OF THE CONTRACTOR.
10. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS OR DESIGNATED TRAFFIC LANES. THE CONTRACTOR SHALL NOT STORE ANY EQUIPMENT OR MATERIAL WITHIN THE PUBLIC RIGHT OF WAY. OVERNIGHT PARKING OF CONSTRUCTION VEHICLES ON PRIVATE PROPERTY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. ALL PROPERTY CORNERS OR MONUMENTS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL PROPERTY CORNERS MUST BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF **CONNECTICUT**.
12. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING THE POLLUTION OF THE ENVIRONMENT.
13. CONTRACTOR TO ENSURE ALL WORK PERFORMED IS IN ACCORDANCE WITH EXISTING PROJECT PERMITS, STUDIES, AND REPORTS PROVIDED IN THE CONTRACT DOCUMENTS INCLUDING STATE STORMWATER MANAGEMENT PERMIT AND LOCAL ORDINANCE.
14. IT IS THE INTENT OF THESE PLANS THAT THE CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE THE IDENTIFIED PROJECT BOUNDARIES AND CLEARING LIMITS.
15. IT IS THE INTENT OF THESE PLANS THAT THE CONTRACTOR AVOID "FILLING" WETLANDS AT ALL COSTS. CONTRACTOR TO AVOID THE DELINEATED WETLAND AREA ONSITE. WHEREVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCES. IF DISTURBANCE ACTIVITIES SHOULD TAKE PLACE UPGRADIENT OF AND BETWEEN 30 AND 50 FEET OF ANY PROTECTED NATURAL RESOURCES, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE UPGRADIENT OF AND LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, PERIMETER CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.
16. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
17. CONTRACTOR SHALL FIELD FIT ANY PROPOSED CULVERT INVERTS TO PROVIDE POSITIVE DRAINAGE IN THE DIRECTION OF EXISTING SLOPES. ALL CULVERTS TO BE INSTALLED AT ADEQUATE DEPTHS AND TO DAYLIGHT. INLETS AND OUTLETS OF ALL CULVERTS TO BE STABILIZED WITH RIP RAP IN ACCORDANCE WITH THE SITE GRADING & DRAINAGE PLAN.
18. EXISTING ACCESS ROADS TO BE MAINTAINED SHALL BE PROOF ROLLED, SMOOTHED, AND RESURFACED AS NECESSARY TO PROVIDE AN ACCEPTABLE SURFACE.
19. THE CONTRACTOR SHALL SECURE PERMITS FROM THE STATE AND TOWN OF **NEW HAVEN** AS NECESSARY BEFORE DRIVING CONSTRUCTION EQUIPMENT OVER AND ACROSS STATE AND TOWN MAINTAINED ROADS.
20. ALL WORK IN THE PUBLIC RIGHTS OF WAY SHALL CONFORM WITH THE **CONNECTICUT** DEPARTMENT OF TRANSPORTATION **"HIGHWAY DESIGN MANUAL"**.

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NOT FOR CONSTRUCTION

PROJECT DEVELOPER / APPLICANT	PARCEL OWNERSHIP
NOKOMIS ENERGY 2836 LYNDALE AVENUE S MINNEAPOLIS, MN 55408	UNITED STATES SURGICAL CORPORATION TAX MAP: 3 LOTS: 7 & 10 TAX MAP: 6 LOTS: 26-29 15 HAMPSHIRE STREET MANSFIELD, MA 02048
CIVIL ENGINEER	**SURVEYOR**
VERDANTERRA, INC. 305 S. PATERSON STREET MADISON, WI 53703 ph: 608.709.0466 LICENSED ENGINEER: CHRISTOPHER W. CONNELLY STATE PE REG# PEN0036474	MARTIN SURVEYING ASSOCIATES, LLC 201 CHRISTIAN LANE BERLIN, CT 06037 ph: 860-832-9328 DATE OF SURVEY: 04/05/2023

DEMOLITION NOTES:

1. THE INTENT OF THE DEMOLITION PLAN IS TO IDENTIFY EXISTING STRUCTURES REQUIRING DEMOLITION FOR THE CONSTRUCTION OF THE PROPOSED SOLAR ARRAY. THIS PLAN DOES NOT SHOW DEMOLITION ACTIVITIES IN DETAIL. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXISTING CONDITIONS, AND CONDUCT NECESSARY INVESTIGATIONS, MATERIAL SAMPLING, OR BUILDING ASSESSMENTS NECESSARY TO ACCOUNT FOR DEMOLITION, REMOVAL, AND PROPER DISPOSAL OF CONSTRUCTION & DEMOLITION DEBRIS TO MEET PROJECT GOALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS.
2. CONTRACTOR SHALL COORDINATE DISCONNECTION AND CAPPING OF ALL UTILITY SERVICES WITH THE AUTHORITY HAVING JURISDICTION.
3. EXISTING UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIGSAFE SHALL BE NOTIFIED A MINIMUM OF 72-HOURS PRIOR TO COMMENCING ANY EXCAVATION.

CONTRACTOR NOTES:

CONTRACTOR SHALL MAINTAIN THE PROJECT SITE IN ACCORDANCE WITH THE FOLLOWING PERFORMANCE STANDARDS:

1. SPILL PREVENTION: CONTROLS SHALL BE IN PLACE TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS USED AND STORED ONSITE. APPROPRIATE CONTROLS INCLUDE, BUT ARE NOT LIMITED TO, PROPER STORAGE PRACTICES THAT MINIMIZE EXPOSURE OF MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION. ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL **1-800-482-0777**. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL **1-800-452-4664**.
2. GROUNDWATER PROTECTION: DURING CONSTRUCTION, THE CONTRACTOR MAY NOT STORE OR HANDLE LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER IN AREAS OF THE PROJECT SITES DRAINING TO AN INFILTRATION AREA OR WITHIN 100 FEET OF A CRITICAL RESOURCE AREA OR STREAM. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORING AND HANDLING LIQUID HAZARDOUS MATERIALS.
3. FUGITIVE SEDIMENT AND DUST: CONTRACTOR SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. CONTRACTOR SHALL MONITOR VEHICLES ENTERING AND EXITING THE PROJECT SITE FOR EVIDENCE OF TRACKING MUD ONTO PUBLIC OR PRIVATE ROADWAYS OUTSIDE THE WORK AREA. IF NECESSARY, CONTRACTOR SHALL PROVIDE MEANS FOR SWEEPING AND CLEANING ROAD AREAS EXPERIENCING TRACKING. DURING THE MUD SEASON IT MAY BE NECESSARY TO INCREASE THE SIZE OF STABILIZED CONSTRUCTION ENTRANCES OR PROVIDE A WHEEL WASHING STATION.
4. DEBRIS AND OTHER MATERIALS: CONTRACTOR SHALL MANAGE ALL LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER TO PREVENT MATERIALS FROM BECOMING A SOURCE OF POLLUTION.
5. TRENCH OR FOUNDATION DEWATERING: TRENCH DEWATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, SUMPS, BASINS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL REMOVE COLLECTED WATER FROM THE PONDED AREAS, EITHER THROUGH GRAVITY OR PUMPING, IN A MANNER THAT SPREADS IT THROUGH NATURAL WOODED BUFFERS OR TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE (E.G. COFFERDAM SEDIMENT BASIN). THE CONTRACTOR SHALL AVOID PRACTICES THAT ALLOW SEDIMENT LADEN WATER FROM DEWATERING TO FLOW OVER DISTURBED AREAS OF THE PROJECT SITES. OTHER MEASURES OR METHODS MAY BE UTILIZED AS REVIEWED AND SPPROVED BY THE ENGINEER AND, IF NECESSARY, **THE CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION**.
6. NON-STORMWATER DISCHARGES: THE CONTRACTOR SHALL IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES.
7. ADDITIONAL REQUIREMENTS: COMPLETION OF THE WORK WILL REQUIRE FREQUENT ACCESS TO VARIOUS PORTIONS OF THE PROJECT AREA FROM STATE AND LOCAL ROADWAYS . CONTRACTOR SHALL MONITOR PUBLIC ROADWAYS AND SHALL CLEAN PAVEMENT BY MEANS NECESSARY IN THE EVENT THAT SEDIMENT OR TRACKING IS OBSERVED. SIGNAGE SHALL BE POSTED AT INTERSECTIONS OF PROJECT ACCESS ROADS AND PUBLIC WAYS, STATING COMPANY NAME AND 24-HOUR CONTACT PHONE NUMBER.
8. SNOW REMOVAL NOTE: THE OPERATOR IS RESPONSIBLE TO MAINTAIN ACCESS DRIVE CLEAR FROM SNOW. THE ENTRANCE AND ACCESS DRIVE LEADING TO THE GATE WILL BE MAINTAINED BY CLEARING THE SNOW.

GENERAL GRADING NOTES:

1. ALL WORK RELATED TO ROAD CONSTRUCTION, SITE PREPARATION, AND GRAVEL INSTALLATION, AS SHOWN ON THIS PLAN, SHALL, UNLESS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION (FIRST PRIORITY), AND/OR STATE OR LOCAL STANDARD SPECIFICATIONS.
2. A GEOTECHNICAL ENGINEER DID NOT PROVIDE RECOMMENDATIONS FOR CONSTRUCTION. RECOMMENDATIONS HEREIN ARE BASED ON TYPICAL PRACTICES AND DO NOT ACCOUNT FOR SITE SPECIFIC SOIL CONDITIONS.
3. IT IS THE INTENT OF THESE PLANS THAT THIS CONTRACTOR SHALL NOT PERFORM ANY WORK OUTSIDE OF THE PROPERTY BOUNDARIES OR CLEARING LIMITS EXCEPT AS REQUIRED BY THIS PLAN.
4. THE CONTRACTOR IS TO ENSURE THAT NO SOIL ERODES FROM THE SITE. THIS SHOULD BE ACHIEVED BY CONSTRUCTING SILT FENCE OR EROSION CONTROL LOGS AT THE PROPERTY LINES AND WETTING THE SOIL TO PROTECT IT FROM WIND EROSION.
5. EXCAVATED MATERIAL (NON-HAZARDOUS OR NON-CONTAMINATED) MAY BE TEMPORARILY STOCKPILED IN DESIGNATED AREAS AS DIRECTED BY THE OWNER. TOPSOIL TO BE STOCKPILED SEPARATELY. EXCESS EXCAVATED MATERIAL CAN BE SPREAD ON SITE. CATWALK THE SPREAD MATERIAL USING DIRECTIONAL TRACKING PRACTICES, APPLY TOPSOIL, AND VEGETATE THE AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN.
6. EXCESS MATERIAL THAT IS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN PROPER ACCORDANCE W/ ALL REGULATORY AUTHORITIES. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND STATE AUTHORITIES OF LOCATION OF DISPOSAL BEFORE MATERIAL IS REMOVED.
7. A DISPOSAL SITE FOR ANY AND ALL EXCESS EXCAVATION MATERIAL AND UNSUITABLE MATERIAL AND/OR A BORROW SITE CONTAINING ACCEPTABLE FILL MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS AND APPROVED BY THE ENGINEER AND OWNER.
8. VERIFY ALL ELEVATIONS SHOWN ON PLAN FROM BASIS OF SITE BENCHMARK PRIOR TO BEGINNING CONSTRUCTION.
9. FILL MATERIAL SHALL NOT CONTAIN DELETERIOUS MATERIALS OR ORGANIC MATTER. NO ROCK OR IRREDUCIBLE MATERIAL WITH A MINIMUM DIMENSION GREATER THAN 2 INCHES SHALL BE BURIED OR PLACED IN FILL.
10. CONDUCT EARTHWORK OPERATIONS ONLY IN AREA REQUIRED FOR IMMEDIATE CONSTRUCTION ACTIVITY AND THEN ONLY IF SEDIMENT CONTROL DEVICES ARE IN PLACE. MASS CLEARING AND GRADING OF THE SITE SHALL BE AVOIDED.
11. COMPACTION REQUIREMENTS: 90% PER ASTM D-1557.
12. PROPOSED CONTOURS REPRESENT FINISHED GRADE.

PROJECT SCHEDULE:

SPECIFICS OF HOW WORK IS TO BE COMPLETED SHALL ALSO BE BASED ON ENVIRONMENTAL CONSIDERATIONS ASSOCIATED WITH SEASONAL CHANGES. THE FOLLOWING DATES ARE PROVIDED TO ESTABLISH A GENERAL GUIDELINE FOR THESE SEASONS:

- WINTER: NOVEMBER 1 TO APRIL 15
- MUD SEASON: APRIL 15 TO APRIL 30
- SPRING: MAY 1 TO JUNE 21
- SUMMER: JUNE 22 TO SEPTEMBER 21
- FALL: SEPTEMBER 22 TO OCTOBER 31

PARCEL DATA

TAX ID#	PROPERTY OWNER	SITE ADDRESS
'003 007	UNITED STATES SURGICAL CORP	195 MCDERMOTT ROAD, NORTH HAVEN
'006 029	UNITED STATES SURGICAL CORP	86 QUINNIPIAC AVE, NORTH HAVEN
'006 026	UNITED STATES SURGICAL CORP	60 MIDDLETOWN AVE, NORTH HAVEN
'003 010	UNITED STATES SURGICAL CORP	20 MIDDLETOWN AVE, NORTH HAVEN

ZONING DATA

ZONING DISTRICT:	IL30 DISTRICT
MINIMUM LOT AREA	30,000 S.F
MINIMUM LOT WIDTH	100'
REQUIRED YARD SETBACKS	
FRONT	75'
SIDE	20'
REAR	40'
MAXIMUM BUILDING HEIGHT	60'

SITE DATA

EXISTING USE:	PROFESSIONAL BUSINESS
PROPOSED USE:	SOLAR POWER GENERATION FOR EX PROFESSIONAL BUSINESS
LOT AREA	6-29 (7.55 AC.)
LOT WIDTH	N/A INTERNAL
LOT AREA	3-7 (31.34 AC.)
LOT WIDTH	1,151 FT
PROJECT/PRELIMINARY DISTURBED AREA:	1.4 AC.
PRELIMINARY SOLAR AREA:	0.85 AC.
PROPOSED BUILDING HEIGHT	NO NEW BUILDINGS
PROPOSED NEW IMPERVIOUS COVERAGE	245 S.F.

SOILS GROUP

ACCORDING TO THE NRCS SOIL SURVEY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES, REFER TO THE PLAN FOR LOCATIONS.

MAP UNIT SYMBOL	MAP UNIT NAME	HYDROLOGIC SOIL GROUP
307	Urban Land	D

LEGEND — EXISTING FEATURES

- Edge Of Paved Surface
- Edge Of Gravel Or Crushed Stone
- Edge Of Roadway Shoulder
- Property Boundary Line
- Iron Pin Or Pipe
- Concrete Monument
- Adjoining Property Boundary Line
- Easement Line
- Legal Right Of Way Line
- Minimum Building Setback Line
- Edge Of Existing Watercourse
- Existing Waterbody
- 420 — Index Contour Line
- 421 — Intermediate Contour Line
- x 500.00 — Spot Elevation
- Building
- Concrete Surface
- Treeline
- OHE — OHE — Overhead Electric Lines
- UE — UE — Underground Electric Line
- Utility Pole
- T — T — Overhead Telephone Line
- W — Water Line
- Fire Hydrant
- S — Sanitary Sewer Line
- Sewer Manhole
- G — Gas Line
- GV — Gas Valve
- x — x — Fence
- Sign
- BM — Bench Mark
- Soil Type Boundary Line
- CeB — Soil Label

LEGEND — PROPOSED SITE FEATURES

- CONCRETE SURFACE
- EDGE OF STONE OR GRAVEL
- STONE OR GRAVEL SURFACE
- FENCE
- TREELINE
- SOLAR ARRAY
- SIGN
- OH — OH — OVERHEAD ELECTRIC LINE
- UE — UNDERGROUND ELECTRIC LINE

LEGEND — DEMOLITION

- AREA OF TREE CLEARING

LEGEND — PROPOSED GRADING FEATURES

- 500 — INTERMEDIATE CONTOUR LINES
- 504 — INDEX CONTOUR LINES
- + 500.00 — PROPOSED SPOT ELEVATION

LEGEND — PROPOSED E&S CONTROL PLAN FEATURES

- STABILIZED ROCK CONSTRUCTION ENTRANCE
- SF-18 — SILT FENCE – 18" HIGH
- FS-12 — SILT SOCK – 12"
- FS-18 — SILT SOCK – 18"
- LOD — LIMIT OF DISTURBANCE

811 Know what's **below.** **Call** before you dig.

Revision | Date | No.

Seal

Engineer
VERDANTERRA
305 S PATERSON STREET
MADISON, WI 53703
608.709.0466
WWW.VERDANTERRA.COM

Applicant
NOKOMIS ENERGY
2836 Lyndale Ave S.
Suite #132
Minneapolis, MN 55408
612-470-3223

Property Owners:
United States Surgical Corp
15 Hampshire Street
Mansfield, MA 02048

Project Name:
CT SOLAR PDF, LLC

Project Number:
07522001

Scale:	Drawn By:
AS SHOWN	DK
Date:	Checked By:
JUNE 2023	CWC/SML

Drawing Description:
NOTES & LEGENDS

Drawing Number:
C0.01

Sheet Number:
02 of 14

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GRAPHIC SCALE
100' 50' 0 100'
1" = 100'

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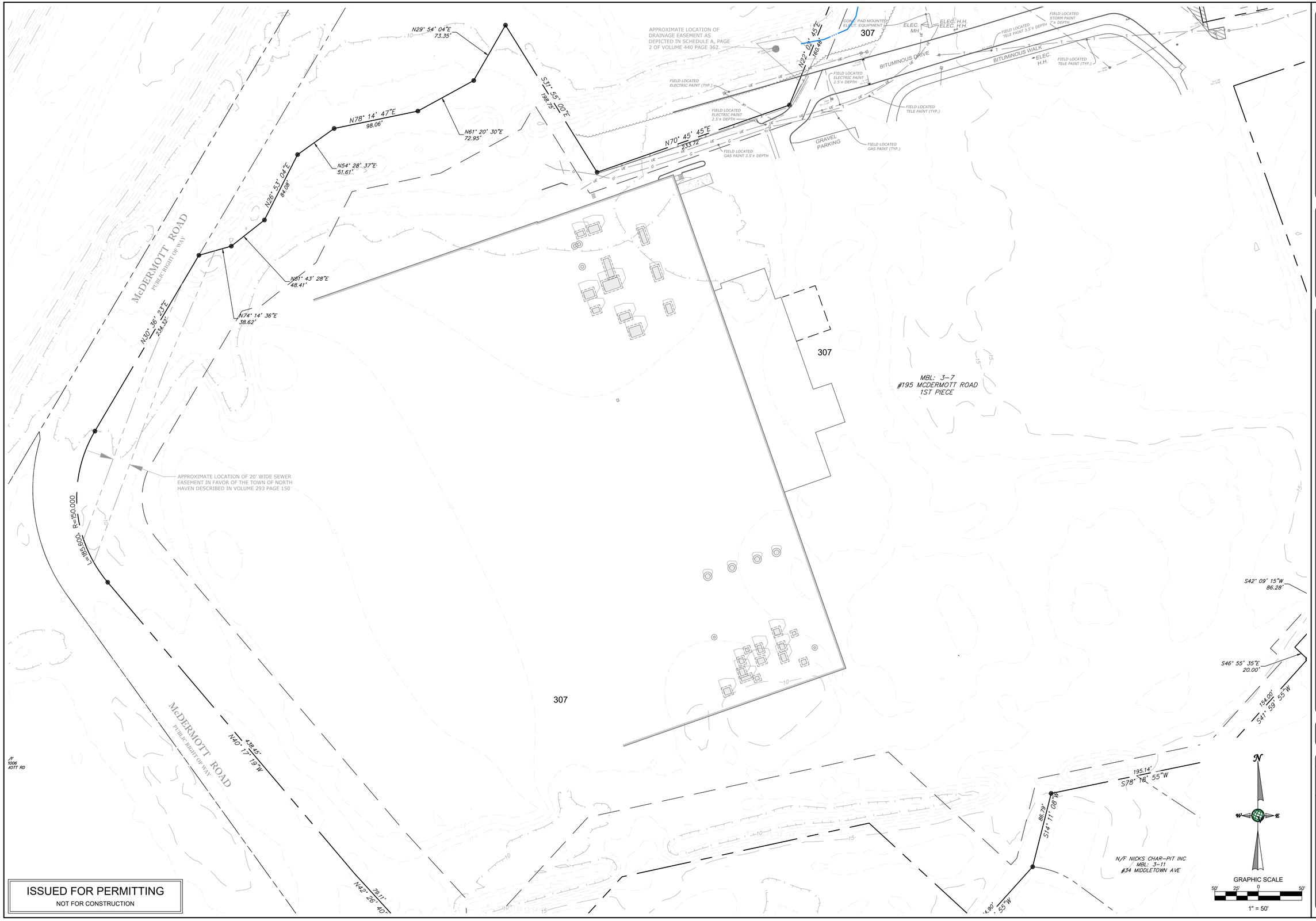
Drawing Description:
OVERALL EXISTING CONDTIONS & DEMOLITION PLAN

Drawing Number:
C1.00

Sheet Number:
03 of 14



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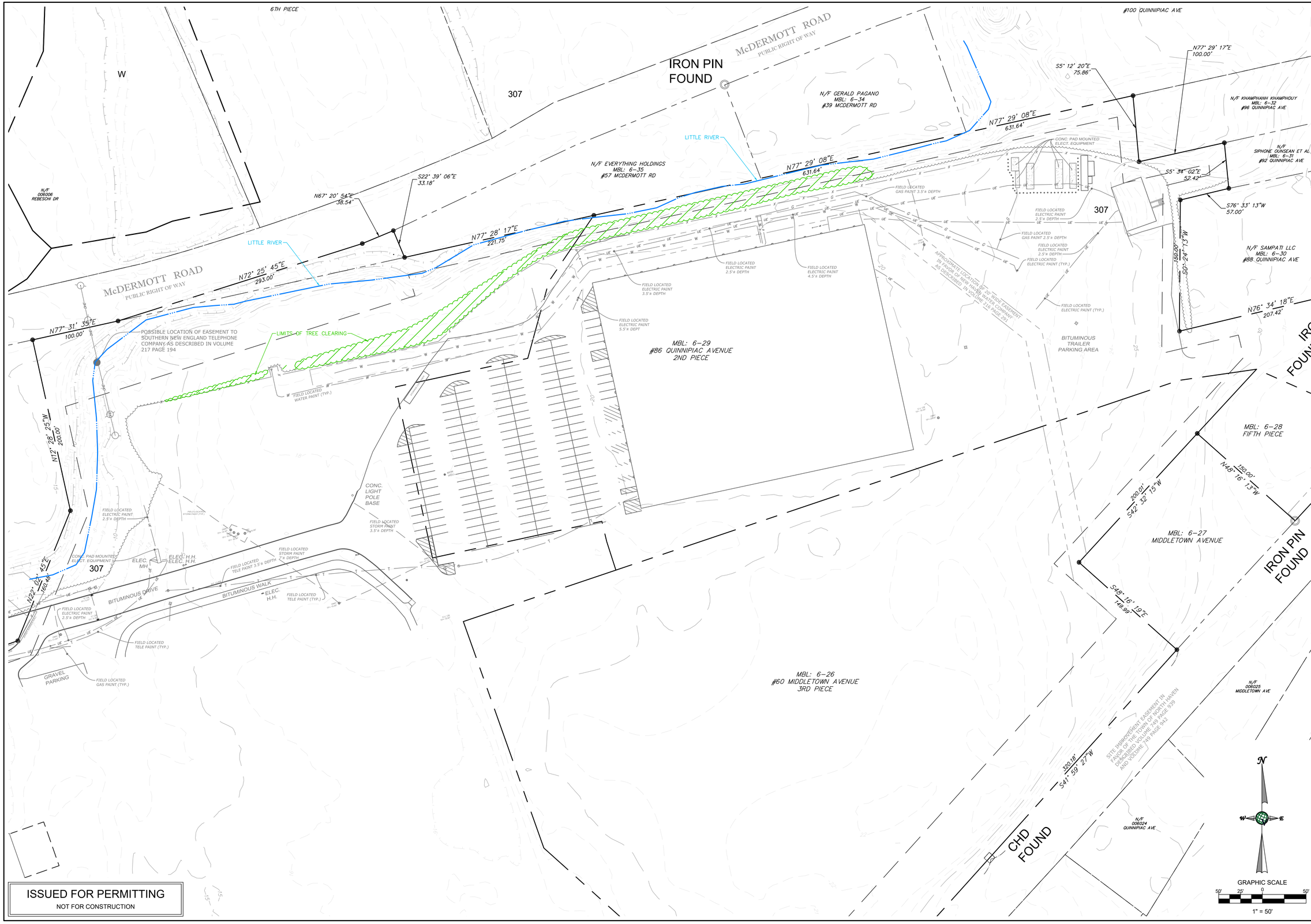
EXISTING CONDITIONS & DEMOLITION PLAN

Drawing Number:
C1.01

Sheet Number:
04 of 14



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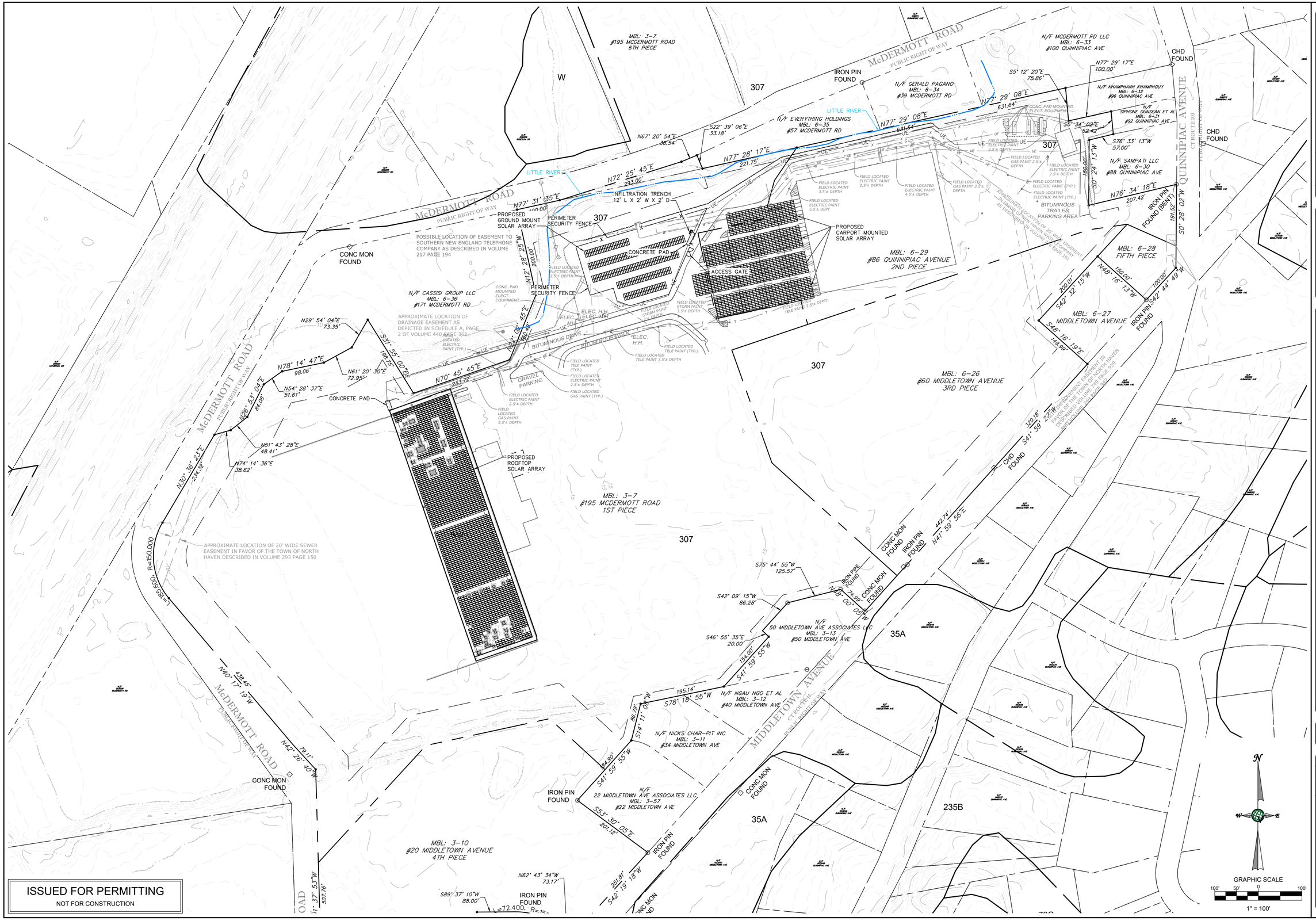
Drawing Description:
EXISTING CONDITIONS & DEMOLITION PLAN

Drawing Number:
C1.02

Sheet Number:
05 of 14



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JUNE 2023	CWC/SML

Drawing Description:
OVERALL GRADING PLAN

Drawing Number:
C3.00

Sheet Number:
06 of 14

#195 MCDERMOTT ROAD
6TH PIECE

McDERMOTT ROAD
PUBLIC RIGHT OF WAY

IRON PIN
FOUND

N/F GERALD PAGANO
MBL: 6-34
#39 MCDERMOTT RD

S5° 12' 20"E
75.86'

N77° 29' 08"E
631.64'

LITTLE RIVER

N/F EVERYTHING HOLDINGS
MBL: 6-35
#57 MCDERMOTT RD

S22° 39' 06"E
33.18'

N67° 20' 54"E
38.54'

N77° 28' 17"E
221.75'

N72° 25' 45"E
293.00'

N77° 31' 35"E
100.00'

N/F
006006
REBESOW DR

W

307

CONC. PAD MOUNTED
ELECT. EQUIPMENT

FIELD LOCATED
GAS PAINT 3.5'± DEPTH

FIELD LOCATED
ELECTRIC PAINT
2.5'± DEPTH

FIELD LOCATED
GAS PAINT 2.5'± DEPTH

FIELD LOCATED
ELECTRIC PAINT (TYP.)

APPROXIMATE LOCATION OF 20' WIDE EASEMENT
IN FAVOR OF NEW HAVEN WATER COMPANY
AS DISCLAIMED IN VOLUME 116 PAGE 291.

FIELD LOCATED
ELECTRIC PAINT
3.5'± DEPT

FIELD LOCATED
ELECTRIC PAINT
2.5'± DEPT

FIELD LOCATED
ELECTRIC PAINT
4.5'± DEPT

FIELD LOCATED
ELECTRIC PAINT (TYP.)

FIELD LOCATED
ELECTRIC PAINT
5.5'± DEPT

BITUMINOUS
TRAILER
PARKING AREA

MBL: 6-29
#86 QUINNIPIAC AVENUE
2ND PIECE

PROPOSED
CARPORT MOUNTED
SOLAR ARRAY

POSSIBLE LOCATION OF EASEMENT TO
SOUTHERN NEW ENGLAND TELEPHONE
COMPANY AS DESCRIBED IN VOLUME
217 PAGE 194

INFILTRATION TRENCH
12' L X 2' WIDE (TYP.)

PROPOSED
GROUND MOUNT
SOLAR ARRAY

PERIMETER
SECURITY FENCE

FIELD LOCATED
WATER PAINT (TYP.)

CONCRETE PAD

ACCESS GATE

CONC.
LIGHT
POLE
BASE

FIELD LOCATED
STORM PAINT
3.5'± DEPTH

N12° 28' 25"W
200.00'

PERIMETER
SECURITY FENCE

N/F CASSISI GROUP LLC
MBL: 6-36
#171 MCDERMOTT RD

FIELD LOCATED
ELECTRIC PAINT
2.5'± DEPTH

APPROXIMATE LOCATION OF
DRAINAGE EASEMENT AS
DEPICTED IN SCHEDULE A, PAGE
2 OF VOLUME 440 PAGE 362.

CONC. PAD MOUNTED
ELECT. EQUIPMENT

307

ELEC.
MH

ELEC. H.H.

FIELD LOCATED
TELE PAINT 3.5'± DEPTH

FIELD LOCATED
STORM PAINT
2'± DEPTH

N22° 01' 45"E
160.48'

BITUMINOUS DRIVE

BITUMINOUS WALK

ELEC.
H.H.

FIELD LOCATED
TELE PAINT (TYP.)

FIELD LOCATED
ELECTRIC PAINT (TYP.)

FIELD LOCATED
ELECTRIC PAINT
2.5'± DEPTH

FIELD LOCATED
ELECTRIC PAINT
2.5'± DEPTH

FIELD LOCATED
TELE PAINT (TYP.)

N70° 45' 45"E
233.72'

GRAVEL
PARKING

FIELD LOCATED
GAS PAINT (TYP.)

FIELD LOCATED
GAS PAINT 3.5'± DEPTH

MBL: 6-26
#60 MIDDLETOWN AVENUE
3RD PIECE

PROPOSED
ROOFTOP
SOLAR ARRAY

307

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GRAPHIC SCALE
50' 25' 0 50'
1" = 50'

No.	Date	Revision

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GRADING PLAN

Drawing Number:
C3.01

Sheet Number:
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CONC MON FOUND

PERIMETER SECURITY FENCE

ACCESS GATE

N/F CASSISI GROUP LLC
MBL: 6-36
#171 MCDERMOTT RD

APPROXIMATE LOCATION OF DRAINAGE EASEMENT AS DEPICTED IN SCHEDULE A, PAGE 2 OF VOLUME 440 PAGE 362.

N12° 28' 00"E 200.00'

N22° 01' 45"E 180.48'

N70° 45' 45"E 233.72'

S31° 55' 00"E 198.75'

N29° 54' 04"E 73.35'

N78° 14' 47"E 98.06'

N61° 20' 30"E 72.95'

N54° 25' 37"E 51.61'

N26° 53' 04"E 84.98'

N61° 43' 28"E 48.41'

N74° 14' 36"E 38.62'

N10° 36' 23"E 234.32'

CONCRETE PAD

CONC. PAD MOUNTED ELEC. EQUIPMENT

307

BITUMINOUS DRIVE

BITUMINOUS WALK

GRAVEL PARKING

FIELD LOCATED TELE PAINT (TYP.)

FIELD LOCATED GAS PAINT (TYP.)

FIELD LOCATED GAS PAINT 3.5'± DEPTH

FIELD LOCATED STORM PAINT 3.5'± DEPTH

FIELD LOCATED STORM PAINT ± DEPTH

FIELD LOCATED TELE PAINT 3.5'± DEPTH

McDERMOTT ROAD
PUBLIC RIGHT-OF-WAY

APPROXIMATE LOCATION OF 20' WIDE SEWER EASEMENT IN FAVOR OF THE TOWN OF NORTH HAVEN DESCRIBED IN VOLUME 293 PAGE 150

Roof 1

307

MBL: 3-7
#195 MCDERMOTT ROAD
1ST PIECE

S75° 44' 55"W 125.57'

S42° 09' 15"W 86.28'

S46° 55' 35"E 20.00'

S41° 39' 55"W 154.02'

S78° 18' 55"W 195.14'

N/F NGAU NGO ET AL
MBL: 3-12
#40 MIDDLETOWN AVE

McDERMOTT ROAD
PUBLIC RIGHT-OF-WAY

N40° 17' 17"E 439.45'

GRAPHIC SCALE
50' 25' 0 50'
1" = 50'

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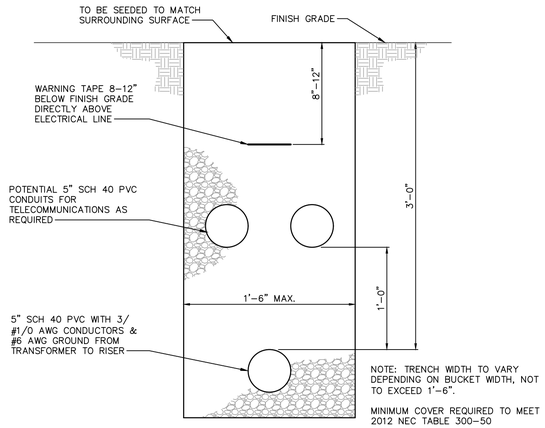
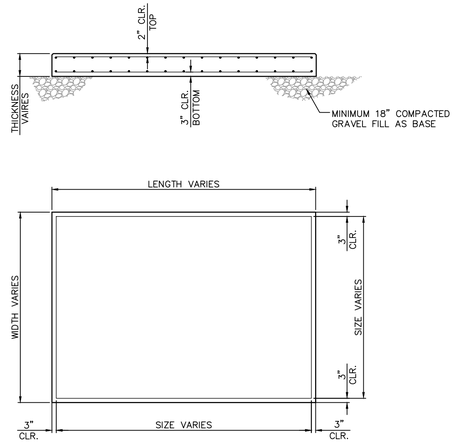


AC CONDUIT TRENCH DETAIL

NOT TO SCALE

DETAIL IS SCHEMATIC ONLY. REFER TO ELECTRICAL PLANS FOR ACTUAL TRENCH DETAIL.



NOTES:
1. CONCRETE TO BE 4000 PSI @ 28 DAYS.
2. MAX. SLUMP: 4 INCHES (TO BE MEASURED PRIOR TO PUMPING AND ADDITION OF ADMIXTURES.)
3. REINFORCING SHALL BE ASTM A615 GR. 60 (60 KSI YIELD.)
4. USE ¾" CHAMFER ON ALL EXPOSED EDGES, UNLESS NOTED OTHERWISE.
5. FOUNDATIONS TO BE BACKFILLED & COMPACTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. ESTIMATED CONCRETE QUALITY IS FOR OWNER'S ASSET MANAGEMENT PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR DETERMINING QUANTITIES FOR CONSTRUCTION & BID PURPOSES.
7. EQUIPMENT ANCHORAGE TO BE HILTI ADHESIVE ANCHOR, DESIGNED UPON RECEIPT OF CERTIFIED EQUIPMENT DRAWINGS.

TYPICAL EQUIPMENT PAD

NOT TO SCALE

SITE ADDRESS: XXXXXXX
SITE OWNER: XXXXXXX
CONTACT: XXX-XXX-XXXX

O & M COMPANY: SOLAR PROJECT OWNER NAME
CONTACT: XXX-XXX-XXXX

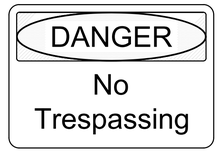
TYPICAL CONTACT PLAQUE

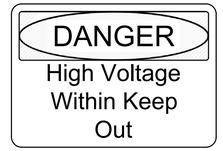
NOT TO SCALE

TEMPORARY CONSTRUCTION

TEMPORARY CONSTRUCTION SIGN

NOT TO SCALE



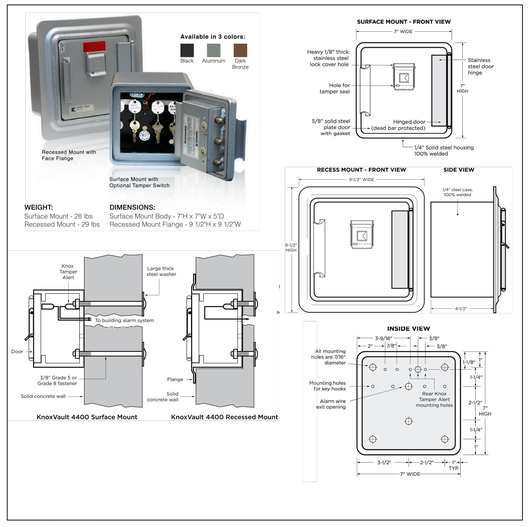


NOTES

1. SIGNS SHALL CONFORM TO THE 2013 OSHA AND ANSI REQUIREMENTS.
2. SIGNS SHALL BE 20" WIDE BY 14" HIGH.
3. SIGNS SHALL HAVE A MOUNTING HEIGHT OF BETWEEN 45 TO 66 INCHES.
4. SIGN PANELS SHALL BE 10 GAUGE ALUMINUM WITH HIGH VISIBILITY REFLECTIVE SHEETING.

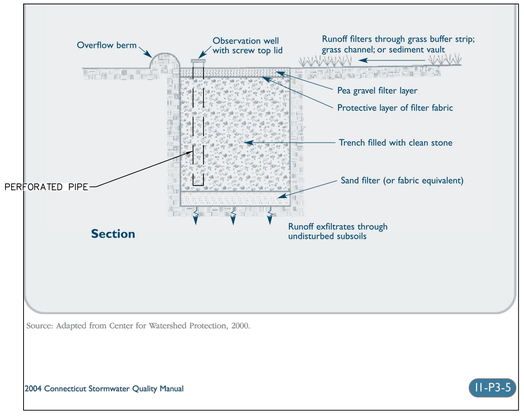
FENCE WARNING SIGNS

NOT TO SCALE



KNOX BOX

NOT TO SCALE



INFILTRATION TRENCH

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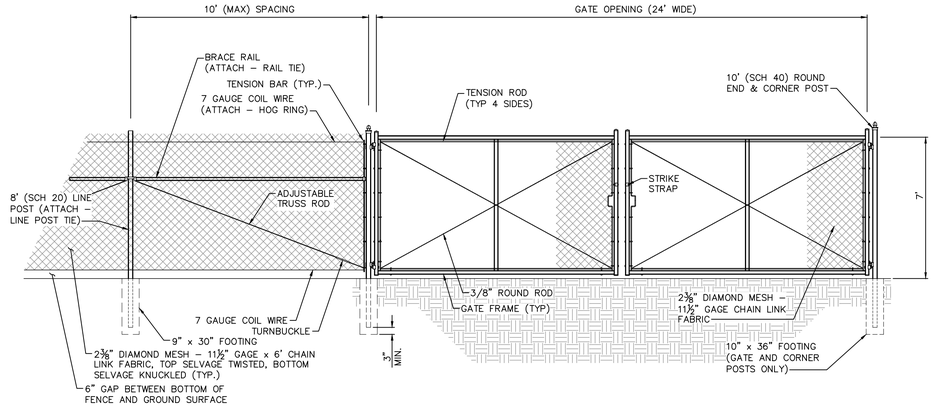
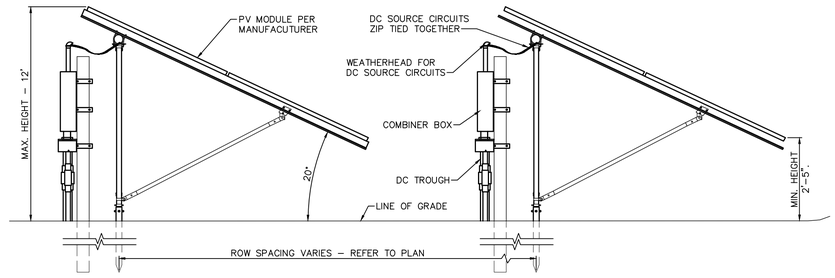


POST SCHEDULE: (SCH 40)	
TERMINAL –	2–⅜" OD
GATE –	4" OD
POST SCHEDULE: (SCH 20)	
LINE –	1–⅞" OD
BRACE RAIL –	1–⅝" OD

TYPICAL ACCESS GATE & FENCE

NOT TO SCALE

NOTE:
ALL FENCING MATERIALS TO BE GALVANIZED.

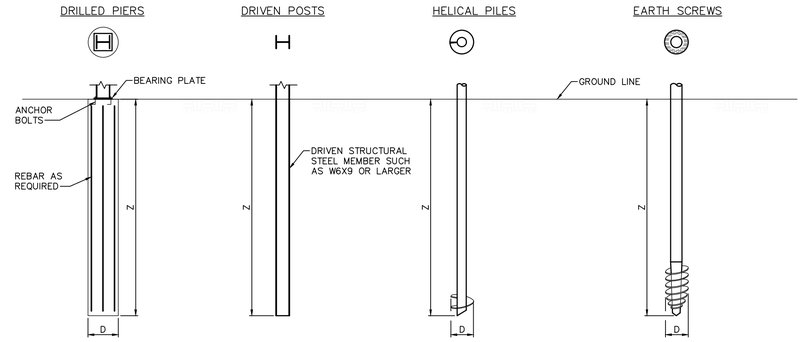


NOTES:
1. PROVIDE EDGE GUARD OR ADEQUATE PROTECTION FOR PV WIRES AND SHARP EDGES OF RACKING SYSTEM.

2. PROVIDE DRIP LOOP AND SUPPORT.

FIXED TILT SOLAR PANEL

NOT TO SCALE



D – TIPICALLY 6" TO 18" DEPENDING ON FOUNDATION TYPE AND IN–SITU CONDITIONS
Z – GREATER THAN OR EQUAL TO PENETRATION DEPTH

NOTES:
1. STRUCTURAL REQUIREMENTS AND EMBEDMENT OF FOUNDATION ELEMENTS IS DEPENDENT ON THE RESULTS OF SITE SPECIFIC GEOTECHNICAL EXPLORATION AND RACKING SYSTEM STRUCTURAL DESIGN.

2. EXAMPLE FOUNDATIONS PRESENTED ABOVE TO BE REVISED BASED ON SITE SPECIFIC REQUIREMENTS.

SOLAR RACKING FOUNDATIONS

NOT TO SCALE

MOWING REQUIREMENTS DUE TO EASTERN BOX TURTLE:

USE THESE ADDITIONAL TECHNIQUES TO MINIMIZE IMPACT, ESPECIALLY IF YOU NEED TO MOW DURING PEAK USE TIMES:

- MOW ON MULTIYEAR ROTATION, COMBINE WITH CHEMICAL CONTROL OF WOODY PLANTS.
- FOR GRASSLANDS > 10 ACRES, LIMIT TOTAL MOWING TO 50% EACH YEAR. IF MOWING DURING ACTIVE SEASON, LIMIT TO 25% OF AREA. IF MOWING DURING INACTIVE SEASON LIMIT TO 50% OF AREA.
- MOWING STYLE: AVOID FLAIL MOWER HEADS WITH GUIDE BARS THAT RIDE ALONG THE GROUND. SICKLE BAR MOWERS WILL HAVE THE LEAST IMPACT IF MOWING EVERY 1–5 YEARS. IN AREAS WITH MORE WOODY VEGETATION > 1–2" DIAMETER BRONTOSAURUS–STYLE MOWER WILL LIKELY HAVE THE LEAST IMPACT ON TURTLES.
- MOWING HEIGHT: IF MOWING DURING ACTIVE SEASON, RETENTION OF MOWING STUBBLE TO 7–12 INCHES WILL REDUCE MORTALITY, REDUCE BLADE WEAR, AND WILL LEAVE IMPORTANT COVER FOR ANIMALS.
- DIRECTIONALITY – IF MOWING DURING THE ACTIVE SEASON IS NECESSARY, START MOWING FROM THE CENTER OF THE FIELD AND USE A BACK–AND–FORTH APPROACH, OR LARGE CIRCULAR PATTERN, TO AVOID CONCENTRATING FLEEING ANIMALS WHERE THEY MAY BE KILLED OR STRANDED. IN ADDITION, LEAVE AN UNMOWED 30 FT STRIP AROUND THE PERIMETER OF THE FIELD AND MOW THIS AREA LAST. MOST TURTLES AREA FOUND IN THESE AREAS AND THIS PROVIDES TIME FOR THEM TO REACT TO THE MOWING ACTIVITY AND MOVE OUT OF THE AREA.
- IF FIELD IS NEAR A STREAM: START MOWING THE SIDE FURTHEST FROM STREAM AND WORK TOWARDS THE STREAM.
- IF FIELD IS BORDERED BY WOODLAND: START MOWING SIDE FURTHEST FROM WOODLAND AND WORK TOWARDS WOODLAND.
- IF FIELD IS BORDERED BY ROAD, START MOWNG NEXT TO THE ROAD AND WORK YOUR WAY ACROSS THE FIELD.
- MOWER SPEED – MOWING IN LOW GEAR OR AT SLOW SPEEDS WILL ALLOW TURTLES TO REACT AND MOVE OUT OF THE FIELD.
- UNMOWED EDGE – LEAVING AN UNMOWED FIELD EDGE IN HIGH TURTLE USE AREAS UNTIL AFTER SEPTEMBER 15TH. EASTERN BOX TURTLES ARE USUALLY ALONG FIELD EDGES ADJACENT TO FOREST AND WOOD TURTLE AREA OFTEN IN FIELD EDGES CLOSEST TO NEARBY STREAMS.
- LANDSCAPE PLANNING: USE PARTNERSHIPS AND LANDSCAPE SCALE PLANNING TO PROTECT IMPORTANT CONSERVATION AREAS FOR THIS SPECIES.
- NESTING AREA MANAGEMENT: IDENTIFY AND PROTECT NESTING AREAS FOR THIS SPECIES. WORK WITH BIOLOGISTS TO PLAN YOUR SITE USE AND NESTING SITE MANAGEMENT.

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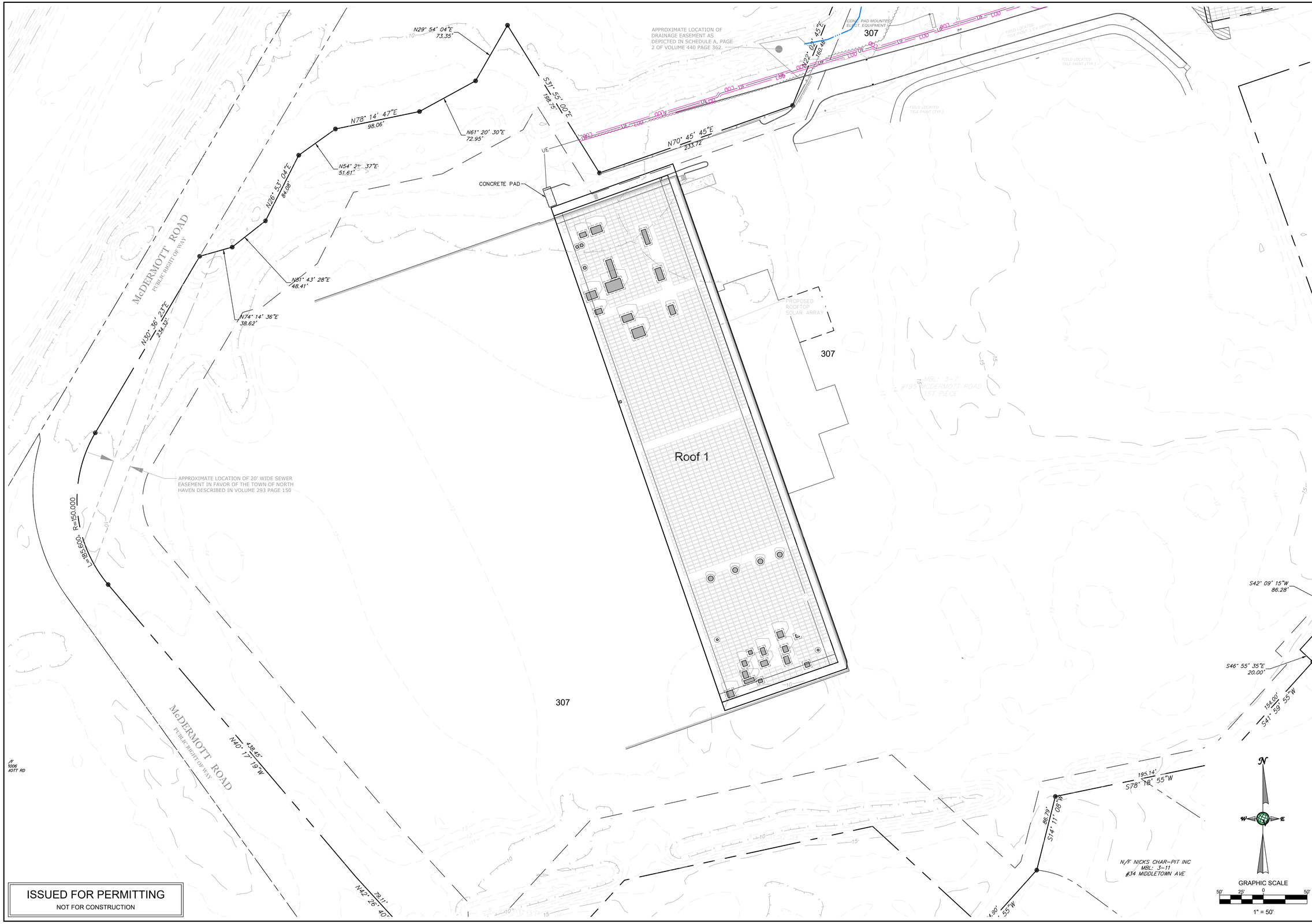

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Drawing Description:
EROSION & SEDIMENT POLLUTION CONTROL PLAN

Drawing Number:
C6.01

Sheet Number:
11 of 14

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GRAPHIC SCALE
50' 25' 0 50'
1" = 50'

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EROSION & SEDIMENT POLLUTION CONTROL PLAN

Drawing Number:
C6.02

Sheet Number:
12 of 14

EROSION CONTROL NOTES:

PROJECT DESCRIPTION

THE PROJECT INVOLVES THECONSTRUCTION OF A GROUND MOUNTED PHOTOVOLTAIC ARRAY AND RELATED UTILITIES, SITE PREPARATION, AND EROSION AND SEDIMENTATION CONTROL MEASURES.

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
2. ERDSION CONTROL DEVICES WILL BE INSPECTED, REPLACED AND/OR REPAIRED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR LOSS OF SERVICEABILITY DUE TO SEDIMENT ACCUMULATION, AT A MINIMUM, ALL EROSION CONTROL DEVICES WILL BE OBSERVED WEEKLY.
3. DURING THE FUTURE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO CONSTRUCTION SITE.
4. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY A SUITABLE GROWTH OF GRASS. ONCE A SUITABLE GROWTH OF GRASS HAS BEEN OBTAINED, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BY THE CONTRACTOR. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THEY ARE REMOVED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, SEEDED, AND MULCHED IMMEDIATELY.
5. EARTH DISTURBANCE WILL BE MINIMAL. HOWEVER, ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED PER THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL GUIDELINES.

CONSTRUCTION SEQUENCE

1. ESTABLISH TREE REMOVAL AND DISTURBANCE WORKSPACE LIMITS; IDENTIFY AND MARK SENSITIVE RECEPTORS INCLUDING NATURAL RESOURCES AND DOWN GRADIENT DRAINAGE INFRASTRUCTURE.
2. INSTALLATION OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND ASSOCIATED WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE.2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
3. PRIOR TO USAGE, CONSTRUCT AND STABILIZE THE CONSTRUCTION ENTRANCE IN THE LOCATIONS INDICATED ON THE EROSION CONTROL PLAN SHEET. MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.
4. PRIOR TO EARTH DISTURBANCE ACTIVITY, PROPERLY INSTALL AND MAINTAIN PERIMETER SEDIMENT BARRIERS SUCH AS SILT SOCK SILT FENCING AND/OR OTHER APPROVED EROSION CONTROL BARRIERS AS SHOWN ON THE DRAWINGS.
5. CLEAR TIMBER, BRUSH, AND COMPLETE TREE REMOVAL; GRUBBING SHALL NOT BE COMPLETED UNTIL JUST PRIOR TO PRELIMINARY GRADING IN A FUTURE PHASE.
6. COMPLETE ACCESS ROAD CONSTRUCTION, EQUIPMENT AND SOLAR ARRAY INSTALLATION PER THE PROVIDED PLAN SETS.
7. STABILIZE ANY NECESSARY EQUIPMENT STORAGE AND LAYDOWN AREAS WITH MATTING, CRUSHED STONE, OR GRAVEL SUBBASE AS NECESSARY TO MINIMIZE RUTTING AND AVOID PONDING OF STORMWATER.
8. WITHIN 7 DAYS OF THE CESSATION OF EARTH DISTURBANCE ACTIVITIES IN AN AREA THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS, STABILIZE ANY EXPOSED SOIL WITH MULCH, OR OTHER NON-ERODIBLE COVER. STABILIZE AREAS WITHIN 50 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
9. WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS. FOR WINTER STABILIZATION, HAY MULCH IS APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT. MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.
10. INSPECT AND REPAIR EROSION CONTROL MEASURES DAILY IN AREAS OF ACTIVE CONSTRUCTION; OTHERWISE WEEKLY AND BEFORE AND AFTER A RAINFALL EVENT OF 0.5-INCHES OR GREATER WITHIN A 24-HOUR PERIOD AND PRIOR TO COMPLETING STABILIZATION MEASURES. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 OF THE HEIGHT OF THE BARRIER.
11. REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMPS OR SIGNIFICANT REPAIR OF BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL).
12. KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPS, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN.
13. THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.
14. MONITOR PUBLIC ROADS FOR SIGNS OF TRACKING OR SPILLING OF SPOIL MATERIAL AND CLEAN-UP AS NECESSARY.
15. MAINTAIN ALL TEMPORARY EROSION CONTROLS AND SEDIMENT BARRIERS UNTIL VEGETATION HAS BEEN ESTABLISHED OVER 90% OF THE AREA TO BE REVEGETATED. RESEED SPARSELY VEGETATED AREAS AS NECESSARY.
16. REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WITHIN 30 DAYS AFTER ALL FUTURE PHASES AND WHEN THE SITE IS PERMANENTLY STABILIZED.
17. CONTRACTOR WILL BE RESPONSIBLE FOR FOLLOWING PROCEDURES FOUND IN THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

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NOT FOR CONSTRUCTION

REVEGETATION PLAN:

ANY VEGETATED AREA DISTURBED BY CONSTRUCTION SHALL BE REVEGETATED IMMEDIATELY UPON COMPLETION OF WORK IN THAT AREA. REVEGETATION AREAS SHALL BE IDENTIFIED BY THE OWNER'S REPRESENTATIVE. REVEGETATION PROCEDURES SHALL COMPLY WITH METHODS OUTLINED IN THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

SEED MIXES:

M.13.04—Seed Mixtures: (a) The grass seed mixture shall conform to the following:

Species	Proportion By Weight (Mass) Pounds (kilograms)	Minimum Purity (Percent)	Minimum Germination (Percent)
CHEWINGS FESCUE, (FESTUCA RUBRA VAR. COMMUTATA) CERTIFIED VARIETY: JAMESTOWN, ATLANTA, VICTORY, SHADOW OR EQUAL CERTIFIED VARIETY; NAME THE VARIETY	35 (15.9)	97	80
HARD FESCUE, (FESTUCA LONGIFOLIA) CERTIFIED VARIETY: RELIANT, SPARTON, SCALDIS OR EQUAL CERTIFIED VARIETY; NAME THE VARIETY	30 (13.6)	96	85
COLONIAL BENTGRASS, (AGRASTIS TENUIS) CERTIFIED VARIETY: HIGHLAND OR EQUAL CERTIFIED VARIETY; NAME THE VARIETY	5 (2.3)	95	90
BIRDSFOOT TREFOIL, (LOTUS CORNICULATUS) VARIETY ARVENIS, CERTIFIED VARIETY: EMPIRE OR EQUAL LOW GROWING VARIETY; NAME THE VARIETY	10 (4.5)	96	90
PERENNIAL RYEGRASS, (LOLIUM PERENNE) TRUF TYPE, CERTIFIED VARIETY: NAME THE VARIETY	20 (9.1)	98	90

The Birdsfoot Trefoil will be inoculated before planting. Under no circumstances should annual Ryegrass, Italian Rye, or any other seed be added to the seed mixture.

(b) The "temporary" grass seed shall be perennial ryegrass (Lolium perenne) or an improved variety thereof, such as Manhattan, having a minimum purity of 98% and a minimum germination of 90%. The seed mixture shall be delivered in new, clean, sealed containers. Labels and contents shall conform to all State and Federal regulations. Seed shall be subject to the testing provisions of the AOSA.

EASTERN BOX TURTLE:

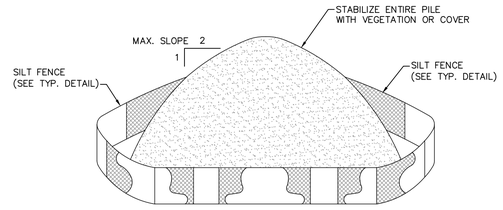
IT IS RECOMMENDED BY THE CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION TO CONSULT WITH A HERPETOLOGIST FAMILIAR WITH THE PREFERRED HABITATS TO ASSIST WITH PROPER TECHNIQUES TO ENSURE THE BEST STRATEGIES ARE EMPLOYED FOR THIS SITE AND THE SCOPE OF THE PROJECT.

TO PREVENT TURTLE ACCESS AND ENTRY INTO THE WORK ZONE BETWEEN APRIL 1 – NOVEMBER 1:

- EXCLUSIONARY PRACTICES WILL BE USED TO PREVENT ANY TURTLE ACCESS INTO DISTURBANCE AREAS. THESE MEASURES WILL NEED TO BE INSTALLED AT THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS, OR SPECIFICALLY DESIGNATED BY A HERPETOLOGIST WHO CAN ASSES THE CONDITIONS OF THE SITE.
- EXCLUSIONARY FENCING SHOULD BE AT LEAST 20 INCHES TALL AND MUST BE SECURED TO AND REMAIN IN CONTACT WITH THE GROUND AND BE REGULARLY MAINTAINED (AT LEAST BI-WEEKLY AND AFTER MAJOR WEATHER EVENTS) TO SECURE ANY GAPS OR OPENINGS AT GROUND LEVEL THAT MAY LET ANIMALS PASS THROUGH.
- ALL STAGING AND STORAGE AREAS, OUTSIDE OF PREVIOUSLY PAVED LOCATIONS, REGARDLESS OF THE DURATION OF TIME THEY WILL BE UTILIZED, MUST BE REVIEWED TO REMOVE INDIVIDUALS AND EXCLUDE FROM RE-ENTRY.
- ALL CONSTRUCTION PERSONNEL WORKING WITHIN THE TURTLE HABITAT MUST BE APPRISED OF THE SPECIES DESCRIPTION AND THE POSSIBLE PRESENCE OF A LISTED SPECIES.
- THE CONTRACTOR SHOULD SEARCH THE WORK AREA EACH MORNING PRIOR TO ANY WORK BEING DONE.
- ANY TURTLES ENCOUNTERED WITHIN THE IMMEDIATE WORK AREA SHALL BE CAREFULLY MOVED TO AN ADJACENT AREA OUTSIDE OF THE EXCLUDED AREA AND FENCING SHOULD BE INSPECTED TO IDENTIFY AND REMOVE THE ACCESS POINT. THIS ANIMAL IS PROTECTED BY LAW AND SHOULD NOT BE RELOCATED OFF-SITE.
- IN AREAS WHERE SILT FENCE IS USED FOR EXCLUSION, IT SHALL BE REMOVED AS SOON AS THE AREA IS STABLE AND DISTURBANCE IS FINISHED TO ALLOW FOR REPTILE AND AMPHIBIAN PASSAGE TO RESUME.
- IF LAND DISTURBANCE WILL OCCUR IN SUITABLE OVERWINTERING FORESTED HABITAT YOU WILL NEED TO TAKE PRECAUTIONS TO AVOID MORTALITY OF HIBERNATING ADULTS. IF PRACTICABLE, SMALL PROJECTS, UNDER THE SUPERVISION OF A QUALIFIED HERPETOLOGIST, MAY BE ABLE TO UTILIZE A COMBINATION OF EXCLUSIONARY FENCING INSTALLED BEFORE OCTOBER 15, COMBINED WITH AND SURVEYS TO ENSURE THAT NO TURTLES ARE WITHIN THE ENCLOSED FENCING. WORK CAN THEN BE CONDUCTED WITHIN THE FENCED AREA AT ANY TIME OF YEAR AS LONG AS THE FENCING IS MAINTAINED. PROJECTS THAT WILL IMPACT LARGE BLOCKS OF FOREST OR SIGNIFICANT OVERWINTERING HABITAT MAY NEED TO RESTRICT YOUR LAND DISTURBANCE ACTIVITIES IN FORESTED HABITAT TO THE TURTLE ACTIVE SEASON. THESE PROJECTS WOULD NEED TO RESTRICT LAND DISTURBANCE ACTIVITIES TO OCCUR ONLY BETWEEN APRIL 1 – OCTOBER 31.
- EARLY SUCCESSIONAL HABITAT IS IMPORTANT FOR THIS SPECIES AND MAINTENANCE BY MOWING IS ESSENTIAL. UNFORTUNATELY, MOWING IS MAJOR SOURCE OF HUMAN INDUCED ADULT TURTLE MORTALITY.
- AVOID MOWING OR VEHICULAR TRAFFIC DURING PEAK USE BY THIS SPECIES (MAY 15 – SEPT 15).

USE THESE ADDITIONAL TECHNIQUES TO MINIMIZE IMPACT, ESPECIALLY IF YOU NEED TO MOW DURING PEAK USE TIMES:

- MOW ON MULTIYEAR ROTATION, COMBINE WITH CHEMICAL CONTROL OF WOODY PLANTS.
- FOR GRASSLANDS > 10 ACRES, LIMIT TOTAL MOWING TO 50% EACH YEAR. IF MOWING DURING ACTIVE SEASON, LIMIT TO 25% OF AREA. IF MOWING DURING INACTIVE SEASON LIMIT TO 50% OF AREA.
- MOWING STYLE: AVOID FLAIL MOWER HEADS WITH GUIDE BARS THAT RIDE ALONG THE GROUND. SICKLE BAR MOWERS WILL HAVE THE LEAST IMPACT IF MOWING EVERY 1-5 YEARS. IN AREAS WITH MORE WOODY VEGETATION > 1-2" DIAMETER BRONTOSAURUS-STYLE MOWER WILL LIKELY HAVE THE LEAST IMPACT ON TURTLES.
- MOWING HEIGHT: IF MOWING DURING ACTIVE SEASON, RETENTION OF MOWING STUBBLE TO 7-12 INCHES WILL REDUCE MORTALITY, REDUCE BLADE WEAR, AND WILL LEAVE IMPORTANT COVER FOR ANIMALS.
- DIRECTIONALITY – IF MOWING DURING THE ACTIVE SEASON IS NECESSARY, START MOWING FROM THE CENTER OF THE FIELD AND USE A BACK-AND-FORTH APPROACH, OR LARGE CIRCULAR PATTERN, TO AVOID CONCENTRATING FLEEING ANIMALS WHERE THEY MAY BE KILLED OR STRANDED. IN ADDITION, LEAVE AN UNMOWED 30 FT STRIP AROUND THE PERIMETER OF THE FIELD AND MOW THIS AREA LAST. MOST TURTLES AREA FOUND IN THESE AREAS AND THIS PROVIDES TIME FOR THEM TO REACT TO THE MOWING ACTIVITY AND MOVE OUT OF THE AREA.
- IF FIELD IS NEAR A STREAM: START MOWING THE SIDE FURTHEST FROM STREAM AND WORK TOWARDS THE STREAM.
- IF FIELD IS BORDERED BY WOODLAND: START MOWING SIDE FURTHEST FROM WOODLAND AND WORK TOWARDS WOODLAND.
- IF FIELD IS BORDERED BY ROAD, START MOWING NEXT TO THE ROAD AND WORK YOUR WAY ACROSS THE FIELD.
- MOWER SPEED – MOWING IN LOW GEAR OR AT SLOW SPEEDS WILL ALLOW TURTLES TO REACT AND MOVE OUT OF THE FIELD.
- UNMOWED EDGE – LEAVING AN UNMOWED FIELD EDGE IN HIGH TURTLE USE AREAS UNTIL AFTER SEPTEMBER 15TH. EASTERN BOX TURTLES ARE USUALLY ALONG FIELD EDGES ADJACENT TO FOREST AND WOOD TURTLE AREA OFTEN IN FIELD EDGES CLOSEST TO NEARBY STREAMS.
- LANDSCAPE PLANNING: USE PARTNERSHIPS AND LANDSCAPE SCALE PLANNING TO PROTECT IMPORTANT CONSERVATION AREAS FOR THIS SPECIES.
- NESTING AREA MANAGEMENT: IDENTIFY AND PROTECT NESTING AREAS FOR THIS SPECIES. WORK WITH BIOLOGISTS TO PLAN YOUR SITE USE AND NESTING SITE MANAGEMENT.



INSTALLATION NOTES:
1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

TYPICAL TOPSOIL STOCKPILE
NOT TO SCALE

No.	Date	Revision

Seal

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CT SOLAR PDF, LLC

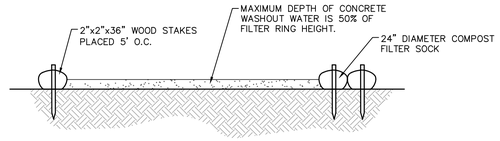
Project Number:
07522001

Scale:	Drawn By:
AS SHOWN	DK
Date:	Checked By:
JUNE 2023	CWC/SML

Drawing Description:
EROSION & SEDIMENT POLLUTION CONTROL NOTES & DETAILS

Drawing Number:
C6.03

Sheet Number:
13 of 14



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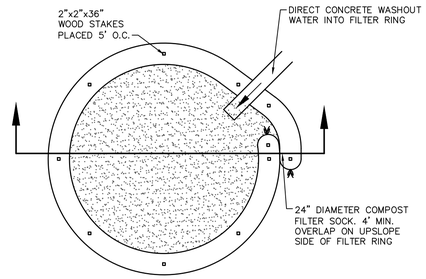


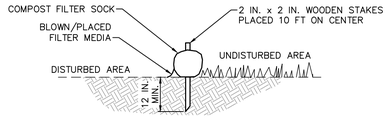
PLAN

NOTES
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT
3. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

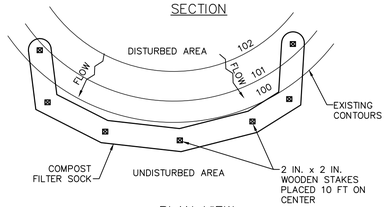
MAINTENANCE:
1. ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.
2. ACCUMULATED MATERIALS SHOULD BE REMOVED WHEN THEY REACH 75% CAPACITY.
3. PLASTIC LINERS SHOULD BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.

CONCRETE WASHOUT

NOT TO SCALE



SECTION



PLAN VIEW

NOTES:

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

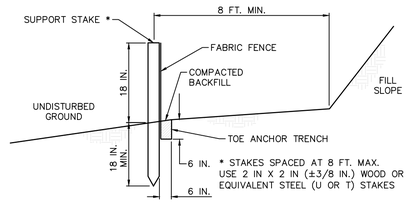
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK

NOT TO SCALE

JOINING FENCE SECTIONS



SECTION VIEW

NOTES:
1. FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.
2. FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.
3. SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
4. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.
5. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).
6. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

STANDARD SILT FENCE (18" HIGH)

NOT TO SCALE

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

No.	Date	Revision

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Drawing Description:
EROSION & SEDIMENT POLLUTION CONTROL DETAILS

Drawing Number:
C6.04

Sheet Number:
14 of 14

APPENDIX C – PROJECT / ENVIRONMENTAL INFORMATION

Soil Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for State of Connecticut

April 11, 2023

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,010 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil 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 1:12,000.

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

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
307	Urban land	2.5	100.0%
Totals for Area of Interest		**2.5**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

State of Connecticut

307—Urban land

Map Unit Setting

National map unit symbol: 9lmh
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Udorthents, wet substratum

Percent of map unit: 10 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 10 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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

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

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

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

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

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

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

Custom Soil Resource Report
Map—Hydrologic Soil Group

Map Scale: 1:1,010 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
307	Urban land	D	2.5	100.0%
Totals for Area of Interest			**2.5**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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Geotechnical Report

Rainfall Information

NOAA Atlas 14, Volume 10, Version 3
Location name: North Haven, Connecticut, USA*
Latitude: 41.3404°, Longitude: -72.8678°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.343** (0.271-0.424)	**0.415** (0.328-0.513)	**0.532** (0.419-0.661)	**0.629** (0.493-0.786)	**0.763** (0.577-0.999)	**0.863** (0.639-1.16)	**0.969** (0.695-1.35)	**1.09** (0.737-1.55)	**1.26** (0.820-1.87)	**1.41** (0.890-2.12)
10-min	**0.486** (0.385-0.600)	**0.587** (0.464-0.727)	**0.753** (0.594-0.936)	**0.891** (0.698-1.11)	**1.08** (0.818-1.42)	**1.22** (0.905-1.64)	**1.37** (0.985-1.91)	**1.54** (1.04-2.20)	**1.79** (1.16-2.64)	**1.99** (1.26-3.01)
15-min	**0.571** (0.452-0.706)	**0.691** (0.546-0.855)	**0.887** (0.699-1.10)	**1.05** (0.822-1.31)	**1.27** (0.962-1.67)	**1.44** (1.07-1.93)	**1.62** (1.16-2.25)	**1.82** (1.23-2.59)	**2.11** (1.37-3.11)	**2.34** (1.48-3.54)
30-min	**0.790** (0.626-0.977)	**0.954** (0.755-1.18)	**1.22** (0.964-1.52)	**1.45** (1.13-1.81)	**1.75** (1.33-2.30)	**1.98** (1.47-2.66)	**2.23** (1.60-3.10)	**2.50** (1.69-3.56)	**2.90** (1.88-4.28)	**3.23** (2.04-4.87)
60-min	**1.01** (0.799-1.25)	**1.22** (0.963-1.51)	**1.56** (1.23-1.94)	**1.84** (1.44-2.30)	**2.23** (1.69-2.93)	**2.53** (1.87-3.38)	**2.84** (2.04-3.95)	**3.19** (2.16-4.54)	**3.69** (2.40-5.46)	**4.11** (2.60-6.20)
2-hr	**1.32** (1.06-1.63)	**1.59** (1.27-1.96)	**2.04** (1.61-2.51)	**2.40** (1.89-2.98)	**2.91** (2.21-3.78)	**3.28** (2.45-4.37)	**3.68** (2.66-5.11)	**4.15** (2.82-5.87)	**4.83** (3.14-7.08)	**5.40** (3.43-8.08)
3-hr	**1.54** (1.23-1.88)	**1.85** (1.48-2.27)	**2.36** (1.88-2.90)	**2.79** (2.20-3.44)	**3.37** (2.57-4.37)	**3.80** (2.84-5.05)	**4.27** (3.10-5.90)	**4.81** (3.27-6.78)	**5.61** (3.66-8.20)	**6.28** (4.00-9.37)
6-hr	**1.96** (1.58-2.38)	**2.36** (1.90-2.87)	**3.01** (2.41-3.67)	**3.54** (2.82-4.35)	**4.29** (3.30-5.52)	**4.84** (3.64-6.39)	**5.43** (3.96-7.47)	**6.13** (4.18-8.58)	**7.16** (4.69-10.4)	**8.04** (5.13-11.9)
12-hr	**2.43** (1.97-2.93)	**2.93** (2.38-3.54)	**3.75** (3.03-4.55)	**4.43** (3.55-5.40)	**5.36** (4.15-6.87)	**6.06** (4.59-7.95)	**6.80** (4.99-9.30)	**7.69** (5.27-10.7)	**9.01** (5.92-13.0)	**10.1** (6.48-14.9)
24-hr	**2.86** (2.33-3.42)	**3.48** (2.84-4.18)	**4.50** (3.66-5.42)	**5.35** (4.32-6.48)	**6.52** (5.08-8.31)	**7.38** (5.63-9.65)	**8.32** (6.16-11.4)	**9.46** (6.51-13.1)	**11.2** (7.38-16.0)	**12.7** (8.15-18.6)
2-day	**3.20** (2.63-3.81)	**3.97** (3.26-4.73)	**5.22** (4.27-6.24)	**6.26** (5.09-7.53)	**7.69** (6.04-9.77)	**8.74** (6.73-11.4)	**9.90** (7.41-13.5)	**11.4** (7.84-15.6)	**13.7** (9.02-19.4)	**15.7** (10.1-22.7)
3-day	**3.47** (2.87-4.11)	**4.31** (3.56-5.12)	**5.69** (4.68-6.78)	**6.84** (5.58-8.19)	**8.41** (6.63-10.6)	**9.56** (7.39-12.4)	**10.8** (8.14-14.8)	**12.5** (8.62-17.0)	**15.0** (9.94-21.3)	**17.3** (11.1-25.0)
4-day	**3.72** (3.08-4.40)	**4.61** (3.82-5.46)	**6.07** (5.01-7.21)	**7.28** (5.96-8.70)	**8.95** (7.08-11.3)	**10.2** (7.87-13.2)	**11.5** (8.67-15.6)	**13.2** (9.17-18.0)	**15.9** (10.6-22.5)	**18.3** (11.8-26.4)
7-day	**4.43** (3.69-5.20)	**5.41** (4.50-6.36)	**7.01** (5.81-8.27)	**8.33** (6.86-9.90)	**10.2** (8.07-12.7)	**11.5** (8.93-14.8)	**13.0** (9.77-17.4)	**14.8** (10.3-20.1)	**17.6** (11.7-24.7)	**20.0** (13.0-28.7)
10-day	**5.13** (4.29-6.00)	**6.15** (5.14-7.21)	**7.83** (6.51-9.21)	**9.22** (7.62-10.9)	**11.1** (8.86-13.9)	**12.6** (9.76-16.0)	**14.1** (10.6-18.7)	**15.9** (11.1-21.5)	**18.7** (12.5-26.2)	**21.1** (13.7-30.2)
20-day	**7.28** (6.13-8.46)	**8.38** (7.05-9.76)	**10.2** (8.54-11.9)	**11.7** (9.73-13.7)	**13.8** (11.0-16.9)	**15.3** (11.9-19.2)	**16.9** (12.7-22.1)	**18.8** (13.2-25.1)	**21.4** (14.3-29.7)	**23.5** (15.3-33.4)
30-day	**9.08** (7.68-10.5)	**10.2** (8.64-11.9)	**12.1** (10.2-14.1)	**13.7** (11.4-16.0)	**15.8** (12.7-19.3)	**17.4** (13.6-21.7)	**19.1** (14.3-24.6)	**20.9** (14.7-27.8)	**23.3** (15.7-32.2)	**25.2** (16.4-35.7)
45-day	**11.3** (9.62-13.1)	**12.5** (10.6-14.4)	**14.5** (12.2-16.7)	**16.1** (13.5-18.7)	**18.3** (14.7-22.1)	**20.0** (15.6-24.7)	**21.7** (16.2-27.7)	**23.4** (16.6-31.0)	**25.6** (17.3-35.2)	**27.2** (17.8-38.3)
60-day	**13.2** (11.2-15.2)	**14.4** (12.3-16.6)	**16.4** (13.9-19.0)	**18.1** (15.2-21.0)	**20.3** (16.4-24.5)	**22.1** (17.3-27.1)	**23.8** (17.8-30.1)	**25.5** (18.1-33.6)	**27.5** (18.6-37.6)	**28.9** (18.9-40.5)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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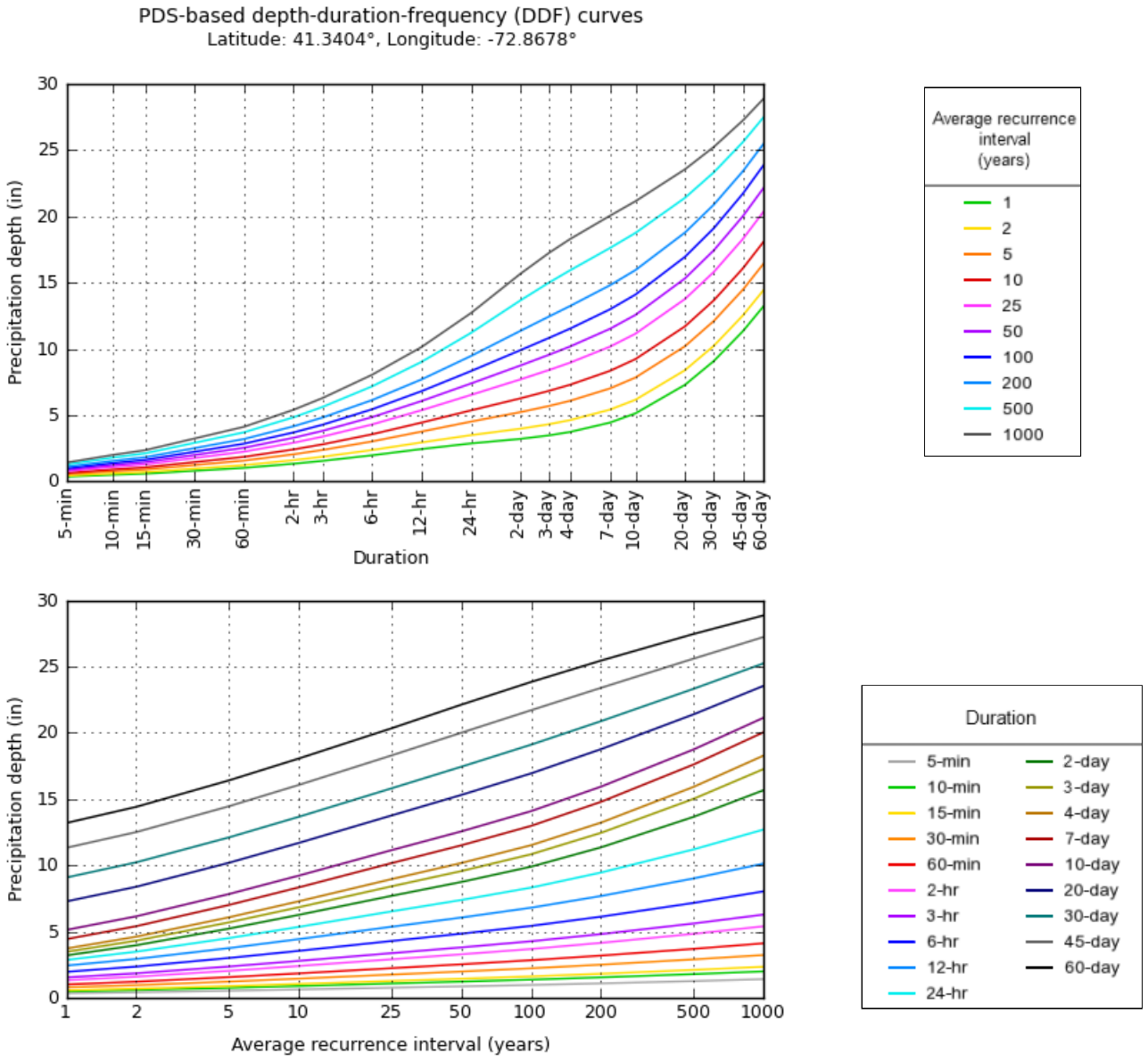
PF graphical



NOAA Atlas 14, Volume 10, Version 3

Created (GMT): Tue Apr 11 15:37:27 2023

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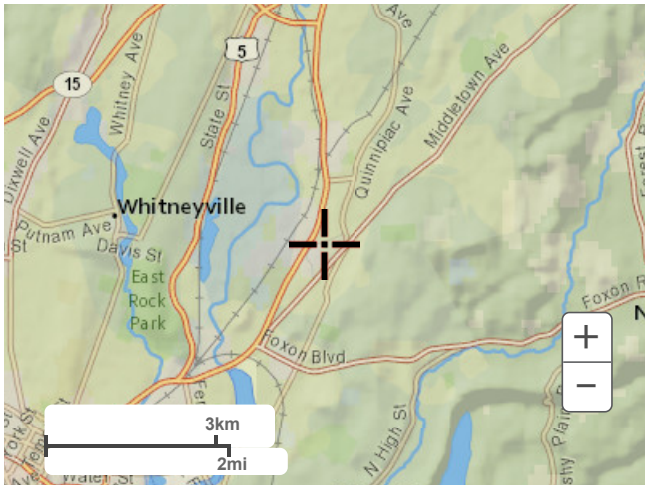
Maps & aerials

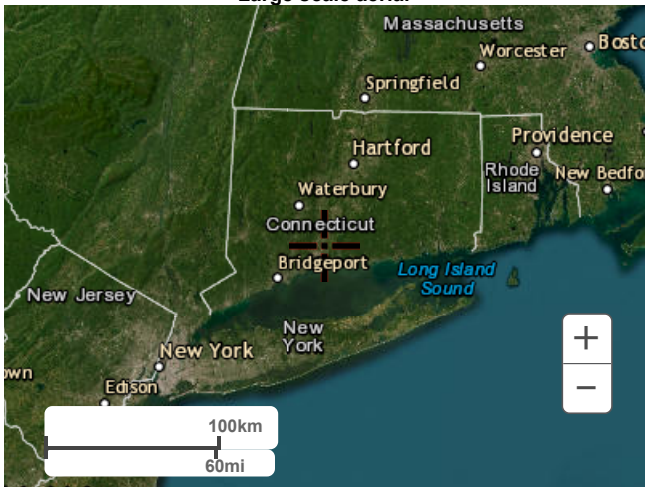
Small scale terrain



Large scale terrain

Large scale map

Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

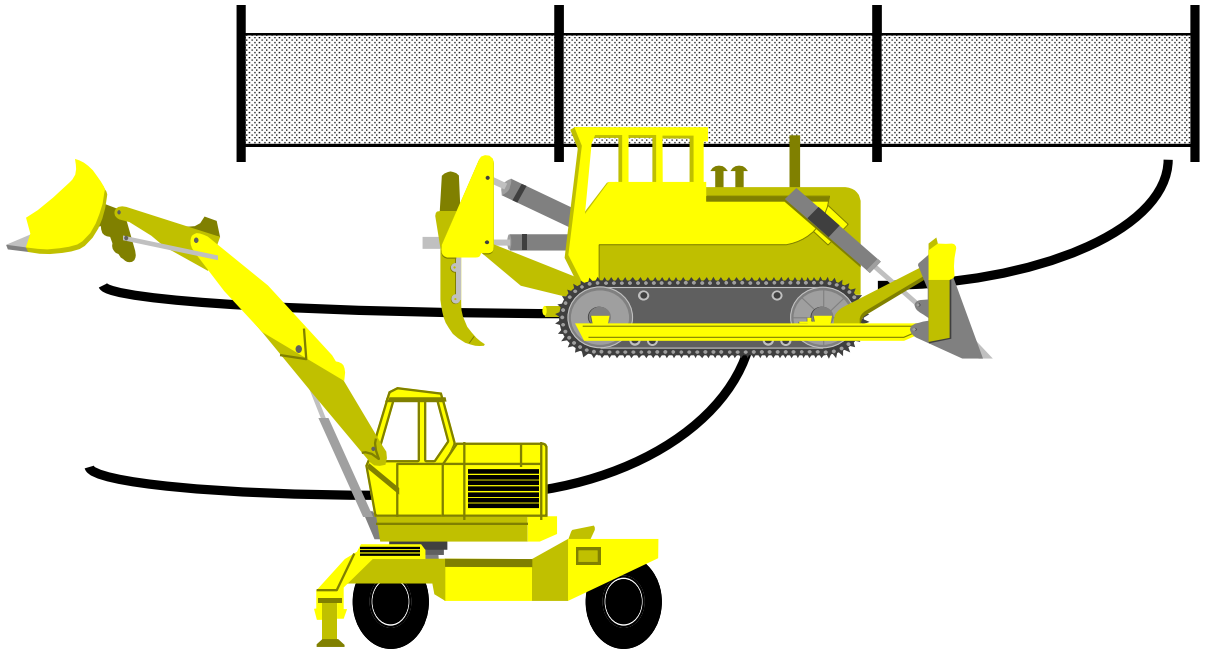
Disclaimer

APPENDIX D – GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities



Effective Date: December 31, 2020
Modification Date: November 25, 2022
Expiration Date: December 20, 2025

Printed on recycled paper

General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Table of Contents

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Section 1. Authority

This general permit is issued under the authority of section 22a-430b of the Connecticut General Statutes.

Section 2. Definitions

The definitions of terms used in this general permit shall be the same as the definitions contained in section 22a-423 of the Connecticut General Statutes and section 22a-430-3(a) of the Regulations of Connecticut State Agencies. All references to an Appendix in this general permit means the applicable Appendix of this general permit. As used in this general permit, the following definitions shall apply:

"*x-year, 24-hour rainfall event*" means the maximum 24-hour precipitation event with a probable recurrence interval of once in the given number of years (i.e. x=2, 25 or 100), as defined by the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 10, Version 2, Point Precipitation Frequency Estimates (as amended), or equivalent regional or state rainfall probability information developed therefrom.

"*Annual sediment load*" means the total amount of sediment carried by stormwater runoff on an annualized basis.

"*Aquifer protection area*" has the same meaning as provided in section 22a-354h of the Connecticut General Statutes.

"*Best engineering practices*" means the design of engineered control measures to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable.

"*CFR*" means the Code of Federal Regulations.

"*Coastal area*" means coastal area as defined in section 22a-93(3) of the Connecticut General Statutes.

"*Coastal waters*" means coastal waters as defined in section 22a-93(5) of the Connecticut General Statutes.

"*Commissioner*" means the Commissioner of Energy and Environmental Protection or the Commissioner's designee.

"*Construction activity*" means any activity and discharges associated with construction at a site or the site's preparation for construction, including, but not limited to, clearing, grubbing, pile driving, soil disturbance, soil compaction by construction equipment, staging and stockpiling, cleaning and washout, grading, excavation, and dewatering.

"*DOT"* means the State of Connecticut Department of Transportation.

"*Department*" means the Department of Energy and Environmental Protection.

"*Designing qualified professional*" means the qualified professional engineer or qualified soil erosion and sediment control professional, as defined below, who developed the original Stormwater Pollution Control Plan for which authorization was granted under this general permit.

"*Developer*" means a person who or municipality which is responsible, either solely or partially through contract, for the design and construction of a project site.

"*Dewatering wastewater*" means wastewater associated with the construction activity generated from the lowering of the groundwater table, the pumping of accumulated stormwater or uncontaminated groundwater from an excavation, the pumping of surface water from a cofferdam, or pumping of other surface water that has been diverted into a construction site.

"*District*" means a soil and water conservation district established pursuant to section 22a-315 of the Connecticut General Statutes. Appendices E and F list the Districts, their geographic delineations, and contact information.

"*Disturbance*" means the area on a site where soil will be exposed or susceptible to erosion during any construction activity.

"*Effective Impervious Cover*" is the area of impervious cover that is hydraulically connected to a water or wetland by means of continuous paved surfaces, gutters, swales, ditches, drain pipes or other conventional conveyance and detention structures that do not reduce runoff volume. Impervious cover is a surface composed of any material that impedes or prevents infiltration of water into the soil. Impervious surfaces shall include, but are not limited to, roofs, solid decks, driveways, patios, sidewalks, parking areas, tennis courts, concrete or asphalt streets, or compacted soils or compacted gravel surfaces.

"*Engineered stormwater management system*" means any control measure and related appurtenances which requires engineering analysis and/or design by a professional engineer.

"*Erosion*" means the detachment and movement of soil or rock fragments by water, wind, ice and gravity.

"*Final stabilization*" for a site authorized by this general permit means that no disturbed areas remain exposed, there is no active erosion or sedimentation present on the site, and that vegetation or permanent non-vegetative ground cover, as specified in the Permittee's Plan, have been fully established over the entire site.

"*Fresh-tidal wetland*" means a tidal wetland with an average salinity level of less than 0.5 parts per thousand.

"*General Permit*" means the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities issued by the Commissioner effective on December 31, 2020.

"*Groundwater*" means those waters of the state that naturally exist or flow below the surface of the ground.

"*Guidelines*" means the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, established pursuant to section 22a-328 of the Connecticut General Statutes.

"*High Quality Waters*" means those waters defined as high quality waters in RCSA 22a-426-1, as may be amended.

"*Impaired water(s)*" means those surface waters of the state designated by the commissioner as impaired pursuant to Section 303(d) of the Clean Water Act and as identified in the most recent State of Connecticut Integrated Water Quality Report.

"*In Responsible charge*" means professional experience for which the Commissioner determines that a professional's primary duties consistently involve a high level of responsibility and decision making in the planning and designing of engineered stormwater management systems or in the planning and designing of soil erosion and sediment controls for residential and commercial construction projects. The Commissioner

shall consider the following in determining whether a professional's experience qualifies as responsible charge experience:

(i) the level of independent decision-making exercised;

(ii) the number of individuals and the disciplines of the other professionals that the professional supervised or coordinated;

(iii) the extent to which a professional's responsibilities consistently involved the review of work performed by other professionals involved the planning and designing of engineered stormwater management systems or the planning and designing of soil erosion and sediment controls for residential and commercial construction projects;

(iv) the extent to which a professional's responsibilities consistently involved the planning and designing of engineered stormwater management systems or the planning and designing of soil erosion and sediment controls for residential and commercial construction projects and whether such responsibilities were an integral and substantial component of the professional's position;

(v) the nature of a professional's employer's primary business interests and the relation of those interests to planning and designing of engineered stormwater management systems or to planning and designing of soil erosion and sediment controls for residential and commercial construction projects;

(vi) the extent to which a professional has engaged in the evaluation and selection of scientific or technical methodologies for planning and designing of engineered stormwater management systems or for planning and designing of soil erosion and sediment controls for residential and commercial construction projects;

(vii) the extent to which a professional drew technical conclusions, made recommendations, and issued opinions based on the results of planning and designing of engineered stormwater management systems or of planning and designing of soil erosion and sediment controls for residential and commercial construction projects; or

(viii) any other factor that the Commissioner deems relevant.

"*Individual permit*" means a permit issued to a specific permittee under section 22a-430 of the Connecticut General Statutes.

"*Inland wetland*" means wetlands as defined in section 22a-38 of the Connecticut General Statutes.

"*Landscape Architect*" means a person with a currently effective license issued in accordance with chapter 396 of the Connecticut General Statutes.

"*Linear Project*" includes the construction of roads, railways, bridges, bikeways, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

"*Locally approvable project*" means a construction activity for which the registration is not for a municipal, state or federal project and is required to obtain municipal approval for the project.

"*Locally exempt project*" means a construction activity for which a registration is required under this general permit and which is not a locally approvable project.

"*Low Impact Development*" or "*LID*" means a site design strategy that maintains, mimics or replicates pre-development hydrology through the use of numerous site design principles and small-scale treatment practices distributed throughout a site to manage runoff volume and water quality at the source.

"*Minimize*", for purposes of implementing the control measures in Section 5(*b*)(2) of this general permit, means to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

"*Municipal separate storm sewer system*" or "*MS4*" means conveyances for stormwater (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) owned or operated by any municipality, DOT or by any other state or federal institution (as defined in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems) and discharging to surface waters of the state.

"*Municipality*" has the same meaning as provided in section 22a-423 of the Connecticut General Statutes.

"*Normal Working Hours*" are considered to be, at a minimum, Monday through Friday, between the hours of 8:00 am and 6:00 pm, unless additional working hours are specified by the permittee.

"*Permittee*" means any person who or municipality which initiates, creates or maintains a discharge in accordance with Section 3 of this general permit.

"*Person*" means person as defined in section 22a-423 of the Connecticut General Statutes.

"*Phase*" means a portion of a project possessing a distinct and complete set of activities that have a specific functional goal wherein the work to be completed in the phase is not dependent upon the execution of work in a later phase in order to make it functional.

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

"*Professional Engineer*" or *"P.E.*" means a person with a currently effective license issued in accordance with chapter 391 of the Connecticut General Statutes.

"*Qualified Inspector*" means an individual possessing either (1) a professional license or certification by a professional organization recognized by the commissioner related to agronomy, civil engineering, landscape architecture, soil science, and two years of demonstrable and focused experience in erosion and sediment control plan reading, installation, inspection and/or report writing for residential and commercial construction projects in accordance with the Guidelines; or (2) five years of demonstrable and focused experience in erosion and sediment control plan reading, installation, inspection and/or report writing for residential and commercial construction projects in accordance with the Guidelines; or (3) certification by the DOT. For purposes of solar array projects, a Qualified Inspector shall be selected as specified in Appendix I of the general permit.

"*Qualified professional engineer*" means a professional engineer who has, for a minimum of eight years, engaged in the planning and designing of engineered stormwater management systems for residential and commercial construction projects in accordance with the Guidelines and the Stormwater Quality Manual including, but not limited to, a minimum of four years in responsible charge of the planning and designing of engineered stormwater management systems for such projects. Such qualified professional engineer shall remain in good standing with the Connecticut Department of Consumer Protection and the Commissioner.

"*Qualified soil erosion and sediment control professional*" means a landscape architect or a professional engineer who: (1) has for a minimum of eight years engaged in the planning and designing of soil erosion and sediment controls for residential and commercial construction projects in accordance with the Guidelines including, but not limited to, a minimum of four years in responsible charge of the planning and designing of soil erosion and sediment controls for such projects; or (2) is currently certified as a professional in erosion and sediment control as designated by EnviroCert International, Incorporated (or other certifying organization acceptable to the commissioner) and has, for a minimum of six years, engaged in the planning and designing of soil erosion and sediment controls for residential and commercial construction projects in accordance with the Guidelines including, but not limited to, a minimum of four years in responsible charge in the planning and designing of soil erosion and sediment controls for such projects. Such qualified soil erosion and sediment control professional shall remain in good standing with the Connecticut Department of Consumer Protection and the Commissioner.

"*Registrant*" means a person or municipality that files a registration.

"*Registration*" means a registration filed with the commissioner pursuant to Section 4 of this general permit.

"*Regulated Municipal Separate Storm Sewer System*" or "*Regulated MS4*" means any MS4 (as defined above) authorized by the most recently issued General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, as well as the separate storm sewer system of the DOT and the City of Stamford including all those located partially or entirely within an Urbanized Area and those additional MS4s located outside an Urbanized Area as may be designated by the commissioner.

"*Retain*" means to hold runoff on-site to promote vegetative uptake and groundwater recharge through the use of runoff reduction or LID practices or other measures. In addition, it means there shall be no subsequent point source release to surface waters from a storm event defined in this general permit or as approved by the commissioner.

"*Runoff reduction practices*" means those post-construction stormwater management practices used to reduce post-development runoff volume delivered to the receiving water, as defined by retaining the volume of runoff from a storm up to the first half inch or one inch of rainfall. Runoff reduction is quantified as the total annual post-development runoff volume reduced through canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration or evapo-transpiration.

"*Sediment*" means solid material, either mineral or organic, that is in suspension, is transported, or has been moved from its site of origin by erosion.

"*Site*" means geographically contiguous land on which a construction activity takes place or on which a construction activity for which authorization is sought under this general permit is proposed to take place. Non-contiguous land or water owned by the same person shall be deemed the same site if such land is part of a linear project (as defined in this section) or is otherwise connected by a right-of-way, which such person controls.

"*Soil*" means any unconsolidated mineral and organic material of any origin.

"*Soil Scientist*" shall be as defined in Conn. Gen. Stat. § 22a-38.

"*Solar array*" means an on-the-ground installation of arrays of photovoltaic cell panels, supporting structures and related equipment for the production of electricity.

"*Stabilize"* means the use of measures as outlined in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, or as approved by the commissioner, to prevent the visible movement of soil particles and development of rills.

"*Standard of care*", as used in Section 3(*b*), means to endeavor to perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

"*Structural measure*" means a measure constructed for the temporary storage and/or treatment of stormwater runoff.

"*Stormwater*" means waters consisting of rainfall runoff, including snow or ice melt during a rain event.

"*Stormwater Pollution Control Plan*", "*SWPCC*", or "*Plan*" means the stormwater pollution control plan required under Section 5(*b*) of the general permit and approved by Commissioner as part of the approval of a registration.

"*Stormwater Quality Manual*" means the 2004 Connecticut Stormwater Quality Manual published by the Connecticut Department of Energy & Environmental Protection, as amended.

"*Surface water*" means that portion of waters, as the term "waters" is defined in section 22a-423 of the Connecticut General Statutes, located above the ground surface.

"*Tidal wetland*" means a wetland as that term is defined in section 22a-29(2) of the Connecticut General Statutes.

"*Total disturbance*" means the total area of disturbance on a site during all phases of construction activity.

"*Total Maximum Daily Load*" or "*TMDL*" means the maximum capacity of a surface water to assimilate a pollutant as established by the commissioner, including pollutants contributed by point and non-point sources and a margin of safety.

"*Upland soils*" means soils which are not designated as poorly drained, very poorly drained, alluvial, or flood plain by the National Cooperative Soils Survey, as may be amended, of the Natural Resources Conservation Service of the United States Department of Agriculture and/or the inland wetlands agency of the municipality in which the project will take place.

"*Water company*" means water company as defined in section 25-32a of the Connecticut General Statutes.

"*Waters*" shall be as defined in Conn. Gen. Stat. § 22a-423, and for clarification shall include vernal pools and intermittent waters.

"*Water Quality Standards*" means the water quality standards in RCSA 22a-426-1 et seq, and the classification maps adopted pursuant to section 22a-426 of the Connecticut General Statutes, as both may be amended.

"*Water Quality Volume*" or "*WQV*" means the volume of runoff generated by one inch of rainfall on a site as defined in the 2004 Connecticut Stormwater Quality Manual, as amended.

"*Wetland*" shall mean and include both "wetland" as defined in Conn. Gen. Stat. § 22a-29 and "wetlands" as defined in Conn. Gen. Stat. § 22a-38.

Section 3. Authorization Under This General Permit

(a) Eligible Activities

This general permit authorizes construction activities and associated stormwater and dewatering wastewater discharges on a site, as defined in this general permit, with a total disturbance of one or more acres of land area on a site, *regardless of project phasing*.

In the case of a larger plan of development (such as a subdivision), the estimate of total acres of site disturbance shall include, but is not limited to, road and utility construction, individual lot construction (e.g. house, driveway, septic system, etc.), and all other construction associated with the overall plan, regardless of the individual parties responsible for construction of these various elements.

(b) Requirements for Authorization

This general permit authorizes the construction activity and associated discharges listed in the "Eligible Activities" section (Section 3(*a*)) of this general permit provided:

(1) Coastal Management Act

Such construction activity must be consistent with all applicable goals and policies in section 22a-92 of the Connecticut General Statutes, and must not cause adverse impacts to coastal resources as defined in section 22a-93(15) of the Connecticut General Statutes. Please refer to the Appendix D for additional guidance.

(2) Endangered and Threatened Species

Such activity must not threaten the continued existence of any species listed pursuant to section 26-306 of the Connecticut General Statutes as endangered or threatened and must not result in the destruction or adverse modification of habitat designated as essential to such species. See Appendix A for conditions and requirements for compliance.

(3) Aquifer Protection Areas

Such construction activity, if it is located within an aquifer protection area as mapped under section 22a-354b of the General Statutes, must comply with regulations adopted pursuant to section 22a-354i of the General Statutes. Please refer to the Appendix C for additional guidance.

For any construction activity regulated pursuant to sections 22a-354i-8(c) and 9(b) of the Regulations of Connecticut State Agencies (Aquifer Protection Regulations), the Stormwater Pollution Control Plan (Plan) must assure that stormwater run-off generated from the regulated construction activity (i) is managed in a manner so as to prevent pollution of groundwater, and (ii) complies with all the requirements of this general permit.

(4) Mining Operations Exception

The stormwater discharge resulting from an activity classified by the Standard Industrial Classification 10 and 12 through 14 (the mining industry) is not eligible to be authorized by this general permit and is regulated under the most recently issued General Permit for the Discharge of Stormwater Associated with Industrial Activity.

(5) Discharge to POTW

The stormwater is *not* discharged to a Publicly Owned Treatment Works (POTW).

(6) Discharge to Groundwater

The stormwater is *not* discharged entirely to groundwater under all conditions before, during or after construction.

(7) Such construction activity must be consistent with the Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) for those river components and tributaries which have been designated as Wild and Scenic by the United States Congress. Further, such construction activities must not have a direct and adverse effect on the values for which such river designation was established. Please refer to Appendix H for additional guidance.

(8) Certification Requirements for Registrants and other Individuals

As part of the registration for this general permit, the registrant and any other individual or individuals responsible for preparing the registration submits to the commissioner a written certification which, at a minimum, complies with the following requirements:

(A) The registrant and any other individual or individuals responsible for preparing the registration and signing the certification has completely and thoroughly reviewed, at a minimum, this general permit and the following regarding the activities to be authorized under such general permit:

(i) all registration information provided in accordance with Section 4(*c*)(2) of such general permit;

(ii) the project site, based on a site inspection;

(iii) the Stormwater Pollution Control Plan; and

(iv) any plans and specifications and any Department approvals regarding such Stormwater Pollution Control Plan;

(B) The registrant and any other individual or individuals responsible for preparing the registration and signing the certification pursuant to this general permit has, based on the review described in section 3(*b*)(8)(A) of this general permit, made an affirmative determination to:

(i) comply with the terms and conditions of this general permit;

(ii) maintain compliance with all plans and documents prepared pursuant to this general permit including, but not limited to, the Stormwater Pollution Control Plan;

(iii) properly implement and maintain the elements of the Stormwater Pollution Control Plan; and

(iv) properly operate and maintain all stormwater management systems in compliance with the terms and conditions of this general permit to protect the waters of the state from pollution;

(C) Such registrant and any other individual or individuals responsible for preparing the registration certifies to the following statement: "I hereby certify that I am making this certification in connection with a registration under such general permit, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT

ADDRESS OF PROJECT OR ACTIVITY] and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(*b*)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(*b*)(8)(B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Connecticut General Statutes. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

(9) The registrant has submitted to the commissioner a written certification by a professional engineer or, where appropriate, a landscape architect licensed in the State of Connecticut for the preparation, planning and design of the Stormwater Pollution Control Plan ("Plan" or "SWPCP") and stormwater management systems:

The professional engineer or landscape architect shall certify to the following statement:

"I hereby certify that I am a [professional engineer][landscape architect] licensed in the State of Connecticut. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT ADDRESS OF PROJECT OR ACTIVITY]. I certify that I have thoroughly and completely reviewed the Stormwater Pollution Control Plan for the project or activity covered by this certification. I further certify, based on such review and on the standard of care for such projects, that the Stormwater Pollution Control Plan has been prepared in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, the Stormwater Quality Manual, as amended, and the conditions of the general permit, and that the controls required for such Plan are appropriate for the site. I further certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement in this certification may subject me to sanction by the Department and/or be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

(10) Plan Review and Certification by a District for Locally Approvable Projects

For locally approvable Plans not reviewed in accordance with Section 3(*b*)(11), below, the registrant has submitted to the commissioner a written certification by the appropriate regional District for the review of the Stormwater Pollution Control Plan pursuant to Appendix E, which, at a minimum, complies with the following requirements:

(A) the Plan Review Certification must be signed by the District. Information on the District review process is outlined in the Memorandum of Agreement provided in Appendix E. In cases where the District is unable to complete review of the Plan within the time limits

specified in the Memorandum of Agreement in Appendix E, a notice to that effect signed by the District may be submitted in lieu of the certification.

(B) the Stormwater Pollution Control Plan has been prepared in accordance with the requirements of Section 5(*b*) of the general permit.

(11) Plan Review and Certification by a Qualified Soil Erosion and Sediment Control Professional and Qualified Professional Engineer for Locally Approvable Projects

For those Plans not reviewed in accordance with Section 3(*b*)(10), above, the registrant has submitted to the commissioner a written certification by a qualified professional engineer or a qualified soil erosion and sediment control professional in accordance with the following requirements:

(A) for projects disturbing more than one acre and less than fifteen (15) acres, such qualified soil erosion and sediment control professional or qualified professional engineer:

(i) is not an employee, as defined by the Internal Revenue Service in the Internal Revenue Code of 1986, of the registrant; and

(ii) has no ownership interest of any kind in the project for which the registration is being submitted.

(B) for projects disturbing fifteen (15) acres or more, such qualified soil erosion and sediment control professional or qualified professional engineer:

(i) is not an employee, as defined by the Internal Revenue Service in the Internal Revenue Code of 1986, of the registrant;

(ii) did not engage in any activities associated with the preparation, planning, designing or engineering of such plan for soil erosion and sediment control or plan for stormwater management systems on behalf of such registrant;

(iii) is not under the same employ as any person who engaged in any activities associated with the preparation, planning, designing or engineering of such plans and specifications for soil erosion and sediment control or plans and specifications for stormwater management systems on behalf of such registrant; and

(iv) has no ownership interest of any kind in the project for which the registration is being submitted.

(C) The qualified professional engineer or qualified soil erosion and sediment control professional signing the certification has, at a minimum, completely and thoroughly reviewed this general permit and the following regarding the discharges to be authorized under such general permit:

(i) all registration information provided in accordance with Section 4(*c*)(1) of such general permit;

(ii) the site, based on a site inspection;

(iii) the Stormwater Pollution Control Plan;

(iv) the Guidelines;

(v) the Stormwater Quality Manual, if applicable; and

(vi) all non-engineered and engineered stormwater management systems, including any plans and specifications and any Department approvals regarding such stormwater management systems.

(D) Affirmative Determination

(i) The qualified soil erosion and sediment control professional signing the certification must have made an affirmative determination, based on the review described in section 3(*b*)(11)(C) of this general permit that:

(a) the Stormwater Pollution Control Plan prepared and certified pursuant to the registration is adequate to assure that the project or activity authorized under this general permit, if implemented in accordance with the Stormwater Pollution Control Plan, will comply with the terms and conditions of such general permit; and

(b) all non-engineered stormwater management systems:

(*1*) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual;

(*2*) will function properly as designed;

(*3*) are adequate to ensure compliance with the terms and conditions of this general permit; and

(*4*) will protect the waters of the state from pollution.

(ii) The qualified professional engineer signing the certification must have made an affirmative determination, based on the review described in section 3(*b*)(11)(C) of this general permit that:

(a) the Stormwater Pollution Control Plan prepared and certified pursuant to the registration is adequate to assure that the activity authorized under this general permit, if implemented in accordance with the Stormwater Pollution Control Plan, will comply with the terms and conditions of such general permit; and

(b) all non-engineered and engineered stormwater management systems:

(*1*) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual;

(*2*) will function properly as designed;

(*3*) are adequate to ensure compliance with the terms and conditions of this general permit; and

(*4*) will protect the waters of the state from pollution.

(E) The qualified professional engineer or qualified soil erosion and sediment control professional shall, provided it is true and accurate, certify to the following statement:

"I hereby certify that I am a qualified professional engineer or qualified soil erosion and sediment control professional, or both, as defined in the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and as further specified in sections 3(*b*)(11)(A) and (B) of such general permit. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT ADDRESS OF PROJECT OR ACTIVITY]. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(*b*)(11)(C) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I further certify that I have made the affirmative determination in accordance with Sections 3(*b*)(11)(D)(i) and (ii) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

(12) Plan Review and Certification for Projects Conducted by State Agencies

For projects conducted by a state agency (e.g. DOT, DAS, etc.), the registering agency has submitted to the commissioner a written certification by a qualified professional engineer or a qualified soil erosion and sediment control professional in accordance with the following requirements:

(A) the registering agency or another state agency has developed a process to establish a list of qualified professional engineers and qualified soil erosion and sediment control professionals for which the process to qualify has been approved in writing by the commissioner;

(B) the qualified professional engineer or qualified soil erosion and sediment control professional reviewing and certifying the Plan is included on the list prepared by a state agency and for which the process to establish the list has been approved by the commissioner pursuant to Section 3(*b*)(12)(A), above;

(C) the qualified professional engineer or qualified soil erosion and sediment control professional signing the certification has, at a minimum, completely and thoroughly reviewed this general permit and the following regarding the discharges to be authorized under such general permit:

(i) all registration information provided in accordance with Section 4(*c*)(2) of such general permit;

(ii) the site, based on a site inspection;

(iii) the Stormwater Pollution Control Plan;

(iv) the Guidelines;

(v) the Stormwater Quality Manual, if applicable; and

(vi) all non-engineered and engineered stormwater management systems, including any plans and specifications and any Department approvals regarding such stormwater management systems.

(D) Affirmative Determination

(i) The qualified soil erosion and sediment control professional signing the certification must have made an affirmative determination, based on the review described in section 3(*b*)(12)(C) of this general permit that:

(a) the Stormwater Pollution Control Plan prepared and certified pursuant to the registration is adequate to assure that the project or activity authorized under this general permit, if implemented in accordance with the Stormwater Pollution Control Plan, will comply with the terms and conditions of such general permit; and

(b) all non-engineered stormwater management systems:

(*1*) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual;

(*2*) will function properly as designed;

(*3*) are adequate to ensure compliance with the terms and conditions of this general permit; and

(*4*) will protect the waters of the state from pollution.

(ii) The qualified professional engineer signing the certification must have made an affirmative determination, based on the review described in section 3(*b*)(12)(C) of this general permit that:

(a) the Stormwater Pollution Control Plan prepared and certified pursuant to the registration is adequate to assure that the activity authorized under this general permit, if implemented in accordance with the Stormwater Pollution Control Plan, will comply with the terms and conditions of such general permit; and

(b) all non-engineered and engineered stormwater management systems:

(*1*) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual;

(*2*) will function properly as designed;

(*3*) are adequate to ensure compliance with the terms and conditions of this general permit; and

(*4*) will protect the waters of the state from pollution.

(E) The qualified professional engineer or qualified soil erosion and sediment control professional shall, provided it is true and accurate, certify to the following statement:

"I hereby certify that I am a qualified professional engineer or qualified soil erosion and sediment control professional, or both, as defined in the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and as further specified in sections 3(*b*)(12)(A) and (B) of such general permit. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT ADDRESS OF PROJECT OR ACTIVITY]. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(*b*)(12)(C) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I further certify that I have made the affirmative determination in accordance with Sections 3(*b*)(12)(D)(i) and (ii) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

(F) Projects conducted by a state agency under this subparagraph (Section 3(*b*)(12)) shall be submitted in accordance with the requirements in Sections 3(*c*), 3(*g*)(1)(B) and 4(*c*)(2)(A)(i).

(13) New Discharges to Impaired Waters

(A) For impaired waters identified in the State's most recent Integrated Water Quality Report, new stormwater discharges proposed in a registration submitted under this general permit that will discharge directly to such waters must comply with the requirements of (13)(B), below, if such report indicates the cause or potential cause of the impairment as one of the following:

(i) Site Clearance (Land Development or Redevelopment)

(ii) Post-Development Erosion and Sedimentation

(iii) Source Unknown (if cause of impairment is Sedimentation/Siltation)

(B) Such stormwater discharge is authorized if the permittee complies with the requirements of Section 5(*b*)(3) of this permit and receives a written affirmative determination from the commissioner that the discharge meets the requirements of that section. In such case, the permittee must keep a copy of the written determination onsite with the Plan. If the permittee does not receive such affirmative determination, the construction activity is not authorized by this general permit and must obtain an individual permit.

(14) Solar Arrays

For constructions activities associated with the development of a solar array that is locally exempt, as those respective terms are defined in Section 2, in addition to the other requirements of this general permit a Permittee shall also comply with the requirements in Appendix I.

(15) Cold Water Stream Habitat

Unless otherwise authorized in writing by the Commissioner, a Permittee shall maintain a one-hundred (100) foot buffer of undisturbed soil and well-established vegetation between any construction activity and any stream, river, or tributary that is included within a Cold Water Stream Habitat as defined at: https://portal.ct.gov/DEEP/Water/Inland-Water-Monitoring/Cold-Water-Stream-Habitat-Map.

(16) Other Requirements for Authorization

The following requirements for authorization shall apply to all projects:

(A) Prior to commencement of any construction activity, the Permittee shall conduct a preconstruction meeting with the qualified professional who designed the project, the qualified inspector who will be conducting inspections, and all site contractors and subcontractors to be involved in construction. Such meeting shall convey the design, stormwater control measures, erosion and sediment controls, plan implementation and routine site inspections, and contract requirements for the project prior to earth disturbance. Such meeting shall also include a site walk of the project site. In the case of solar arrays and any other projects that may be reviewed and/or inspected by a District, the preconstruction meeting and site walk shall also include the appropriate District personnel. The Permittee shall ensure that the date of such meeting and a report summarizing the meeting shall be prepared and retained in the Permittee's Plan.

(B) The following contractor certification shall be signed by all contractors and subcontractors that will perform construction activities on the site that have the potential to cause pollution of the waters of the State:

"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this general permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for the site."

Such signed certifications shall be maintained with the Plan on-site at all times.

(C) The designing qualified professional shall conduct the Plan Implementation Inspection(s) pursuant to Section 5(*b*)(4)(A) and shall submit such Plan Implementation Inspection report(s) to the commissioner confirming compliance with the general permit and proper initial implementation of all control measures designated in the Plan for the initial phase of construction. In the case of solar arrays and any other projects that may be reviewed and/or inspected by a District, the Plan Implementation Inspection(s) shall also include the appropriate District personnel.

(D) For locally approvable projects, the permittee shall indicate whether any financial assurance was required by the town in which the project is being conducted and, if so, indicate what type of assurance was required and in what amount.

(E) Nothing in this subsection or permit shall be construed to authorize District personnel, a qualified soil erosion and sediment control professional or a qualified professional engineer to engage in any profession or occupation requiring a license under any other provision of the general statutes without such license.

(F) Failure to comply with any provisions of Section 3(*b*)(16) is a violation of this general permit and shall be grounds for the commissioner to revoke authorization.

(G) Specific Provisions Applicable to Projects Conducted by State Agencies

(i) Permittee shall conduct a preconstruction meeting with the contractor that conveys the design, stormwater control measures, plan implementation and routine site inspections, erosion and sediment controls, and contract requirements for the project prior to earth disturbance. Such meeting shall include a site walk of the project site.

(ii) The DOT District Engineer, District Environmental Coordinator, or the designated employee of another state agency shall conduct the Plan Implementation Inspection(s) pursuant to Section 5(*b*)(4)(A) of the general permit and shall submit such Plan Implementation Inspection report(s) to the Commissioner confirming compliance with the general permit and proper initial implementation of all control measures designated in the Plan for the initial phase of construction.

(iii) The State is not required to provide evidence of financial assurance.

(c) Registration

Pursuant to the "Registration Requirements" section (Section 4) of this general permit, a completed registration with respect to the construction activity shall be filed with the commissioner.

(d) Small Construction

For construction projects with a total disturbance of between one and five acres, the permittee shall adhere to the erosion and sediment control land use regulations of the municipality in which the construction activity is conducted, as well as the Guidelines and the Stormwater Quality Manual.

No registration or Plan review and certification shall be required for such construction activity provided a land-use commission of the municipality (i.e. planning/zoning, wetland, conservation, etc) reviews and issues a written approval of the proposed erosion and sediment control measures, pursuant to the requirements of section 22a-329 of the Connecticut General Statutes. In the absence of a municipal commission to review and approve such activity, the permittee shall register with the DEEP under the requirements for a Locally Exempt Project and comply with all applicable conditions of this general permit.

(e) Geographic Area

This general permit applies throughout the State of Connecticut.

(f) Effective Date and Expiration Date of this General Permit

This General Permit shall be effective at 12:00 a.m. on December 31, 2020. The provisions of this General Permit shall expire as of 11:59 p.m. on December 30, 2025.

(g) Effective Date of Authorization

A construction activity is not authorized by this general permit unless a registration has been approved by the Commissioner and the following conditions have been met:

(1) General Timelines

(A) for locally approvable projects, sixty (60) days have elapsed after the submission of a complete and sufficient registration form required by Section 4(*c*) of the general permit, or

(B) for locally exempt projects with a total disturbed area of under fifteen (15) acres, sixty (60) days have elapsed after the submission of a complete and sufficient registration form required by Section 4(*c*), or

(C) for locally exempt projects with a total disturbed area equal to or more than fifteen (15) acres, ninety (90) days have elapsed after the submission of a complete and sufficient registration form required by Section 4(*c*) of the general permit.

(2) Exceptions to Authorization Timelines

If one of the following conditions applies, that condition shall supersede those of subsection (1), above:

(A) for sites for which the registration and Plan availability and review provisions of Section 4(*e*) of the general permit are completed prior to the elapse of the authorization periods in subdivision (1), above, the commissioner may authorize the activity upon such completion, or

(B) for sites for which the conditions of Section 3(*b*)(2), 3(*b*)(13) or Section 5(*a*)(2) of the general permit apply, the activity is authorized only upon the date of the commissioner's affirmative determination and/or approval of a registration, or

(C) for sites authorized by any previous version of this general permit and for which no Notice of Termination has been submitted pursuant to the "Termination Requirements" of that general permit, the activity is authorized effective December 31, 2020. Authorization under this general permit shall cease if a re-registration form is not submitted within one hundred twenty (120) days of the effective date of this general permit.

(h) Revocation of an Individual Permit

No person shall seek authorization under this general permit for a construction activity authorized by an individual permit. If a construction activity is eligible for authorization under this general permit and such activity is presently authorized by an individual permit, the existing individual permit may be revoked by the commissioner upon a written request by the permittee. If the commissioner revokes such individual permit in writing, such revocation shall take effect on the effective date of authorization of such activity under this general permit.

(i) Issuance of an Individual Permit

If the commissioner issues an individual permit under section 22a-430 of the Connecticut General Statutes, authorizing a construction activity authorized by this general permit, this general permit shall cease to authorize that activity beginning on the date such individual permit is issued.

Section 4. Registration Requirements

(a) Who Must File a Registration

With the exception noted in the "Small Construction" section (Section 3(*d*)) of this general permit, any person or municipality which initiates, creates, originates or maintains a discharge described in the "Eligible Activities" section (Section 3(*a*)) of this general permit shall file with the commissioner a registration form (or, for existing permittees, a re-registration form) that meets the requirements of the "Contents of Registration" section (Section 4(*d*)) of this general permit (or a re-registration form) and the applicable fee within the timeframes and in the amounts specified in Sections 4(*c*) and 4(*d*)(1)(A), respectively. Any such person or municipality filing a registration remains responsible for maintaining compliance with this general permit.

(b) Scope of Registration

Each registration shall be limited to the discharge at or from one site; no registration shall cover discharges at or from more than one site.

(c) Registration Procedure

(1) Locally Approvable Projects

The registration must:

(A) Be electronically submitted, along with all required elements in subsections (B) through (E), below, at least sixty (60) days prior to the planned commencement of the construction activity. Failure to include any of these required submissions shall, among other potential reasons, be grounds to reject the registration.

(B) Include the electronic Registration Form (available at www.ct.gov/deep/stormwater).

(C) Include any additional forms and information that may be required pursuant to the "Requirements for Authorization" section (Section 3(*b*) of the general permit) regarding compliance and/or consistency with the Coastal Management Act, Impaired Waters (including TMDL requirements), Endangered and Threatened Species, and Aquifer Protection Areas.

(D) Include an electronic copy of the Stormwater Pollution Control Plan. The electronic Plan shall be in Adobe™ PDF format or similar publicly available format in common use. **DO NOT INCLUDE** in this electronic copy any pages or other material that do not pertain to stormwater management or erosion and sediment control (such as electrical and lighting plans, boundary or lot surveys, building plans, non-stormwater related detail sheets, etc.).

(E) Include a Plan Review Certification in accordance with the plan review certification requirements of either Section 5(*b*)(10) or 5(*b*)(11) of the general permit.

(2) Locally Exempt Projects

The registration must be electronically submitted, along with all required elements in subsections (B), (C) and (D) of this section. The sixty (60) or ninety (90) day periods cited in subparagraph (A) of this subdivision shall not begin until all required elements have been submitted. Failure to include any of these required submissions shall be grounds to reject the registration. A registration shall:

(A) Be submitted at least:

(i) sixty (60) days prior to the planned commencement of the construction activity if the site has a total disturbance of between one (1) and fifteen (15) acres; ***or***

(ii) ninety (90) days prior to the planned commencement of construction activity if the site:

(a) has a total disturbance greater than fifteen (15) acres;

(b) discharges to a tidal wetland (that is not a fresh-tidal wetland) within 500 feet of the discharge point; ***or***

(c) is subject to the impaired waters provisions of Section 3(*b*)(13) of the general permit.

(B) Include the electronic Registration Form (available at www.ct.gov/deep/stormwater).

(C) Include any additional forms and information that may be required pursuant to Section 3(*b*)) of the general permit, "Requirements of Authorization", regarding compliance and/or consistency with the Coastal Management Act, Impaired Waters (including TMDL requirements), Endangered and Threatened Species, Solar Array provisions and Aquifer Protection.

(D) Include an electronic copy of the Stormwater Pollution Control Plan (Plan) (or a web address where the electronic Plan can be downloaded) for the commissioner's review. The electronic Plan shall be in Adobe™ PDF format or similar publicly available format in common use. **DO NOT INCLUDE** in this electronic copy any pages or other material that do not pertain to stormwater management or erosion and sediment control (such as electrical and lighting plans, A-2 boundary or similar lot surveys, building plans, non-stormwater related detail sheets, etc.).

(3) Re-Registration of Existing Projects

(A) *Re-Registration*. In order for discharges to continue to be authorized, a Permittee with a registration previously approved by the Commissioner under any previous version of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and for which no Notice of Termination has been submitted pursuant to the "Termination Requirements" of that general permit shall submit a re-registration. Any such registration shall:

(i) be submitted no later than one hundred twenty (120) days after the effective date of this general permit using an electronic Re-Registration Form (available at www.ct.gov/deep/stormwater) pursuant to Section 4(*c*)(3) of the general permit; and

(ii) be accompanied by the fee set forth in Section 4(*d*)(1)(A)(iii) of the general permit unless that section provides for the waiver of such fee. Resubmission of a Permittee's Plan is not required with a re-registration provided, however, that such Plan shall be provided to, if requested by, the commissioner. Such Plan shall be provided within the time frame provided for in any request, or if no timeframe is provided, within thirty (30) days of the date of any such request.

(B) *Existing Projects that are not re-registered.* Discharges at or emanating from a site, for a Permittee with a registration previously approved by the Commissioner, that is not re-registered in accordance with this section shall no longer be authorized. Any re-registration

received more than one hundred twenty (120) days after the effective date of this general permit shall be considered to be a new registration, and shall not be eligible for any exemption from, or waiver of, any condition or requirement of this general permit, as specified in this section, and shall instead be required to comply with this general permit as if it were a new project, i.e., a project that had not been previously registered.

(C) *Exemption for Existing Projects Upon Re-Registration.* A Permittee that submits a re-registration in compliance with this section shall, except as provided in this section, comply with the terms and conditions of this general permit, including, but not limited to, the Plan in effect for the site. Any such Permittee shall be exempt from compliance with Sections 3(*b*)(15) and 5(*b*)(2)(D)(vi) of this general permit and, for a Permittee submitting a re-registration for construction of a solar array, shall be exempt from paragraphs (1) and (2) of Section I, Design and Construction requirements, in Appendix I and Section II, Design requirements for post-constriction stormwater management measures in Appendix I.

Note: For clarification purposes, the provisions of this general permit, including any updates to a Permittee's Plan, shall not apply retroactively to construction activities that may have already commenced – or been completed - before a Permittee submits a re-registration pursuant to section 4(*c*)(3) of this general permit. For example, the plan implementation inspections required by Section 5(*b*)(4)(A) of this general permit would not be applicable to a phase of construction already begun at the time a re-registration is submitted. By contrast, compliance with those same plan implementation inspection requirements would be required for each phase of construction that commences after a re-registration is submitted.

(4) Latest Date for New Registrations

Unless another date is specified by the Commissioner on the Department's Internet website (www.ct.gov/deep/stormwater), no person shall submit a registration under this general permit on or after October 1, 2025.

(d) Contents of Registration

(1) Fees

(A) Registration Fee

A registration, if required, shall not be deemed complete unless the registration fee has been paid in full.

(i) Locally Approvable Projects

A registration fee of $625.00 shall be submitted to the Department with the registration form.

(ii) Locally Exempt Projects

A registration fee shall be submitted with a registration form as follows:

(a) For sites with total disturbance of one (1) or more acres, but less than fifteen (15) acres, the fee shall be $3,000.

(b) For sites with total disturbance equal to or greater than fifteen (15) acres and less than fifty (50) acres, the fee shall be $4,000.

(c) For sites with total disturbance equal to or greater than fifty (50) acres, the fee shall be $5,000.

The fees for municipalities shall be half of those indicated in subsections (a), (b) and (c) above pursuant to section 22a-6(b) of the Connecticut General Statutes. State and Federal agencies shall pay the full fees specified in this subsection.

(iii) Re-registration

(a) For sites that registered under the previous version of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities prior to August 1, 2019 and for which no Notice of Termination has been submitted pursuant to the "Termination Requirements" section (Section 6), the re-registration fee shall be $625 payable with submission of the re-registration form within one hundred twenty (120) days from the effective date of this general permit. If a Notice of Termination is submitted prior to January 1, 2020, no re-registration or associated fee are required.

(b) For sites that registered under the previous version of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities on or after August 1, 2019 and for which no Notice of Termination has been submitted pursuant to the "Termination Requirements" section (Section 6), the permittee shall re-register and there is no re-registration fee.

(B) The registration fee shall be paid electronically or by check or money order payable to the Department of Energy & Environmental Protection in accordance with the instructions on the registration form.

(C) The registration fee is non-refundable.

(2) Registration Form

A registration shall be filed electronically on forms prescribed and provided by the commissioner (available at: www.ct.gov/deep/stormwater).

A registration shall include, but not be limited to, the following:

(A) Legal name, address, email address, and telephone number of the registrant. If the registrant is a person (as defined in Section 2 of this permit) transacting business in Connecticut and is registered with the Connecticut Secretary of the State, provide the exact name as registered with the Connecticut Secretary of the State.

(B) Legal name, address, email address, and telephone number of the owner of the property on which the construction activity will take place.

(C) Legal name, address, email address, and telephone number of the primary contact for departmental correspondence and inquiries, if different from the registrant.

(D) Legal name, address, email address, and telephone number of the developer of the property on which the construction activity is to take place.

(E) Legal name, address, email address, and daytime and off-hours telephone numbers of the general contractor(s) or other representative(s), if different from the developer.

(F) Legal name, address, email address, and telephone number of any consultant(s), engineer(s) or landscape architect(s) retained by the permittee to prepare the registration and Stormwater Pollution Control Plan.

(G) Location address or description of the site for which the registration is filed.

(H) The estimated duration of the construction activity.

(I) Indication of the normal working hours at the site.

(J) A brief description of the construction activity, including, but not limited to:

(i) Total number of acres to be disturbed, regardless of phasing.

(ii) Verification that construction is in accordance with the Guidelines and local erosion and sediment control ordinances, where applicable.

(iii) For sites in the Coastal Boundary, documentation that the DEEP Office of Long Island Sound Programs or local governing authority has issued a coastal site plan approval or a determination that the project is exempt from coastal site plan review (see Appendix D) in accordance with section 22a-92 and 22a-93(15) of the Connecticut General Statutes.

(iv) Documentation that the construction activity will not threaten the continued existence of any species listed pursuant to section 26-306 of the Connecticut General Statutes as endangered or threatened and will not result in the destruction or adverse modification of habitat designated as essential to such species (see Appendix A).

(v) For sites discharging to certain impaired waters, as specified in Section 3(*b*)(13) of the general permit, documentation that the construction activity meets the requirements of that section and Section 5(*b*)(3) of the general permit for authorization under this general permit.

(vi) Verification that the construction activity is not located within an aquifer protection area (see Appendix C) as mapped under section 22a-354b of the Connecticut General Statutes or, if it is located within an aquifer protection area, that the construction activity will comply with regulations adopted pursuant to section 22a-354i of the Connecticut General Statutes.

(vii) For a proposed locally approvable project, a plan review certification from the appropriate District, qualified soil erosion and sediment control professional, and/or qualified professional engineer in accordance with Section 5(*b*)(10) or (11) or a notice from the District that they were unable to complete the Plan review within the time limits specified in the Memorandum of Agreement in Appendix E.

(viii) For construction activities within one-hundred (100) feet of any stream, river, or tributary that is included within a Cold Water Stream Habitat, as may be authorized by the Commissioner pursuant to Section 3(b)(15) of this general permit, a completed Fisheries Consultation Form or documentation of official interagency coordination between the Fisheries Division and other state agency staff.

(K) A brief description of the stormwater discharge, including:

(i) The name of the municipal separate storm sewer system or immediate surface water body or wetland to which the stormwater runoff will discharge;

(ii) Verification of whether or not the site discharges to a tidal wetland (that is not a fresh-tidal wetland) within 500 feet of the discharge point, to a high quality water or to an impaired water with or without a TMDL;

(iii) The name of the watershed or nearest waterbody to which the site discharges.

(iv) Location of the stormwater discharge(s) including latitude and longitude.

(L) The total effective impervious cover for the site before and after the proposed construction activity.

(M) Documentation that the proposed construction activity has been reviewed for consistency with state Historic Preservation statutes, regulations, and policies including identification of any potential impacts on property listed or eligible for listing on the Connecticut Register of Historic Places. A review conducted for an Army Corps of Engineers Section 404 wetland permit would meet this qualification. Refer to Appendix G for guidance on conducting the required review.

(N) An electronic copy of their Plan. The electronic Plan shall be in Adobe™ PDF format or similar publicly available format in common use. **DO NOT INCLUDE** in this Plan any pages or other material that do not pertain to stormwater management or erosion and sediment control (such as electrical and lighting plans, boundary or lot surveys, building plans, non-stormwater related detail sheets, etc.).

(O) The certification of the registrant and of the individual or individuals responsible for actually preparing the registration, in accordance with Section 3(*b*)(8) of the general permit.

(P) A design certification must be signed by a professional engineer or, where appropriate, a landscape architect in accordance with Section 3(*b*)(9) of the general permit.

(Q) For registrations for locally approvable projects a review certification must be signed by either: (i) a District representative in accordance with Section 3(*b*)(10) of the general permit, or (ii) a qualified soil erosion and sediment control professional and/or qualified professional engineer in accordance with either Section 3(*b*)(11) of the general permit.

If the registrant is not capable of submitting electronically, contact the DEEP stormwater staff at DEEP.stormwaterstaff@ct.gov.

(3) Re-Registration Form

For sites previously registered under any previous version of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and for which no Notice of Termination has been submitted pursuant to the "Termination Requirements" in Section 6 of the general permit, a re-registration is required. Such re-registration shall be filed electronically on forms prescribed and provided by the commissioner (available at: www.ct.gov/deep/stormwater) and shall include, but not be limited to, the following:

(A) Legal name, address, email address, and telephone number of the registrant. If the registrant is a person transacting business in Connecticut and is registered with the Connecticut

Secretary of the State, provide the exact name as registered with the Connecticut Secretary of the State.

(B) The previously issued permit number (beginning with GSN).

(C) Legal name, address, email address, and telephone number of the owner of the property on which the construction activity will take place.

(D) Legal name, address, email address, and telephone number of the primary contact for departmental correspondence and inquiries, if different from the registrant.

(E) Legal name, address, email address, and telephone number of the developer of the property on which the subject construction activity is to take place.

(F) Legal name, address, email address, and daytime and off-hours telephone numbers of the general contractor(s) or other representative(s), if different from the developer.

(G) Legal name, address, email address, and telephone number of any consultant(s) or engineer(s) retained by the permittee to prepare the registration and Stormwater Pollution Control Plan.

(H) Location address or description of the site for which the re-registration is filed.

(I) Indication of the normal working hours at the site.

(J) The estimated duration of the construction activity.

(K) The signature of the registrant and of the individual or individuals responsible for actually preparing the re-registration, each of who shall certify in writing as follows:

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT ADDRESS OF PROJECT OR ACTIVITY] and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that all designs and plans for such activity meet the current terms and conditions of the general permit in accordance with Section 5(b)(5)(C) of such general permit and that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(*b*)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

(e) How to Submit a Registration

A registration or re-registration (available at: www.ct.gov/deep/stormwater) shall be filed electronically with the commissioner in accordance with Section 4(*d*)(2) or (3) of the general permit. If a permittee is not capable of submitting electronically, contact the DEEP stormwater staff at DEEP.stormwaterstaff@ct.gov.

(f) Availability of Registration and Plan

The commissioner shall post on the DEEP website a list of registrations submitted. Plans will be posted electronically with the corresponding registration. On or before thirty (30) days from the date such registration is accessible to the public through posting by the commissioner, members of the public may review and comment on a registration and/or Plan. This provision shall not apply to Permittee's submitting a re-registration for sites registered under any previous version of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and for which no Notice of Termination has been submitted pursuant to the "Termination Requirements" in Section 6 of the general permit.

(g) Additional Information

The commissioner may require a Permittee to submit additional information that the commissioner deems necessary to evaluate compliance of the subject construction activity with the requirements for authorization under this general permit.

(h) Additional Notification

(1) No later than five (5) days after submitting a registration to the commissioner, the Permittee shall provide the following additional notifications:

(A) For discharges authorized by this general permit to a regulated municipal separate storm sewer system, a notification that a registration has been submitted to the Department shall also be submitted to the owner and operator of that system.

(B) For discharges authorized by this general permit to a DOT separate storm sewer system, a copy of the registration and all attachments thereto shall also be submitted to the DOT upon request.

(C) For discharges within a public drinking water supply watershed or aquifer protection area, a copy of the registration and the Plan described in subsection 5(*b*) of this general permit shall be submitted to the water company.

(D) For discharges to river components and tributaries which have been designated as Wild and Scenic under the Wild and Scenic Rivers Act, a copy of the registration and the Plan described in 5(*b*) of this general permit shall be submitted to the applicable Wild and Scenic Coordinating Committee. Please refer to Appendix H for additional guidance.

(2) The Permittee shall ensure that a copy of the registration submitted to the Commissioner and the Plan shall be available upon request to the local inland wetlands agency established pursuant to section 22a-42 of the Connecticut General Statutes, or its duly authorized agent.

(i) Action by Commissioner

(1) The commissioner may reject without prejudice a registration that the commissioner deems insufficient. For example, if it does not satisfy the requirements of the "Contents of Registration"

section (subsection 4(*d*)) of this general permit. Any registration refiled after such a rejection shall be accompanied by the fee specified in the "Fees" subsection (subsection 4(*d*)(1)) of this general permit.

(2) The commissioner may disapprove a registration if it does not comply with the requirements of this general permit or for any other reason provided for by law. For example, if it is inconsistent with the requirements for authorization under the "Requirements for Authorization" section (Section 3(*b*)) of this general permit, or an individual permit is required pursuant to Conn. Gen. Stat. § 22a-430b(c). Disapproval of a registration under this subsection shall constitute notice to the registrant that the subject construction activity must be authorized under an individual permit.

(3) Rejection or disapproval of a registration by the commissioner shall be in writing and state the reasons for such rejection or disapproval.

(4) Pursuant to Conn. Gen. Stat. § 22a-430b(c), the commissioner may require that a person or municipality obtain an individual permit, in which case, such person or municipality will be ineligible for authorization under this general permit.

(5) When approving a registration, the commissioner may include in any such approval any term or condition the commissioner deems necessary to protect human health and the environment..

Section 5. Conditions of this General Permit

The permittee shall comply with all of the requirements of this general permit at all times. In addition, a permittee shall be responsible for conducting authorized construction activities in accordance with the following conditions:

(a) General Conditions

(1) Structures and Dredging in Coastal and Tidal Areas

Any person who or municipality that discharges stormwater into coastal tidal waters for which a permit is required under section 22a-361 of the Connecticut General Statutes (structures and dredging) or section 22a-32 of the Connecticut General Statutes (Tidal Wetlands Act), shall obtain such permit(s) from the commissioner. A tidal wetland permit is required for any regulated activity conducted within a tidal wetland, including, but no limited to, the placement of any sediment upon a tidal wetland, whether it is deposited directly or indirectly.

(2) Discharges to Tidal Wetlands

Any site which has a post-construction stormwater discharge to a tidal wetland (that is not a fresh-tidal wetland) where such discharge is within 500 feet of the tidal wetland, shall discharge such stormwater through a system designed to retain and infiltrate the volume of stormwater runoff generated by 1 inch of rainfall on the site. If there are site constraints that would prevent retention of this volume on-site (e.g., brownfields, capped landfills, bedrock, elevated groundwater, etc.), documentation must be submitted, for the commissioner's review and written approval, which explains the site limitations and offers an alternative retention volume. In such cases, the portion of 1 inch that cannot be retained must be provided with additional stormwater treatment so as to protect water quality. Any such treatment shall be designed, installed and maintained in accordance with the Stormwater Quality Manual.

For sites unable to comply with this section, the commissioner, at the commissioner's sole discretion, may require the submission of an individual permit in lieu of authorization under this general permit.

(3) Toxicity to Aquatic and Marine Life/Risk to Human Health

Any discharge authorized under this general permit shall not cause pollution due to acute or chronic toxicity to aquatic and marine life, impair the biological integrity of aquatic or marine ecosystems, or result in an unacceptable risk to human health.

(4) Water Quality Standards

Any discharge authorized under this general permit shall not cause or contribute to an exceedance of the applicable Water Quality Standards in the receiving water.

(5) High Quality Waters

Any new or increased discharge authorized under this general permit to high quality waters shall be discharged in accordance with the Anti-Degradation Implementation requirements in the Water Quality Standards, section 22a-426-8 of RCSA.

(b) Stormwater Pollution Control Plan

All Permittees shall develop and maintain on-site a Stormwater Pollution Control Plan ("Plan" or "SWPCP") for the construction activity authorized by this general permit. Once the construction activity begins, the permittee shall perform all actions required by such Plan and shall maintain compliance with the Plan at all times. The permittee shall ensure that the design and implementation of the Plan minimizes: (1) soil erosion and sedimentation during and after construction; and (2) stormwater pollution from the site after construction is completed.

(1) Development and Contents of Plan

(A) The Plan shall consist of site plan drawings and a narrative. The Plan shall be prepared in accordance with sound engineering practices, and shall be consistent with the Guidelines, the Stormwater Quality Manual (available at http://www.ct.gov/deep/stormwater) and any applicable requirements of this general permit. The Plan shall also be consistent with any remedial action plan, closure plan or other plan required by any other DEEP permit.

(B) The Plan shall include, at a minimum, the following items:

(i) Site Plan

Site drawings indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, the location of major structural and non-structural controls (as specified in subsection 5(*b*)(2), below), the location of areas where stabilization practices are expected to occur, areas which will be vegetated following construction, surface waters, impaired waters (identifying those with and without a TMDL), high quality waters, inland wetlands, tidal wetlands, fresh-tidal wetlands, and locations where stormwater will be discharged to a surface water (both during and post-construction);

(ii) Site Description

(a) A narrative description of the nature of the construction activity;

(b) An estimate of the total area of the site and the total area of the site that is expected to be disturbed by construction activities;

(c) An estimate of the average runoff coefficient of the site after construction activities are completed;

(d) The name of the immediate receiving water(s) and the ultimate receiving water(s) of the discharges authorized by this general permit; and

(e) Extent of wetland acreage on the site.

(iii) Construction Sequencing

The Plan shall clearly identify the expected sequence of all construction activities on the site and corresponding erosion and sediment controls and shall include an estimated timetable for all construction activities, which shall be revised as necessary to keep the Plan current. Wherever practicable, site construction activities shall be phased to avoid the disturbance of over five acres at one time (or a lesser area of disturbance as required in Section 5(*b*)(3) of the general permit regarding "Impaired Waters". In addition, permanent stormwater control measures, including, but not limited to, stormwater basins should be constructed, where practicable, in the early phases of the construction sequence. The Plan shall clearly show the limits of total disturbance for the construction activity and for each phase.

(iv) Control Measures

The Plan shall include a description, in a separate narrative and on the site plan drawings, of control measures that will be implemented at the site to minimize the discharge of pollutants. Control measures shall be implemented in accordance with Section 5(*b*)(2) of the general permit. In addition, the following information shall be provided:

(a) Calculations supporting the design of sediment and floatables removal controls pursuant to Section 5(*b*)(2)(C)(ii)(b) of the general permit.

(b) Calculations supporting the design of velocity dissipation controls pursuant to Section 5(*b*)(2)(C)(ii)(c) of the general permit.

(v) Runoff Reduction and Low Impact Development (LID) Information

Where runoff reduction practices and/or LID measures are utilized, the following information shall be included in the site plan and narrative (refer to Appendix B for guidance):

(a) The location of the site's streams, floodplains, all wetlands, riparian buffers, slopes 3:1 and steeper, and vegetation identified for preservation and non-disturbance during construction such as forested areas, hay fields, and old fields;

(b) Natural drainage patterns, swales, and other drainage ways, that are not streams, floodplains, or wetlands;

(c) The location of all areas with soils suitable for infiltration[1] and areas of the site best suited for infiltration for the siting of runoff reduction practices and LID design measures;

1 Infiltration rates must be measured by a field permeability test. The measured field design infiltration rate is equal to one-half the field-measured infiltration rate.

(d) The location of all areas unsuitable or least suitable for infiltration for the siting of areas of development/building;

(e) The location of all post-construction stormwater management measures, runoff reduction practices and LID design measures developed pursuant to subsection 5(*b*)(2)(C)(i) of the general permit;

(f) Identification of areas inappropriate for the infiltration of stormwater runoff from land uses with a significant potential for groundwater pollution;

(g) A narrative describing the nature, purpose, implementation and long-term maintenance of post-construction stormwater management measures, runoff reduction practices and LID design measures;

(h) Calculations, for measures developed pursuant to Section 5(*b*)(2)(C)(i) of the general permit, illustrating the retention of the water quality volume or half the water quality volume for the site, as applicable, including a discussion of the impact of any runoff reduction and/or LID practices on these calculations;

(i) A narrative describing any site constraints that prevent retention of the appropriate volume specified in Section 5(*b*)(2)(C)(i) of the general permit including: an explanation of the site limitations; a description of the runoff reduction practices implemented; an explanation of why the amount retained constitutes the maximum extent achievable; an alternative retention volume; and a description of the measures used to provide additional stormwater treatment for sediment, floatables and nutrients above the alternate volume up to the water quality volume; and

(j) Calculations showing the proposed effective impervious cover for the site and, where required or proposed for linear projects pursuant to Section 5(*b*)(2)(C)(i) of the general permit, each outfall drainage area.

(vi) Inspections

(a) Plan Implementation Inspections

The Plan shall include a Plan Implementation inspection checklist, a schedule for conducting inspections, and identification of the designing qualified professional (and District personnel, as appropriate) conducting such inspections and their responsibilities and procedures pursuant to subsection 5(*b*)(4)(A) of the general permit. The Plan shall also include documentation of the qualifications of the inspector and the findings, actions and results of all inspections conducted at the site. For inspection requirements for solar arrays (as defined in Section 2), see Appendix I.

(b) Routine Inspections

The Plan shall include a routine inspection checklist, schedule for conducting inspections, and identification of the qualified inspector(s) conducting the routine inspections and their responsibilities and procedures pursuant to subsection 5(*b*)(4)(B) of the general permit. The Plan shall also include documentation of the qualifications of the inspector(s) and the findings, actions and results of all inspections conducted at the site.

(c) For additional Plan Implementation and Routine Inspection requirements for solar arrays, see Appendix I.

(d) Inspection Checklists

The checklists required by (vi)(a) and (vi)(b) of this subparagraph shall include the information described in the checklist forms found at: www.ct.gov/deep/stormwater. Such inspection checklists shall comply with the requirements and conditions of Section 5(*b*)(4) of the general permit, and include a space for the qualified professional's signature and professional stamp.

(vii) Contractors

(a) The Plan shall clearly identify each contractor and subcontractor that will perform construction activities on the site that have the potential to cause pollution of the waters of the State. The Plan shall also include a copy of the certification statement pursuant to "Other Requirements for Authorization" in Section 3(*b*)(16) of the general permit, signed by each such contractor and subcontractor.

(b) Subdivisions

Where individual lots in a subdivision or other common plan of development are conveyed or otherwise the responsibility of another person or municipality, those individual lot contractors shall be required to comply with the provisions of this general permit and the Stormwater Pollution Control Plan, regardless of lot size or disturbed area. In such cases, the permittee shall provide a copy of the Plan to each individual lot contractor, obtain signed certifications pursuant to Section 3(*b*)(16)(B) of the general permit from such contractors and retain all signed certifications in the Plan.

(viii) Impaired Waters

For construction activities that discharge to impaired waters, as specified in "New Discharges to Impaired Waters" (Section 3(*b*)(13)), the Plan shall include a description of the provisions for controlling the construction and post-construction stormwater discharges to these waters pursuant to subsection 5(*b*)(3) below.

(2) Stormwater Control Measures

Control Measures are required Best Management Practices (BMPs) that the permittee must implement to minimize the discharge of pollutants from the permitted activity. The term "minimize" is defined in Section 2 of this general permit. The Permittee shall comply with the following requirements.

Control Measures shall be designed in accordance with the Guidelines, the Stormwater Quality Manual or the DOT Qualified Products List (https://portal.ct.gov/-/media/DOT/documents/dresearch/ConnDOT-Qualified-Product-List.pdf?la=en). Use of control measures to comply with the "Erosion and Sediment Controls" section (subsection (A) below) of this general permit that are not included in such references must be approved by the commissioner. The narrative and drawings of controls shall address the following minimum components:

(A) Erosion and Sediment Controls

(i) Soil Stabilization and Protection

The Plan shall include a narrative and drawings of interim and permanent soil stabilization practices for managing disturbed areas and soil stockpiles, including a schedule for implementing the practices. The Permittee shall ensure that existing vegetation is preserved to the maximum extent practicable and that disturbed portions of the site are minimized and stabilized throughout the duration of the construction activity at the site.

Regardless of any provisions for erosion control barriers prescribed in the Guidelines, the Permittee shall ensure that two rows of erosion control barriers are installed and maintained on sites with slopes equal to or greater than eight percent (8%) within the contributing drainage area to such barrier. Notwithstanding the foregoing, use of two rows of erosion control barriers shall not be required on the sites specified in this paragraph when: (i) the Commissioner determines, for a limited section or portion of such erosion control barriers, that it is necessary to accommodate animal crossing or animal movement; (ii) the Commissioner approves a Plan that includes an erosion control system whose performance is equivalent to, or exceeds, two rows of erosion control barriers; or (iii) for *linear projects*, the Commissioner has determined that two rows of erosion control barriers, when compared to one row, will cause greater adverse impact to wetlands, waters, or other sensitive resources. In such situation the Commissioner may approve a Plan with one row of erosion control barriers or an alternative erosion control system. When implementing this paragraph the Commissioner may consider the contributing disturbed area, drainage area, length of the slope, flow conditions to maintain sheet flow, the efficacy of the proposed barrier, any adverse impacts from the use of one or two rows of erosion control barriers, and any other factor the Commissioner deems necessary.

Where construction activities have permanently ceased or when final grades are reached in any portion of the site, stabilization and protection practices as specified in Chapter 5 of the Guidelines or as approved by the commissioner shall be implemented within seven days. Notwithstanding any provisions of the Guidelines, areas that will remain disturbed but inactive for at least fourteen calendar days shall receive temporary seeding or soil protection within seven days in accordance with the Guidelines unless site conditions warrant shorter time periods for these provisions.

Areas that will remain disturbed beyond the seeding season as identified in the Guidelines, shall receive long-term, non-vegetative stabilization and protection sufficient to protect the site through the winter. In all cases, stabilization and protection measures shall be implemented as soon as possible in accordance with the Guidelines or as approved by the commissioner.

Temporary or permanent vegetation or other ground cover shall be maintained at all times in all areas of the site, except those undergoing active disturbance, in order to prevent erosion and soil compaction during construction activities. All new temporary and permanent vegetation shall consist of native plant species. With respect to such vegetation, the Permittee shall not use chemical fertilization, herbicides, or pesticides except as necessary to establish such vegetation.

A reverse slope bench is required for any slope steeper than 3:1 (horizontal: vertical) that exceeds 15 feet vertically, except when engineered slope stabilization structures or measures are included or a detailed soil mechanics analysis has been conducted to

verify stability. Engineered analyses and measures must be designed by a CT licensed Professional Engineer with experience in geotechnical engineering or soil mechanics.

(ii) Wetland Protection

Where site disturbance occurs within fifty (50) feet upgradient of a wetland, wetlands, or waters as defined in Section 2 of the general permit, a double row of sediment barrier (e.g. hay bales, silt fence, wattles, etc.) shall be installed in accordance with the Guidelines between the disturbed area and any such downgradient wetland, wetlands or waters.

(iii) Structural Measures

The Plan shall include a narrative and drawings of structural measures to divert flows away from exposed soils, store flows or otherwise limit runoff and minimize the discharge of pollutants from the site. Unless otherwise specifically approved in writing by the commissioner, or if otherwise authorized by another state or federal permit, structural measures shall be installed on upland soils.

For points of discharge from disturbed sites with a total contributing drainage area of between two to five acres, a temporary sediment trap or temporary sediment basin shall be designed and installed in accordance with the Guidelines. For points of discharge from disturbed sites with a total contributing drainage area greater than five acres, a temporary sediment basin shall be designed and installed in accordance with the Guidelines. Such trap(s) or basin(s) must be maintained until final stabilization of the contributing area as defined in "Notice of Termination" (Section 6(*a*)).

The requirement for sediment traps or basins shall not apply to flows from off-site areas and flows from areas of the site that are either undisturbed or have undergone final stabilization, provided such flows are diverted around the temporary sediment trap or basin and are approved in writing by the commissioner.

(iv) Maintenance

The Plan shall include a narrative of the procedures to maintain, in good and effective operating condition, all erosion and sediment control measures, including vegetation, and all other protective measures identified in the Plan. Maintenance of all erosion and sediment controls shall be performed in accordance with the Guidelines, or more frequently as necessary.

(B) Dewatering Wastewaters

Dewatering wastewaters shall be managed in accordance with the Guidelines. Dewatering wastewaters discharged to surface waters shall be discharged in a manner that minimizes the discoloration of the receiving waters. The Plan shall include a narrative and drawings of the operational and structural measures that will be used to ensure that all dewatering wastewaters will not cause scouring or erosion or contain suspended solids in amounts that could reasonably be expected to cause pollution of surface waters of the State. Unless otherwise specifically approved in writing by the commissioner, or if otherwise authorized by another state or federal permit, dewatering measures shall be installed on upland soils.

No discharge of dewatering wastewater(s) shall contain or cause a visible oil sheen, floating solids, or foaming in the receiving water.

(C) Post-Construction Stormwater Management

The Plan shall include a narrative and drawings of measures that will be installed during the construction process to minimize the discharge of pollutants in stormwater discharges that will occur after construction operations have been completed. Post-construction stormwater management measures shall be designed and implemented in accordance with the Stormwater Quality Manual, the DOT Qualified Products List or as approved by the commissioner. Unless otherwise specifically provided by the commissioner in writing, or authorized by another state or federal permit, structural measures shall be placed on upland soils. The Plan shall include provisions to address the long-term maintenance of any post-construction stormwater management measure installed.

(i) Post-Construction Performance Standards

The permittee shall utilize runoff reduction practices (as defined in Section 2 of the general permit) to meet runoff volume requirements based on the conditions below.

(a) Redevelopment

For sites that are currently developed with an effective impervious cover of forty percent or more and for which the permittee is proposing redevelopment, the permittee shall design the site in such a manner as to retain on-site half the water quality volume (as defined in Section 2 of the general permit) for the site and provide additional stormwater treatment without retention for discharges up to the full water quality volume for sediment, floatables and nutrients to the maximum extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice. In cases where the permittee is not able to retain half the water quality volume (e.g., brownfields, capped landfills, bedrock, elevated groundwater, etc.), the permittee shall design the redevelopment to retain runoff volume to the maximum extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice. In such cases, additional stormwater treatment up to the full water quality volume is still required. Any such treatment shall be designed, installed and maintained in accordance with the Stormwater Quality Manual. If retention of half the water quality volume is not achieved, the permittee shall submit a report for the commissioner's review and written approval describing: the measures taken to maximize runoff reduction practices on the site; the reasons why those practices constitute the maximum extent achievable; the alternative retention volume; and a description of the measures used to provide additional stormwater treatment above the alternate volume up to the water quality volume.

(b) Linear Redevelopment

In the case of linear redevelopment projects (e.g. roadway reconstruction or widening or public utility rights of way) for the developed portion of the right of way: (1) for projects that may be unable to comply with the retention of the appropriate portion of the water quality volume specified in subparagraphs (a) and (c) of this subsection, the alternate retention and treatment provisions may also be applied as specified in such subparagraphs, or (2) for projects that will not increase the effective impervious cover within a given watershed, the permittee shall implement the additional stormwater treatment measures referenced in subsections (a) and (c) of this subsection, but will not be required to retain the appropriate portion of the water quality volume specified in such paragraphs.

(c) Other Development

The following performance standard applies to all sites that are currently undeveloped or are currently developed with less than forty percent effective impervious cover. For these sites, the permittee shall design the site to retain the water quality volume for the site. If there are site constraints that would prevent retention of this volume on-site (e.g., brownfields, capped landfills, bedrock, elevated groundwater, etc.), documentation must be submitted, for the commissioner's review and written approval, which: explains the site limitations; provides a description of the runoff reduction practices implemented; provides an explanation of why this constitutes the maximum extent achievable; offers an alternative retention volume; and provides a description of the measures used to provide additional stormwater treatment for sediment, floatables and nutrients above the alternate volume up to the water quality volume. In the case of linear projects that do not involve impervious surfaces (e.g. electrical transmission rights-of-way or natural gas pipelines), retention of the water quality volume is not required as long as the post-development runoff characteristics do not differ significantly from pre-development conditions.

(ii) Post-Construction Control Measures

(a) Runoff Reduction and Low Impact Development ("LID") Practices

The site design shall incorporate runoff reduction practices, low impact development ("LID") practices or other post-construction control measures to meet the performance standards in subsection (i) above, promote groundwater recharge and minimize post-construction impacts to water quality. Please refer to Appendix B for additional guidance information.

(b) Suspended Solids and Floatables Removal

The permittee shall install post-construction stormwater control measures designed to minimize the discharge of suspended solids and floatables (e.g. oil and grease, other floatable liquids, floatable solids, trash, etc.) from stormwater. A goal of 80 percent removal of the annual sediment load from the stormwater discharge shall be used in designing and installing such stormwater control measures. The Plan shall provide calculations supporting the capability of such measures in achieving this goal and any third-party verification, as applicable, of the sediment removal efficiencies of such measures. This goal is not intended to limit local approval authorities from requiring a higher standard pursuant to local requirements.

(c) Velocity Dissipation

Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow to receiving waters so that the natural physical and biological characteristics and functions of such waters are maintained and protected.

(D) Other Controls

The following additional controls shall be implemented:

(i) Waste Disposal

Best management practices shall be implemented to minimize the discharge of litter, debris, building materials, hardened concrete waste, or similar materials to waters of the State. A narrative of these practices shall be provided in the Plan. In addition, the dumping of liquid wastes in storm sewers is prohibited.

(ii) Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete, paint and other materials shall be conducted in a designated washout area. There shall be no surface discharge of washout wastewaters from this area. Such washout shall be conducted: (1) outside of any buffers and at least 50 feet from any stream, wetland or other sensitive resource; or (2) in an entirely self-contained washout system. The permittee shall clearly flag off and designate areas to be used for washing and conduct such activities only in these areas. The permittee shall direct all washwater into a container or pit designed such that no overflows can occur during rainfall or after snowmelt. At least once per week, the permittee shall inspect all of the containers or pits used for washout to ensure structural integrity, adequate holding capacity, and to check for leaks or overflows. If there are signs of leaks, holes or overflows in the containers or pits that could lead to a discharge, the permittee shall repair them prior to further use.

For concrete washout areas, the permittee shall remove hardened concrete waste whenever the hardened concrete has accumulated to a height of ½ of the container or pit or as necessary to avoid overflows. The permittee shall remove and dispose of such hardened concrete waste in accordance with the practices developed for "Waste Disposal" (see Section 5(*b*)(2)(D)(i) of this general permit).

A narrative of maintenance procedures and a record of maintenance and inspections shall be included in the Plan.

(iii) Off-site Vehicle Tracking/Dust Suppression

Off-site vehicle tracking of sediments and the generation of dust shall be minimized. Wet dust suppression shall be used, in accordance with section 22a-174-18(c) of the Regulations of Connecticut State Agencies, for any construction activity that causes airborne particulates. The volume of water sprayed for controlling dust shall be minimized so as to prevent the runoff of water. No discharge of dust control water shall contain a visible oil sheen, floating solids, visible discoloration, or foaming agents or cause a visible sheen, floating solids, visible discoloration, or foaming in any receiving waters.

(iv) Cleaning

All post-construction stormwater structures shall be cleaned of construction sediment and any remaining silt fence shall be removed upon stabilization of the site.

(v) Storage of Chemical and Petroleum Products

All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) shall be stored within an impermeable containment system that is free of gaps and cracks, can contain any leaks or spills and accumulated precipitation until the collected materials are detected and removed, and

which can hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment system. In addition, all chemicals and petroleum products shall be stored under a roofed area except for those chemicals stored in containers of 100 gallon capacity or more, in which case a roof is not required. Double-walled tanks satisfy the requirements of this paragraph for containment and roofing.

(vi) Cold Water Stream Habitat

For construction activities within one hundred (100) feet of any stream, river, or tributary that is included within a Cold Water Stream Habitat, as may be authorized by the Commissioner pursuant to Section 3(*b*)(15) of this general permit, any mitigation strategies authorized by the commissioner must be verified post-construction.

(3) Additional Control Measures for Impaired Waters

Construction activities discharging directly to impaired waters that do not comply with this subsection are not authorized by this general permit. For construction activities that discharge directly to impaired waters, as specified in "New Discharges to Impaired Waters" (Section 3(*b*)(13) of this general permit), the Plan shall include the following provisions:

(A) In lieu of the provisions regarding "Construction Sequencing" in Section 5(*b*)(1)(B)(iii) of this general permit, no more than 3 acres may be disturbed at any one time. For those areas for which construction activity will be temporarily suspended for a period of greater than 14 days, temporary stabilization measures shall be implemented within 3 days of such suspension of activity. For all areas, permanent stabilization shall be implemented within 30 days of disturbance; ***or***

(B) The Plan shall document that measures are in place to ensure that there will be no discharge to the impaired water from rain events up to a 2-year, 24-hour rain event while construction activity is occurring; ***or***

(C) For discharges to impaired waters with an established TMDL, the requirements for stormwater discharges specified in the TMDL shall be met, or:

(i) the Plan shall document that there is sufficient remaining Waste Load Allocation (WLA) in the TMDL to allow the discharge;

(ii) measures shall be implemented to ensure the WLA will not be exceeded; ***and***

(iii) stormwater discharges shall be monitored, if applicable, for any indicator pollutant identified in the TMDL for every rain event that produces a discharge to ensure compliance with the WLA.

(4) Inspections

All construction activities authorized by this general permit shall be inspected initially for Plan implementation and then weekly for routine inspections. Upon project completion and prior to submission of a Notice of Termination, post-construction and final stabilization inspections shall also be conducted. For inspections at solar arrays, see additional requirements in Appendix I.

(A) Plan Implementation Inspections

Prior to commencement of each phase of the construction activity on the site, the permittee shall contact the designing qualified professional and, for locally exempt projects including, but not limited to, solar arrays subject to Appendix I, the appropriate District to ensure that all required inspections are conducted. For each phase of construction, the site shall be inspected at least once within the first thirty (30) days of construction activity and at least three times, with seven (7) or more days between inspections, within the first ninety (90) days of construction activity to confirm compliance with the general permit and proper initial implementation of all control measures designated in the Plan for each phase of construction. The following conditions shall apply:

(i) for all projects not conducted by a state agency and which disturb more than one (1) acre, the inspector shall be someone who:

(a) is not an employee, as defined by the Internal Revenue Service in the Internal Revenue Code of 1986, of the registrant, and

(b) has no ownership interest of any kind in the project for which the registration is being submitted.

(ii) for projects conducted by a state agency and which disturb more than one (1) acre, the inspector shall be someone who:

(a) meets the requirements in subparagraph (i), above, or

(b) is included in the list of qualified professionals specified in Section 3(*b*)(12)(B) of the general permit.

(B) Routine Inspections

The permittee shall routinely inspect the site for compliance with the general permit, including, but not limited to, compliance with the Plan for the site, until a Notice of Termination under Section 6 of the general permit has been submitted to the Commissioner. Inspection procedures for these routine inspections shall comply with the following:

(i) The permittee shall maintain a rain gauge on-site to document rainfall amounts. At least once a week and within 24 hours of the end of a storm that generates a discharge, a qualified inspector (provided by the permittee), shall inspect, at a minimum, the following: disturbed areas of the construction activity that have not been finally stabilized; all erosion and sediment control measures; all structural control measures; all soil stockpile areas; all washout areas and locations where vehicles enter or exit the site. For storms that end on a weekend, holiday or other time after which normal working hours will not commence within 24 hours, a routine inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For storms of less than 0.5 inches, an inspection shall occur immediately upon the start of the subsequent normal working hours.

In areas of the site where temporary stabilization has been implemented, a routine inspection shall be conducted at least weekly until final stabilization has been achieved. Once all post-construction stormwater measures have been installed in accordance with the Post-Construction Stormwater Management section (subsection 5(*b*)(2)(C) of this general permit) and cleaned of any construction sediment or debris, a post-construction inspection shall be conducted in accordance with subsection (C), below. For sites that

have implemented final stabilization, a routine inspection shall be conducted in accordance with subsection (D), below.

(ii) During each routine inspection the qualified inspector(s) shall, among other things, evaluate the effectiveness of erosion and sediment controls, structural controls, stabilization practices, and any other controls implemented to prevent pollution and determine if it is necessary to install, maintain, or repair such controls and/or practices to improve the quality of stormwater discharge(s). In addition, during each routine inspections the site including, but not limited to, all of the areas noted in the preceding paragraph, shall be inspected for evidence of, or the potential for, pollutants discharging to waters, or entering the drainage system and impacts to the receiving waters. Locations where vehicles enter or exit the site shall also be inspected for evidence of off-site sediment tracking.

(iii) The qualified inspector conducting routine inspections shall prepare a report of each inspection. Each such report shall be retained as part of the Plan. A copy of each inspection report shall be submitted electronically in accordance with Section 5(*c*)(2) of the general permit. This report shall summarize: the scope of the inspection; name(s) and qualifications of personnel conducting the inspection; the date(s) of the inspection; weather conditions including precipitation information; major observations relating to erosion and sediment controls and the implementation of the Plan; a description of the stormwater discharge(s) from the site; and any water quality monitoring performed during the inspection. The report shall be signed by the permittee or his/her authorized representative in accordance with the "Certification of Documents," see Section 5(*h*) of this general permit.

The report shall include a statement that, in the judgment of the qualified inspector(s) conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the Plan and permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions (as identified in the Guidelines) shall be implemented on site within 24 hours and incorporated into a revised Plan within three (3) calendar days of the date of inspection unless another schedule is specified in the Guidelines. Engineered corrective actions (as identified in the Guidelines) shall be implemented on site within seven (7) calendar days and incorporated into a revised Plan within ten (10) calendar days of the date of inspection, unless another schedule is specified in the Guidelines or is approved by the commissioner. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures shall be implemented to minimize the potential for the discharge of pollutants from the site.

(iv) Inspectors from the DEEP and the appropriate District, where applicable, may inspect the site to verify compliance with this general permit at any time construction activities are ongoing, and upon completion of construction activities, until a Notice of Termination has been accepted by the Commissioner pursuant to Section 6 of the general permit.

(C) Post-Construction Inspection

(i) For locally approvable projects, once all post-construction stormwater measures have been installed in accordance with Section 5(*b*)(2)(C) of the general permit, Post-Construction Stormwater Management, and cleaned of any construction sediment or debris, the Permittee shall ensure that the appropriate Conservation District or a qualified soil erosion and sediment control professional or a qualified professional

engineer, as appropriate, inspects the site to confirm compliance with the post-construction stormwater management requirements. The permittee shall ensure that the person inspecting the site pursuant to this paragraph is not an employee, as defined by the Internal Revenue Service in the Internal Revenue Code of 1986, of the Permittee and that such person has no ownership interest of any kind in the project for which the site's registration was submitted. A report shall be prepared and certified in accordance with Sections 6(*a*) and (*b*) of the general permit to indicate compliance with this requirement on the Notice of Termination form.

(ii) For locally exempt projects except those conducted by state agencies, once all post-construction stormwater measures have been installed in accordance with the Section 5(*b*)(2)(C) of the general permit, "Post-Construction Stormwater Management", and cleaned of any construction sediment or debris, the permittee shall ensure that a qualified soil erosion and sediment control professional or a qualified professional engineer inspects the site to confirm compliance with the post-construction stormwater management requirements of the general permit. A report shall be prepared and certified in accordance with Sections 6(*a*) and (*b*) of the general permit to indicate compliance with this requirement on the Notice of Termination form.

(iii) For projects conducted by state agencies, once all post-construction stormwater measures have been installed in accordance with the Post-Construction Stormwater Management section (subsection 5(*b*)(2)(C)) and cleaned of any construction sediment or debris, the DOT District Engineer or his/her designee and/or DOT District Environmental Coordinator, or the designated employee of another state agency, will inspect the site to confirm compliance with the post-construction stormwater management requirements of the general permit.

(D) Final Stabilization Inspection

For all projects, once the site has achieved final stabilization for at least one full growing season (April – October) in the year following the end of construction, the Permittee shall have the site inspected by a qualified inspector to confirm such stabilization is maintained. The Permittee shall indicate compliance with this requirement on the Notice of Termination form.

(5) Keeping Plans Current

The Permittee is responsible for keeping their Plan in compliance with this general permit at all times. This may involve any or all of the following:

(A) The permittee shall amend the Plan if the actions required by the Plan fail to prevent pollution or unauthorized discharges to the waters of the state, or fail to comply with any other provision of this general permit. The Plan shall also be amended whenever there is an addition of or change in contractors or subcontractors at the site, the designing qualified professional, District personnel, or a change in design, construction, operation, or maintenance at the site which has not otherwise been addressed in the Plan.

The permittee shall submit a new registration to the commissioner in accordance with Section 4 of this general permit if the amount of disturbed area increases from the amount specified in the registration approved by the Commissioner or there are changes to engineered or non-engineered construction or post-construction control measures that have the potential to increase the quantity or quantity of pollution in the site's stormwater discharges. Such new registration shall be submitted before any such increases or changes are implemented.

(B) The commissioner may notify the permittee at any time that the Plan or the site does not meet one or more requirements of this general permit. Within seven (7) days of such notice, or such other time as the commissioner may allow, the permittee shall make the required changes to the Plan and perform all actions required by such revised Plan. Within 15 days of such notice, or such other time as the commissioner may allow, the permittee shall submit to the commissioner a written certification that the requested changes have been made and implemented and such other information as the commissioner requires. Any such certification or information shall be submitted in accordance with the 'Duty to Provide Information" and "Certification of Documents," Sections 5(*g*) and 5(*h*) of this general permit.

(C) For any stormwater discharges authorized under any previous version of this general permit, the Permittee shall, excluding any provisions for which an exemption is provided for in Section 4(*c*)(3)(C) of the general permit, update their Plan prior to their re-registration pursuant to Section 4(*c*)(3) of the general permit, and in no case later than one hundred twenty (120) days after the effective date of this general permit to ensure and maintain compliance with any applicable term and condition of this general permit. For previously authorized sites discharging to impaired waters or other sensitive areas, the commissioner may require additional control measures or provide authorization under an individual permit pursuant to Sections 4(*i*) and 3(*i*).

(D) The Permittee shall ensure that any person keeping this Plan or part thereof current, under the Keeping Plans Current section of this permit, has qualifications that would be required under this general permit to initially prepare the Plan or part thereof.

(E) The permittee shall retain as part of the Plan all modifications, and any documentation associated with each modification, made under this section.

(6) Failure to Prepare, Maintain or Update Plan

In no event shall failure to complete, maintain or update a Plan, in accordance with the "Development of Contents of the Plan" and "Keeping Plans Current" sections (subsections 5(*b*)(1) and 5(*b*)(5)) of this general permit, excuse non-compliance or relieve a permittee of responsibility to implement any actions required to protect the waters of the state or comply with the requirements of this permit.

(7) Plan Signature

The Plan shall be signed and certified as follows:

(A) The Plan shall be signed by the permittee in accordance with the Section 5(*h*) of this general permit, "Certification of Documents".

(B) The Plan shall include certification by all contractors and subcontractors in accordance with Section 5(*b*)(1)(B)(vii)) of this general permit, "Contractors".

(C) The Plan shall include a copy of the certification by a professional engineer or landscape architect made in accordance with Section 3(*b*)(9) of this general permit.

(8) Plan Review Certification

For a locally approvable project pursuant to Section 4(*c*) of this general permit, a copy of the Plan review certification made in accordance with Section 3(*b*)(10) or (11) of this general permit, as

applicable, shall be maintained with the Plan. (Note: Construction activities reviewed and certified pursuant to those sections are still subject to the local erosion and sediment control and stormwater management regulations of the municipality in which the activity is conducted.)

(9) Plan Submittal

The Permittee shall ensure that the Plan is submitted to the commissioner and other parties as follows:

(A) For all Locally Exempt Projects with greater than one acre of soil disturbance, the Permittee shall submit an electronic copy of the Plan and a completed Registration Form to the commissioner.

(B) For Locally Approvable projects, the permittee shall provide an electronic copy of the Plan and a completed Registration Form to the commissioner. In addition, a completed Registration Form for this general permit shall be submitted to the following persons immediately upon request:

(i) The municipal planning commission, zoning commission and/or inland wetlands agency, or its respective enforcement officer or designated agent; and

(ii) In the case of a stormwater discharge through a municipal separate storm sewer system, the municipal operator of the system; and

(iii) In the case of a stormwater discharge located within a public drinking water supply watershed or aquifer area, the water company responsible for that water supply.

DO NOT SUBMIT any information that does not pertain to stormwater management or erosion and sediment control (such as electrical and lighting plans, boundary or lot surveys, building plans, non-stormwater related detail sheets, etc.). Any plans stamped "not for construction" will not be accepted.

(c) Reporting and Record Keeping Requirements

(1) Record Keeping

(A) For a period of at least five years from the date the Notice of Termination is accepted by the Commissioner, the permittee shall retain copies of the Plan and all reports required by this general permit, and records of all data used to complete the registration for this general permit, unless the commissioner specifies another time period in writing.

(B) The permittee shall retain an updated copy of the Plan required by this general permit at the construction site from the date construction is initiated at the site until the date construction at the site is completed.

(C) Inspection records must be retained as part of the Plan for a period of five (5) years after the date of inspection. In addition, the following inspection reports shall be kept on-site with the Plan and shall be submitted to the Commissioner upon request:

(i) Plan Implementation Inspections conducted in accordance with Section 5(*b*)(4)(A) and recorded on checklist forms prepared pursuant to Section 5(*b*)(1)(B)(vi)(a).

(ii) Routine Inspections conducted in accordance with Section 5(*b*)(4)(B) and recorded on checklist forms prepared pursuant to Section 5(*b*)(1)(B)(vi)(b).

(D) Plan Modification

Plan modifications made pursuant to Section 5(*b*)(5) of this general permit and any documentation associated with such modification shall be kept on-site with the Plan.

(2) Reporting

(A) The reports specified in this section shall be provided to the Commissioner within the timeframe specified in any request by the Commissioner, and if no timeframe is specified, no later than thirty (30) days after the date of any such request. If requested by the Commissioner, the reports shall be submitted to the Commissioner using NetDMR in the manner specified in subsection (B), below.

(B) NetDMR Reporting

The permittee shall submit all reporting of inspections, Plan updates or other reporting electronically using NetDMR, a web-based tool that allows Permittees to electronically submit stormwater reports through a secure internet connection. Unless otherwise approved in writing by the commissioner, no later than thirty (30) days after authorization under this permit the Permittee shall begin reporting electronically using NetDMR. Specific requirements regarding subscription to NetDMR and submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

(i) Submittal of NetDMR Subscriber Agreement

At or before the time the Permittee submits a registration for this permit, the Permittee and/or the person authorized to sign the Permittee's reports ("Signatory Authority") as described in RCSA Section 22a-430-3(b)(2) shall contact the Department at deep.netdmr@ct.gov and initiate the NetDMR subscription process for electronic submission of Stormwater Report information. Information on NetDMR is available on the Department's website at www.ct.gov/deep/netdmr. On or before the date of authorization under this permit the Permittee shall submit a signed and notarized copy of the *Connecticut DEEP NetDMR Subscriber Agreement* to the Department.

(ii) Submittal of Reports and other documents Using NetDMR

Unless otherwise approved by the commissioner, on or before thirty (30) days following authorization under this permit, the Permittee and/or the Signatory Authority shall electronically submit reports and any other documents required under this permit or by request of the Commissioner to the Department using NetDMR in satisfaction of the requirements of Section 5(*c*)(2)(A) of this permit.

Reports shall be submitted electronically to the Department no later than fifteen (15) days following the completed reporting period. NetDMR is accessed from: http://www.epa.gov/netdmr.

(iii) Submittal of NetDMR Opt-Out Requests

If the Permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for electronically submitting reports, the commissioner may approve an alternative for the submission of reports. Any such request shall be submitted in writing to the Department for written approval on or before the Permittee's date of permit authorization. This demonstration shall be valid for twelve (12) months from the date of the Department's approval and

shall thereupon expire. At such time, reports shall be submitted electronically to the Department using NetDMR unless the Permittee submits a renewed request for an alternative and such request is approved by the Department.

All requests under this provision and requests for the NetDMR subscriber form should be sent to the following address or by email at deep.netdmr@ct.gov:

Attn: NetDMR Coordinator
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

(d) Regulations of Connecticut State Agencies Incorporated into this General Permit

The permittee shall comply with sections 22a-430-3 and 22a-430-4 of the Regulations of Connecticut State Agencies which are hereby incorporated into this general permit, as if fully set forth herein.

(e) Reliance on Registration

In evaluating a registration submitted under this general permit, the commissioner has relied on information provided by the registrant. If such information proves to be false or incomplete, any authorization reliant on such information may be suspended or revoked in accordance with law, and the commissioner may take any other action authorized by law.

(f) Duty to Correct and Report Violations

Upon learning of any violation of this general permit, including, but not limited to, any failure to follow the Plan or any adverse impacts on wetlands or waters a permittee shall immediately cease all construction activities and take all reasonable action to determine the cause of such violation, return to compliance, correct and mitigate the results of such violation, and prevent such violation from recurring. Construction activities shall not recommence until such reasonable action(s) have been taken and such violation and/or adverse impacts have been corrected and compliance has been restored. The permittee shall ensure that any violations of the terms and conditions of the general permit, including but not limited to, the Plan, identified during an inspection or at any other time, that result in the potential to discharge pollutants to waters of the state are reported to the commissioner within two (2) hours of discovery, or, for those violations discovered outside normal business hours, at the start of the next business day. Violations shall be reported to the DEEP stormwater staff at deep.stormwaterstaff@ct.gov and by calling (860) 424-3025. Furthermore, within five (5) days of discovery of a violation, the Permittee shall prepare and submit to the commissioner a written report signed by the Permittee, which documents the cause of the violation, duration including dates and times, and corrective action taken to address the violation and any action taken or planned to prevent future occurrences. Such information shall be filed in accordance with Section 5(*h*) of this general permit, "Certification of Documents".

In addition, nothing in this section shall affect any other action the commissioner is authorized to take regarding a violation of this general permit.

(g) Duty to Provide Information

The commissioner may request any information pertinent to the construction activity or concerning the Permittee's compliance with this general permit. If requested, the permittee shall provide any such information within fifteen (15) days of such request or other time period as may be specified in writing by the commissioner.

(h) Certification of Documents

Unless otherwise specified in this general permit, any document, including but not limited to any notice, information or report, which is submitted to the commissioner under this general permit shall be signed by the permittee, or a duly authorized representative of the permittee, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

(i) Date of Filing

For purposes of this general permit, the date of filing with the commissioner of any document is the date such document is received by the commissioner. The word "day" as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day thereafter.

(j) False Statements

Any false statement in any information submitted pursuant to this general permit may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes.

(k) Correction of Inaccuracies

Within fifteen (15) days after the date a permittee becomes aware of a change in any information submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be filed in accordance with the certification requirements prescribed in Section 5(*h*) of this general permit.

(l) Transfer of Authorization

Any authorization issued by the commissioner under this general permit is transferable only in accordance with the provisions of section 22a-6o of the General Statutes. Any person or municipality proposing to transfer any such authorization shall submit a license transfer form to the commissioner. For state projects, the Permittee must be contractually authorized to conduct the transfer. The transferee is not authorized to conduct any activities under this general permit until the transfer is approved by the commissioner. The transferee may adopt by reference the Plan developed by the transferor. The transferee shall update the Plan as required by Section 5(*b*)(5) of this general permit, "Keeping Plans Current".

(m) Other Applicable Requirements

Nothing in this general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state and local requirements, including but not limited to the obligation to obtain any other required authorizations or licenses.

(n) Other Rights

This general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal, state, and local laws pertinent to the property or construction activity affected by such general permit. In conducting any construction activity authorized hereunder, the permittee shall not cause pollution, impairment, or destruction of the air, water, or other natural resources of this state. The issuance of this general permit shall not create any presumption that this general permit should or will be renewed.

Section 6. Termination Requirements

(a) Notice of Termination

At the completion of a construction project the Permittee shall submit a Notice of Termination in accordance with the requirements of this section. A project shall be considered complete after all post-construction measures are installed, cleaned, functioning, and inspected and the site has achieved final stabilization and inspection (see Sections 5(*b*)(4)(C) & (D) of the general permit, respectively) for at least one full growing season (i.e. April through October) in the year following the cessation of construction activities. Final stabilization must be achieved for all phases of construction, and for solar projects, any additional requirements in Appendix I complied with, before a Notice of Termination may be submitted.

(b) Termination Form

A Notice of Termination shall be filed on forms prescribed and provided by the commissioner and shall include the following:

(1) The permit number as provided to the permittee on the permit certificate;

(2) The name of the registrant as reported on the general permit registration form (DEEP-PED-REG-015), or if a license transfer has been approved by the commissioner, the name of the permittee on a license transfer form;

(3) The address of the completed construction site;

(4) The dates when:

(A) Construction was completed;

(B) All storm drainage structures were cleaned of construction debris pursuant to the "Other Controls" section (subsection 5(*b*)(2)(D)) of this general permit;

(C) The post-construction inspection was conducted pursuant to Section 5(*b)(*4)(C);

(D) The final stabilization inspection was conducted pursuant to Section 5(*b*)(4)(D).

(5) A description of the post-construction activities at the site; and

(6) Signatures of:

(A) The permittee; and

(B) The person who conducted the post-construction inspection pursuant to Section 5(*b*)(4)(C) of the general permit.

(C) The person who conducted the final stabilization inspection pursuant to Section 5(*b*)(4)(D) of the general permit.

(c) Where to File a Termination Form

A termination form shall be filed with the commissioner at the following address:

WATER PERMITTING AND ENFORCEMENT DIVISION/STORMWATER GROUP
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Section 7. Commissioner's Powers

(a) Abatement of Violations

The commissioner may take any action provided by law to abate a violation of this general permit, including but not limited to penalties of up to $25,000 per violation per day under Chapter 446k of the Connecticut General Statutes, for such violation. The commissioner may, by summary proceedings or otherwise and for any reason provided by law, including violation of this general permit, revoke a permittee's authorization hereunder in accordance with sections 22a-3a-2 through 22a-3a-6, inclusive, of the Regulations of Connecticut State Agencies. Nothing herein shall be construed to affect any remedy available to the commissioner by law.

(b) General Permit Revocation, Suspension, or Modification

The commissioner may, for any reason provided by law, by summary proceedings or otherwise, revoke or suspend this general permit or modify to establish any appropriate conditions, schedules of compliance, or other provisions which may be necessary to protect human health or the environment.

(c) Filing of an Individual Permit Application

If the commissioner notifies a permittee in writing that such permittee must obtain an individual permit, the permittee shall file an application for an individual permit within thirty (30) days of receiving the commissioner's notice or such other time that the commissioner specified in the notice to the permittee. While such application is pending before the commissioner, the permittee shall continue to comply with the terms and conditions of this general permit. Nothing herein shall affect the commissioner's power to revoke a permittee's authorization under this general permit at any time.

Issued: November 25, 2022

for Katherine S. Dykes
Commissioner

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

APPENDIX A

Endangered and Threatened Species

In order to be eligible for coverage under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("GP" or "the GP"), under section 3(*b*)(2) of the GP, a registrant must ensure that the construction activity, as defined in Section 2 of the GP, does not threaten the continued existence of any state or federal species listed as endangered or threatened ("listed species") or result in the destruction or adverse modification of any habitat associated with such species.

In order to prevent significant, unforeseen delays in the processing of a registration under the GP, registrants should assess compliance with section 3(*b*)(2) early in the planning stages of a project. The Department of Energy and Environmental Protection ("the Department") strongly recommends that this assessment *be initiated up to one year, or more,* prior to the projected construction initiation date, and even before the purchase of the site of the construction activity. At a minimum, registrants must assess compliance with section 3(*b*)(2) prior to submission of the Registration Form for the GP.

This Appendix describes the ways that a registrant can comply with section 3(*b*)(2) of the GP. In connection with the filing of a registration a registrant can perform a self-assessment described in Section 1, seek a limited two-year determination or a safe harbor determination from the Department's Wildlife Division under Sections 2 or 3, respectively, or stipulate in writing to the presence of listed species or any habitat associated with such species and develop a mitigation plan pursuant to Section 5 of this Appendix. While some means of compliance are more limited than others, the options set out in this Appendix are not mutually exclusive and all options remain available to a registrant. For example, a registrant may perform a self-assessment under Section 1 and seek a safe harbor determination under Section 3 of this Appendix. Provided the requirements of this Appendix are met, the choice of how to proceed is the registrant's.

Section 1. Self Assessment through Natural Diversity Database Map Review and Screening

Before submission of a registration for coverage under this GP, a registrant must review the current versions of the Department's Natural Diversity Data Base ("NDDB") maps. Except as provided for in Sections 2, 3 or 5 of this Appendix, such review must occur no more than six months before such submission. Such review provides a method for screening whether the Department is already aware of listed species that may be present on the site of the construction activity. These maps can be viewed online at:

CT DEEP Natural Diversity Data Base Maps
CTECO Webpage (in the interactive Map Viewer)

Screening

The site of the construction activity must be compared to the shaded areas depicted on the NDDB map to determine if the site is entirely or partially within a shaded area. If the site is entirely or partially within a shaded area for a listed species a registrant can only achieve compliance with section 3(*b*)(2) of the GP by obtaining a limited two-year determination under Section 2, a safe harbor determination under Section 3, or an approved mitigation plan under Section 5 of this Appendix from the Department's Wildlife Division.

If the site of the construction activity is not entirely or partially within a shaded area, then the Department is not aware of any listed species at the site of the construction activity. Based upon this screening, and provided the registrant has no reasonably available verifiable, scientific or other credible information that the construction activity could reasonably be expected to violate section 3(*b*)(2) of the GP, when completing the Registration Form for this GP a registrant may check the box that indicates that the construction activity will not impact federal or state listed species.

A registrant using only self-assessment under this section may utilize the results of any such self-assessment for up to, but no more than, six months from the date of such assessment. Note, however, that the NDDB maps are not the result of comprehensive state-wide field investigations, but rather serve as a screening tool. Using such maps as a screening tool does not provide a registrant with an assurance that listed species or their associated habitat may not be encountered at the site of the construction activity. Notwithstanding the NDDB screening results, if a listed species is encountered at the site of the construction activity, the registrant shall promptly contact the Department and may need to take additional action to ensure that the registrant does not violate section 3(*b*)(2) of the GP.

Section 2. Obtaining a Limited Two-Year Determination

A registrant may seek a written determination from the Department's Wildlife Division, good for two years, that the proposed construction activity complies with section 3(*b*)(2) of the GP. To obtain this limited two-year determination, a registrant must, in addition to conducting the NDDB map review in Section 1 of this Appendix, provide the Department's Wildlife Division with (1) any reasonably available verifiable, scientific or other credible information about whether the construction activity could reasonably be expected to result in a violation of section 3(*b*)(2) of the GP, and (2) limited information about the site of the proposed construction activity, but less information than would be necessary for a safe harbor determination under Section 3 of this Appendix. The limited information necessary for a two-year determination is on the current "Request for Natural Diversity Database (NDDB) State Listed Species Review" form on the Department's website. The form and instructions for seeking such a limited two-year determination are available at www.ct.gov/DEEP/nddbrequest.

Provided the registrant's information is accurate and the Department's Wildlife Division determines that the construction activity will not violate section 3(*b*)(2) of the GP, the registrant shall receive a limited two-year determination from the Department. Any such determination may indicate that the construction activity will not impact listed species or their associated habitat, or it may include specific conditions to be implemented to avoid or significantly minimize any impacts that may be encountered at the site of the construction activity. For purposes of submitting a registration for the GP, any such limited two-year determination can be relied upon by the person receiving such determination for two years from the date of such determination. Like, however, the NDDB screening procedure in Section 1 of this Appendix, a limited two-year determination does not provide a registrant with an assurance that listed species or their associated habitat may not be encountered at the site of the construction activity. If a listed species is encountered, the registrant shall promptly contact the Department and may need to take additional action to ensure that the construction activity does not violate section 3(*b*)(2) of the GP.

If a registrant receives a limited two-year determination from the Department, the registrant should check the limited two-year determination box on the GP registration form and include the Department's two-year limited determination letter with the GP Registration form. Checking the limited two-year determination box on the registration form and failing to provide the determination letter from the Department's Wildlife Division with the GP Registration form will delay and may prevent processing of a registration.

If based upon the information provided by a registrant seeking a limited two-year determination the Department's Wildlife Division determines that the construction activity could impact listed species or their associated habitat, or that the Department needs additional information to make a limited two-year determination, the registrant may still achieve compliance with section 3(*b*)(2) of the GP through providing additional information pursuant to Section 4 or developing a mitigation plan pursuant to Section 5 of this Appendix.

A registrant may request one or more one-year extensions to a limited two-year determination under this section. If the Department's Wildlife Division has prescribed a form for requesting an extension, any such request shall be made using the prescribed form. There is a presumption that requests for a one-year extension of a limited two-year determination shall be granted. However, this presumption can be rebutted if the Department determines that a change in any of the following has occurred since an initial limited two-year determination or any extension was granted: the construction activity affecting or potentially affecting listed species or their associated habitat; the NDDB maps for the site of the construction activity; the limited information upon which a limited two-year determination or any extension was granted; or other information indicative of a change in circumstance affecting listed species or their associated habitat. Any one-year extension granted under this paragraph shall run from the date the Department's Wildlife Division issues its determination to grant an extension and shall be treated under the same conditions as a limited two-year determination as provided for in this section. Any letter granting a one-year extension shall be included with a registration along with the original limited two-year determination as provided for in this section.

Section 3. Obtaining a Safe Harbor Determination

A registrant may seek a written determination from the Department's Wildlife Division, good for three years, with the potential to be extended for an additional year, that proposed construction activity complies with section 3(*b*)(2) of the GP. Any such determination shall constitute a "safe harbor" for purposes of section 3(*b*)(2) of the GP.

To obtain a safe harbor determination, a registrant must, in addition to conducting the NDDB review in section 1 of this Appendix, provide the Department's Wildlife Division with any reasonably available verifiable, scientific or other credible information about whether the construction activity could reasonably be expected to result in a violation of section 3(*b*)(2) of the GP and specific information about the site of the construction activity. The specific information necessary for a safe harbor determination is listed in Attachment A to this Appendix. This information must be sufficient to allow the Wildlife Division to adequately assess the site for potential risks to listed species and their associated habitat. While the Department recognizes certain information is necessary to make a safe harbor determination, it also recognizes that a registrant may need to obtain a safe harbor determination early in its project's approval process in order to make prudent business decisions about purchasing a site or proceeding to final project designs. The form and instructions for seeking a safe harbor determination are available at www.ct.gov/DEEP/nddbrequest.

Provided the registrant's information is accurate and the Department's Wildlife Division determines that the construction activity will not violate section 3(*b*)(2) of the GP, the registrant shall receive a safe harbor determination from the Department. A safe harbor determination may indicate that the construction activity will not impact listed species or their associated habitat, or it may include specific conditions to be implemented to avoid or significantly minimize any impacts that may be encountered at the site of the construction activity. The Department shall honor the safe harbor determination for three years from the date it is issued, meaning that unlike the NDDB review in Section 1 or the limited two-year determination in Section 2 of this Appendix, if the Department makes a safe harbor determination and a registrant remains in compliance with any conditions in any such determination, irrespective of what may be found at the site of the construction activity, a registrant shall be considered in compliance with section 3(*b*)(2) of the GP. However, a safe harbor determination shall

not be effective if a construction activity may threaten the continued existence of any federally listed species or its critical habitat under federal law. If a federally listed species or its critical habitat is encountered on the site of the construction activity, the registrant shall promptly contact the Department and may need to take additional action to ensure that the construction activity does not violate federal law or section 3(*b*)(2) of the GP.

If a registrant receives a safe harbor determination from the Department, the registrant should check the safe harbor determination box on the GP registration form and include the Department's safe harbor determination with the GP Registration form. Checking the safe harbor box on the registration form and failing to provide the safe harbor determination letter from the Department's Wildlife Division with the GP Registration form will delay and may prevent processing of a registration.

If based upon the information provided by a registrant seeking a safe harbor determination the Department's Wildlife Division determines that the construction activity could impact listed species or their associated habitat, or that the Department needs additional information to make a safe harbor determination, the registrant may still achieve compliance with section 3(*b*)(2) of the GP through providing additional information pursuant to Section 4 or developing a mitigation plan pursuant to Section 5 of this Appendix.

If a registrant receives a safe harbor determination from the Department's Wildlife Division, anytime during the third year of such safe harbor, a registrant may request a one-year extension of that safe harbor. If the Department's Wildlife Division has prescribed a form for requesting an extension, any such request shall be made using the prescribed form. There is a presumption that a request for a one-year extension of a safe harbor shall be granted. However, this presumption can be rebutted if the Department determines that a change in any of the following has occurred since the safe harbor was granted: the construction activity affecting or potentially affecting listed species or their associated habitat; the NDDB maps for the site of the construction activity; the information upon which the safe harbor was granted; or other information indicative of a change in circumstance affecting listed species or their associated habitat. A registrant may seek only one extension, for one year, to a safe harbor determination. Any one-year extension granted under this paragraph shall run from the date of the Department's Wildlife Division issues its determination to grant an extension and shall be honored by the Department in the same manner as a safe harbor determination noted above. Any letter granting a one-year extension shall be included with a registration along with the original safe harbor determination as provided for in this section.

Section 4. Providing Additional Information

For the Department's Wildlife Division to make a limited two-year determination under Section 2 or a safe harbor determination under section 3 of this Appendix, limited additional information may be required to determine if the construction activity would impact listed species or their associated habitat. If the species in question is a state listed endangered or threatened species under section 26-306 of the general statutes, a registrant shall, in consultation with the Department's Wildlife Division, provide the limited additional information requested by the Department's Wildlife Division. Such information may include, but is not limited to, a survey of specific listed species in question. If the species in question is a federally listed threatened or endangered species, in addition to the Department's Wildlife Division, a registrant shall also consult with the U.S. Fish and Wildlife Service and shall provide any additional information requested by that agency. A registrant that initially sought or obtained a limited two-year determination may, after providing the additional information required under this section request a safe harbor determination under Section 3 of this Appendix.

At any time, as an alternative to proceeding under Section 2, 3 or 4 of this Appendix, a registrant may stipulate, in writing, to the presence of one or more listed species or their associated habitat. A registrant choosing this alternative shall proceed to develop a mitigation plan under Section 5 of this Appendix.

If based upon any additional information provided to the Department's Wildlife Division, and as applicable, the U.S. Fish & Wildlife Service, the Department's Wildlife division determines that construction activity will be in compliance with section 3(*b*)(2) of the GP, a registrant shall receive a limited two-year determination under Section 2 or a safe harbor determination under Section 3 of this Appendix, as applicable.

If the Department's Wildlife Division determines that additional information is necessary to determine if the construction activity has the potential to impact listed species or their associated habitat, and a registrant chooses to not provide such information, a registrant shall proceed with the self-assessment through an NDDB review under Section 1 of this Appendix, or stipulate to the existence of a listed species or associated habitat and develop a mitigation plan under Section 5 or such registrant shall not be eligible to register under the GP.

Section 5. Developing a Mitigation Plan

The Department's Wildlife Division may determine that the construction activity has the potential to adversely impact listed species or their associated habitat. However, it may be possible to modify the construction activity or undertake certain on-site measures to avoid or significantly minimize such impacts. If the species or associated habitat in question is a state listed endangered or threatened species under section 26-306 of the general statutes, a registrant shall consult with the Department's Wildlife Division to determine if an acceptable mitigation plan can be developed so impacts can be avoided or minimized such that a registrant remains in compliance with section 3(*b*)(2). If the species in question is a federally listed threatened or endangered species, any such consultation shall also include the U.S. Fish and Wildlife Service.

If a registrant in consultation with the Department's Wildlife Division, and as applicable, the U.S. Fish & Wildlife Service, develops a mitigation plan that is approved by the Department's Wildlife Division, or as applicable, the U.S. Fish & Wildlife Service, the registrant shall receive a limited two-year determination under Section 2 or a safe harbor determination under Section 3 of this Appendix. In this situation, in addition to checking the two-year determination box or the safe harbor determination box, as applicable, on the registration form, the registrant shall also check the box on the registration form indicating that it has an approved mitigation plan and provide a status update on the registration form as to whether it has completed or is still in the process of implementing the approved mitigation plan.

If an approved mitigation plan has not been fully implemented by the time a registration is submitted, completing all remaining tasks in the plan shall become an enforceable condition of any registration issued to the registrant.

If the Department determines that the construction activity has the potential to adversely impact listed species or their associated habitat and the registrant and the Department, and as applicable, the U.S. Fish & Wildlife Service, are not able to agree on an acceptable mitigation plan that is approved by the Department, and as applicable, the U.S. Fish & Wildlife Service, any such registrant shall not be eligible to register under the GP.

APPENDIX A
ATTACHMENT A

Specific Information Needed to Apply for a Safe Harbor Determination

A Safe Harbor Determination will be made upon the submission of a detailed report that fully addresses the matters noted below. For the Department's Wildlife Division to make a safe harbor determination, the report should synthesize and analyze this information, not simply compile information. Those providing synthesis and analysis need appropriate qualifications and experience. A request for a safe harbor determination shall include:

1) Habitat Information, including GIS mapping overlays, identifying:

- wetlands, including wetland cover types;
- plant community types;
- topography;
- soils;
- bedrock geology;
- floodplains, if any;
- land use history; and
- water quality classifications/criteria.

2) Photographs - The report should also include photographs of the site, including all reasonably available aerial or satellite photographs and an analysis of such photographs.

3) Inspection - The report should include a visual inspection(s) of the site, preferably when the ground is visible. This inspection can also be helpful in confirming or further evaluating the items noted above.

4) Biological Surveys - The report should include all biological surveys of the site where construction activity will take place that are reasonably available to a registrant. A registrant shall notify the Department's Wildlife Division of biological studies of the site where construction activity will take place that a registrant is aware of but are not reasonably available to the registrant.

5) Based on items #1 through 4 above, the report shall include a Natural Resources Inventory of the site of the construction activity. This inventory should also include a review of reasonably available scientific literature and any recommendations for minimizing adverse impacts from the proposed construction activity on listed species or their associated habitat.

6) In addition, to the extent the following is available at the time a safe harbor determination is requested, a request for a safe harbor determination shall include and assess:

- Information on Site Disturbance Estimates/Site Alteration information

- Vehicular Use

- Construction Activity Phasing Schedules, if any; and

- Alternation of Drainage Patterns

APPENDIX B

Connecticut Department of Energy & Environmental Protection
Inland Water Resources Division Fact Sheet
Considering Low Impact Development Principles in Site Design

In order to reduce the impact of development and address stormwater quality issues, the Department requires the use of Low Impact Development (LID) measures in accordance with Sections 5(*b*)(2)(C)(i) and (ii) of the general permit. LID is a site design strategy intended to maintain or replicate predevelopment hydrology through the use of small-scale controls, integrated throughout the site, to manage stormwater runoff as close to its source as possible. Infiltration of stormwater through LID helps to remove sediments, nutrients, heavy metals, and other types of pollutants from runoff.

Key Strategies for LID

Key strategies for effective LID include: infiltrating, filtering, and storing as much stormwater as feasible, managing stormwater close to where the rain/snow falls, managing stormwater at multiple locations throughout the landscape, conserving and restoring natural vegetation and soils, preserving open space and minimizing land disturbance, designing the site to minimize impervious surfaces, and providing for maintenance and education. Water quality and quantity benefits are maximized when multiple techniques are grouped together. In areas of compacted and/or possibly contaminated soils, soil suitability should be further investigated prior to selecting optimum treatment and/or remediation measures. Where soil conditions permit, the DEEP encourages the utilization of one, or a combination of, the following measures:

- the use of pervious pavement or grid pavers (which are very compatible for parking lot and fire lane applications), or impervious pavement without curbs or with notched curbs to direct runoff to properly designed and installed infiltration areas;
- the use of vegetated swales, tree box filters, and/or infiltration islands to infiltrate and treat stormwater runoff (from building roofs, roads, and parking lots);
- the minimization of access road widths and parking lot areas to the maximum extent possible to reduce the area of impervious surface;
- the use of dry wells to manage runoff from building roofs;
- incorporation of proper physical barriers or operational procedures for special activity areas where pollutants could potentially be released (e.g. loading docks, maintenance and service areas, dumpsters, etc.);
- the installation of rainwater harvesting systems to capture stormwater from building roofs for the purpose of reuse for irrigation (i.e. - rain barrels for residential use and cisterns for larger developments);
- the use of residential rain gardens to manage runoff from roofs and driveways;
- the use of vegetated roofs (green roofs) to detain, absorb, and reduce the volume of roof runoff; and
- providing for pollution prevention measures to reduce the introduction of pollutants to the environment.

The 2004 Stormwater Quality Manual LID Appendix and the 2002 Erosion and Sediment Control Guidelines LID Appendix both provide guidance on implementing LID measures. A guide to LID resources can also be found in the DEEP Low Impact Development Resources Factsheet (PDF).

LID in Urban Areas

If the proposed site is located in a highly urbanized area, it is likely underlain by urban land complex soils. The Natural Resources Conservation Service (NRCS) Soil Web Survey (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) provides information on soil textures, parent materials, slopes, height of seasonal high water table, depth to restrictive layer, and permeability. In highly developed areas, infiltration may be limited due to the high percentage of impervious cover. However, infiltration practices may be suitable at urban sites depending on:

- Potential contamination of soils in historically industrialized areas. The siting of areas for infiltration must consider any existing soil or groundwater contamination.

- Site specific soil conditions. NRCS mapping consists of a minimum 3 acres map unit and soils may vary substantially within each mapping unit. Test pits should be dug in areas planned for infiltration practices to verify soil suitability and/or limitations.

- Investigation of areas of compacted soils and the utilization of proper construction staging. Planning should insure that areas to be used for infiltration are not compacted during the construction process by vehicles or machinery.

Even if infiltration is limited at a site, it is still possible to implement LID practices. Specifically, potential exists for the installation of green roofs on buildings and/or the use of cisterns to capture and reuse rainwater.

LID in Areas with a High Seasonal Water Table or Hardpan Layer

- The impact of stormwater runoff to any streams and/or wetlands near the site should be considered. Water quality treatment is influenced by hydraulic conductivity and time of travel. If stormwater infiltration is limited by an impermeable layer close to the surface, the water may run laterally through the ground and discharge to the stream or wetlands, providing limited water quality treatment. However, a longer time of travel may provide sufficient treatment. Proper soil testing for infiltration potential will increase the likelihood of successful BMP design.

- In areas with a high seasonal water table, bioretention areas/rain gardens should be planted with water tolerant/wetland plants. The presence of a high seasonal water table suggests that water may drain slowly or not at all during certain parts of the year. Planting native wetland vegetation will help to ensure plant survival and increase the effectiveness of bioretention practices. Information on native plantings that are both drought tolerant and tolerant of wet conditions can be found in The UConn Cooperative Extension System's guide to building a rain garden at http://nemo.uconn.edu/publications/rain_garden_broch.pdf. Native plant lists for Connecticut can also be found at http://www.fhwa.dot.gov/environment/rdsduse/ct.htm.

LID Guidance for Federal Projects

- LID techniques have been utilized by Department of Defense (DoD) agencies during the last several years. The effectiveness of these projects in managing runoff as well as reducing construction and maintenance costs has created significant interest in LID. The DoD has created a Unified Facilities Criteria document, Low Impact Development that provides guidelines for integrating LID planning and design into a facility's regulatory and resource protection programs. It is available on-line at: http://www.wbdg.org/ccb/DOD/UFC/ufc_3_210_10.pdf.

- Section 438 of the Energy Independence and Security Act (EISA) of 2007 requires federal agencies to reduce stormwater runoff from federal development projects to protect water resources. In December 2009, the EPA developed a technical guidance document on implementing the stormwater runoff requirements for federal projects under Section 438 of EISA. The document contains guidance on how compliance with Section 438 can be achieved, measured and evaluated and can be found at: http://www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf.

For more information contact the CT DEEP Watershed Management/Low Impact Development Program call (860)424-3716.

List of Runoff Reduction/LID Practices

Re-Forestation
Disconnection of Rooftop Runoff
Disconnection of Non-Rooftop Runoff
Sheetflow to Conservation Areas
Green Roof
Permeable Pavement
Rainwater Harvesting
Submerged Gravel Wetlands
Micro-Infiltration
Rain Gardens
Bioretention
Landscape Infiltration
Grass Swales
Bio-swales
Wet Swales
Stormwater Ponds
Stormwater Wetlands
Stormwater Filtering Systems
Stormwater Infiltration

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

APPENDIX C

AQUIFER PROTECTION AREAS AND OTHER GROUNDWATER DRINKING SUPPLY AREAS GUIDANCE INFORMATION

The Stormwater Pollution Control Plan ("the Plan") shall consider measures to reduce or mitigate potential impacts to both ground water (aquifers) and surface waters, taking into consideration both quantity and quality of the runoff. The emphasis should be to minimize, to the extent possible, changes between pre-development and post-development runoff rates and volumes.

The basic stormwater principals for Aquifer Protection Areas (and other groundwater drinking supply areas) are to prevent inadvertent pollution discharges/releases to the ground, while encouraging recharge of stormwater where it does not endanger groundwater quality. Measures include:

- prevent illicit discharges to storm water, including fuel/chemical pollution releases to the ground;
- minimize impervious coverage and disconnect large impervious areas with natural or landscape areas;
- direct paved surface runoff to aboveground type land treatment structures – sheet flow, surface swales, depressed grass islands, detention/retention and infiltration basins, and wet basins. These provide an opportunity for volatilization of volatile organic compounds to the extent possible before the stormwater can infiltrate into the ground;
- provide necessary impervious pavement in high potential pollutant release areas. These "storm water hot spots" include certain land use types or storage and loading areas, fueling areas, intensive parking areas and roadways (see table below);
- only use subsurface recharge structures such as dry wells, galleries, or leaching trenches, to directly infiltrate clean runoff such as rooftops, or other clean surfaces. These structures do not adequately allow for attenuation of salts, solvents, fuels or other soluble compounds in groundwater that may be contained in runoff; and
- restrict pavement deicing chemicals, or use an environmentally suitable substitute such as sand only, or alternative de-icing agents such as calcium chloride or calcium magnesium.

Infiltration of stormwater should be **restricted** under the following site conditions:

- ***Land Uses or Activities with Potential for Higher Pollutant Loads:*** Infiltration of stormwater from these land uses or activities (refer to Table 7-5 below), also referred to as stormwater "hotspots," can contaminate public and private groundwater supplies. Infiltration of stormwater from these land uses or activities may be allowed by the review authority with appropriate pretreatment. Pretreatment could consist of one or a combination of the primary or secondary treatment practices described in the Stormwater Quality Manual provided that the treatment practice is designed to remove the stormwater contaminants of concern.

- ***Subsurface Contamination:*** Infiltration of stormwater in areas with soil or groundwater contamination such as brownfield sites and urban redevelopment areas can mobilize contaminants.

- ***Groundwater Supply and Wellhead Areas:*** Infiltration of stormwater can potentially contaminate groundwater drinking water supplies in immediate public drinking water wellhead areas.

Land Uses or Activities with Potential for Higher Pollutant Loads
Table 7-5 of the 2004 Stormwater Quality Manual

Land Use/Activities	
• Industrial facilities subject to the DEEP Industrial Stormwater General Permit or the U.S. EPA National Pollution Discharge Elimination System (NPDES) Stormwater Permit Program • Vehicle salvage yards and recycling facilities • Vehicle fueling facilities (gas stations and other facilities with on-site vehicle fueling) • Vehicle service, maintenance, and equipment cleaning facilities • Fleet storage areas (cars, buses, trucks, public works) • Commercial parking lots with high intensity use (shopping malls, fast food restaurants, convenience stores, supermarkets, etc.) • Public works storage areas	• Road salt storage facilities (if exposed to rainfall) • Commercial nurseries • Flat metal rooftops of industrial facilities • Facilities with outdoor storage and loading/unloading of hazardous substances or materials, regardless of the primary land use of the facility or development • Facilities subject to chemical inventory reporting under Section 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA), if materials or containers are exposed to rainfall • Marinas (service and maintenance) • Other land uses and activities as designated by the review authority

For further information regarding the design of stormwater collection systems in Aquifer Protection Areas, contact the Aquifer Protection Area Program at (860) 424-3020 or visit www.ct.gov/deep/aquiferprotection.

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

APPENDIX D

Coastal Management Act Determination Form

For sites within the Coastal Boundary, please attach this form and written approval from the local governing authority (or verification of exemption) to the Registration Form for the Discharge of Stormwater and Dewatering Wastewaters From Construction Activities.

SITE INFORMATION

Future Permittee _____

Mailing Address _____

Business Phone _____ ext.: _____ Fax: _____

Contact Person _____ Title: _____

Site Name _____

Site Address/ Location _____

Site Latitude and Longitude _____

Receiving Water (name, basin) _____

Project Description _____

_____

STATEMENT OF REVIEW:

The above referenced project is consistent with the goals and policies in section 22a-92 of the Connecticut General Statutes and will not cause adverse impacts to coastal resources as defined in section 22a-93(15) of the Connecticut General Statutes.

Date of Coastal Site Plan Approval: _____

☐ Copy of written approval attached, or

☐ Verification of exemption attached

APPENDIX E

Memorandum of Agreement
Between
The Connecticut Department of Energy & Environmental Protection
and the
the Five Conservation Districts of Connecticut
for
Technical Assistance for Locally Approvable Stormwater Construction General Permits

WHEREAS, the Commissioner of the Department of Energy and Environmental Protection ("Department" or "DEEP ") is authorized by section 22a-6(a)(2)(3) and (4) of the Connecticut General Statutes ("CGS") to enter into this Agreement; and

WHEREAS, the five Conservation Districts of Connecticut (collectively, the "Districts"), are not-for-profit corporations duly authorized, organized and existing under the laws of the State of Connecticut and are authorized by section 22a-315 of the CGS and section 22a-315-14 of the Regulations of Connecticut State Agencies to enter into this Agreement; and

WHEREAS, section 22a-430b of the Connecticut General Statutes authorizes the Department to regulate stormwater discharges from construction activities under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities ("the Construction General Permit" or "CGP"), which has been or shall be issued on October 1, 2019. The Construction General Permit requires the implementation of erosion and sediment controls to control the discharge of sediment from construction and post-construction discharges; and

WHEREAS, Construction General Permits require the preparation and implementation of a Stormwater Pollution Control Plan ("Plan" or "SWPCP") to prevent erosion and the discharge of sediment to the waters of the state; and

WHEREAS, pursuant to section 22a-315 of the CGS, soil and water conservation districts and boards were established to advise the Commissioner on matters of soil and water conservation and erosion and sediment control and to assist the Commissioner in implementing programs related to soil and water conservation and erosion and sediment control; and

WHEREAS, pursuant to section 22a-315 of the CGS, the soil and water conservation districts and boards may receive funds from private sources for services provided to promote soil and water conservation and to assist the Commissioner in the implementation of related programs; and

WHEREAS, section 22a-326 of the CGS declares the policy of the state "to strengthen and extend its erosion and sediment control activities and programs and to establish and implement, through the Council on Soil and Water Conservation, soil and water conservation districts, the municipalities and the Commissioner of Energy and Environmental Protection, a state-wide coordinated erosion and sediment control program which shall reduce the danger from storm water runoff, minimize nonpoint sediment pollution from land being developed and conserve and protect the land, water, air and other environmental resources of the state;" and

WHEREAS, the Districts have understanding and experience in reviewing erosion and sediment control plans because of their longstanding participation in the municipal approval process, as required by section 22a-329 of the CGS; and

WHEREAS, DEEP and the Districts are jointly dedicated to protecting the waters of the state by controlling the discharge of sediment and the pollution resulting from stormwater runoff.

NOW, THEREFORE, in consideration of the mutual covenants and conditions hereinafter stated, the Parties agree as follows:

Special Conditions

I. REQUIREMENTS FOR TECHNICAL ASSISTANCE BY DISTRICTS

A. SWPCP technical assistance shall be conducted by a District representative having one or more of the following minimum qualifications: (i) a bachelor's degree in hydrology, engineering (agricultural, civil, environmental, or chemical), landscape architecture, geology, soil science, environmental science, natural resources management, or a related field and two years of professional and field experience, or (ii) the EnviroCert International, Inc. designation as a Certified Professional in Erosion and Sediment Control (CPESC), Certified Erosion, Sediment and Stormwater Inspector (CESSWI), or a Certified Professional in Stormwater Quality (CPSWQ).

B. All technical assistance on SWPCPs undertaken by a District shall be conducted in accordance with the guidelines and procedures established by DEEP in consultation with the Districts, as further described below.

II. LOCALLY APPROVABLE PROJECTS

For locally approvable projects, as defined in the Construction General Permit, with five (5) or more acres of soil disturbance, the appropriate District (as indicated in Exhibit 2 of this agreement) shall review Stormwater Pollution Control Plans submitted to the District in accordance with Section 3(*b*)(10) of the CGP, shall determine whether each such SWPCP is consistent with the requirements of the CGP, and shall advise the Commissioner in writing of its determination regarding the SWPCP's consistency. The appropriate District may request assistance from another District or re-assign a project to another District upon mutual consent of the Districts. The Commissioner will be notified in writing of any re-assignment.

A. Components of the SWPCP Review by the Districts

1. Requirements for Conducting a Review:

   The District shall begin a SWPCP review upon the receipt of the all of following: the developer's request for review, two hard copies and a digital copy of the proposed SWPCP, a non-refundable down payment from the permittee as per the Fee Schedule in Exhibit 1 and the written permission of the developer to enter onto and inspect the project site. Once the District is in receipt of all the documents and the fee as delineated above, the developer's SWPCP shall be considered submitted to the District.

2. Determinations of Consistency by the District after Review of the SWPCP and Subsequent Procedures

   (a) If the District determines the developer's SWPCP is:

   (i) Consistent with the requirements of the Construction General Permit, the District shall issue an affirmative determination notice to both the developer or such developer's designee and to DEEP in order to advise them of the adequacy of the SWPCP. The District shall also provide a copy of the SWPCP to DEEP if requested by the Commissioner.

   (ii) Not consistent with the requirements of the Construction General Permit, the District shall provide a written notice of such inconsistency to the developer or such developer's designee; such notice shall include a list of the SWPCP's deficiencies and any appropriate explanatory comments.

(b) If the developer's SWPCP is found to be inconsistent with the CGP, the developer may revise the SWPCP (the "Revised SWPCP") to address any deficiencies noted by the District and resubmit its Revised SWPCP to the District for review.

(c) If the District receives a Revised SWPCP in accordance with subsection (b) above, the District shall perform a review of the Revised SWPCP. If the Revised SWPCP is deemed:

(i) Consistent with the requirements of the Construction General Permit, the District shall (1) issue an affirmative determination notice to both the project developer or such project developer's designee and to DEEP to advise them of the adequacy of the SWPCP and (2) provide a copy of the SWPCP to the DEEP if requested by the Commissioner; or

(ii) Not consistent with the requirements of the CGP after this review, the District shall provide a written notice of such inconsistency to the developer or such developer's designee. This notice shall include a list of all remaining SWPCP deficiencies and any explanatory comments as appropriate.

(d) In the event the District determines after review of the Revised SWPCP in accordance with subsection (c), above, that the Revised SWPCP remains inconsistent with the requirements of the Construction General Permit, the developer shall continue to resubmit a Revised SWPCP in accordance with subsection (c), above, until such time as the District determines that the SWPCP is consistent with the requirements of the Construction General Permit and issues an affirmative determination notice. As such, the resubmitted Revised SWPCP shall be reviewed by the District in accordance with the timeframes set forth in Section II.B., and other applicable sections of this document, and the fee shall remain in accordance with the Fee Schedule in Exhibit 1.

(e) Revisions to a SWPCP subsequent to the District's prior approval of developer's SWPCP

In the event the developer revises a SWPCP after the District has determined that the developer's SWPCP, prior to this revision, was consistent with the requirements of the Construction General Permit, the SWPCP shall be considered a Post-Approval Resubmission. In such a case, the District shall review the SWPCP in accordance with the timeframes set forth in Section II.B., and other applicable sections of this document, and the fee shall be in accordance with the Fee Schedule in Exhibit 1.

B. Plan Review Timeframes

1. The District shall review a new submission of a SWPCP submitted by a developer or such developer's designee and provide review comments or issue an affirmative determination notice within thirty (30) calendar days of the date of a complete submission as specified in Section II.A.1.

2. If the District identifies deficiencies in the SWPCP, the District shall allow the developer or such developer's designee the opportunity to revise their SWPCP and resubmit it to the District within fifteen (15) calendar days after the date of mailing or delivery of the District's written comments to the developer or such developer's designee.

3. The District shall review any SWPCP revised in accordance with subsection II.B.2., above, and provide a written determination of the SWPCP's consistency or inconsistency within fifteen (15) calendar days after the submission of the revised SWPCP. Subsequent resubmissions of a revised SWPCP shall be in accordance with the same timeframes.

4. At the request of the District or the developer and with the agreement of both the District and the developer, the deadlines stated in subsections 1. – 3., above, may be extended. However, any such

extensions shall be limited to no more than double the original amount of time allowed above for the relevant action.

5. Expedited review of a SWPCP may be requested by a developer. However, the Districts shall have complete discretion to accept or decline such request for an expedited review based on the District's circumstances, including, but not limited to: their existing workload, vacation schedules and staffing. If a District grants an expedited review, the timeframe shall be reduced to no more than one third of the timeframes noted in subsection 1. – 3., above, and the fee and non-refundable down payment shall be twice those amounts listed in Exhibit 1.

6. In the event a District does not complete the review of the SWPCP within sixty (60) days (or within the time allowed under any resubmissions or authorized extension pursuant to subsections B.3 and B.4, above, but in no circumstance later than 120 days) of the date the SWPCP was initially submitted to the District, and provided such delay is not the result of the developer's or such developer's designee's failure to address SWPCP deficiencies as noted in subsection B.2, above, the District shall:

   (a) not later than three (3) days after the District's deadline, notify the DEEP that the developer shall be initiating the registration process for the Construction General Permit in accordance with section II.B of this Agreement, for completion of the SWPCP review, and;

   (b) provide to the DEEP, upon request, the District's complete file, including supporting documentation the developer's SWPCP consistency determination, including, but not limited to, the SWPCP, any other documentation submitted to the District by or on behalf of a developer, and any analysis already performed by the District; and

   (c) not later than seven (7) days after the District's deadline, in accordance with section II.B of this Agreement, for completion of the SWPCP review, transfer to the DEEP all fees that were originally submitted by the developer.

C. Inspections of the Project Site

1. Prior to the commencement of project construction and during the course of the SWPCP review process, the District shall conduct at least one inspection of the project site.

2. Once the construction of the project has begun, the District shall make at least one, but not more than three, inspection(s) of the project site to verify that the developer's SWPCP is being implemented as approved by the District. The District shall report the results of the inspection(s) to the developer or such developer's designee and to DEEP in a manner prescribed by the Commissioner.

3. Upon notification from the developer or developer's designee, in accordance with Section 6(a)(1) of the CGP, that construction of the stormwater collection and management system is complete, the District shall conduct one inspection of the project site to verify that the post-construction stormwater management measures were completed in accordance with the approved SWPCP. The District shall report the results of this inspection to DEEP in a manner prescribed by the Commissioner.

D. Audits

The District agrees that all records pertaining to this Agreement shall be maintained for a period of not less than five (5) years. Such records shall be made available to the DEEP and to the state auditors upon request. For the purposes of this Agreement, "Records" are all working papers and such information and materials as may have been accumulated by the District in performing the Agreement, including, but not limited to, documents, data, analysis, plans, books, computations, drawings, specifications, notes, reports, records, estimates, summaries and correspondence, kept or stored in any form.

III. FEE SCHEDULE.

A. A District may assess fees for the services it renders in conjunction with its SWPCP reviews. Such fees shall be assessed in accordance with the Fee Schedule in Exhibit 1. All fees shall be submitted by the developer to the District with the developer's request for review and inspections. These fees are non-refundable.

B. The Fee Schedule shall be reviewed annually by the Parties. The Fee Schedule may be adjusted as warranted, without a formal amendment to this Agreement, by mutual agreement between the Districts and the Commissioner.

IV. RESPONSIBILITIES OF DEEP.

A. In accordance with the Construction General Permit requirements for SWPCP reviews of locally approvable projects by a third party, DEEP shall conduct outreach to inform the development community that a District may review SWPCPs for consistency with the requirements of the Construction General Permit. DEEP shall also inform the development community that a registration form for authorization of a locally approvable project under the Construction General Permit may only be submitted to DEEP if: the District, or other third party in accordance with Section 3(b)(11) of the CGP, determines that the SWPCP is consistent with the requirements of the CGP, or in the event the time schedule is exceeded for a District review as described in section II.B.6, above.

B. In order to institute standard SWPCP review guidelines and procedures, DEEP shall coordinate with the Districts to prepare a SWPCP checklist. The standard review guidelines and procedures established shall be consistent with the requirements of the Construction General Permit, the 2002 CT Guidelines for Soil Erosion and Sediment Control, and the 2004 Stormwater Quality Manual, as respectively amended. The Commissioner shall have final approval of the review guidelines and procedures.

C. DEEP shall provide initial training regarding SWPCP requirements for District staff involved in SWPCP reviews. The frequency of subsequent training shall be determined by the Commissioner.

D. DEEP shall retain final decision making authority regarding the determination that a SWPCP is or is not consistent with the requirements of the Construction General Permit and shall oversee the permitting process for Construction General Permit coverage.

E. Once a SWPCP has been approved, DEEP shall oversee any subsequent compliance and/or enforcement matters related to a developer's adherence to the requirements of the Construction General Permit.

F. DEEP shall have the discretion to review any of the Districts' records pertaining to any aspect this Agreement.

V. POINTS OF CONTACT.

The following shall be points of contact for this Agreement unless otherwise agreed to by all Parties, notwithstanding section VI. All notices, demands, requests, consents, approvals or other communications required or permitted to be given or which are given with respect to this Agreement (for the purpose of this section collectively called "Notices") shall be deemed to have been effected at such time as the notice is placed in the U.S. mail, first class and postage prepaid, return receipt requested, or, placed with a recognized, overnight express delivery service that provides for a return receipt. All such Notices shall be in writing and shall be addressed as follows:

A. DEEP
Director
Water Permitting & Enforcement Division
Bureau of Material Management & Compliance Assurance
Department of Energy & Environmental Protection
79 Elm St.
Hartford, CT 06106
Phone: 860-424-3018
Fax: 860-424-4074

B. Conservation District
Board Chairperson
Address & Phone of appropriate District:

Northwest Conservation District
1185 New Litchfield Street
Torrington, CT 06790
Ph: 860-626-7222
Fax: 860-626-7222
Email: info@nwcd.org

Eastern Connecticut Conservation District
238 West Town Street
Norwich, CT 06360-2111
Ph**:** 860-319-8806
Email: Dan.Mullins@comcast.net

Connecticut River Coastal Conservation District, Inc.
deKoven House Community Center
27 Washington Street
Middletown, CT 06457
Ph: 860-346-3282
Email: ctrivercoastal@conservect.org

Southwest Conservation District
51 Mill Pond Road
Hamden, CT 06514
Ph: 203-859-7014
Email: csullivan@conservect.org

North Central Conservation District
24 Hyde Avenue
Vernon, CT 06066
Ph: 860-875-3881
Email: tollandc@snet.net

General Conditions

VI. EXECUTIVE ORDERS AND ANTI-DISCRIMINATION. This Contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which

are incorporated into and are made a part of the Contract as if they had been fully set forth in it. The Contract may also be subject to Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services and to Executive Order No. 49 of Governor Dannel P. Malloy, promulgated May 22, 2015, mandating disclosure of certain gifts to public employees and contributions to certain candidates for office. If Executive Order 14 and/or Executive Order 49 are applicable, they are deemed to be incorporated into and are made a part of the Contract as if they had been fully set forth in it. At the Contractor's request, the Client Agency or DAS shall provide a copy of these orders to the Contractor.

VII. AMENDMENTS. Either the DEEP or the Districts may recommend revisions to this Agreement as circumstances may warrant; however, any revisions must be upon mutual agreement of DEEP and all five Conservation Districts. Unless otherwise stated in this Agreement, formal written amendment is required for changes to any of the terms and conditions specifically stated in the Agreement, any prior amendments to the Agreement, and any other Agreement revisions determined material by the Department.

VIII. SEVERABILITY. The provisions of this Agreement are severable. If any part of it is found unenforceable, all other provisions shall remain fully valid and enforceable, unless the unenforceable provision is an essential element of the bargain.

IX. SOVEREIGN IMMUNITY. The Parties acknowledge and agree that nothing in the Agreement shall be construed as a modification, compromise or waiver by the State of any rights or defenses of any immunities provided by federal law or the laws of the State of Connecticut to the State or any of the State's, which they may have had, now have or shall have with respect to all matters arising out of the Agreement. To the extent that this section conflicts with any other section, this section shall govern.

X. FORUM AND CHOICE OF LAW. The Agreement shall be deemed to have been made in the City of Hartford, State of Connecticut. Both Parties agree that it is fair and reasonable for the validity and construction of the Agreement to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by federal law or the laws of the State of Connecticut do not bar an action against the State or the Districts, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Districts waive any objection which they may now have or shall have to the laying of venue of any Claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

XI. TERMINATION. Notwithstanding any provisions in this Agreement, DEEP, through a duly authorized employee, may terminate the Agreement whenever the Agency makes a written determination that such Termination is in the best interests of the State. The Agency shall notify the Districts in writing sent by certified mail, return receipt requested, which notice shall specify the effective date of Termination and the extent to which the Districts must complete its Performance under the Agreement prior to such date; or (b) The Districts may terminate the Agreement for good cause. The Districts shall notify DEEP by written notice at least one hundred eighty (180) days prior to the effective date of termination. In order for the Districts to terminate this Agreement, (1) there must be a consensus between all five Conservation Districts that each District shall be terminating this Agreement with the DEEP; (2) such proof of consensus shall be submitted to the DEEP in the form of a letter signed by the duly authorized agent for each District by certified mail, return receipt requested, at least one hundred eighty (180) days prior to the Districts' intention to cancel or terminate. Upon the Termination of this Agreement by either Party, the Districts shall deliver to the Agency copies of all Records no later than thirty (30) days after the Termination of the Agreement, or fifteen (15) days after the Non-terminating Party receives a written request from the Terminating Party for the Records. The Districts shall deliver those Records that exist in electronic, magnetic or other intangible form in a non-proprietary format, such as, but not limited to, PDF, ASCII or .TXT. Upon receipt of a written notice of

Termination from the Agency, the Districts shall cease operations as the Agency directs in the notice, and take all actions that are necessary or appropriate, or that the Agency may reasonably direct, for the protection, and preservation of records. Except for any work which the Agency directs the Districts to Perform in the notice prior to the effective date of Termination, and except as otherwise provided in the notice, the Districts shall terminate or conclude all existing subcontracts and purchase orders and shall not enter into any further subcontracts, purchase orders or commitments. Upon Termination of the Agreement, all rights and obligations shall be null and void, so that no Party shall have any further rights or obligations to any other Party, except with respect to the sections which survive Termination. All representations, warranties, agreements and rights of the Parties under the Agreement shall survive such Termination to the extent not otherwise limited in the Agreement and without each one of them having to be specifically mentioned in the Agreement. Termination of the Agreement pursuant to this section shall not be deemed to be a breach of Agreement by the Agency.

XII. DURATION OF AGREEMENT. This Agreement shall be effective on July 1, 2019 or on the date of the last signature below, whichever is later, and shall continue in force unless canceled or terminated by either party in accordance with paragraph XI above.

XIII. VOID AB INITIO. Notwithstanding paragraphs XI and XII, the Agreement shall be void *ab initio* if the Construction General Permit is reissued, revoked or modified to eliminate the need for the Districts to review the SWPCP pursuant to such general permit's terms and conditions or if the Construction General Permit expires and is not reissued.

XIV. INTERPRETATION. The Agreement contains numerous references to statutes and regulations. For purposes of interpretation, conflict resolution and otherwise, the content of those statutes and regulations shall govern over the content of the reference in the Agreement to those statutes and regulations.

XV. ENTIRETY OF AGREEMENT. This Agreement is the entire agreement between the Parties with respect to its subject matter, and supersedes all prior agreements, proposals, offers, counteroffers and understandings of the Parties, whether written or oral. The Agreement has been entered into after full investigation, neither Party relying upon any statement or representation by the other unless such statement or representation is specifically embodied in the Agreement.

XVI. PROTECTION OF STATE CONFIDENTIAL INFORMATION.

A. The Districts or District Parties, at their own expense, have a duty to and shall protect from a Confidential Information Breach any and all Confidential Information which they come to possess or control, wherever and however stored or maintained, in a commercially reasonable manner in accordance with current industry standards. Confidential Information is any information that a party claims to be exempt from the state Freedom of Information Act (Section 1-210 et seq of the Connecticut General Statutes, also called FOIA) as specified in that Act.

B. Each District or District Party shall develop, implement and maintain a comprehensive data-security program for the protection of Confidential Information. The safeguards contained in such program shall be consistent with and comply with the safeguards for protection of Confidential Information, and information of a similar character, as set forth in all applicable federal and state law and written policy of the Department or State concerning the confidentiality of Confidential Information. Such data-security program shall include, but not be limited to, the following:

1. A security policy for employees related to the storage, access and transportation of data containing Confidential Information;

2. Reasonable restrictions on access to records containing Confidential Information, including access to any locked storage where such records are kept;

3. A process for reviewing policies and security measures at least annually;

4. Creating secure access controls to Confidential Information, including but not limited to passwords; and

5. Encrypting of Confidential Information that is stored on laptops, portable devices or being transmitted electronically.

C. The District and District Parties shall notify the Department and the Connecticut Office of the Attorney General as soon as practical, but no later than twenty-four (24) hours, after they become aware of or suspect that any Confidential Information which Parties have come to possess or control has been subject to a Confidential Information Breach. If a Confidential Information Breach has occurred, the District shall, within three (3) business days after the notification, present a credit monitoring and protection plan to the Commissioner of Administrative Services, the Department and the Connecticut Office of the Attorney General, for review and approval. Such credit monitoring or protection plan shall be made available by the District at its own cost and expense to all individuals affected by the Confidential Information Breach. Such credit monitoring or protection plan shall include, but is not limited to, reimbursement for the cost of placing and lifting one (1) security freeze per credit file pursuant to Connecticut General Statutes §36a-701a. Such credit monitoring or protection plans shall be approved by the State in accordance with this Section and shall cover a length of time commensurate with the circumstances of the Confidential Information Breach. The District's costs and expenses for the credit monitoring and protection plan shall not be recoverable from the Department, any State of Connecticut entity or any affected individuals.

D. The District shall incorporate the requirements of this Section in all subAgreements requiring each District Party to safeguard Confidential Information in the same manner as provided for in this Section.

E. Nothing in this Section shall supersede in any manner the District's and/ or the District Parties' obligations pursuant to HIPAA or the provisions of this Agreement concerning the obligations of the District as a Business Associate of the Department.

XVII. AMERICANS WITH DISABILITIES ACT. The Districts shall be and remain in compliance with the Americans with Disabilities Act of 1990 ("Act"), to the extent applicable, during the term of the Agreement. The DEEP may cancel the Agreement if the District and District Parties fail to comply with the Act.

XVIII. ADA PUBLICATION STATEMENT. The following statement shall be incorporated into all **publications** prepared under the terms of this Agreement:

"The Department of Energy and Environmental Protection is an affirmative action/equal opportunity employer and service provider. In conformance with the Americans with Disabilities Act, DEEP makes every effort to provide equally effective services for persons with disabilities. Individuals with disabilities who need this information in an alternative format, to allow them to benefit and/or participate in the agency's programs and services, should call DEEP's Human Resources Office at (860) 424-3006, send a fax to (860) 424-3896, or email DEEP.MedRecs@ct.gov. Persons who are hearing impaired should call the State of Connecticut relay number 711."

When advertising any **public meetings** conducted under the terms of this Agreement, the above publications language should be used as well as the following statement:

"Requests for accommodations must be made at least two weeks prior to the program date."

All **videos** produced under the terms of this Agreement must be made available with closed captioning.

XIX. PUBLICATION OF MATERIALS. The District must obtain written approval from the State of Connecticut prior to distribution or publication of any printed material prepared under the terms of this Agreement. Unless specifically authorized in writing by the State, on a case by case basis, the District shall have no right to use, and shall not use, the name of the State of Connecticut, its officials, agencies, or employees or the seal of the State of Connecticut or its agencies: (1) in any advertising, publicity, promotion; or (2) to express or to imply any endorsement of District's products or services; or (3) to use the name of the State of Connecticut, its officials agencies, or employees or the seal of the State of Connecticut or its agencies in any other manner (whether or not similar to uses prohibited by (1) and (2) above), except only to manufacture and deliver in accordance with this Agreement such items as are hereby contracted for by the State. In no event may the Districts use the State Seal in any way without the express written consent of the Secretary of State.

XX. CHANGES IN PRINCIPAL PROJECT STAFF. Any changes in District staff qualified to review Plans must be requested in writing and approved in writing by the Commissioner at the Commissioner's sole discretion. In the event of any unapproved change in District staff, the Commissioner may, in the Commissioner's sole discretion, terminate this Agreement.

XXI. FURTHER ASSURANCES. The Parties shall provide such information, execute and deliver any instruments and documents and take such other actions as may be necessary or reasonably requested by the other Party which are not inconsistent with the provisions of this Agreement and which do not involve the vesting of rights or assumption of obligations other than those provided for in the Agreement, in order to give full effect to the Agreement and to carry out the intent of the Agreement.

XXII. ASSIGNMENT. The Districts shall not assign any of their rights or obligations under the Agreement, voluntarily or otherwise, in any manner without the prior written consent of the Agency. The Agency may void any purported assignment in violation of this section and declare the District in breach of this Agreement. Any termination by the Agency for a breach is without prejudice to the Agency's or the State's rights or possible Claims.

XXIII. EXHIBITS. All exhibits referred to in, and attached to, this Agreement are incorporated in this Agreement by such reference and shall be deemed to be a part of it as if they had been fully set forth in it.

XXIV. FORCE MAJEUR. Events that materially affect the cost of the Goods or Services or the time schedule within which to Perform and are outside the control of the party asserting that such an event has occurred, including, but not limited to, labor troubles unrelated to District(s), failure of or inadequate permanent power, unavoidable casualties, fire not caused by a District, extraordinary weather conditions, disasters, riots, acts of God, insurrection or war.

XXV. INDEMNIFICATION. The Districts shall indemnify, defend and hold harmless the State and its officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) Claims arising, directly or indirectly, in connection with the Agreement, including the acts of commission or omission (collectively, the "Acts") of the District or District Parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with Claims, Acts or the Agreement. The Districts obligations under this section to indemnify, defend and hold harmless against Claims includes Claims concerning confidentiality of any part of or all of the Districts' Records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or uncopyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the Performance. The Districts shall not be responsible for indemnifying or holding the State harmless from any liability arising due to the negligence of the State or any other person or entity acting under the direct control or supervision of the State. The Districts shall reimburse the State for any and all damages to the real or personal property of the State caused by the Acts of the Districts or any District Parties. The State shall give the Districts reasonable notice of any such Claims. The Districts shall carry and maintain at all times during the term of the Agreement, and during the time that any

provisions survive the term of the Agreement, sufficient general liability insurance to satisfy its obligations under this Agreement. The Districts shall name the State as an additional insured on the policy and shall provide a copy of the policy to the Agency prior to the effective date of the Agreement. The Districts shall not begin Performance until the delivery of the policy to the Agency. The Agency shall be entitled to recover under the insurance policy even if a body of competent jurisdiction determines that the Agency or the State is contributorily negligent. This section shall survive the Termination of the Agreement and shall not be limited by reason of any insurance coverage.

XXVI. DISTRICT PARTIES. A District's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, servants, consultants, employees or any one of them or any other person or entity with whom the District is in privity of oral or written contract and the District intends for such other person or entity to Perform under the Agreement in any capacity

XXVII. CAMPAIGN CONTRIBUTION RESTRICTION. For all State contracts as defined in P.A. 07-1 having a value in a calendar year of $50,000 or more or a combination or series of such agreements or contracts having a value of $100,000 or more, the authorized signatory to this Agreement expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice. See SEEC Form 11.

Authorizing Signatures

For DEEP: _____ _____
Katherine S. Dykes, Commissioner Date

For Northwest Conservation District: _____ _____
Signature Date

_____
Title

For Eastern Connecticut Conservation District: _____ _____
Signature Date

_____
Title

For Connecticut River Coastal Conservation District, Inc.: _____ _____
Signature Date

_____
Title

For Southwest Conservation District: _____ _____
Signature Date

_____
Title

For North Central Conservation District: _____ _____
Signature Date

_____
Title

Exhibit 1

Fee Schedule

The Districts will be paid $120/hour for technical assistance work performed.

Non-refundable down payments required with submission:
$2,500 for sites ≤ 20 acres
$4,000 for sites > 20 acres

Exhibit 2

Conservation Districts of Connecticut
Regional Delineations and Contact Information

Northwest Conservation District
1185 New Litchfield Street
Torrington, CT 06790
Ph: 860-626-7222
Fax: 860-626-7222
Email: info@nwcd.org

Eastern Connecticut Conservation District
238 West Town Street
Norwich, CT 06360-2111
Ph**:** 860-319-8806
Email: Dan.Mullins@comcast.net

Connecticut River Coastal Conservation District, Inc.
deKoven House Community Center
27 Washington Street
Middletown, CT 06457
Ph: 860-346-3282Email: ctrivercoastal@conservect.org

Southwest Conservation District
51 Mill Pond Road
Hamden, CT 06514
Ph: 203-859-7014
Email: csullivan@conservect.org

North Central Conservation District
24 Hyde Avenue
Vernon, CT 06066
Ph: 860-875-3881
Email: tollandc@snet.net

NORTHWEST	SOUTHWEST	NORTH CENTRAL	CT RIVER COASTAL	EASTERN
Barkhamsted	Ansonia	Avon	Berlin	Andover
Bethel	Beacon Falls	Bloomfield	Chester	Ashford
Bethlehem	Bethany	Bolton	Clinton	Bozrah
Bridgewater	Branford	Bristol	Colchester	Brooklyn
Brookfield	Bridgeport	Burlington	Cromwell	Canterbury
Canaan	Cheshire	Canton	Deep River	Chaplin
Colebrook	Darien	Coventry	Durham	Columbia
Cornwall	Derby	East Granby	East Haddam	Eastford
Danbury	East Haven	East Hartford	East Hampton	East Lyme
Goshen	Easton	East Windsor	Essex	Franklin
Hartland	Fairfield	Ellington	Haddam	Griswold
Harwinton	Greenwich	Enfield	Hebron	Groton
Kent	Guilford	Farmington	Killingworth	Hampton
Litchfield	Hamden	Glastonbury	Lyme	Killingly
Morris	Meriden	Granby	Madison	Lebanon
New Fairfield	Middlebury	Hartford	Marlborough	Ledyard
New Hartford	Milford	Manchester	Middlefield	Lisbon
New Milford	Monroe	Plainville	Middletown	Mansfield
Newtown	Naugatuck	Simsbury	Newington	Montville
Norfolk	New Canaan	Somers	New Britain	New London
North Canaan	New Haven	South Windsor	Old Lyme	North Stonington
Plymouth	North Branford	Stafford	Old Saybrook	Norwich
Roxbury	North Haven	Suffield	Portland	Plainfield
Salisbury	Norwalk	Tolland	Rocky Hill	Pomfret
Sharon	Orange	Vernon	Salem	Preston
Sherman	Oxford	West Hartford	Westbrook	Putnam
Southbury	Prospect	Wethersfield		Scotland
Thomaston	Redding	Willington		Sprague
Torrington	Ridgefield	Windsor		Sterling
Warren	Seymour	Windsor Locks		Stonington
Washington	Shelton			Thompson
Watertown	Southington			Union
Winchester	Stamford			Voluntown
Woodbury	Stratford			Waterford
	Trumbull			Windham
	Wallingford			Woodstock
	Waterbury			
	West Haven			
	Weston			
	Westport			
	Wilton			
	Wolcott			
	Woodbridge			

Exhibit 3

CONSERVATION DISTRICT PLAN REVIEW CERTIFICATION

Registrations submitted to DEEP for which a Conservation District has performed the Plan review pursuant to Section 3(*b*)(10) of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities shall include the following certification:

"I hereby certify that I am an employee of the [INSERT NAME OF DISTRICT] Conservation District and that I meet the qualifications to review Stormwater Pollution Control Plans as specified in the Memorandum of Agreement between the Connecticut Department of Energy & Environmental Protection and the Five Conservation Districts of Connecticut for Technical Assistance for Locally Approvable Construction General Permits. I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT ADDRESS OF PROJECT OR ACTIVITY]. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of the requirements of such general permit and on the standard of care for such projects, that the Plan is in compliance with the requirements of the general permit. I understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Registrations submitted to DEEP for which the District review was begun but ***could not be completed*** within the time limits specified in the Memorandum of Agreement shall include the following statement:

"I hereby certify that I am an employee of the [INSERT NAME OF DISTRICT] Conservation District and that I meet the qualifications to review Stormwater Pollution Control Plans as specified in the Memorandum of Agreement between the Connecticut Department of Energy & Environmental Protection and the Five Conservation Districts of Connecticut for Technical Assistance for Locally Approvable Construction General Permits. I am making this statement in connection with a registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by [INSERT NAME OF REGISTRANT] for an activity located at [INSERT ADDRESS OF PROJECT OR ACTIVITY]. I hereby state that the review of the Stormwater Pollution Control Plan (Plan) for such registration was not completed within the time frames specified in the Memorandum of Agreement. Consequently, I cannot certify that the Plan is in compliance with the requirements of the general permit."

APPENDIX F
Memorandum of Agreement
Between
The Connecticut Department of Energy & Environmental Protection
and
the Five Conservation Districts of Connecticut
for
Technical Assistance for Locally Exempt Stormwater Construction General Permits

WHEREAS, the Commissioner of the Department of Energy and Environmental Protection ("Department" or "DEEP ") is authorized by section 22a-6(a)(2)(3) and (4) of the Connecticut General Statutes ("CGS") to enter into this Agreement; and

WHEREAS, the five Conservation Districts of Connecticut (collectively, the "Districts"), are not-for-profit corporations duly authorized, organized and existing under the laws of the State of Connecticut and are authorized by section 22a-315 of the CGS and section 22a-315-14 of the Regulations of Connecticut State Agencies to enter into this Agreement; and

WHEREAS, section 22a-430b of the Connecticut General Statutes authorizes the Department to regulate stormwater discharges from construction activities under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities ("the Construction General Permit" or "CGP"), which has been or shall be issued on October 1, 2019. The Construction General Permit requires the implementation of erosion and sediment controls to control the discharge of sediment from construction and post-construction discharges; and

WHEREAS, the Construction General Permit requires the preparation and implementation of a Stormwater Pollution Control Plan ("Plan" or "SWPCP") to prevent erosion and the discharge of sediment to the waters of the state; and

WHEREAS, pursuant to section 22a-315 of the CGS, soil and water conservation districts and boards were established to advise the Commissioner on matters of soil and water conservation and erosion and sediment control and to assist the Commissioner in implementing programs related to soil and water conservation and erosion and sediment control; and

WHEREAS, pursuant to section 22a-315 of the CGS, the soil and water conservation districts and boards may receive funds from private sources for services provided to promote soil and water conservation and to assist the Commissioner in the implementation of related programs; and

WHEREAS, section 22a-326 of the CGS declares the policy of the state "to strengthen and extend its erosion and sediment control activities and programs and to establish and implement, through the Council on Soil and Water Conservation, soil and water conservation districts, the municipalities and the Commissioner of Energy and Environmental Protection, a state-wide coordinated erosion and sediment control program which shall reduce the danger from storm water runoff, minimize nonpoint sediment

pollution from land being developed and conserve and protect the land, water, air and other environmental resources of the state;" and

WHEREAS, the Districts have understanding and experience in reviewing erosion and sediment control plans because of their longstanding participation in the municipal approval process, as required by section 22a-329 of the CGS; and

WHEREAS, DEEP and the Districts are jointly dedicated to protecting the waters of the state by controlling the discharge of sediment and the pollution resulting from stormwater runoff.

NOW, THEREFORE, in consideration of the mutual covenants and conditions hereinafter stated, the Parties agree as follows:

Special Conditions

II. REQUIREMENTS FOR TECHNICAL ASSISTANCE BY DISTRICTS

A. SWPCP technical assistance shall be conducted by a District representative having one or more of the following minimum qualifications: (i) a bachelor's degree in hydrology, engineering (agricultural, civil, environmental, or chemical), landscape architecture, geology, soil science, environmental science, natural resources management, or a related field and two years of professional and field experience, or (ii) the EnviroCert International, Inc. designation as a Certified Professional in Erosion and Sediment Control (CPESC), Certified Erosion, Sediment and Stormwater Inspector (CESSWI), or a Certified Professional in Stormwater Quality (CPSWQ).

B. All technical assistance on SWPCPs undertaken by a District shall be conducted in accordance with the guidelines and procedures established by DEEP in consultation with the Districts, as further described below.

III. LOCALLY EXEMPT PROJECTS

For locally exempt projects, as defined in the Construction General Permit, with five (5) or more acres of soil disturbance, the appropriate District (as specified in the CGP and as indicated in Exhibit 2 appended hereto) shall, upon request by DEEP, provide technical assistance to DEEP for ensuring implementation of the Stormwater Pollution Control Plan in compliance with the CGP.

A. SWPCP Compliance Technical Assistance

1. The District shall be responsible for inspections to ensure that the SWPCP is properly implemented in accordance with the CGP by coordinating with the permittee (or designee) and conducting on-site inspections. Technical assistance will begin upon a written request from DEEP, the receipt of two copies of the approved SWPCP, and a down payment from the permittee as per the fee schedule in Exhibit 1. Once the District is in receipt of the documents and such down payment, the permittee's SWPCP shall be considered submitted to the District and the District will begin the required review in accordance with this agreement and the CGP.

2. Pre-construction Preparation**:** The District will review the approved SWPCP and any other relevant site plans, conduct an on-site visit, and set a date for the pre-construction meeting.

3. Pre-construction Meeting: Before the start of any construction, including any clearing of vegetation or installation of erosion and sediment controls (E&S controls), the District will meet with the permittee (or designee), contractor(s) and the qualified professional engineer who designed the project (designing qualified professional engineer) to review E&S control plans for construction and post-construction stormwater controls. Such meeting will include review of the construction schedule/phasing plan, inspection schedule, exchange of contacts, and discussion of any potential problem areas. If construction begins prior to this meeting, the District shall notify DEEP of non-compliance with the CGP.

4. Plan Implementation Inspection: The permittee (or designee) will notify the District when the E&S controls are installed and coordinate with the designing qualified professional engineer to schedule the Plan Implementation Inspection. The District will conduct the initial on-site inspection accompanied by the permittee (or designee) and the designing qualified professional engineer. If it is determined that the controls are installed properly and are in compliance with the approved SWPCP, the District will issue a notice that construction may proceed according to the SWPCP phasing plan. If the controls are not installed properly, the District will provide written notification to the permittee (or designee) of any action needed to comply with the SWPCP. The District shall re-inspect the site upon notification by the permittee (or designee) that the site is ready for re-inspection and in accordance with the Plan Implementation Inspection requirements in the CGP. Once the controls are properly installed and are in compliance with the approved SWPCP, the District will issue a notice that construction may proceed according to the SWPCP phasing plan.

5. Interim Inspections

   (a) As determined at the pre-construction meeting and according to the approved SWPCP or as otherwise directed by the Commissioner, interim inspections shall be conducted to verify compliance with the CGP and the SWPCP, including but not limited to, verification of site stabilization at the end of each construction phase and proper installation of controls prior to the beginning of the next phase of construction. Similar to the Plan Implementation Inspection, the permittee (or designee) will notify the District that an inspection is needed for either the closeout of one phase and/or the beginning of another.

   (b) Random inspections shall be conducted at least every 6 weeks if needed between scheduled inspections.

   (c) Additional inspections may be scheduled if E&S control objectives are not being met.

   (d) A written report will be generated following each inspection noting site conditions and any action required to maintain proper E&S controls during construction. The report will note whether or not the site is in compliance with the SWPCP and the CGP.

6. Post-Construction Inspection: Once construction is completed the District will conduct a post-construction site inspection with the permittee (or designee), designing qualified professional engineer and contractor to verify that all post-construction stormwater measures

are installed properly in accordance with the CGP and the SWPCP. The District will conduct at least one follow-up site visit after the post-construction site inspection. Additional inspections may be needed if the site is not stable and remedial action is needed. Reports and required actions will follow the same protocol as outlined in II.A.5.(d), above.

7. Final Stabilization Inspection: A final site inspection with the District, contractor, and designing qualified professional engineer will be conducted to ensure the site has been fully stabilized and all post-construction stormwater Best Management Practices (BMPs) are in place and functioning. The final stabilization inspection shall not take place prior to the completion of one (1) full growing season (April – October) following a successful post-construction inspection. The District will notify DEEP to confirm the site has achieved final stabilization. Subsequent to such notification, the permittee shall submit a Notice of Termination in accordance with the CGP.

B. Audits

The District agrees that all records pertaining to this Agreement shall be maintained for a period of not less than five (5) years. Such records shall be made available to the DEEP and to the state auditors upon request. For the purposes of this Agreement, "Records" are all working papers and such information and materials as may have been accumulated by the District in performing the Agreement, including, but not limited to, documents, data, analysis, plans, books, computations, drawings, specifications, notes, inspection reports and records, estimates, summaries and correspondence, kept or stored in any form.

IV. FEE SCHEDULE

A. A District will assess fees for the services it renders in conjunction with its SWPCP technical assistance in accordance with the Fee Schedule provided in Exhibit 1 to this agreement. Fees will be calculated on an hourly basis and paid for by the permittee. A down payment will be required prior to the start of any assistance.

B. The Fee Schedule shall be reviewed annually by the Parties. The Fee Schedule may be adjusted as warranted by mutual written agreement between the Districts and the Commissioner.

V. RESPONSIBILITIES OF DEEP

A. DEEP is responsible for formal review of all locally exempt SWPCPs submitted as part of the CGP and will require performance assurance (in accordance with the CGP) or similar financial mechanisms of the permittee to ensure payments will be made to Districts for technical assistance work.

B. In order to institute standard SWPCP review guidelines and procedures, DEEP shall coordinate with the Districts to prepare a SWPCP checklist. The standard review guidelines and procedures established shall be consistent with the requirements of the Construction General Permit, the 2002 CT Guidelines for Soil Erosion and Sediment Control (as amended), and the 2004 Stormwater Quality Manual (as amended). The Commissioner shall have final approval of the review guidelines and procedures.

C. DEEP shall provide initial training regarding SWPCP requirements for District staff involved in SWPCP technical assistance. The frequency of subsequent training shall be determined by the Commissioner.

D. DEEP shall retain final decision making authority regarding the determination that a construction site is in compliance or not with the SWPCP requirements of the Construction General Permit and shall oversee the permitting process for Construction General Permit coverage.

E. DEEP shall oversee any subsequent compliance and/or enforcement matters related to a permittee's adherence to the requirements of the Construction General Permit.

F. DEEP shall have the discretion to review any of the Districts' records pertaining to any aspect this Agreement.

VI. POINTS OF CONTACT

The following shall be points of contact for this Agreement unless otherwise agreed to by all Parties. All notices, demands, requests, consents, approvals or other communications required or permitted to be given or which are given with respect to this Agreement (for the purpose of this section collectively called "Notices") shall be deemed to have been effected at such time as the notice is emailed, or placed in the U.S. mail, first class and postage pre-paid, return receipt requested, or placed with a recognized overnight express delivery service that provides for a return receipt. All such Notices shall be in writing and shall be addressed as follows:

DEEP
Director Water Permitting & Enforcement Division
Bureau of Material Management & Compliance Assurance
Department of Energy & Environmental Protection
79 Elm St.
Hartford, CT 06106
Phone: 860-424-3018
Fax: 860-424-4074

Conservation District Executive Director and/or Board Chairperson
Address & Phone of appropriate District:

Northwest Conservation District
1185 New Litchfield Street
Torrington, CT 06790
Ph: 860-626-7222
Fax: 860-626-7222
Email: info@nwcd.org

Eastern Connecticut Conservation District
238 West Town Street
Norwich, CT 06360-2111
Ph: 860-319-8806
Email: Dan.Mullins@comcast.net

Connecticut River Coastal Conservation District, Inc.
deKoven House Community Center
27 Washington Street
Middletown, CT 06457
Ph: 860-346-3282
Email: ctrivercoastal@conservect.org

Southwest Conservation District
51 Mill Pond Road
Hamden, CT 06514
Ph: 203-859-7014
Email: csullivan@conservect.org

North Central Conservation District
24 Hyde Avenue
Vernon, CT 06066
Ph: 860-875-3881
Email: tollandc@snet.net

General Conditions

VII. EXECUTIVE ORDERS AND ANTI-DISCRIMINATION.

Executive Orders. . This Contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the Contract as if they had been fully set forth in it. The Contract may also be subject to Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services and to Executive Order No. 49 of Governor Dannel P. Malloy, promulgated May 22, 2015, mandating disclosure of certain gifts to public employees and contributions to certain candidates for office. If Executive Order 14 and/or Executive Order 49 are applicable, they are deemed to be incorporated into and are made a part of the Contract as if they had been fully set forth in it. At the Contractor's request, the Client Agency or DAS shall provide a copy of these orders to the Contractor.

VIII. AMENDMENTS. Either the DEEP or the Districts may recommend revisions to this Agreement as circumstances may warrant; however, any revisions must be upon mutual agreement of DEEP and all five Conservation Districts. Unless otherwise stated in this Agreement, formal written amendment is required for changes to any of the terms and conditions specifically stated in the Agreement, any prior amendments to the Agreement, and any other Agreement revisions determined

material by the Department.

IX. SEVERABILITY. The provisions of this Agreement are severable. If any part of it is found unenforceable, all other provisions shall remain fully valid and enforceable, unless the unenforceable provision is an essential element of the bargain.

X. SOVEREIGN IMMUNITY. The Parties acknowledge and agree that nothing in the Agreement shall be construed as a modification, compromise or waiver by the State of Connecticut ("State") of any rights or defenses of any immunities provided by federal law or the laws of the State of Connecticut to the State or any of the State's, which they may have had, now have or shall have with respect to all matters arising out of the Agreement. To the extent that this section conflicts with any other section, this section shall govern.

XI. FORUM AND CHOICE OF LAW. The Agreement shall be deemed to have been made in the City of Hartford, State of Connecticut. Both Parties agree that it is fair and reasonable for the validity and construction of the Agreement to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by federal law or the laws of the State of Connecticut do not bar an action against the State or the Districts, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Districts waive any objection which they may now have or shall have to the laying of venue of any Claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

XII. TERMINATION. Notwithstanding any provisions in this Agreement, DEEP, through a duly authorized employee, may terminate the Agreement whenever the Department makes a written determination that such Termination is in the best interests of the State. The Department shall notify the Districts in writing sent by certified mail, return receipt requested, which notice shall specify the effective date of Termination and the extent to which the Districts must complete its Performance under the Agreement prior to such date; or (b) The Districts may terminate the Agreement for good cause. The Districts shall notify DEEP by written notice at least one hundred eighty (180) days prior to the effective date of termination. In order for the Districts to terminate this Agreement, (1) there must be a consensus between all five Conservation Districts that each District shall be terminating this Agreement with the DEEP; (2) such proof of consensus shall be submitted to the DEEP in the form of a letter signed by the duly authorized agent for each District by certified mail, return receipt requested, at least one hundred eighty (180) days prior to the Districts' intention to cancel or terminate. Upon the Termination of this Agreement by either Party, the Districts shall deliver to the Department copies of all Records no later than thirty (30) days after the Termination of the Agreement, or fifteen (15) days after the Non-terminating Party receives a written request from the Terminating Party for the Records. The Districts shall deliver those Records that exist in electronic, magnetic or other intangible form in a non-proprietary format, such as, but not limited to, PDF, ASCII or .TXT. Upon receipt of a written notice of Termination from the Department, the Districts shall cease operations as the Department directs in the notice, and take all actions that are necessary or appropriate, or that the Department may reasonably direct, for the protection, and preservation of records. Except for any work which the Department directs the Districts to Perform in the notice prior to the effective date of Termination, and except as otherwise provided in the notice, the

Districts shall terminate or conclude all existing subcontracts and purchase orders and shall not enter into any further subcontracts, purchase orders or commitments. Upon Termination of the Agreement, all rights and obligations shall be null and void, so that no Party shall have any further rights or obligations to any other Party, except with respect to the sections which survive Termination. All representations, warranties, agreements and rights of the Parties under the Agreement shall survive such Termination to the extent not otherwise limited in the Agreement and without each one of them having to be specifically mentioned in the Agreement. Termination of the Agreement pursuant to this section shall not be deemed to be a breach of Agreement by the Department.

XIII. DURATION OF AGREEMENT. This Agreement shall be effective on January 1, 2019 or on the date of the last signature below, whichever is later, and shall continue in force unless canceled or terminated by either party in accordance with paragraph X above.

XIV. VOID AB INITIO. Notwithstanding paragraphs X and XI, the Agreement shall be void ab initio if, in the Commissioner's sole discretion, the Construction General Permit is reissued, revoked or modified to eliminate the need for the Districts to review the SWPCP pursuant to such general permit's terms and conditions or if the Construction General Permit expires and is not reissued.

XV. INTERPRETATION. The Agreement contains numerous references to statutes and regulations. For purposes of interpretation, conflict resolution and otherwise, the content of those statutes and regulations shall govern over the content of the reference in the Agreement to those statutes and regulations.

XVI. ENTIRETY OF AGREEMENT. This Agreement is the entire agreement between the Parties with respect to its subject matter, and supersedes all prior agreements, proposals, offers, counteroffers and understandings of the Parties, whether written or oral. The Agreement has been entered into after full investigation, neither Party relying upon any statement or representation by the other unless such statement or representation is specifically embodied in the Agreement.

XVII. PROTECTION OF STATE CONFIDENTIAL INFORMATION

A. The Districts or District Parties, at their own expense, have a duty to and shall protect from a Confidential Information Breach any and all Confidential Information which they come to possess or control, wherever and however stored or maintained, in a commercially reasonable manner in accordance with current industry standards.

B. Each District or District Party shall develop, implement and maintain a comprehensive data-security program for the protection of Confidential Information. The safeguards contained in such program shall be consistent with and comply with the safeguards for protection of Confidential Information, and information of a similar character, as set forth in all applicable federal and state law and written policy of the Department or State concerning the confidentiality of Confidential Information. Such data-security program shall include, but not be limited to, the following:

1. A security policy for employees related to the storage, access and transportation of data containing Confidential Information;

2. Reasonable restrictions on access to records containing Confidential Information, including access to any locked storage where such records are kept;

3. A process for reviewing policies and security measures at least annually;

4. Creating secure access controls to Confidential Information, including but not limited to passwords; and

5. Encrypting of Confidential Information that is stored on laptops, portable devices or being transmitted electronically.

C. The District and District Parties shall notify the Department and the Connecticut Office of the Attorney General as soon as practical, but no later than twenty-four (24) hours, after they become aware of or suspect that any Confidential Information which Parties have come to possess or control has been subject to a Confidential Information Breach. If a Confidential Information Breach has occurred, the District shall, within three (3) business days after the notification, present a credit monitoring and protection plan to the Commissioner of Administrative Services, the Department and the Connecticut Office of the Attorney General, for review and approval. Such credit monitoring or protection plan shall be made available by the District at its own cost and expense to all individuals affected by the Confidential Information Breach. Such credit monitoring or protection plan shall include, but is not limited to, reimbursement for the cost of placing and lifting one (1) security freeze per credit file pursuant to Connecticut General Statutes §36a-701a. Such credit monitoring or protection plans shall be approved by the State in accordance with this Section and shall cover a length of time commensurate with the circumstances of the Confidential Information Breach. The District's costs and expenses for the credit monitoring and protection plan shall not be recoverable from the Department, any State of Connecticut entity or any affected individuals.

D. The District shall incorporate the requirements of this Section in all subAgreements requiring each District Party to safeguard Confidential Information in the same manner as provided for in this Section.

E. Nothing in this Section shall supersede in any manner the District's and/ or the District Parties' obligations pursuant to HIPAA or the provisions of this Agreement concerning the obligations of the District as a Business Associate of the Department.

XVIII. AMERICANS WITH DISABILITIES ACT. The Districts shall be and remain in compliance with the Americans with Disabilities Act of 1990 ("Act"), to the extent applicable, during the term of the Agreement. The DEEP may cancel the Agreement if the District and District Parties fail to comply with the Act.

XIX. ADA PUBLICATION STATEMENT. The following statement shall be incorporated into all publications prepared under the terms of this Agreement:

"The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act (ADA). Please contact us at (860) 418-5910 or deep.accommodations@ct.gov if you: have a disability and need a communication aid or service;

have limited proficiency in English and may need information in another language; or if you wish to file an ADA or Title VI discrimination complaint."

When advertising any public meetings conducted under the terms of this Agreement, the above publications language should be used as well as the following statement:

"Requests for accommodations must be made at least two weeks prior to the program date."

All videos produced under the terms of this Agreement must be made available with closed captioning.

XX. PUBLICATION OF MATERIALS. The District must obtain written approval from the State of Connecticut prior to distribution or publication of any printed material prepared under the terms of this Agreement. Unless specifically authorized in writing by the State, on a case by case basis, the District shall have no right to use, and shall not use, the name of the State of Connecticut, its officials, agencies, or employees or the seal of the State of Connecticut or its agencies: (1) in any advertising, publicity, promotion; or (2) to express or to imply any endorsement of District's products or services; or (3) to use the name of the State of Connecticut, its officials agencies, or employees or the seal of the State of Connecticut or its agencies in any other manner (whether or not similar to uses prohibited by (1) and (2) above), except only to manufacture and deliver in accordance with this Agreement such items as are hereby contracted for by the State. In no event may the Districts use the State Seal in any way without the express written consent of the Secretary of State.

XXI. CHANGES IN PRINCIPAL PROJECT STAFF. Any changes in the principal project staff must be requested in writing and approved in writing by the Commissioner at the Commissioner's sole discretion. In the event of any unapproved change in principal project staff, the Commissioner may, in the Commissioner's sole discretion, terminate this Agreement.

XXII. FURTHER ASSURANCES. The Parties shall provide such information, execute and deliver any instruments and documents and take such other actions as may be necessary or reasonably requested by the other Party which are not inconsistent with the provisions of this Agreement and which do not involve the vesting of rights or assumption of obligations other than those provided for in the Agreement, in order to give full effect to the Agreement and to carry out the intent of the Agreement.

XXIII. ASSIGNMENT. The Districts shall not assign any of their rights or obligations under the Agreement, voluntarily or otherwise, in any manner without the prior written consent of the Department. The Department may void any purported assignment in violation of this section and declare the District in breach of this Agreement. Any termination by the Department for a breach is without prejudice to the Agency's or the State's rights or possible Claims.

XXIV. EXHIBITS. All exhibits referred to in, and attached to, this Agreement are incorporated in this Agreement by such reference and shall be deemed to be a part of it as if they had been fully set forth in it.

XXV. FORCE MAJEUR. Events that materially affect the cost of the Goods or Services or the time schedule within which to Perform and are outside the control of the party asserting that such an event has occurred, including, but not limited to, labor troubles unrelated to District(s), failure of or inadequate permanent power, unavoidable casualties, fire not caused by a District, extraordinary

weather conditions, disasters, riots, acts of God, insurrection or war.

XXVI. INDEMNIFICATION. The Districts shall indemnify, defend and hold harmless the State and its officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) Claims arising, directly or indirectly, in connection with the Agreement, including the acts of commission or omission (collectively, the "Acts") of the District or District Parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with Claims, Acts or the Agreement. The Districts obligations under this section to indemnify, defend and hold harmless against Claims includes Claims concerning confidentiality of any part of or all of the Districts' Records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or uncopyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the Performance. The Districts shall not be responsible for indemnifying or holding the State harmless from any liability arising due to the gross negligence of the State or any other person or entity acting under the direct control or supervision of the State. The Districts shall reimburse the State for any and all damages to the real or personal property of the State caused by the Acts of the Districts or any District Parties. The State shall give the Districts reasonable notice of any such Claims. The Districts shall carry and maintain at all times during the term of the Agreement, and during the time that any provisions survive the term of the Agreement, sufficient general liability insurance to satisfy its obligations under this Agreement. The Districts shall name the State as an additional insured on the policy and shall provide a copy of the policy to the Department prior to the effective date of the Agreement. The Districts shall not begin Performance until the delivery of the policy to the Department. The Department shall be entitled to recover under the insurance policy even if a body of competent jurisdiction determines that the Department or the State is contributorily negligent. This section shall survive the Termination of the Agreement and shall not be limited by reason of any insurance coverage.

XXVII. DISTRICT PARTIES. A District's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, servants, consultants, employees or any one of them or any other person or entity with whom the District is in privity of oral or written contract and the District intends for such other person or entity to Perform under the Agreement in any capacity

Authorizing Signatures

For DEEP: _____ _____
Katherine S. Dykes, Commissioner Date

For Northwest Conservation District:

_____ _____
Signature Date
_____
Title

For Eastern Connecticut Conservation District:

_____ _____
Signature Date
_____
Title

For Connecticut River Coastal Conservation District, Inc.:

_____ _____
Signature Date
_____
Title

For Southwest Conservation District:

_____ _____
Signature Date
_____
Title

For North Central Conservation District:

_____ _____
Signature Date
_____
Title

Exhibit 1

Fee Schedule effective as of January 1, 2019

The Districts will be paid $120/hour for technical assistance work performed. Interim inspections must be estimated based on phasing and complexity of site.

Down payments:
$2,500 for sites ≤ 20 acres
$4,000 for sites > 20 acres

Exhibit 2

Conservation Districts of Connecticut
Regional Delineations and Contact Information

Northwest Conservation District
1185 New Litchfield Street
Torrington, CT 06790
Ph: 860-626-7222
Fax: 860-626-7222
Email: info@nwcd.org

Eastern Connecticut Conservation District
238 West Town Street
Norwich, CT 06360-2111
Ph**:** 860-319-8806
Email: Dan.Mullins@comcast.net

Connecticut River Coastal Conservation District, Inc.
deKoven House Community Center
27 Washington Street
Middletown, CT 06457
Ph: 860-346-3282
Email: ctrivercoastal@conservect.org

Southwest Conservation District
51 Mill Pond Road
Hamden, CT 06514
Ph: 203-859-7014
Email: csullivan@conservect.org

North Central Conservation District
24 Hyde Avenue
Vernon, CT 06066
Ph: 860-875-3881
Email: tollandc@snet.net

NORTHWEST	SOUTHWEST	NORTH CENTRAL	CT RIVER COASTAL	EASTERN
Barkhamsted	Ansonia	Avon	Berlin	Andover
Bethel	Beacon Falls	Bloomfield	Chester	Ashford
Bethlehem	Bethany	Bolton	Clinton	Bozrah
Bridgewater	Branford	Bristol	Colchester	Brooklyn
Brookfield	Bridgeport	Burlington	Cromwell	Canterbury
Canaan	Cheshire	Canton	Deep River	Chaplin
Colebrook	Darien	Coventry	Durham	Columbia
Cornwall	Derby	East Granby	East Haddam	Eastford
Danbury	East Haven	East Hartford	East Hampton	East Lyme
Goshen	Easton	East Windsor	Essex	Franklin
Hartland	Fairfield	Ellington	Haddam	Griswold
Harwinton	Greenwich	Enfield	Hebron	Groton
Kent	Guilford	Farmington	Killingworth	Hampton
Litchfield	Hamden	Glastonbury	Lyme	Killingly
Morris	Meriden	Granby	Madison	Lebanon
New Fairfield	Middlebury	Hartford	Marlborough	Ledyard
New Hartford	Milford	Manchester	Middlefield	Lisbon
New Milford	Monroe	Plainville	Middletown	Mansfield
Newtown	Naugatuck	Simsbury	Newington	Montville
Norfolk	New Canaan	Somers	New Britain	New
North Canaan	New Haven	South Windsor	Old Lyme	London
Plymouth	North Branford	Stafford	Old Saybrook	North
Roxbury	North Haven	Suffield	Portland	Stonington
Salisbury	Norwalk	Tolland	Rocky Hill	Norwich
Sharon	Orange	Vernon	Salem	Plainfield
Sherman	Oxford	West Hartford	Westbrook	Pomfret
Southbury	Prospect	Wethersfield		Preston
Thomaston	Redding	Willington		Putnam
Torrington	Ridgefield	Windsor		Scotland
Warren	Seymour	Windsor Locks		Sprague
Washington	Shelton			Sterling
Watertown	Southington			Stonington
Winchester	Stamford			Thompson
Woodbury	Stratford			Union
	Trumbull			Voluntown
	Wallingford			Waterford
	Waterbury			Windham
	West Haven			Woodstock
	Weston			
	Westport			
	Wilton			
	Wolcott			
	Woodbridge			

APPENDIX G

Historic Preservation Review

Chapter 184a, Section 10-387 of the Connecticut General Statutes states that DEEP shall review, in consultation with the State Historic Preservation Office (SHPO) within the Department of Economic and Community Development, its policies and practices for consistency with the preservation and study of the state's archaeological and historical sites. Pursuant to this requirement, DEEP has outlined the following process for assessing the potential for a proposed development to impact these important resources. DEEP advises a review for resources identified below to ***be initiated up to one year*** prior to registration for this permit and in conjunction with the local project approval process.

Question 1
Will the proposed project will be authorized under an Army Corps of Engineers Section 404 wetland permit?

☐ Yes – Stop here – the Section 404 permit will satisfy all requirements for Appendix G
☐ No – Please answer the following questions

Question 2
Is the project site within an area of significance?

☐ Yes ☐ No ☐ Do Not Know or Unable to Determine

This can be determined by consulting the following resources:

1. National Register of Historic Places found at the link below: https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466
2. The municipality of the proposed development site for locally designated properties (including local historic districts) and any municipal ordinance pertaining to properties over 50 years old.

Question 3
Does the area of anticipated construction or ground disturbance include soils defined by the United States Department of Agriculture as "Loam, Sandy Loam, or Loamy Sand" that also may be Fine or Gravelly with slopes less than or equal to 15% (Soil mapping information is available at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx)?

☐ Yes ☐ No ☐ Do Not Know or Unable to Determine

Question 4
Are there buildings or structures over 50 years in age within the project site or evidence of prior human land use (i.e., buildings foundations, wells, stone walls, or other built stone features)?

☐ Yes ☐ No ☐ Do Not Know or Unable to Determine

How to Proceed

If you answered "Yes" or "Do Not Know or Unable to Determine" to any or all of Questions 2, 3, or 4 above; please contact Catherine Labadia at SHPO for additional guidance (email: catherine.labadia@ct.gov or direct phone: 860-500-2329).

If you answered "No" to each one of Questions 2, 3, or 4 above; report in the Registration Form for the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities that a self-review has been conducted and report the results provided above.

Appendix H
Wild & Scenic Rivers Guidance

Overview: Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (WSRA) charges administration of rivers in the National Wild and Scenic Rivers System (National System) to four federal land management agencies (Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service). However, to protect and enhance river values as directed in the WSRA, it is essential to use the authorities of a number of other federal agencies in administering the water column, river bed/bank, and upland river corridor.

Congress declared a policy to protect selected rivers in the nation through the WSRA. The river-administering agencies are to protect the river's identified values, free-flowing condition, and associated water quality. Specifically, each component is to be "administered in such manner as to protect and enhance the (outstandingly remarkable) values (**ORVs**) which caused it to be included in said system. . . ."

The WSRA also directs other federal agencies to protect river values. It explicitly recognizes the Federal Energy Regulatory Commission, Environmental Protection Agency, Army Corps of Engineers and any other federal department or agency with lands on or adjacent to designated (or congressionally authorized study) rivers or that permit or assist in the construction of water resources projects.

Pertinent Sections of the Wild and Scenic Rivers Act

The full Wild and Scenic Rivers Act can be found at the website: www.rivers.gov
Pertinent Sections related to the mandate to protect river values through coordinated federal actions is found in several sections of the WSRA:

Section 1(b)	Section 7(a)	Section 10(a)
Section 12(a)	Section 12(c)	

Designated Rivers under the Wild and Scenic Rivers Act and Contact Information

The full listing of designated rivers can be found on the website www.rivers.gov
As of the date of this publication, there are two designated rivers in Connecticut, both of which are managed under the Partnership Wild and Scenic Rivers Program, through a Coordinating Committee consisting of representatives from local communities and organizations, state government and the National Park Service. More information about these rivers, their watersheds, approved management plans, the Wild and Scenic Coordinating Committees and specific contact information can be found on the websites.

1. Farmington (West Branch) River: farmingtonriver.org
2. Farmington (Lower) & Salmon Brook: lowerfarmingtonriver.org
3. Eightmile River: eightmileriver.org
4. Wood & Pawcatuck Rivers: wpwildrivers.org

APPENDIX I
Stormwater Management at
Solar Array Construction Projects

Solar development has expanded over the last several years as Connecticut and other states have invested in this important resource to further greenhouse gas emission reductions and other renewable policy objectives. However, construction of a large-scale solar array is unlike most other construction activities regulated under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("general permit") and entails challenges not encountered in traditional development projects. If not properly managed, stormwater discharged during and after the construction of solar arrays can be a significant source of pollution resulting from increased runoff, erosion, and sedimentation, which can adversely impact wetlands or other natural resources. It is vitally important to stabilize soil, minimize soil disturbance and soil compaction, and manage the total runoff volume and velocity. Proper stormwater management practices can significantly mitigate the loss of topsoil, erosion and sediment discharges from disturbed areas and stormwater outlets, and erosion along downstream channels and streambanks. The opportunities to properly manage runoff decrease as site imperviousness increases.

Therefore, in addition to the terms and conditions of the general permit, registrations for construction of a Solar Array (as that term is defined in Section 2 of the general permit) shall, at a minimum, adhere to the conditions listed below. Depending on site-specific conditions for a particular solar array construction project, additional analyses may be required.

(I) Design and construction requirements

(1) Roadways, gravel surfaces and transformer pads within the solar array are considered effective impervious cover for the purposes of calculating Water Quality Volume (WQV). In addition to these impervious surfaces, all solar panels in the array shall also be considered effective impervious cover for the purposes of calculating Water Quality Volume if the proposed post-construction slopes at a site are equal to or greater than 15% or if the post-construction slopes at a site are less than 15% and the conditions in (a) – (d), inclusive, below have not been met:

(a) The vegetated area receiving runoff between rows of solar panels (see Figures 1 and 2, below) is equal to or greater than the average width of the row of solar panels draining to the vegetated area;

(b) Overall site conditions and solar panel configuration within the array are designed and constructed such that stormwater runoff remains as sheet flow across the entire site and flows towards the intended stormwater management controls;

(c) The following conditions are satisfied regarding the design of the post-construction slope of the site:

(i) For slopes less than or equal to 5%, appropriate vegetation shall be established that will ensure sheet flow conditions and that will provide sufficient ground cover throughout the site; and

(ii) For slopes greater than 5%, but less than 10%, practices including, but not limited to, level spreaders, terraces or berms as described in Figure 2, below, shall be used to ensure long term sheet flow conditions; and

(iii) For slopes greater than or equal to 8%, erosion control blankets or stump grindings or erosion control mix mulch or hydroseed with tackifier shall be applied within 72 hours of final grading, or when a rainfall of 0.5 inches or greater is predicted within 24 hours of final grading, whichever time period is less; and

(iv) For slopes equal to or greater than 10% and less than 15%, the Plan includes specific engineered stormwater control measures with detailed specifications that are designed to provide permanent stabilization and non-erosive conveyance of runoff to the property line of the site or downgradient from the site.

(d) The solar panels shall be designed and constructed in such a manner as to allow the growth of native

vegetation beneath and between the panels. Pollinator-friendly vegetation is strongly encouraged. With respect to such vegetation, the Permittee shall not use chemical fertilization, herbicides, or pesticides except as necessary to establish such vegetation.

(2) (a) Prior to commencing construction activities, the Permittee shall ensure that the following setback and buffer shall be delineated and maintained on the site:

(i) No solar panel associated with a solar array shall be located within one-hundred (100) feet of any wetland or waters ("the 100-foot setback") that, prior to or after construction, is located downgradient of such construction activity or within fifty (50) feet of any property boundary ("the 50-foot setback") that, prior to or after construction, is located downgradient of such construction activity; and

(ii) Except as provided in section 2(a)(iii), there shall be an undisturbed buffer of at least fifty (50) feet between any construction activity at a site and any wetland or waters that, prior to or after construction, is located downgradient of such construction activity ("the 50-foot buffer"). Such buffer shall be comprised of existing dense herbaceous vegetative ground cover (e.g. not forested area). If the entirety of such buffer is not comprised of existing dense herbaceous vegetative ground cover, such buffer shall be at least one-hundred (100) feet ("the 100-foot buffer").

(iii) There shall be an undisturbed buffer of at least ten (10) feet between any construction activity at a site associated with an access road or the electrical interconnection necessary for the solar array and any wetland or waters that, prior to or after construction, is located downgradient of such construction activity ("10-foot buffer"), except if the access road or electrical interconnection passes between two wetland or waters and the undisturbed buffer cannot be achieved. Any crossing through a wetland or waters for an access road or electrical interconnection is exempt from such buffer requirement.

(b) Notwithstanding section 2(a)(ii), the 50-foot buffer or 100-foot buffer, as applicable, may be reduced, only where necessary, but by no more than fifty percent (50%), only if all of the following have been demonstrated to the satisfaction of the commissioner by approval of a Registration:

(i) Stormwater control measures for managing stormwater discharges that will enter or be received by a wetland or waters shall be designed and installed in accordance with the following conditions:

(A) a minimum sediment load reduction of ninety percent (90%) shall be achieved before such discharges enter or are received by a wetland or waters. The required sediment load reduction shall be calculated based solely on the stormwater controls used; no sediment load reduction from conditions on the site (i.e., from any remaining buffer) shall be considered when calculating the sediment load reduction from such stormwater controls. The sediment load reduction may be calculated using a range of available models that are available to facilitate this calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other equivalent independent third party model or method acceptable to the commissioner;

(B) those portions of a solar array from which stormwater discharges enter or will be received by a wetland or waters shall be deemed effective impervious cover for the purposes of calculating Stream Channel Protection in accordance with Section 7.6.1 of the Stormwater Quality Manual, even if those portions of such array are less than one (1) acre; and

(C) the buffer into which stormwater discharges shall have a slope of less than or equal to fifteen percent (15%)

(c) A soil scientist, as that term is defined in Section 2 of the general permit, shall delineate all wetland or waters by field survey. The location of all wetland or waters and all required setbacks and buffers shall be shown on all mapping and prior to the start of construction be clearly marked on the site with flags, stakes, tape, or a similar marking device by a surveyor licensed in Connecticut.

(d) Delineation of the 100-foot setback and any buffer required under this section shall be measured perpendicularly and laterally from the nearest part of the solar array or construction activity, as applicable, to:

(i) in the case of waters, the ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris;

(ii) the nearest edge of the stream or river bank, bluff, or cliff, as applicable; and

(iii) the nearest edge of any wetland, as determined by a soil scientist.

(e) The Plan shall indicate how compliance with this section will be achieved.

(f) Prior to the approval of a registration, the commissioner may determine that the 100 foot-setback or any buffer required under this section is not adequate to protect water quality or natural resources (i.e., a vernal pool, cold-water perennial streams, perennial headwater seeps or similar sensitive wetland or waters, or other sensitive habitat). In such a case, the commissioner may reject or disapprove the registration, or may impose additional terms and conditions in the approval of such registration, including, but not limited to, an additional setback, buffer or other control measure.

(g) Nothing in this section is intended to or shall prevent improvements, as may be directed by the commissioner in the approval of a registration, to enhance the water quality benefits or the natural resource value of any buffer required under this section.

(h) The terms "wetland", "wetlands", and "waters" shall be as defined in Section 2 of the general permit. In addition, the term "access road" shall mean a road used for the sole purpose of gaining access to the site from a public road or right-of-way or a road used solely to provide access between separate internal areas of fenced solar arrays. Access road shall *not* include any other road, including, but not limited to, a road around the perimeter of a solar array or a road used to service solar arrays.

(3) The lowest vertical clearance of the solar panels above the ground should not be greater than ten (10) feet. The panels shall, however, be at an adequate height to support vegetative growth and maintenance beneath and between the panels. If the lowest vertical clearance of the solar panels above the ground is greater than ten (10) feet, non-vegetative control measures will be required to prevent/control erosion and scour along the drip line or otherwise provide energy dissipation from water running off the panels. This section does not apply to solar carports that are installed over asphalt pavement.

(4) In addition to the pre-construction meeting required by Section 3(*b*)(15) of the general permit, prior to each phase of any construction activity, the Permittee shall ensure that a preconstruction meeting takes place with the designing qualified professional, qualified inspector, and all site contractors and subcontractors to be involved in construction, and the appropriate District personnel. Such meeting shall include a site walk of the project site. The Permittee shall ensure that a record of the date of such meeting and a report summarizing the meeting shall be prepared and retained in the Permittee's Plan, with a copy sent to all parties who attended the preconstruction meeting.

(5) (a) The Permittee shall retain the designing qualified professional and a qualified inspector (as those terms are defined in Section (2)) to conduct the Plan Implementation and Routine inspections pursuant to Section 5(*b*)(4), provided that any qualified inspector shall be chosen by the designing qualified professional. Unless otherwise approved in writing by the Commissioner, such designing qualified professional and qualified inspector shall be retained for the duration of the construction project until the Notice of Termination has been submitted to the Commissioner and determined to be acceptable, as described below in paragraph (8) below.

(b) Plan Implementation Inspections: Notwithstanding the schedule of inspections set forth in Section 5(*b*)(4) of the general permit, the Permittee shall ensure that the designing qualified professional and the qualified

inspector chosen by such designing qualified professional conduct Plan Implementation Inspections beginning with the commencement of construction activities and through each phase of construction until all perimeter controls, initial erosion and sediment control measures, and construction stormwater traps, basins, swales, and other control measures associated with each phase have been installed and stabilized. In addition, once all of these measures have been installed and stabilized, the Permittee shall ensure that the designing qualified professional certifies in writing to their completion in the applicable inspection report in accordance with the Plan. The Permittee shall ensure that the designing qualified professional conducts a Plan Implementation Inspection of the site at least once a month and the qualified inspector chosen by such designing qualified professional conducts such inspection at least once a week. (The qualified inspector does not need to conduct a weekly inspection during the week the qualified designing professional conducts a monthly inspection).

(c) Routine Inspections: Following the completion of the Plan Implementation Inspections (i.e., after the designing qualified professional has certified that stormwater control measures have been installed and stabilized) and notwithstanding the requirements of Section 5(*b*)(4)(B) of the general permit, either the designing qualified professional or the qualified inspector shall conduct weekly Routine Inspections pursuant to Section 5(*b*)(4)(B) of the general permit, provided that the designing qualified professional shall inspect the site at least once a month, or more frequently if necessary, to confirm that the site is in compliance with the general permit and determine if it is necessary to install, modify, maintain, or repair such controls and/or measures to improve the quality of stormwater discharges.

(d) In addition to any requirements of Section 5(*b*)(4)(B) of the general permit, the designing qualified professional shall seal and certify to the truth and accuracy of each inspection undertaken pursuant to this section regardless of whether the inspection is performed by such designing qualified professional or the qualified inspector. On or before five (5) days after the completion of each inspection, the Permittee shall ensure that certified inspection reports of all inspections undertaken pursuant to this section are provided by the designing qualified professional directly to the Permittee and shall ensure that a copy of the certified inspection report of each such inspection is provided to the appropriate District personnel and submitted electronically to the Department via email at DEEP.stormwaterstaff@ct.gov.

(e) Unless otherwise provided for in this section, the Permittee shall comply with section 5(*b*)(4) of the general permit, including, but not limited to, taking action if an inspection indicates that the site is not in compliance with the terms and conditions of the Plan or the general permit.

(f) The Permittee shall also ensure that the proposed inspection checklist prepared by the designing qualified professional is submitted for the review and approval of the Commissioner and is included with the registration for the general permit. No other professionals may serve as the designing qualified professional or qualified inspector without the prior submittal of relevant credentials and inspection checklist for the Commissioner's review and written approval.

(6) In addition to the requirements of this general permit regarding inspection checklists, the Permittee shall ensure that a copy of all such checklists are submitted electronically to the Department email (DEEP.stormwaterstaff@ct.gov) and the appropriate District within five (5) days from the date an inspection of the site was performed.

(7) The Permittee shall ensure, after completion of a construction project, that a Notice of Termination is filed in compliance with Section 6 of this general permit, including the requirement that such Notice of Termination be signed by a District representative certifying that such District representative has personally conducted a Post-Construction Inspection and Final Stabilization Inspection in accordance with Section 6(*a*) of this general permit and verified compliance with the requirements of that section. The Notice of Termination shall not be submitted until two (2) full growing seasons have passed following final stabilization. Monthly post-construction inspections shall be conducted by the qualified inspector following final stabilization until the Notice of Termination is submitted.

(8) (a) Prior to undertaking any construction activity, the Permittee shall secure and maintain a letter of credit in

accordance with the requirements of this section.

(b) For sites with a total disturbance of twenty (20) acres or more, the amount of the Letter of Credit shall be $15,000.00 per acre of disturbance. For sites with a total disturbance of less than twenty (20) acres, the amount of the Letter of Credit shall be $7,500.00 per acre of disturbance. Should a project developer locate more than one project with a total disturbance of less than twenty (20) acres in the same vicinity, for purposes of this section, the Commissioner reserves the right to combine such projects and consider them as being a site with a total disturbance of twenty (20) acres or more.

(c) The wording of such letter of credit must be identical to the wording specified in Appendix J of the general permit. The Permittee shall maintain such letter of credit in effect until the Commissioner notifies the permittee that the Notice of Termination, filed in compliance with Section 6 of the general permit has been accepted by the Commissioner.

(d) At the option of the Permittee, the amount of the letter of credit required under section 8(b) of Appendix I may be reduced:

(i) By forty (40) percent of the amount of the original letter of credit, only upon a determination by the Commissioner or, after designation of a District by the Commissioner, a representative from such District, that all perimeter controls, initial erosion and sediment control measures, and construction stormwater traps, basins, swales, and other control measures have been installed, functioning and stabilized in accordance with the general permit and the Plan;

(ii) By forty (40) percent of the amount of the original letter of credit, only upon a determination by the Commissioner or, after designation of a District by the Commissioner, a representative from such District, that all post-construction stormwater management measures specified in the SWPCP have been installed, functioning and stabilized in accordance with the general permit and the Plan; and

(iii) Upon the Commissioner's acceptance of the Notice of Termination filed in compliance with Section 6 of the general permit, the letter of credit may be terminated.

(e) The process for reducing the amount of the letter of credit in accordance with section 8(d) of Appendix I shall be as follows: the Permittee shall first submit a new letter of credit identical in all respects to the letter of credit in Appendix J, except for the reduced amount. Once the new letter of credit is received and the Commissioner determines that it is satisfactory, the Commissioner shall follow any reasonable instructions from the issuing bank regarding the termination or return of the previous letter of credit.

II. Design requirements for post-construction stormwater management measures.

(1) Post-construction stormwater control measures shall be designed and constructed to provide permanent stabilization and non-erosive conveyance of runoff on the site, to the property line of the site or downgradient from the site to ensure protection of on- and off-site wetland, wetlands, and waters (as those terms are defined in Section 2 of the general permit) or other natural resources.

(2) Orientation of panels shall be considered with respect to drainage pattern, flow concentration, drainage area and velocity.

(3) The permittee shall conduct a hydrologic analysis that:

(a) Evaluates and controls the 2, 25, 50 and 100-year 24-hour rainfall event post-development peak discharge to the corresponding pre-development peak discharge rates in accordance with the Stormwater Quality Manual, with the following exceptions: that sheet flow is maintained for a maximum length of 100 feet; shallow concentrated flow is calculated using velocity factors per NRCS Part 630 National Engineering Handbook Chapter 15 (the use of TR-55 paved or unpaved velocity factors are not acceptable); if swales are used to convey or control stormwater, such swales shall convey and control stormwater from a 100-year, 24-hour

rainfall event; and

(b) Is based on site specific soil mapping to confirm soil types; and

(c) Is able to determine and confirm the infiltrative capacity of any stormwater management measures . In addition, in areas where grading exceeds a two (2) foot difference between existing and proposed grades, the runoff curve number shall increase by one full HSG (e.g. runoff curve number for soils of HSG B shall be considered HSB C). For the remainder of the entire site, the runoff curve number associated with the Hydrologic Soil Group present on-site shall increase by one half (1/2) the difference between the Hydrologic Soil Group present on-site and the next higher Hydrologic Soil Group (e.g. half the difference between the runoff curve number for HSG B versus HSG C) to account for the compaction of soils that results from extensive machinery traffic over the course of the construction of the array; and

(d) Is based on slope gradient, surveyed soil type (adjusted per subparagraph (c), above), infiltration rate, length of slope, occurrence of bedrock, and change in drainage patterns. Pre- and post-development drainage area maps shall be provided showing this information; and

(e) For an engineered stormwater management system, demonstrates no net increase in peak flows, erosive velocities or volumes, or adverse impacts to downstream properties in accordance with the general permit and the Stormwater Quality Manual.

Figure 1
Solar Panel Installation with Slopes ≤ 5%

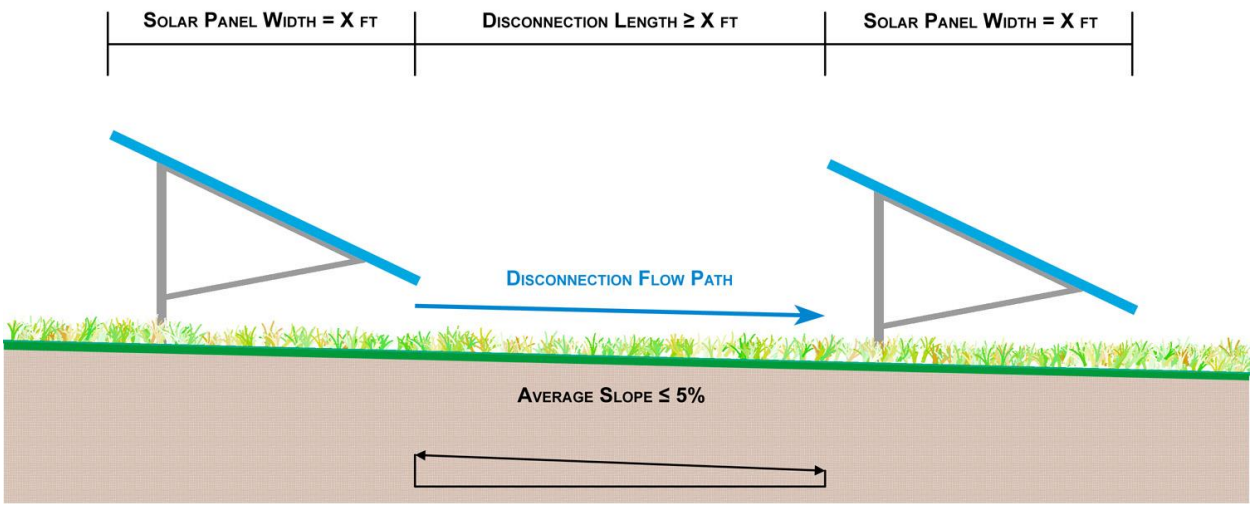
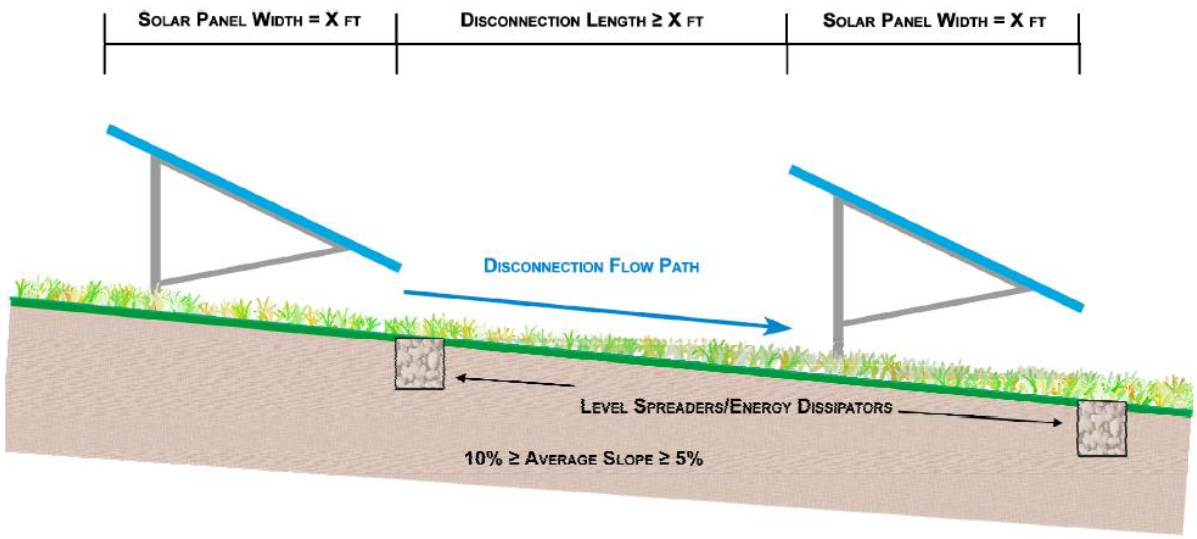


Figure 2
Solar Panel Installation with Slopes > 5% and ≤ 10%



Source: Maryland Department of the Environment: Stormwater Design Guidance – Solar Panel Installations

APPENDIX J
CTDEEP Financial Assurance Irrevocable Letter of Credit

[NAME OF ISSUING BANK]

IRREVOCABLE STANDBY LETTER OF CREDIT NUMBER: [XXXX]

ISSUANCE DATE: [MONTH, DATE, YEAR]

TOTAL AMOUNT: U.S. $[X,XXX.00]

BENEFICIARY: Commissioner, Connecticut Department of Energy and Environmental Protection

APPLICANT: [APPLICANT NAME AND ADDRESS]

Commissioner
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. [XXXX] in your favor, at the request and for the account of the Applicant, [APPLICANT NAME AND ADDRESS], up to the aggregate total amount of [XXX] U.S. Dollars ($[X,XXX].00). We hereby authorize the Commissioner of the Connecticut Department of Energy and Environmental Protection ("Commissioner") to draw at sight on us, [NAME AND ADDRESS OF ISSUING BANK], an aggregate amount up to the total amount, available upon presentation of:

(1) your sight draft, bearing reference to this Letter of Credit No. [XXXX], and

(2) your signed, dated statement reading as follows: "I certify that the amount of the draft is payable because I have determined one or more of the following has occurred or is occurring:

(a) one or more violations of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities issued by the Commissioner and which is currently in effect, or one or more violations of any other requirement or approval applicable to the management of stormwater at or emanating from [ADDRESS OF SITE] ("the Property"), or

(b) stormwater at or emanating from the Property is or has become a potential source of pollution (as that term is defined in Conn. Gen. Stat. § 22a-423) which has not been

remedied to my satisfaction within five (5) business days of the Applicant's receipt of a written notice from me that a pollution condition exists, or

(c) the Applicant, or any other entity in which the Applicant has a controlling interest, no longer owns, leases, or can control the use of the Property, or no longer owns, operates, or has a controlling interest in the solar array facility located at the Property, or

(d) the issuing bank has notified me that it has decided not to extend this letter of credit beyond the current expiration date."

This letter of credit is effective as of [MONTH, DATE, YEAR] and shall expire on [MONTH, DATE, YEAR AT LEAST ONE YEAR LATER], but such expiration date shall be automatically extended for a period of one year and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and Applicant, [APPLICANT NAME], by certified mail or nationally recognized courier service that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of this letter of credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by you, as shown on the signed return receipts or evidence of courier delivery.

Multiple and partial draws on this letter of credit are expressly permitted, up to an aggregate amount not to exceed the total amount. Whenever this letter of credit is drawn on under and in compliance with the terms of this letter of credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into a Connecticut Department of Energy and Environmental Protection dedicated account in accordance with your instructions.

All banking and other charges under this letter of credit are for the account of the Applicant.

This letter of credit is issued subject to the edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce, in effect on the date this Letter of Credit is issued.

By signing, the signatory below certifies, under penalty of law, that the issuing institution is an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a Federal or State agency.

_____

[SIGNATURE(S) OF OFFICIAL(S) OF ISSUING INSTITUTION]

_____

[TITLE(S) OF OFFICIAL(S) OF ISSUING INSTITUTION]

Date: [MONTH, DATE, YEAR]

APPENDIX E – GENERAL PERMIT APPLICATION FORM AND APPROVAL

APPENDIX F – CONSTRUCTION INSPECTION REPORT

Blank Construction Inspection Report

STORM WATER POLLUTION CONTROL PLAN
INSPECTION REPORT (Page 1 of 2)

CT Solar PDF LLC
195 McDermott Road, North Haven, CT

Inspections/reports must be completed every seven (7) days and within 24 hours of the end of a storm event 0.5 inches or greater or equivalent snowfall

Date:_____ Week Ending:_____

Inspection Type:

☐ **Routine (every 7 calendar days)** ☐ **Pre-Storm** ☐ **Storm** ☐ **Post-Storm**

Weather/Storm Event Information:

Storm Start Time: _____ Storm Duration: _____

Time Elapsed Since Last Storm:_____ Approx. Amount of Rainfall (inches): _____

Site Notes:_____

_____

_____

Based on the results of the inspection, necessary control modifications shall be implemented within seven (7) calendar days. These reports shall be kept on file as part of the Storm Water Pollution Prevention Plan for at least three (3) years from the date of completion and submission of the Final Stabilization Certification/Termination Checklist and Notice of Termination. A copy of the SWPCP shall be kept at the site at all times during construction.

Certification Statement:
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name of Inspector:_____Title of Inspector: _____

Qualifications of Inspector: _____

Inspector's Signature: _____

Construction phasing/sequencing is consistent with the SWPCP and Erosion Control Plans: [ ] Yes [ ] No

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION REPORT (Page 2 of 2)

Inspection Areas	Satisfactory	Unsatisfactory (provide location per plan sheet)	N/A	Corrective Action Required	Implementation Date of Corrective Action
Construction Entrance/Exit					
Perimeter Control Measures					
Inlet Protection					
Staging Areas					
Curb and Gutter					
Water Quality Basin					
Drainage Channels					
Temporary Seeding/sodding/ mulching					
Permanent Seeding/sodding/ mulching					
Material Management and Storage					
Solid and Construction Waste					
Sanitary Wastes					
Non-Storm Water Discharges					
Location(s) where additional BMP item is needed not shown on plan					

STORM WATER POLLUTION PREVENTION PLAN

STABILIZATION SCHEDULE FOR MAJOR GRADING ACTIVITIES

CT Solar PDF LLC
195 McDermott Road, North Haven, CT

			Note: If activities cease for more than 14 days these columns need to be completed.					
Major Site Construction Activity Areas	**Begin Date**	**Completion Date**	**Temporary Cease Date**	**Resume Date**	**Begin Date for Stabilization Temporary**	**Begin Date for Stabilization Permanent**	**Type of Stabilization (List measures used such as stone, seeding, mulch, landscaping, etc…)**	**Contractor Responsible for Work**
Temp. Gravel Const. Entrance								
Mass Grading								
Entry Drive								
Parking Area								
Building Pad								
Water Quality Basin								
Pervious Areas								

Project Construction Inspection Reports

APPENDIX G – NOTICE OF TERMINATION FORM

Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Notice of Termination Form: Solar Projects (Appendix I)

This Notice serves as a request to terminate the below listed permit as well as any applicable Letter(s) of Credit.

Part I: Permittee Information

The below information is required in accordance with Section 6(b) of the General Permit.

1. Permit Number: GSN _____
2. Registrant: _____
3. Site Address: _____

   City/Town: _____ State: _____ Zip Code: _____
4. Date of completion of construction: _____

   Date all storm drainage structures were cleared of construction sediment and debris: _____

   Beginning and Ending Dates of post-construction inspections: _____

   Date of final stabilization inspection(s)*: _____

   Qualified Inspector who conducted the Final Stabilization Inspection: (This person must sign Part III) _____
5. Check the post-construction activity(ies)** at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Capped Landfill

   ☐ Commercial ☐ Solar Array ☐ Other: _____

* The Final Stabilization Inspection must occur at least two full growing seasons after final stabilization has been achieved. A full growing season is defined as the timeframe encompassed by two consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved.

** Any questions regarding this form can be sent via email to DEEP.StormwaterStaff@ct.gov.

Locally Approvable and Locally Exempt Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Approvable and Locally Exempt Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(i)/(ii) and Appendix I(I)(7) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional and a District Representative

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional and a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Title
Signature of District Representative	Date
Printed Name of District Representative	Title

State Agency Projects Must Complete the following Part II - (Attach additional sheets as needed)

Part II: State Agency Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(iii) and Appendix I(I)(7) of the General Permit.

Certification by a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency and a District Representative

"I hereby certify that I am a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency and a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature	Date
Printed Name	Title
Signature of District Representative	Date
Printed Name of District Representative	Title

All Projects Must Complete the following Part III - *(Attach additional sheets as needed)*

Part III: Final Stabilization Inspection Certification

The below information is required in accordance with Section 5(b)(4)(D) and Appendix I(I)(7) of the General Permit.

Certification by a Qualified Inspector and a District Representative

"I hereby certify that I am a qualified inspector and a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that the site has been stabilized, as defined in Section 2 of the general permit, for a period of no less than two full growing seasons following the cessation of construction activities. I further certify that there is no active erosion or sedimentation present on site and no disturbed areas remain exposed. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Inspector	Date
Printed Name of Qualified Inspector	Title
Signature of District Representative	Date
Printed Name of District Representative	Title

All Projects Must Complete the following Part IV - *(Attach additional sheets as needed)*

Part IV: Permittee Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by the Permittee

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Signature of Permittee	Date
Printed Name of Permittee	Title

All Projects Must Complete the following Part V - *(Attach additional documentation as needed)*

Part V: Additional Submittals

The following attachments are required to be submitted along with the Notice of Termination Form:

☐ Post-Construction Inspection Report (must contain photos with time stamps)

☐ Final Stabilization Inspection Report (must contain photos with time stamps)

Complete and submit this form in accordance with the general permit (DEEP-WPED-GP-015) to ensure the proper handling of the termination. Print or type unless otherwise noted.

Submit this Notice of Termination Form to the address below, as well as via email to DEEP.StormwaterStaff@ct.gov:

WATER PERMITTING AND ENFORCEMENT DIVISION/STORMWATER GROUP
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

APPENDIX H – OPERATIONS & MAINTENANCE MANUAL

Post-Construction Operation and Maintenance (O&M) Manual for Stormwater Management Facilities

for

CT SOLAR PDF LLC

TOWN OF NORTH HAVEN
NEW HAVEN COUNTY, CONNECTICUT
Permit #: _____

Prepared for:
Nokomis Energy
2836 Lyndale Avenue S, Suite 132
Minneapolis, MN 55408

Prepared by:
Verdanterra
305 S Paterson Street
Madison, WI 53703

June 2023

Table of Contents:

Appendices:

1.0 Introduction

The stormwater management system for the CT Solar PDF LLC Project consists of one infiltration trench. The following O&M Manual outlines the minimum requirements for maintaining the stormwater management facilities, as required per Wisconsin regulations.

1.1 Purpose of the Manual

This manual is intended to outline the requirements for proper maintenance and operation of the stormwater management facilities associated with Project Name. Proper maintenance ensures the following:

- Stormwater facilities operate as they were designed;
- Stormwater facilities remain free of sediment, debris, and potential pollutants; and
- Stormwater facilities do not result in adverse downstream impacts to environmentally sensitive areas.

CT Solar PDF LLC will be solely-owned, operated, and maintained by Nokomis Energy (the Owner). The Owner is responsible for ensuring that the stormwater management facilities installed on the Project Site are properly maintained and that they function as designed. In some cases, the maintenance responsibility may be assigned to others through special maintenance agreements. Stormwater management practice schematics for the Project Site are provided in Appendix A. Maintenance agreements associated with this Project shall be included in Appendix D of this Manual.

This Manual details the various stormwater facility components and the general operation and maintenance activities required for each component. Additional operation and maintenance information may be found in the 2004 Connecticut Stormwater Quality Manual as well as town and county regulations.

2.0 Inspection and Maintenance Schedule

The stormwater management systems shall be inspected and maintained regularly to ensure proper site function. Inspection frequency may depend on the stormwater management systems and facilities present at the Project Site.

A Maintenance Inspection Form shall be completed during each inspection to document the Site conditions and required maintenance activities. Maintenance activities may include, but are not limited to, removal of sediment, trash, or debris; vegetation management; erosion repair; and revegetation of exposed soils. A blank sample Maintenance Inspection Form has been included in Appendix B. Completed Maintenance Inspection Forms shall be incorporated into Appendix C.

3.0 First Year Maintenance

The following maintenance activities are required during the first year following Project completion:

- Water vegetation once every three days for the first month, then provide a half inch of water per week during the first year.

- Fertilization may be needed in the fall after the first growing season to increase plant vigor. Fertilizer application and use should be in accordance with local, state, and federal laws and regulations.
- Keep the site free of vehicular and foot traffic and other weight loads.

4.0 General Site Maintenance

Site cover and associated structures should be inspected periodically for the first few months following construction and then on a bi-annual basis. Site inspections should also be performed following major weather events such as, but not limited to, major storm events, thunderstorms, and significant snow melt.

Items to inspect for include, but are not limited to:

- Differential settlement of embankments, cracking, or erosion.
- Lack of vegetative cover density.
- Sediment accumulation on the ground surface or within stormwater management practices or conveyance systems.
- Accumulation of debris, litter, or pollutants such as oil or grease on the ground surface or within stormwater management practices or conveyance systems.
- Damage to or weakness of stormwater management practices or conveyance systems.

4.1 Site Restoration

Areas within a Project Site that have undergone site restoration should be inspected periodically for the first six months and once after each storm event greater than a half-inch.

Items to inspect for include, but are not limited to:

- Checking embankments for subsidence, erosion, cracking, undesirable tree and shrub growth, and the presence of burrowing animals.
- Health and vigor of vegetation such as trees, shrubs, grass, and flowers.
- Accumulation of sediment or vegetative debris such as leaves and branches.

4.2 Tree Planting/Preservation

During the first three years, mulching, watering and protection of young trees is necessary. Inspection of trees should be performed every three months and within the one week of ice storms and high wind events, reaching speeds of 20 mph, until trees have reached maturity. As a minimum, inspection should include assessment of tree health, inspection for evidence of damage or disease, and determining the survival rate of damage and diseased trees. Trees shall be pruned and treated as necessary, and dead trees shall be replaced.

5.0 Winter Maintenance

To prevent impacts to stormwater management facilities, the following winter maintenance limitations, restrictions, and/or requirements are recommended:

- Remove snow and ice from catch basins, inlet and outlet structures, and away from culvert end sections.
- Snow plowed or removed should not be piled at inlets/outlets of stormwater management practices or structures.
- De-icing materials should be limited to sand and "environmentally friendly" chemical products.
    - The use of salt mixtures should be kept to a minimum.
    - Sand used for de-icing should be clean, coarse material free of fines, silt and clay.
- De-icing materials should be removed during the early spring by sweeping and/or vacuuming.

6.0 Operation and Maintenance Procedures: Stormwater Management Facilities

6.1 Infiltration Trenches

An infiltration trench is a stormwater management practice that collects and stores runoff until It can infiltrate into the subsurface soil. Infiltration trenches typically are longer than they are wide, are less than 15 feet in width, and are intended to promote subsurface infiltration. Trenches are commonly filled with properly graded media that will promote infiltration and reduce pollutants discharged to surface waters, such as sediment, debris and nutrients. Schedule of maintenance operations is below:

- As Needed: Replace pea gravel/topsoil and top surface filter fabric (when clogged). Ensure that contributing area, practice and inlets are clear of debris.
- Monthly: Ensure that the contributing area is stabilized.
- Monthly: Remove sediment and oil/grease from pre-treatment devices, as well as overflow structures.
- Monthly: Mow grass filter strips should be moved as necessary. Remove grass clippings.
- Monthly: Repair undercut and eroded areas at inflow and outflow structures.
- Semi-annual inspection: Inspect pre-treatment devices and diversion structures for sediment build-up and structural damage.

7.0 Operation and Maintenance Procedures: Miscellaneous Items

7.1 Fences, Gates, and Signage

Fences have been installed around the perimeter of stormwater facilities in order to restrict entry to the facility, and to protecting the public and wildlife. Gates have been installed at various locations along the perimeter fencing to allow for maintenance access. Gates are to be secured shut with a lock except when maintenance operations are actively occurring.

Inspect the fences, gates, and signage annually for areas needing repair or replacement. Repair or replace damaged or compromised components of the fences, gates, or signage as needed. Maintain the ground underneath the fences and gates as needed to allow safe entry and exit to the stormwater management facility and prevent further erosion impacts. Replace the signage if any information is missing or has been sun-bleached.

8.0 Operation and Maintenance Procedures: Repair/Replacement Activities

Damage to on-site stormwater facilities and infrastructure may occur and repair or replacement may be necessary to ensure proper function. Components of the stormwater management practices, conveyance systems, or on-site structures which require repair or replacement should be addressed immediately following identification of deficiencies.

Repair of stormwater management facilities shall be completed as outlined in this Manual. Replacement of stormwater facilities or components of a facility may require assessment and design by a licensed engineer. The Owner/Operator shall read local, state, and federal regulations prior to replacement activities to ensure compliance.

9.0 Contact Information

Questions about the stormwater management systems and operation and maintenance procedures should be directed to Client Representative's Name at Client Name by phone at XXX-XXX-XXXX or email at XXXXXX@XXXX.com.

Appendix A - Stormwater Management Practice Schematics

Post-Construction O&M Manual: Stormwater Management Practice Schematics

Project Name:	
Owner/Operator:	

1		**2**	

3		**4**	

5		**6**	

7		**8**	

9		**10**	

11		**12**	

Appendix B – Blank Maintenance Inspection Form

Post-Construction Operation and Maintenance Manual: Maintenance Inspection Form

Project Name:	
Inspection Date:	
Inspection Time:	
Inspector's Name:	

Inspection Item	Inspection Frequency	Maintenance Required?	Comments
Infiltration Facilities			
Facility is functioning properly?	Annually		
Free of trash, debris, and pollutants?	Monthly		
System is draining properly?	Monthly		
Sediment accumulation has reached 2 inches or greater?	Monthly		
Vegetation is healthy and sufficient ground cover is observed?	Annually		
Fences, Gates, and Signage			
Fencing and gates are in working order and are not damaged?	Annually		
Signage is legible and displayed clearly?	Annually		
Vegetation is maintained to not impede gated access or block signage?	Annually		

Appendix C – Completed Maintenance Inspection Forms

Appendix D – Maintenance Agreements

APPENDIX I – STORMWATER MANAGEMENT REPORT

STORMWATER MANAGEMENT REPORT

CT Solar PDF LLC

195 MCDERMOTT ROAD

NORTH HAVEN, CONNECTICUT

Prepared for:

Nokomis Energy
2836 Lyndale Avenue S, Suite 132
Minneapolis, MN 55408

Prepared by:

Verdanterra
305 S Paterson Street
Madison WI, 53703

June 2023

TABLE OF CONTENTS

CONTENTS

ATTACHMENTS

1.0 Introduction

CT Solar PDF LLC is proposing a solar facility located within the existing 195 McDermott Road property in the town of North Haven, New Haven County, Connecticut. The Site has existing impervious parking areas and buildings previously constructed. The majority of the solar array facility will be located on rooftops or on canopies over existing paved parking areas. There is a 1.104-acre existing grass area on the property on which the ground mounted portion of the solar facility will be located. This stormwater management report was prepared to analyze this existing grass area only. The other areas of the Project are located within existing impervious areas and as such, there will be no earth disturbance. In total, the Project will add 245 square feet of impervious area in the form of a single equipment concrete pad.

A stormwater management system has been designed to provide pollutant removal, reduce channel erosion, prevent overbank flooding, and safely control extreme flood events in accordance with Connecticut state regulations.

The proposed stormwater management system for the Project is an infiltration trench to treat runoff from the concrete equipment pad.

This narrative presents a review of the design concepts and parameters of the stormwater management system for the proposed increased impervious areas, in accordance with Connecticut stormwater guidelines. The purpose of the stormwater management report is to assure that changes in the surface runoff characteristics as a result of the proposed construction, will not adversely impact adjacent or downstream properties. On-site stormwater management will be implemented in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and the 2004 Connecticut Stormwater Quality Manual.

1.1 Objectives of the SWPCP

1. Identification of existing and potential sources of pollutants associated with industrial activity that may affect the quality of stormwater discharges from the facility.

2. Identification of the drainage areas and the surface water outfalls associated with the Facility.

3. Establishment of Best Management Practices (BMPs) for reducing and controlling exposure of site surface water to the Significant Materials at the Facility.

2.0 Existing Conditions

The Project site is composed primarily of existing impervious areas in the form of access roads, parking areas, and buildings. However, this report deals with an existing grass area only. The site topography is described as moderately flat. Runoff is directed from east to northwest. The typical slopes range from 1%

to 4%. Elevations at the site vary between 20 and 14 feet above sea level.

2.1 Soil and Groundwater Conditions

The USDA Natural Resources Conservation Service Soil Survey identifies the soils on the site are all listed as 307 on the USDA NRCS soils survey. The Soil Survey identifies this soil is Urban Land. Hydrologic Soil Group (HSG) "D". Because of the nature of the Project, there will be no runoff rate increase. An infiltration trench will be utilized for water quality and recharge volume for the small 245 square-foot concrete equipment pad. Infiltration testing was not completed due to the small size of the additional impervious area.

3.0 Alterations to Land Cover Within Project Area

Existing condition cover for the area of this study is grass cover in good condition. Under proposed development conditions, alterations to land cover generally consist of maintaining ground cover in the grass condition and the addition of a 245 square foot concrete equipment pad. Site grading will be minimal and limited to utility trenching and the equipment pad area. The panel layout area will be maintained as meadow/grass cover for the life of the Project. There are no watersheds located on the site. Runoff enters into Little River, located northwest of the Project area.

The table below is provided as a summary of land cover within the Project study area:

PRE-DEVELOPMENT CONDITIONS			*POST-DEVELOPMENT CONDITIONS*		
Cover Description	*CN*	*Area (sf.)*	*Cover Description*	*CN*	*Area (sf.)*
75% Grass Cover Good (HSG D)	80	48,079	75% Grass Cover Good (HSG D)	80	47,834
			Equipment Pad (HSG D)	98	245
Total:	**48,079 sf.**		**Total:**	**48,079 sf.**	

4.0 Modeling Assumptions

The stormwater runoff was estimated using HydroCAD. HydroCAD was developed based on methodologies developed by the United States Department of Agriculture Soil Conservation Service (USDA-SCS[1]), namely *Urban Hydrology for Small Watersheds*, Technical Release 55 and Technical Release 20 (TR-55 and TR-20), in combination with other hydraulic and hydrologic calculations. Based on site specific information and rainfall data, the program estimates inflow and outflow hydrographs for a subcatchment.

The pre- and post-development subcatchment boundaries and hydrologic flow lines used to determine the times of concentration are indicated on the Pre- and Post-Development Drainage Plans. Subcatchment boundaries were determined from the existing and proposed contour data.

[1] Now known as the Natural Resource Conservation Service (NRCS)

The hydrologic analysis consists of one drainage area, 1.04 acres in size. This drainage area is the same for both pre-development and post-development. Runoff from the subcatchment was analyzed at the point of intersection of the respective longest hydrologic flow paths and either an existing stormwater conveyance or Project area boundary. The intent of the hydrologic analysis is to demonstrate that the changes in ground cover resulting from the Project will not adversely affect downgradient properties. The results of the pre- and post-development site runoff analyses are shown and compared in the tables located in Section 6.0: Runoff Analysis.

Storm events modeled for the pre- and post-development analyses are based on the information provided by the NOAA Atlas 14 Frequency Data for the site area. As indicated the in HydroCAD calculations included in Attachments C & D, the 24-hour duration precipitation events have a Type-II distribution. The Project area has rainfall amounts of 2.86 inches, 3.48 inches, 5.35 inches, 6.52 inches, 7.38 inches, and 8.32 inches, with return frequencies of 1-, 2-, 10-, 25-, 50- and 100-years, respectively, which were utilized in the hydrologic model. Additional assumptions made to complete the pre- and post-development runoff analysis are provided in Section 6.0: Runoff Analysis.

5.0 Drainage Plans

The Pre-Development Drainage Map and Post-Development Drainage Map for the proposed Project are included in Attachments A and B respectively. Both plans include contours, land cover types, soil groups, subcatchment boundaries and analysis points, hydrologic flow lines, existing features, and drainage ways where applicable. The Post-Development Drainage Map includes the locations of roads, proposed structures, and proposed stormwater management features.

6.0 Runoff Analysis

The pre- and post-development stormwater analysis calculations are provided in Attachments C and D respectively. The runoff routing calculations were performed with the use of HydroCAD software. The analyses include computations for determining the CN values for the pre- and post-development subcatchments and the HydroCAD output, which includes time of concentration calculations, peak discharge calculations for the 24-hour storms of 1-, 2- 10-, 25-, 50-, and 100-year frequencies, and routing calculations.

Results for each subcatchment and the resulting peak flow for the combined areas are included within Attachment B. The tables below provide a summary of the peak runoff calculated for each design storm.

Drainage Area One:

ANALYSIS POINT: DESIGN POINT ONE				
DESIGN STORM	PRE-DEVELOPMENT		POST-DEVELOPMENT	
	RUNOFF VOL. (AF)	RUNOFF RATE (CFS)	RUNOFF VOL. (AF)	RUNOFF RATE (CFS)
1-Year, 24-hour	0.105	1.49	0.105	1.49
2-Year, 24-hour	0.149	2.13	0.149	2.13
10-Year, 24-hour	0.294	4.21	0.294	4.21
25-Year, 24-hour	0.391	5.57	0.391	5.57
50-Year, 24-hour	0.464	6.51	0.464	6.51
100-Year, 24-hour	0.545	7.67	0.545	7.67

As shown in the table above, peak runoff rate and volumes under post-development conditions are unchanged from pre-development.

A summary of the land cover types, hydrologic soil groups (HSG), and curve numbers for the pre- and post-development subcatchments are provided in the stormwater calculation package in Attachments C & D. Cover types for the affected impacted area were determined from the natural resource field surveys, and available historical aerial imagery.

The soils and hydrologic soil group information for the Project study area are based on the NRCS soil maps. The HSG within the watershed runoff analysis areas are shown on the Pre- and Post-Development Drainage Maps (Attachments A & B).

The runoff curve numbers were developed from observed cover types and hydrologic soil groups.

6.1 Time of Concentration Calculations

Time of concentration was calculated using USDA-SCS TR-55 methodologies for each subcatchment considering the hydrologic flow length, slope, vegetative cover, surface roughness, and each stage-storage relationship. The type and length of each flow line determining time of concentration and travel times in the area to be developed are indicated on the pre- and post-development drainage plans. A maximum sheet flow length of 100 feet was used for this analysis. Shallow concentrated was used for portions of the flow path beyond 100 feet extending until a channel or culvert was encountered. A summary of time of concentration calculations is provided in the HydroCAD calculations (Attachments C & D).

6.2 Peak Discharge Calculations

Peak discharge calculations are included in the HydroCAD output. A summary comparison of pre- and post-development peak discharge calculations is presented in Section 6.0 above.

6.3 Water Quality Calculations

The overall site will contain 245 square feet of new impervious cover. The area will drain into the infiltration trench. The water quality volume treatment calculations are as follows:

WQV = (I)(R))(A)/12 WQV = 0.00027 af = 13 cf.

The infiltration trench will be 27.5 sf. and 2 feet in depth. Assume a void ratio of 40%.

Trench Volume = 27.5 sf x 2 ft x 0.4 = 22 cf. This is greater than the 13 cf. required.

7.0 Summary

Development of the proposed property will slightly change the stormwater drainage characteristics of the site. Impervious area will be added in the form of a single 245 square foot concrete equipment pad. Changes to the stormwater drainage characteristics of the site have been evaluated in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and the 2004 Connecticut Stormwater Quality Manual.

The proposed stormwater management system has been designed to attenuate and treat the stormwater runoff generated from the contributing areas for storm events up to and including the 100-year design storm event. The proposed stormwater management design includes the use of an infiltration trench. Stormwater modeling results, based on the proposed site layout, indicate the ability to reduce the overall post-development discharge rate from the site as summarized in the Table below.

Post Development Stormwater Peak Discharge Rates

Peak Discharge Rates in cfs	1-Year Storm	10-Year Storm	100-Year Storm
Pre-Development	1.49 cfs	4.21 cfs	7.67 cfs
Post-Development	1.49 cfs	4.21 cfs	7.67 cfs
Overall Reduction (cfs)	0	0	0

Through the implementation of acceptable stormwater management practices, recommended by the Connecticut stormwater and erosion & sediment control guidelines, the proposed Project will not adversely affect adjacent or downstream properties.

Prepared by:
Verdanterra

Chad Alberth, PE

Attachment A
Pre-Development Drainage Map

LEGEND

PRE DEVELOPMENT

PRE DEVELOPMENT DRAINAGE AREA

PRE DEVELOPMENT FLOW PATH

PRE-DEVELOPMENT
1.104 AC.
CN= 80
Tc. 17.4 MIN.

INFILTRATION TRENCH
12' L X 7' W X 3' D
Tc PATH

LITTLE RIVER

Meadow

MBL: 3-7
#195 MCDERMOTT ROAD
6TH PIECE

MBL: 3-7
#195 MCDERMOTT ROAD
1ST PIECE

MBL: 6-29
#86 QUINNIPIAC AVENUE
2ND PIECE

MBL: 6-28
FIFTH PIECE

MBL: 6-27
MIDDLETOWN AVENUE

MBL: 6-26
#60 MIDDLETOWN AVENUE
3RD PIECE

MBL: 3-10
#20 MIDDLETOWN AVENUE
4TH PIECE

N/F CASSISI GROUP LLC
MBL: 6-36
#171 MCDERMOTT RD

N/F GERALD PAGANO
MBL: 6-34
#39 MCDERMOTT RD

N/F EVERYTHING HOUSE INC
MBL: 6-35
#71 MCDERMOTT RD

N/F MCDERMOTT RD LLC
MBL: 6-33
#100 QUINNIPIAC AVE

N/F SAMPATI LLC
MBL: 6-30
#88 QUINNIPIAC AVE

N/F 50 MIDDLETOWN AVE ASSOCIATES LLC
MBL: 3-13
#50 MIDDLETOWN AVE

N/F NGAU NGO ET AL
MBL: 3-12
#40 MIDDLETOWN AVE

N/F NICKS CHAR-PIT INC
MBL: 3-11
#34 MIDDLETOWN AVE

N/F 22 MIDDLETOWN AVE ASSOCIATES LLC
MBL: 1-57
#22 MIDDLETOWN AVE

APPROXIMATE LOCATION OF DRAINAGE EASEMENT AS DEPICTED IN SCHEDULE A, PAGE 2 OF VOLUME 440 PAGE 363

APPROXIMATE LOCATION OF 20' WIDE SEWER EASEMENT IN FAVOR OF THE TOWN OF NORTH HAVEN DESCRIBED IN VOLUME 293 PAGE 150

CONC MON FOUND

IRON PIN FOUND

CHD FOUND

IRON PIPE FOUND

IRON PIN FOUND (BENT)

FIELD LOCATED ELECTRIC PAINT 3.5'± DEPTH

FIELD LOCATED ELECTRIC PAINT 2.5'± DEPTH

FIELD LOCATED ELECTRIC PAINT 4.5'± DEPTH

CONC PAD MOUNTED ELECTRIC EQUIPMENT

N29° 54' 04"E 73.35'

N78° 14' 47"E 98.06'

N61° 20' 30"E 72.95'

N70° 45' 45"E 233.72'

N26° 53' 04"E 81.03'

N51° 43' 28"E 48.41'

N74° 14' 36"E 38.62'

N30° 36' 23"E 254.93'

R=150.000

S38° 37' 53"W 307.78'

N40° 17' 19"W 238.45'

N42° 20' 40"W 79.11'

S22° 39' 06"E 33.18'

N67° 20' 54"E 36.54'

N77° 29' 08"E 100.00'

S31° 34' 02"E 52.42'

S76° 33' 13"W 57.00'

S0° 28' 02"W 191.30'

N76° 34' 18"E 207.42'

S29° 42' 15"W 200.01'

S48° 16' 13"W 150.00'

S41° 42' 49"W 150.00'

S48° 16' 13"W 149.99'

S41° 59' 27"W

N41° 59' 56"E

S75° 44' 55"W 125.57'

S42° 09' 15"W 86.28'

N15° 00' 05"W

S46° 55' 35"E 20.00'

S41° 59' 55"W 134.02'

S78° 18' 55"W 195.11'

S74° 11' 05"W 36.79'

S41° 59' 55"W 84.90'

S55° 30' 05"W 201.12'

S42° 19' 18"W 261.81'

N62° 43' 34"W 73.17'

S89° 37' 10"W 88.00'

IRON PIN FOUND

72.40'

R=15

CONC MON FOUND

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

GRAPHIC SCALE
100' 50' 0 100'
1" = 100'

No.	Date	Revision

Seal

Engineer
VERDANTERRA
305 S PATERSON STREET
MADISON, WI 53703
608.709.0466
WWW.VERDANTERRA.COM

Applicant
NOKOMIS ENERGY
2836 Lyndale Ave S.
Suite #132
Minneapolis, MN 55408
612-470-3223

Property Owners:
United States Surgical Corp
15 Hampshire Street
Mansfield, MA 02048

Project Name:
CT SOLAR PDF, LLC

Project Number:
07522001

Scale:	Drawn By:
AS SHOWN	DK
Date:	Checked By:
JUNE 2023	CWC/SML

Drawing Description:
PRE-DEVELOPMENT
DRAINAGE MAP

Drawing Number:
FIG-1

Sheet Number:
1 of 1

Attachment B
Post-Development Drainage Map

LEGEND

POST DEVELOPMENT

- POST DEVELOPMENT DRAINAGE AREA
- POST DEVELOPMENT FLOW PATH

POST-DEVELOPMENT
1.104 AC.
Weighted CN = 80
Tc = 17.4 min.

INFILTRATION TRENCH
12' L X Tc PATH

PROPOSED GROUND MOUNT SOLAR ARRAY

PROPOSED CARPORT MOUNTED SOLAR ARRAY

PROPOSED ROOFTOP SOLAR ARRAY

PERIMETER SECURITY FENCE

ACCESS GATE

CONCRETE PAD

Meadow

LITTLE RIVER

MBL: 3-7
#195 MCDERMOTT ROAD
6TH PIECE

MBL: 3-7
#195 MCDERMOTT ROAD
1ST PIECE

MBL: 6-29
#86 QUINNIPIAC AVENUE
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APPROXIMATE LOCATION OF 20' WIDE SEWER EASEMENT IN FAVOR OF THE TOWN OF NORTH MILTON DESCRIBED IN VOLUME 293 PAGE 150

GRAPHIC SCALE
100' 50' 0 100'
1" = 100'

ISSUED FOR PERMITTING
NOT FOR CONSTRUCTION

No.	Date	Revision

Seal

Engineer:
VERDANTERRA
305 S PATERSON STREET
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Applicant:
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Suite #132
Minneapolis, MN 55408
612-470-3223

Property Owners:
United States Surgical Corp
15 Hampshire Street
Mansfield, MA 02048

Project Name:
CT SOLAR PDF, LLC

Project Number:
07522001

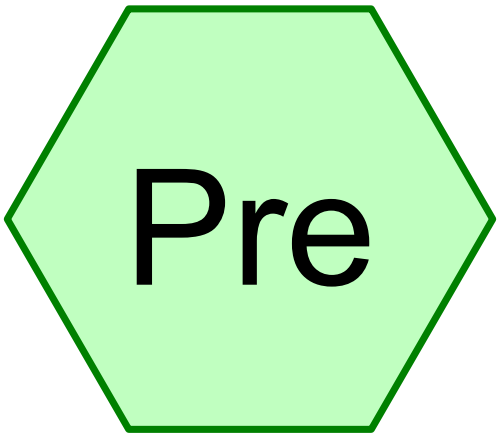
Scale:	Drawn By:
AS SHOWN	DK
Date:	Checked By:
JUNE 2023	CWC/SML

Drawing Description:
POST DEVELOPMENT
DRAINAGE MAP

Drawing Number:
FIG-1

Sheet Number:
1 of 1

Attachment C
Pre-Development HydroCAD Calculations



Pre

Subcat Reach Pond Link

Routing Diagram for Pre Hydrocad.
Prepared by Verdanterra, Printed 6/6/2023

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	2.86	2
2	2-Year	Type II 24-hr		Default	24.00	1	3.48	2
3	10-Year	Type II 24-hr		Default	24.00	1	5.35	2
4	25-Year	Type II 24-hr		Default	24.00	1	6.52	2
5	50-year	Type II 24-hr		Default	24.00	1	7.38	2
6	100-Year	Type II 24-hr		Default	24.00	1	8.32	2
7	Custom	Type II 24-hr		Default	24.00	1	7.38	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.104	80	>75% Grass cover, Good, HSG D (Pre)
1.104	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
1.104	HSG D	Pre
0.000	Other	
1.104		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.104	0.000	1.104	>75% Grass cover, Good	Pre
0.000	**0.000**	**0.000**	**1.104**	**0.000**	**1.104**	**TOTAL AREA**	

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=1.15"
Flow Length=282' Tc=17.4 min CN=80 Runoff=1.49 cfs 0.105 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.105 af Average Runoff Depth = 1.15"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

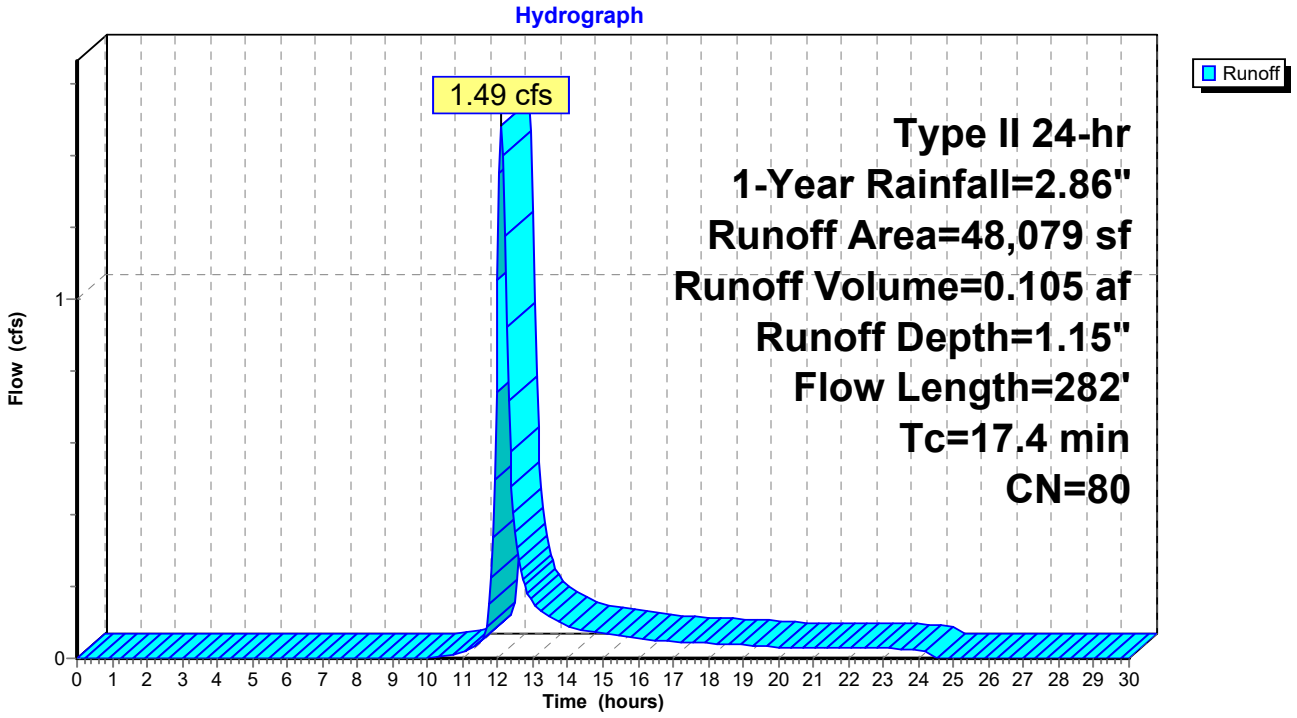
Runoff = 1.49 cfs @ 12.11 hrs, Volume= 0.105 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.86"

Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=1.62"
Flow Length=282' Tc=17.4 min CN=80 Runoff=2.13 cfs 0.149 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.149 af Average Runoff Depth = 1.62"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

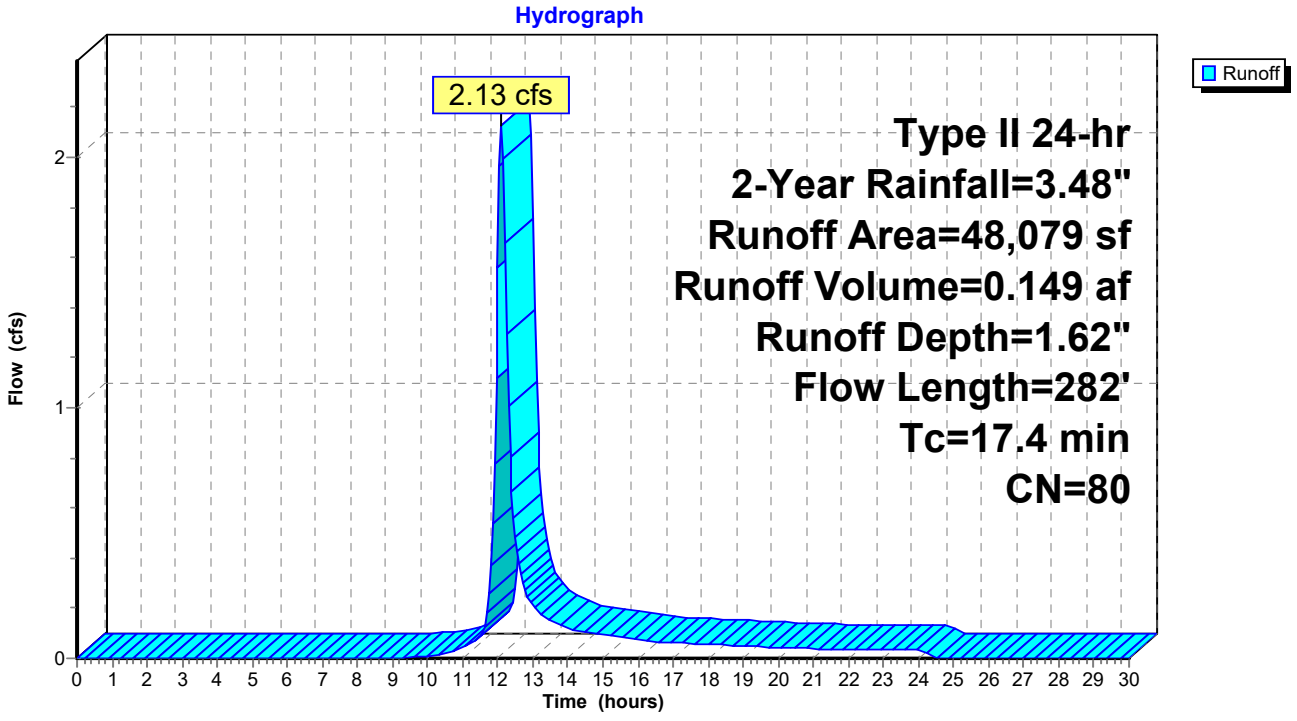
Runoff = 2.13 cfs @ 12.10 hrs, Volume= 0.149 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=3.48"

Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=3.20"
Flow Length=282' Tc=17.4 min CN=80 Runoff=4.21 cfs 0.294 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.294 af Average Runoff Depth = 3.20"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

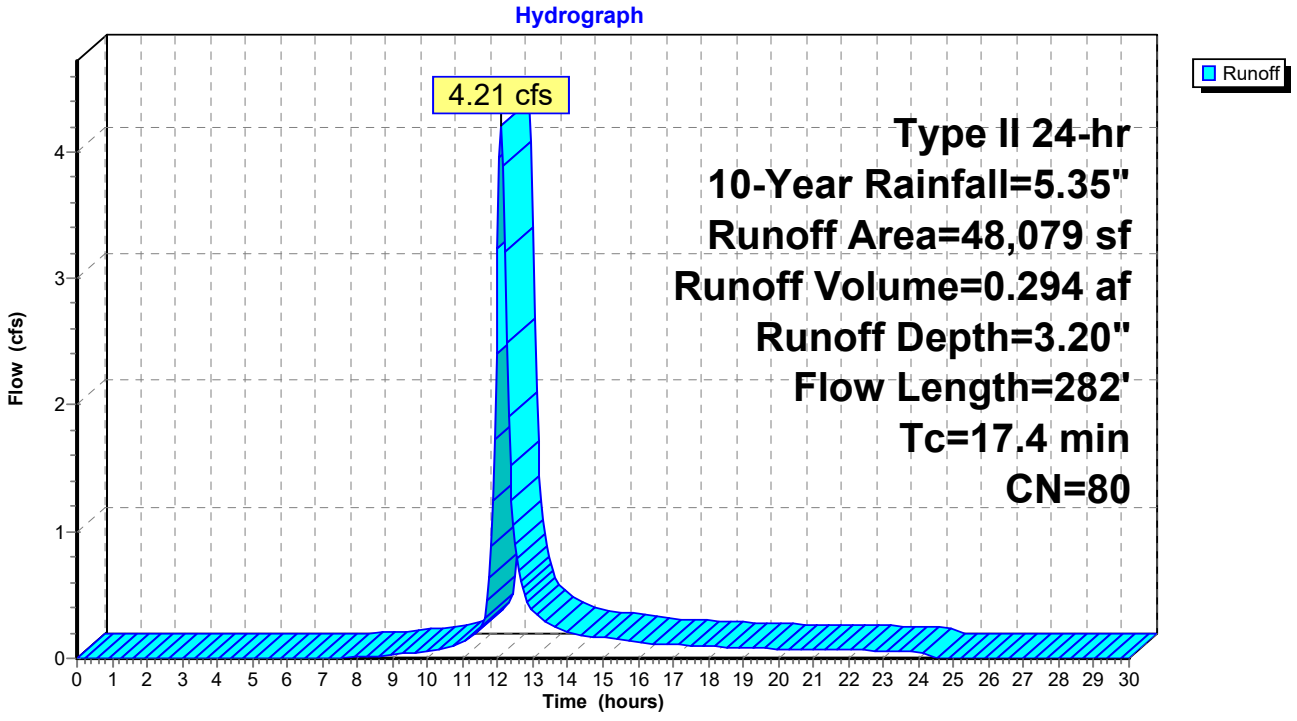
Runoff = 4.21 cfs @ 12.10 hrs, Volume= 0.294 af, Depth= 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=5.35"

Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=4.25"
Flow Length=282' Tc=17.4 min CN=80 Runoff=5.57 cfs 0.391 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.391 af Average Runoff Depth = 4.25"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

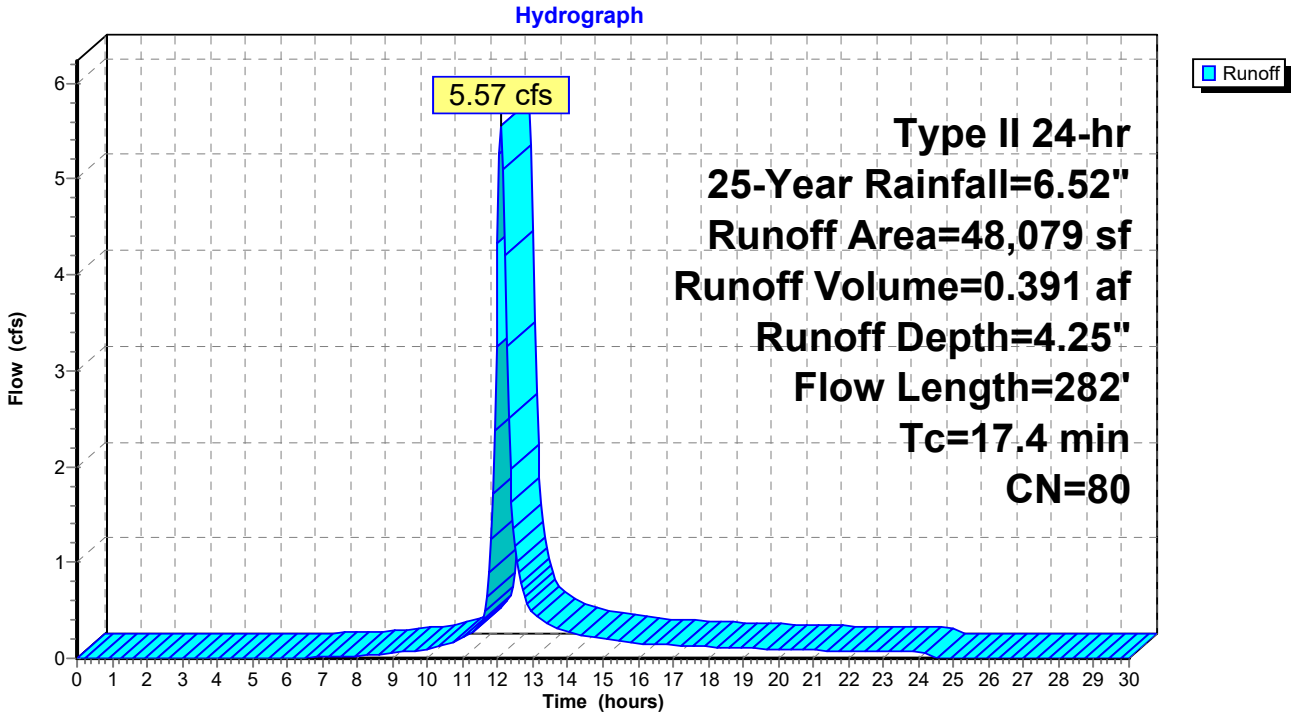
Runoff = 5.57 cfs @ 12.10 hrs, Volume= 0.391 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=6.52"

Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=5.05"
Flow Length=282' Tc=17.4 min CN=80 Runoff=6.57 cfs 0.464 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.464 af Average Runoff Depth = 5.05"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

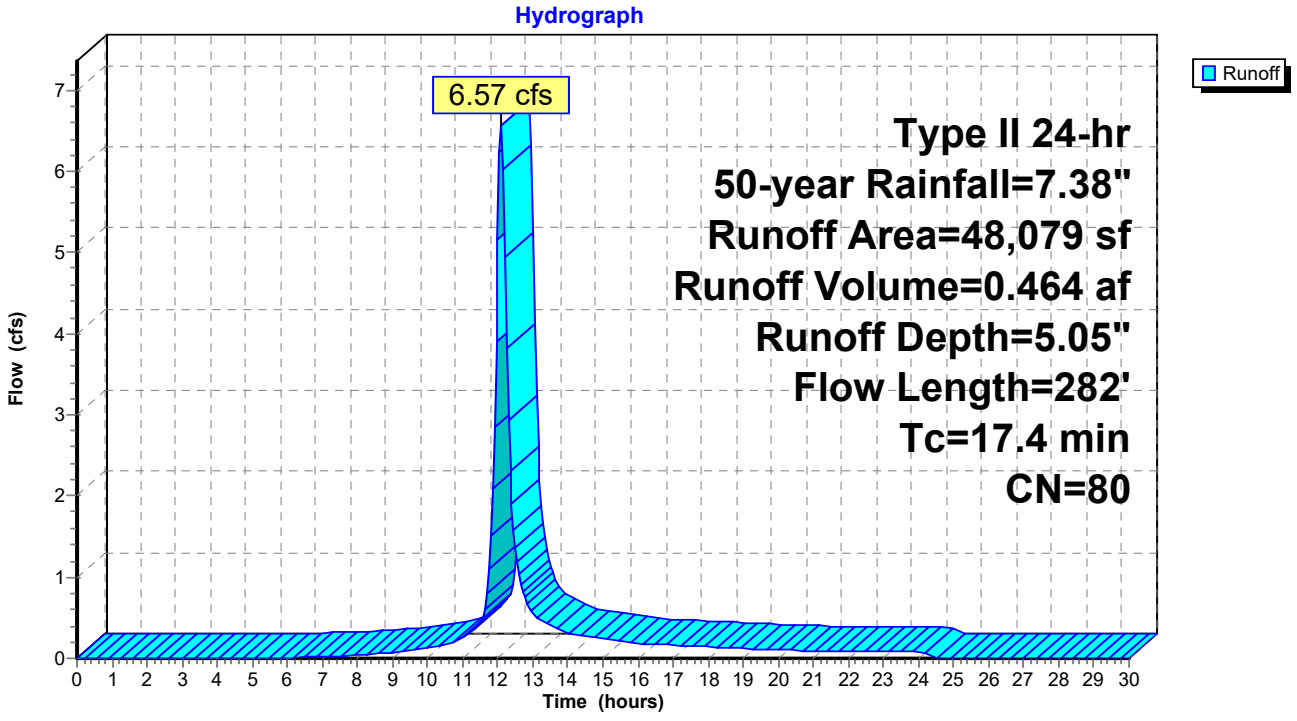
Runoff = 6.57 cfs @ 12.09 hrs, Volume= 0.464 af, Depth= 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year Rainfall=7.38"

Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=5.93"
Flow Length=282' Tc=17.4 min CN=80 Runoff=7.67 cfs 0.545 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.545 af Average Runoff Depth = 5.93"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

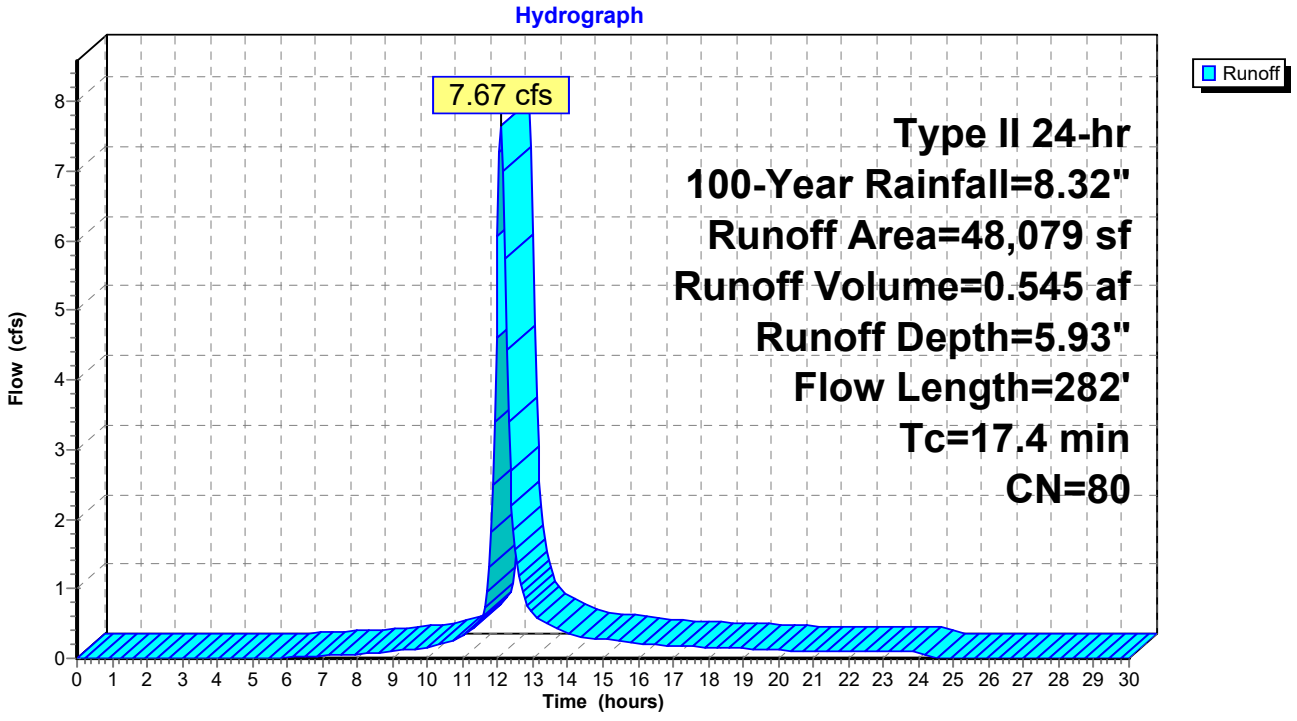
Runoff = 7.67 cfs @ 12.09 hrs, Volume= 0.545 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=8.32"

Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Pre: Pre Runoff Area=48,079 sf 0.00% Impervious Runoff Depth=5.05"
Flow Length=282' Tc=17.4 min CN=80 Runoff=6.57 cfs 0.464 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.464 af Average Runoff Depth = 5.05"
100.00% Pervious = 1.104 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment Pre: Pre

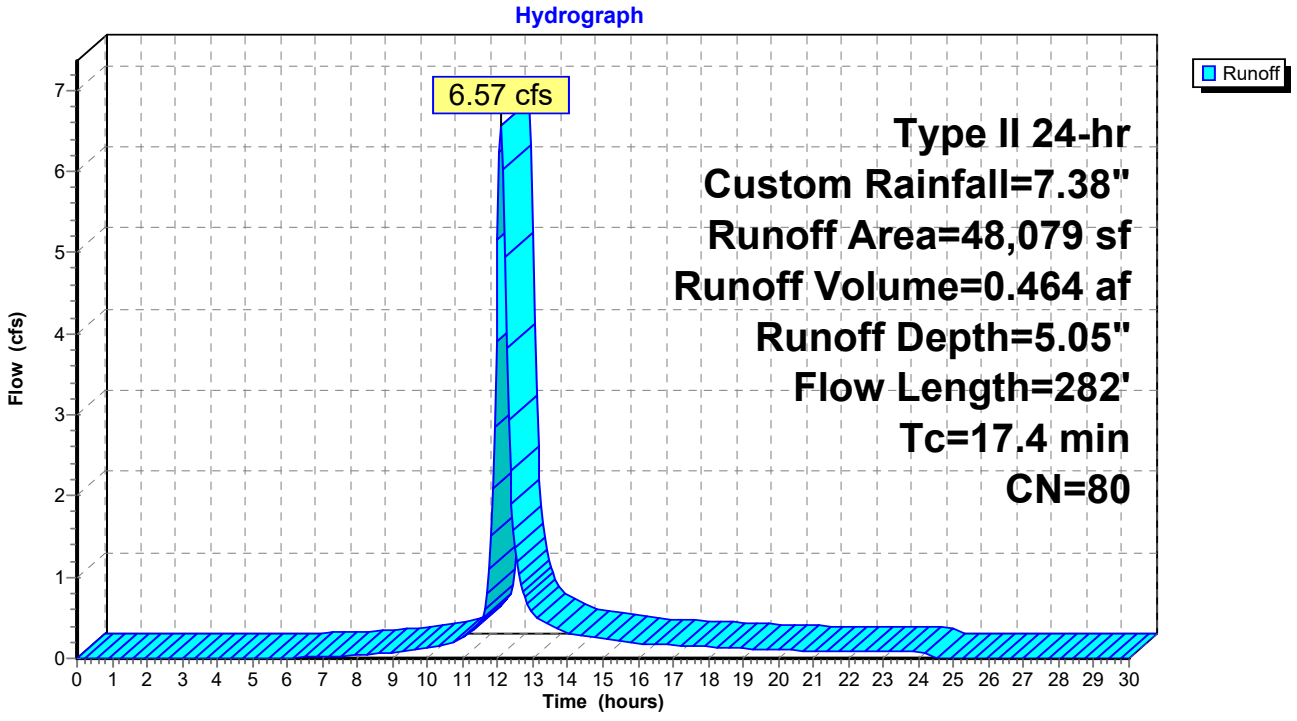
Runoff = 6.57 cfs @ 12.09 hrs, Volume= 0.464 af, Depth= 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Custom Rainfall=7.38"

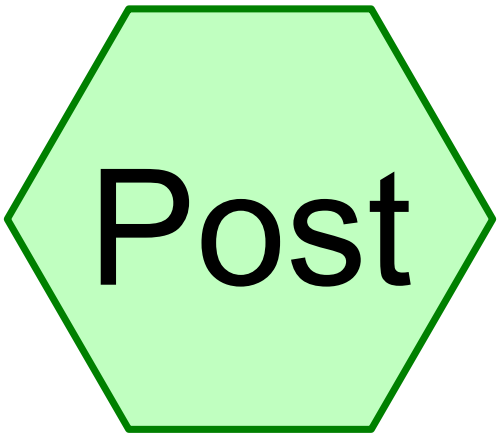
Area (sf)	CN	Description
48,079	80	>75% Grass cover, Good, HSG D
48,079		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Pre: Pre



Attachment D
Post-Development HydroCAD Calculations



Post

Subcat Reach Pond Link

Routing Diagram for Post Hydrocad.
Prepared by Verdanterra, Printed 6/6/2023

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	2.86	2
2	2-Year	Type II 24-hr		Default	24.00	1	3.48	2
3	10-Year	Type II 24-hr		Default	24.00	1	5.35	2
4	25-Year	Type II 24-hr		Default	24.00	1	6.52	2
5	50-year	Type II 24-hr		Default	24.00	1	7.38	2
6	100-Year	Type II 24-hr		Default	24.00	1	8.32	2
7	Custom	Type II 24-hr		Default	24.00	1	7.38	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.098	80	>75% Grass cover, Good, HSG D (Post)
0.006	98	Unconnected pavement, HSG D (Post)
1.104	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
1.104	HSG D	Post
0.000	Other	
1.104		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.098	0.000	1.098	>75% Grass cover, Good	Post
0.000	0.000	0.000	0.006	0.000	0.006	Unconnected pavement	Post
0.000	**0.000**	**0.000**	**1.104**	**0.000**	**1.104**	**TOTAL AREA**	

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=1.15"
Flow Length=282' Tc=17.4 min CN=80 Runoff=1.49 cfs 0.105 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.105 af Average Runoff Depth = 1.15"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

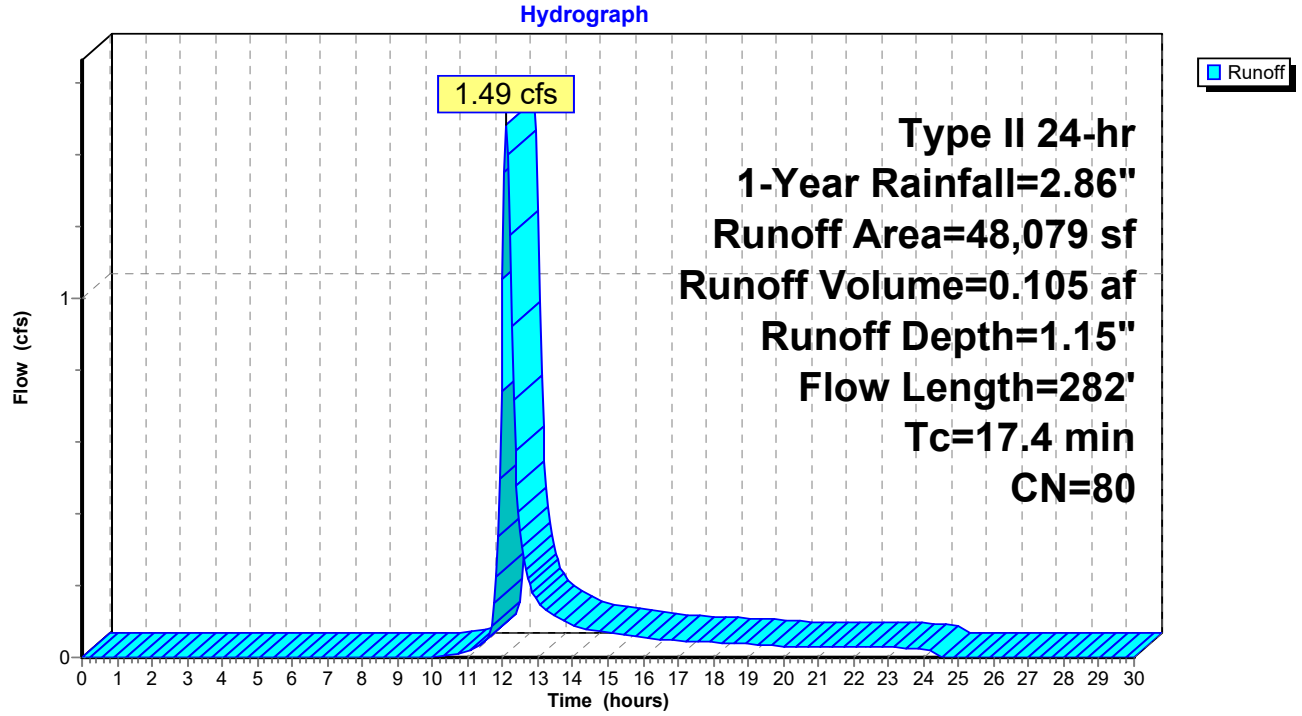
Runoff = 1.49 cfs @ 12.11 hrs, Volume= 0.105 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-Year Rainfall=2.86"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=1.62"
Flow Length=282' Tc=17.4 min CN=80 Runoff=2.13 cfs 0.149 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.149 af Average Runoff Depth = 1.62"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

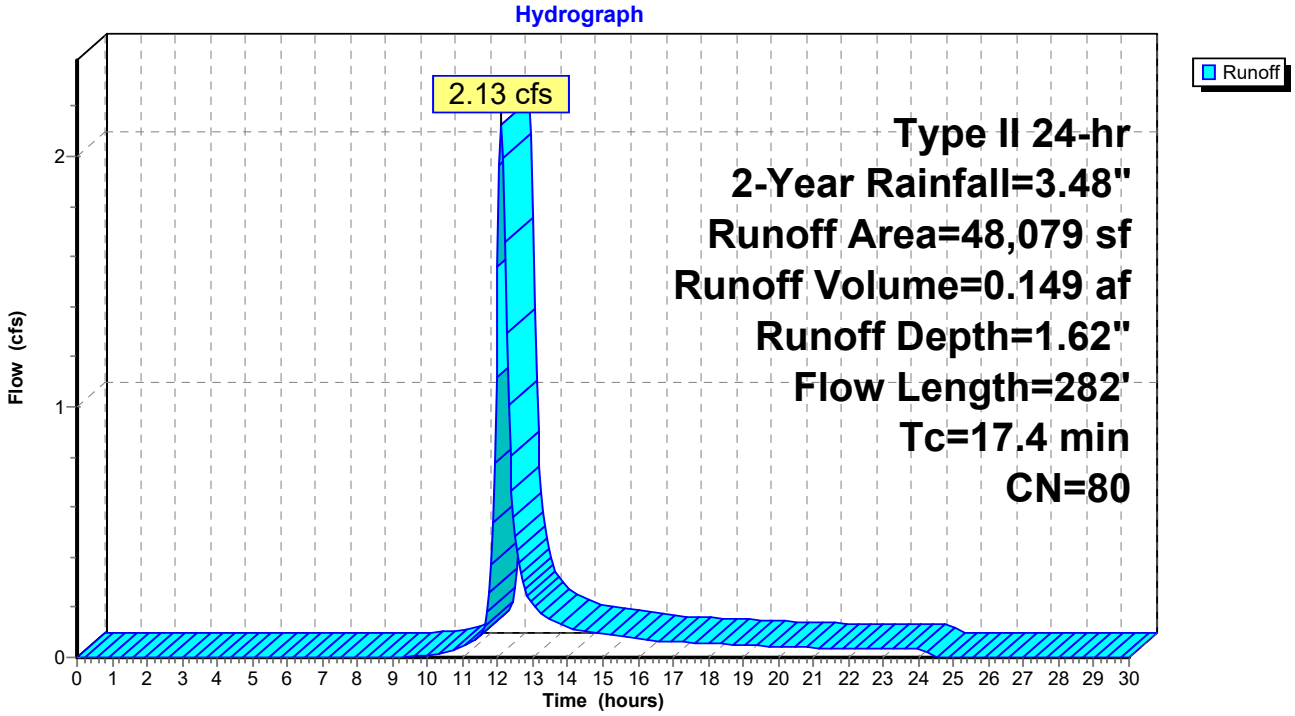
Runoff = 2.13 cfs @ 12.10 hrs, Volume= 0.149 af, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-Year Rainfall=3.48"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=3.20"
Flow Length=282' Tc=17.4 min CN=80 Runoff=4.21 cfs 0.294 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.294 af Average Runoff Depth = 3.20"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

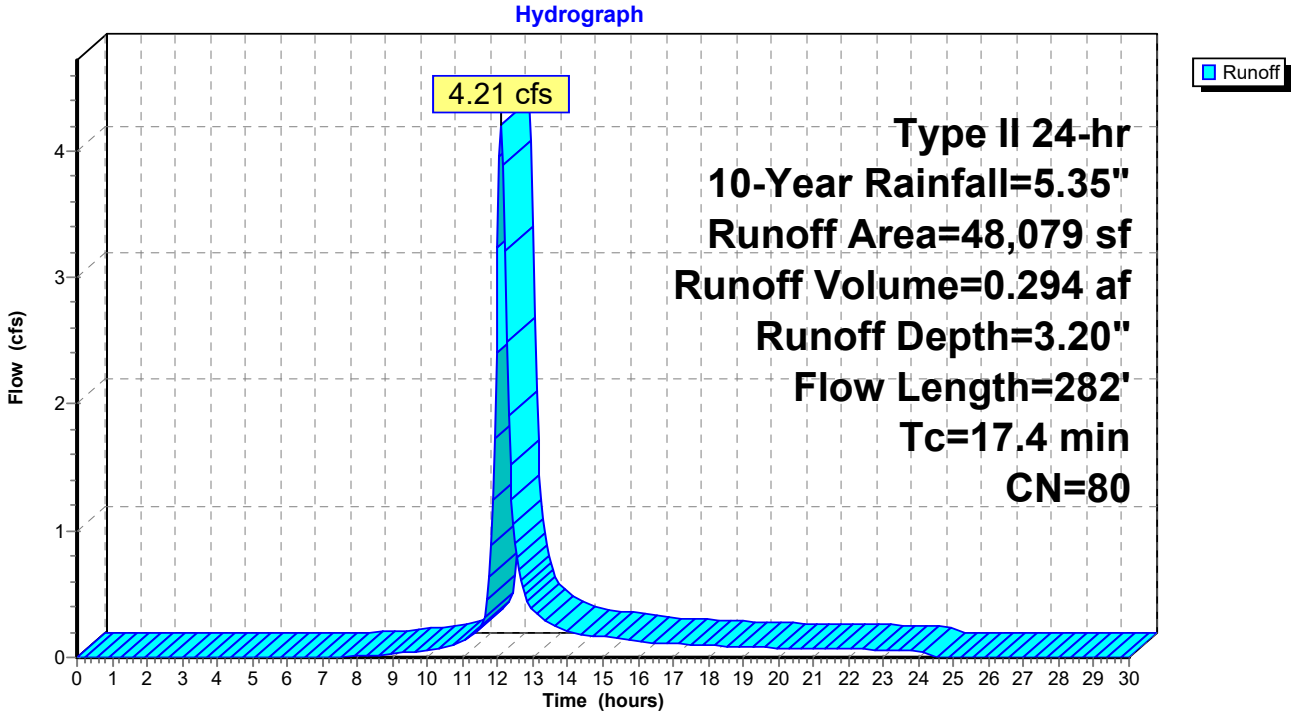
Runoff = 4.21 cfs @ 12.10 hrs, Volume= 0.294 af, Depth= 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-Year Rainfall=5.35"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=4.25"
Flow Length=282' Tc=17.4 min CN=80 Runoff=5.57 cfs 0.391 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.391 af Average Runoff Depth = 4.25"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

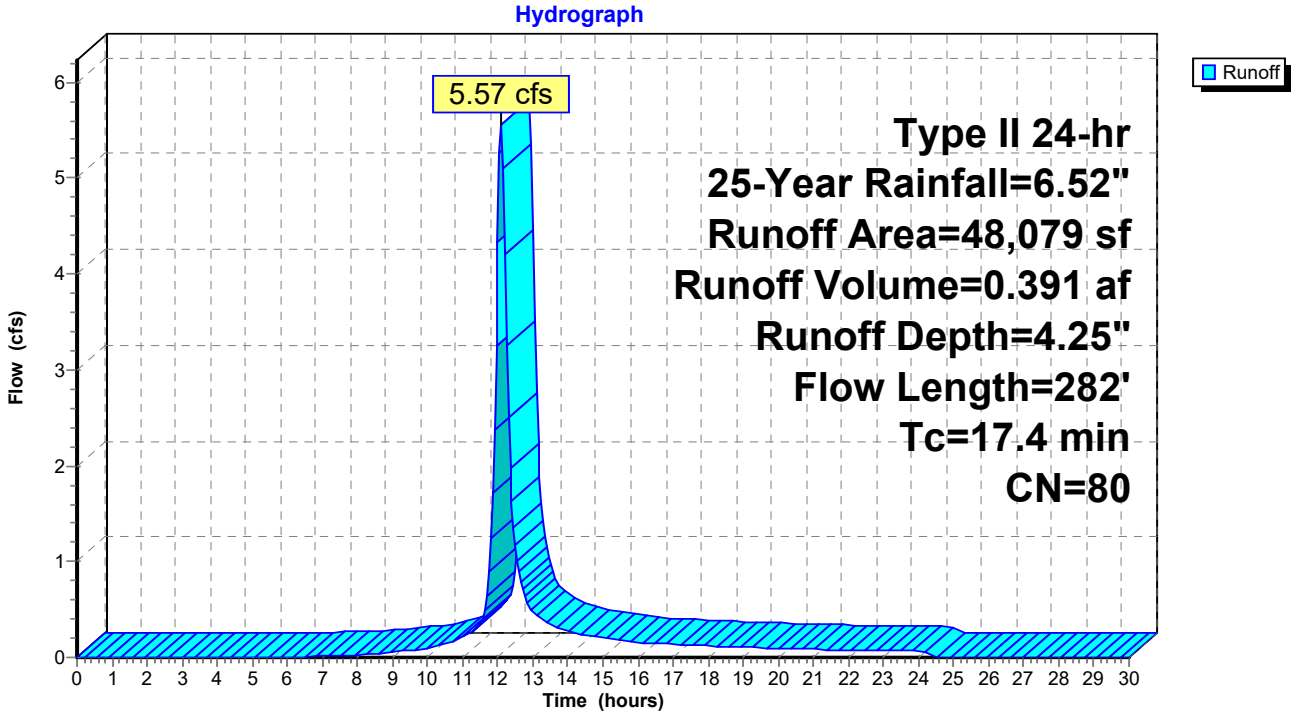
Runoff = 5.57 cfs @ 12.10 hrs, Volume= 0.391 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-Year Rainfall=6.52"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=5.05"
Flow Length=282' Tc=17.4 min CN=80 Runoff=6.57 cfs 0.464 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.464 af Average Runoff Depth = 5.05"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

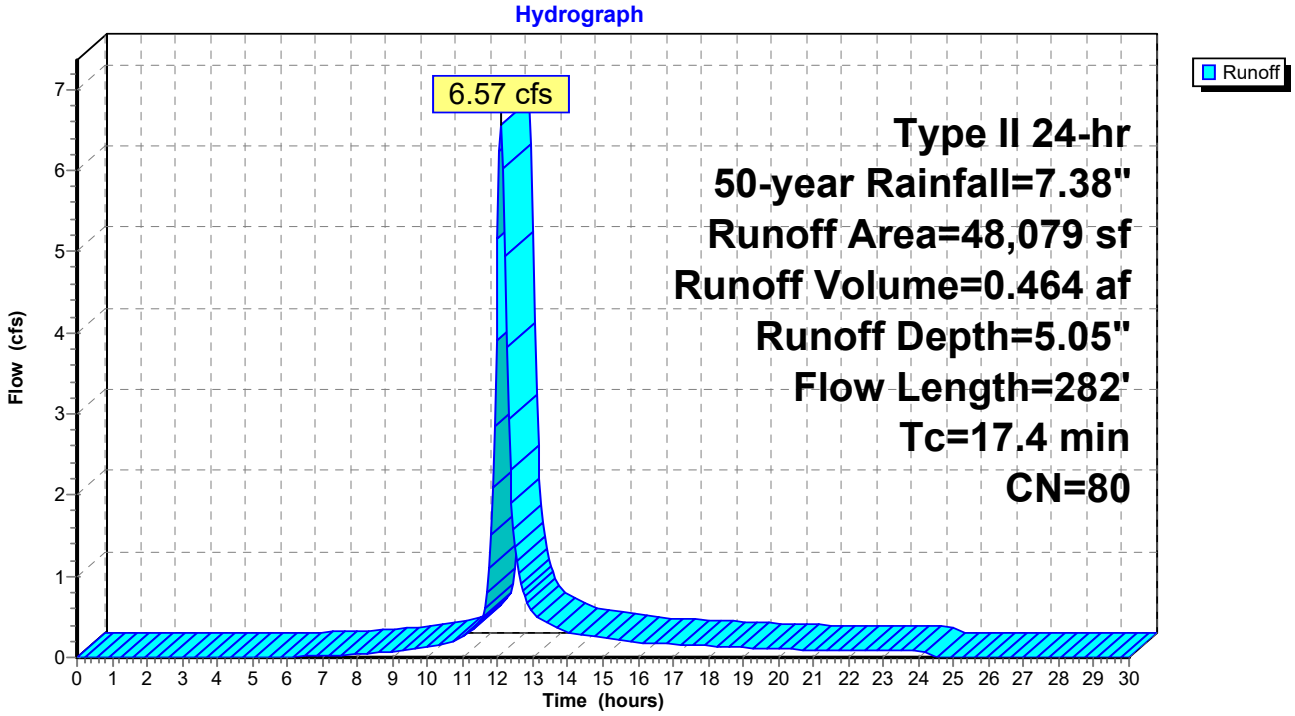
Runoff = 6.57 cfs @ 12.09 hrs, Volume= 0.464 af, Depth= 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year Rainfall=7.38"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=5.93"
Flow Length=282' Tc=17.4 min CN=80 Runoff=7.67 cfs 0.545 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.545 af Average Runoff Depth = 5.93"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

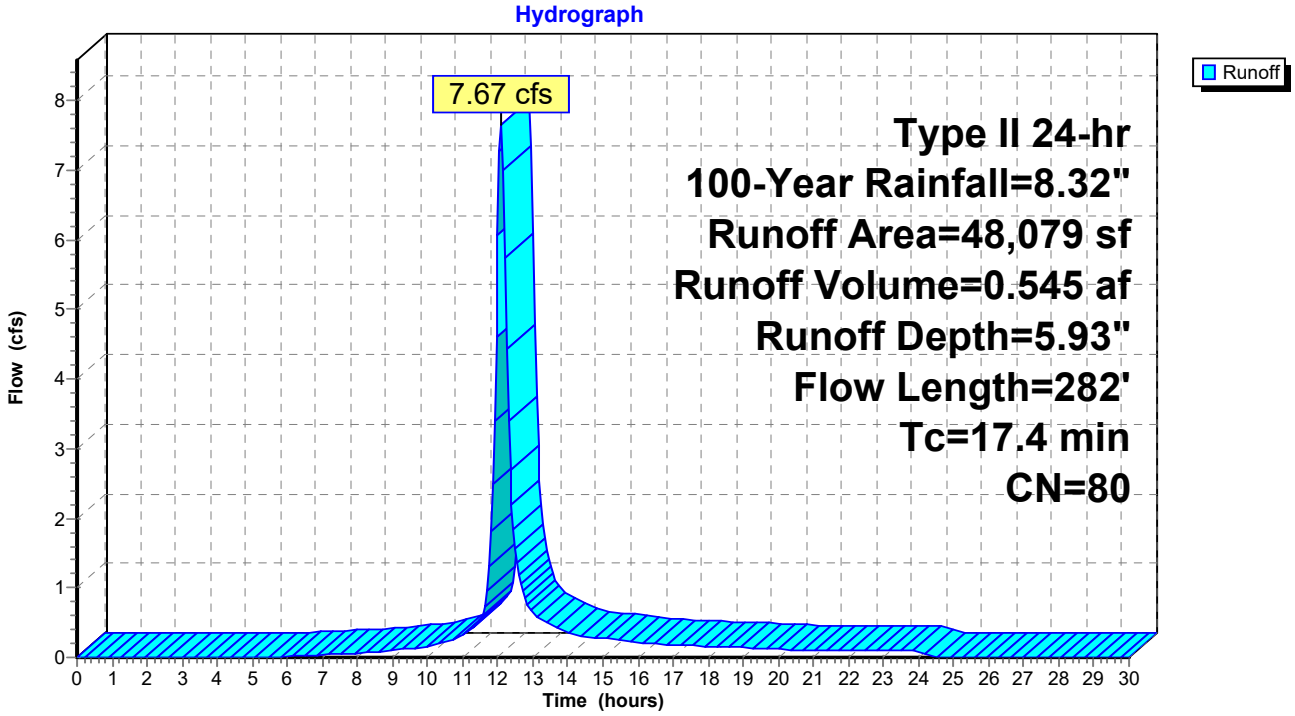
Runoff = 7.67 cfs @ 12.09 hrs, Volume= 0.545 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=8.32"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment Post: Pre Runoff Area=48,079 sf 0.51% Impervious Runoff Depth=5.05"
Flow Length=282' Tc=17.4 min CN=80 Runoff=6.57 cfs 0.464 af

Total Runoff Area = 1.104 ac Runoff Volume = 0.464 af Average Runoff Depth = 5.05"
99.49% Pervious = 1.098 ac 0.51% Impervious = 0.006 ac

Summary for Subcatchment Post: Pre

Runoff = 6.57 cfs @ 12.09 hrs, Volume= 0.464 af, Depth= 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Custom Rainfall=7.38"

Area (sf)	CN	Description
47,834	80	>75% Grass cover, Good, HSG D
245	98	Unconnected pavement, HSG D
48,079	80	Weighted Average
47,834		99.49% Pervious Area
245		0.51% Impervious Area
245		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.9	100	0.0100	0.11		**Sheet Flow, SF-1** Grass: Short n= 0.150 P2= 2.42"
2.5	182	0.0300	1.21		**Shallow Concentrated Flow, 3116** Short Grass Pasture Kv= 7.0 fps
17.4	282	Total			

Subcatchment Post: Pre