

STORMWATER POLLUTION CONTROL PLAN

**GHCC Haddam 11C
Substation Enlargement
1384 Saybrook Road
Haddam, CT 06428**

Project No. 84185



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ATTACHMENTS

- Attachment 1 Site Location Map
- Attachment 2 Site Plans

APPENDICES

- Appendix A Inspection Reports
- Appendix B Stormwater Monitoring Reports (SMR)
- Appendix C Washout Area Maintenance and Inspection Records
- Appendix D Notice of Termination Form

1. INTRODUCTION

Eversource Energy is undertaking the expansion of their 345/115kV Haddam Substation #11C, located at 1384 Saybrook Road in Haddam, Connecticut. The project proposes the expansion of approximately 1.01 acres to the southeast of the existing substation, as well as the renovation of approximately 1.8 acres of the existing substation. It will consist of gravel surface finishing, miscellaneous site appurtenances, modifications to the perimeter fence and a proposed retaining wall to accommodate the new substation electrical equipment.

This Stormwater Pollution Control Plan (SWPCP) has been prepared in accordance with the Connecticut Department of Energy and Environmental Protection (DEEP) “General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities”, DEEP-WPED-GP-015 (hereinafter the “General Permit”). Eversource Energy (Eversource) has filed registration under the General Permit with DEEP and is therefore the “Permittee”. As this SWPCP is a required component of the General Permit registration, all project participants who are involved with “site” construction (e.g. Construction Manager, General Contractor, Contractor, Subcontractors, etc.) are required to certify to this SWPCP and perform the actions defined by this SWPCP throughout all phases of construction. Eversource, as Permittee, will be responsible for compliance with applicable portions of this SWPCP following the completion of construction and turn-over of the new streetscape.

This SWPCP is intended to be used in concert with the erosion and sedimentation control measures depicted on the drawings included in Attachment 2. This SWPCP is intended to minimize the following: (1) pollution caused by soil erosion and sedimentation during and after construction; and (2) stormwater pollution caused by use of the site after construction is completed.

2. SITE PLAN

The project site is located to the south of Ruddy Ferry Road and is bounded by residential properties to the north, south, and west. The current parcel is owned N/F by Eversource Energy and is over 21 Acres in total. The disturbed portion of the site will be approximately 2.8 acres.

The project work area elevation ranges from approximately 35 feet above MSL at the lowest point to the south of the site up to approximately 80 feet above MSL to the north of the site.

Based on a review of FEMA Map No. 09007C0253G, the site is located within “Other Area Zone X” flood areas determined to be outside the 0.2% annual chance floodplain.

Site drawings included in Attachment 2 provide the following:

- Drainage patterns
- Approximate slopes anticipated after major grading activities
- Areas of soil disturbance
- Location of major structural and non-structural controls
- The location of areas where stabilization practices are expected to occur
- Areas which will be vegetated following construction
- Monitored outfall

3. SITE DESCRIPTION

3.1. Nature of the Construction Activity

The purpose of the project is to expand the existing electrical substation to allow the installation of additional transformers and electrical bus-work to handle upgrades in the transmission infrastructure in the Middlesex area. The expansion will consist of gravel surface finishing, miscellaneous site appurtenances, modifications to the perimeter fence and a proposed retaining wall to accommodate the new substation electrical equipment.

3.2. Site Area and Site Area Disturbance

The total site area is 21.44 acres with the disturbed portion of the site approximately 2.8 acres.

3.3. Runoff Coefficients

The estimated average runoff coefficient of the site after construction activities are completed is 0.55.

3.4. Receiving Water(s)

The majority off all wastewater shall be infiltrated to the ground onsite. However, any portions of runoff not infiltrated will eventually discharge to a wetland to the southeast of the site. This Wetland ultimately collects into Ruddy Creek to the south, which discharges to the Connecticut River approximately 2,000 feet from the site. The site is located in Connecticut DEEP Drainage Basin 4000-49.

3.5. Wetlands

The wetland associated with Ruddy Creek is located to the south of the site. For the substation expansion, there will be approximately 500 square feet of filling within the wetland to allow installation of the retaining wall. There is also an anticipated 3,654 square feet of wetland tree clearing.

3.6. Monitoring Outfall Location

The majority of the site stormwater is collected and detained onsite to be infiltrated into the ground. As a result, for the purposes of Stormwater Turbidity Monitoring during construction, the Monitoring Outfall Location (MO-1) will be located southeast of the expansion area on the slope adjacent to the tree-line, down-gradient of the proposed retaining wall installation. (See Attachment 2 – Site Development and Grading Plan for specific location)

4. CONSTRUCTION SEQUENCING

The sequence of major construction activity will generally occur as follows:

1. Modifications to the Haddam Substation.
2. Relocation of a portion of the 115-kV 1772 Line, which is located within the Right of Way (ROW).
3. The reconfiguration of the 345-kV 348 Line, also located within the ROW.

The general scope of each major activity is summarized below.

4.1. Modification to the Haddam Substation

Construction will begin with the modifications to the substation which include the expansion of the 345kV switch yard, the installation of (3) single phase 345kV to 115kV autotransformers and re-grading along the northeast property line. The substation will be expanded to the southeast to accommodate the new equipment and this will require the installation of a retaining wall to allow the existing grade to be brought up to the elevation of the substation. The construction for the substation modifications is scheduled to begin in August of 2015 and complete by December of 2016. The general sequence will be as follows:

1. Clearing and grubbing – 2 to 4 weeks
2. Excavation for retaining wall installation – 2 to 4 weeks
3. Re-grading along the northeast property line – 2 to 4 weeks
4. Construction and backfill of the retaining wall – 6 to 10 weeks
5. Restoration of the area impacted by the wall installation and the re-grading – 2 to 4 weeks
6. Installation of footings for new equipment – 6 to 10 weeks
7. Installation of new equipment – 35 to 40 weeks
8. Commissioning and testing – 2 to 4 weeks
9. Final landscaping – 2 to 4 weeks

4.2. Relocation of a portion of the 115-kV 1772 Line.

The relocation of the 1772 line includes removal of one (1) double circuit 115-kV lattice structure and the installation of two (2) new single circuit steel monopoles. The construction associated with the relocation of the 1772 line is scheduled to begin in August 2015 and complete by December 2015. The general sequence will be as follows:

1. Clearing and grubbing – 1 to 2 weeks
2. Installation of footings for new structures – 4 to 6 weeks
3. Installation of new structures – 1 week
4. Removal of existing lattice structure – 1 week
5. Re-routing conductor to new structures – 1 week
6. Restoration of area impacted by construction of the new structures – 2 weeks

4.3. Reconfiguration of the 345-kV 348 Line.

The reconfiguration of the 345-kV 348 Line involves the installation of a new (3) pole structure within the southwest area of the substation, modifications to the existing lattice tower in the right of way to the east of the substation and the reconnection of the 348 line into the expanded 345kV switchyard. The construction associated with the reconfiguration of the 348 line is scheduled to

begin in November 2015 and complete by December 2016. The construction will not be continuous from start to finish and general sequence will be as follows:

1. Installation of footings for new (3) pole structure – 4 to 6 weeks
2. Installation of new (3) pole structure – 1 week
3. Modifications to the existing lattice structure – 1 week
4. Re-routing conductor to new structures – 1 week
5. Restoration of area impacted by construction – 2 weeks

5. STORMWATER CONTROL MEASURES

Per the General Permit, this SWPCP must address interim and permanent stabilization practices to address pollution caused by soil erosion and sedimentation during construction, and soil erosion and sedimentation following construction. The project's erosion and sedimentation controls and stormwater management systems were designed to address both short-term and long-term stormwater quality.

The project's Erosion and Sediment Control Plans include many of the measures indicated below. However, the measures specified on the plans are the minimum requirements for erosion and sediment control at the project, and are shown in general size and location only. All contractors performing site work on the project, and other contractor entities who may have authority over erosion and sedimentation control measures at the project, are responsible for ensuring that all measures are configured and constructed in a manner that will minimize erosion of soils and prevent the transport of sediments and other pollutants to any resource areas. In general terms, all entities performing work on the site have a responsibility to minimize the area of exposed soil, control run-off rate and direction, and provide for rapid stabilization of exposed areas.

5.1. Erosion and Sediment Controls

During construction, stormwater run-off is a concern due to the excess amount of exposed areas that do not have vegetation or other cover to prevent the removal and transportation of sediment to resource areas. The primary function of erosion and sedimentation controls, as defined by the 2002 "Connecticut Guidelines for Soil Erosion and Sediment Control" (hereinafter the "2002 Guidelines") is to, "absorb erosional energies and reduce run-off velocities that force the detachment and transport of soil and/or encourage the deposition of eroded soil particles before they reach any sensitive area." The project addresses the short-term concerns by providing erosion control measures in the form of Erosion and Sediment Control Plans (refer to Attachment 2). The proposed erosion and sedimentation controls consider the specific characteristics of the site and the anticipated construction activities, and have been designed in accordance with the 2002 Guidelines.

5.1.1. Soil Stabilization and Protection

5.1.1.1. Erosion Control Barriers

Reference: Section 5-11 of the 2002 Guidelines

Prior to any construction activity, hay bales, silt fence, or combination hay bale/silt fence barriers will be placed at the limit of work where run-off potential exists, at other key locations within the site where run-off potential exists, and around stockpiles or stockpile areas. These barriers will be inspected once every seven calendar days and within 24 hours after every rainfall generating a discharge. Repair or replace damage or displaced fencing as required. Collected silt will be removed when one-half the barrier height is reached.

Hay bales

Use hay bales for the following:

- To intercept and detain small amounts of sediment from small disturbed areas.
- To decrease the velocity of sheet flows.
- To redirect small volumes of water away from erodible soils.
- To settle and assist in filtering waters discharged from pumping operations.

Applicability-

- Below small disturbed areas where the drainage area (disturbed and undisturbed) is less than 1 acre in size.
- Above disturbed slopes to direct surface water away from erodible areas where the drainage area (disturbed and undisturbed) is less than 1 acre in size.
- Where protection and effectiveness is required for less than 3 months.
- Where sedimentation will reduce the capacity of storm drainage systems or adversely affect adjacent areas, watercourses and other sensitive areas.
- Not for use in drainage-ways, except in special cases where it is applied with other measures.
- Not intended for use in streams.

Silt Fence

Use silt fence for the following:

- To intercept and retain sediment from disturbed areas.
- To decrease the velocity of sheet flows and low volume concentrated flows.

Applicability-

- Below small disturbed areas where the contributing drainage area (disturbed and undisturbed) is less than 1 acre in size.
- At storm water drainage inlets and catch basins where sedimentation will reduce the capacity of storm drainage systems or adversely affect adjacent areas, watercourses and other sensitive areas.
- Not for use in areas where rock, frozen ground or other hard surface prevents proper installation of the barrier.
- Prohibited from use in drainage-ways whose flow is supported by ground water discharge.

5.1.1.2. Temporary Seeding

Reference: Section 5-3-2 of the 2002 Guidelines

Areas that will remain disturbed but inactive for at least thirty days will receive temporary seeding or soil protection within seven (7) days in accordance with the 2002 Guidelines. Areas that will remain disturbed beyond the seeding season as identified in the 2002 Guidelines, will receive long-term, non-vegetative stabilization and protection (see below) 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 2002 Guidelines or as approved by DEEP.

It is important to note that temporary seeding will not provide the same level of protection that permanent vegetation will provide. Temporary seeding mixtures do not develop a “turf” or “sod.” Temporary seeding does not generally receive the same level of maintenance as permanent seeding.

Temporary seeding will be conducted per the table below:

Temporary Erosion Control Seeding

Species (Note 1)	Application Rate, Pounds Per Acre	Application rate, Pounds Per 1,000 sf	Optimum Seed Depth, inches (Note 2)	Optimum Seeding Dates (Note 3)
Annual ryegrass <i>Lolium multiflorum</i>	40	1.00	0.5	3/1 - 6/15 and 8/1 - 10/15
Perennial ryegrass <i>Lolium perenne</i>	40	1.00	0.5	3/15 - 7/1 and 8/1 - 10/15
Winter Rye <i>Secale cereale</i>	120	3.00	1.00	4/5 - 7/1 and 8/15 - 10/15
Oats <i>Avena sativa</i>	86	2	1	3/1 - 6/15 and 8/1 - 9/15
Winter Wheat <i>Triticum aestivum</i>	120	3	1	4/15 - 7/1 and 8/15 - 10/15
Millet <i>Echinochloa crusgalli</i>	20	.5	1	5/15 - 7/15
Sudangrass <i>Sorghum sudanese</i>	30	.7	1	5/15 - 8/1
Buckwheat <i>Fagopyrum esculentum</i>	15	.4	1	4/1 - 9/15
Weeping lovegrass <i>Eragostis curvula</i>	5	.2	.25	6/1 - 7/1
ConnDOT All Purpose Mix	150	3.4	.5	3/1 - 6/15 and 8/1 - 10/15

1 - Listed species may be used in combinations to obtain a broader time spectrum. If used in combinations, reduce each species planting rate by 20% of that listed.

2 - Seed at twice the indicated depth for sandy soils

3 - May be planted throughout summer if soil moisture is adequate or can be irrigated. Fall seeding may be extended 15 days in the coastal towns.

5.1.1.3. Soil Stabilization- Mulches

Reference: Section 5-4-8 of the 2002 Guidelines

Structural (non-living) soil stabilization is intended to protect the soil surface on a temporary basis without the intention of promoting plant growth.

Applicability-

- When grading of the disturbed area will be suspended for a period of 30 or more consecutive days, but less than 5 months, disturbed areas will be stabilized within 7 days of the suspension of grading through the use of mulch, non-bituminous tackifiers, erosion control netting, or other approved materials appropriate for use as a temporary soil protector.
- For surfaces that are not to be reworked within 5 months but will be reworked within 1 year, use temporary seeding, seeding-type mulch (hay, straw, or cellulose fiber) or when slopes are less than 3:1, wood chips, bark chips or shredded bark.

Mulch Types-

Hay - The dried stems and leafy parts of plants cut and harvested, such as alfalfa, clovers, other forage legumes and the finer stemmed, leafy grasses. The average stem length should not be less than 4 inches. Hay that can be windblown should be anchored to hold it in place.

Straw - Cut and dried stems of herbaceous plants, such as wheat, barley, cereal rye, or brome. The average stem length should not be less than 4 inches. Straw that can be windblown should be anchored to hold it in place.

Wood Chips - Chipped wood material from logs, stumps, brush or trimmings including bark, stems and leaves having a general maximum size of 0.5 inch by 2 inches and free of excessively fine or long stringy particles as well as stones, soil and other debris. No anchoring is required. If seeding is performed where wood chips have been previously applied, prior to the seeding the wood chips should be removed or tilled into the ground and additional nitrogen applied. Nitrogen application rate is determined by soil test at time of seeding (anticipate 12 lbs. nitrogen per ton of wood chips).

Bark Chips, Shredded Bark - Tree bark shredded as a by-product of timber processing having a general maximum size of 4 inches and free of excessively fine or long stringy particles as well as stone and other debris. Material use is the same as wood chips.

Other Mulch Materials - Other mulch materials may include corn stalks, leaves and other similar materials provided they meet the requirements of the materials in Section 5-4 of the 2002 Guidelines.

5.1.1.4. Soil Stabilization - Blankets/Mats

Reference: Section 5-4-10 of the 2002 Guidelines

Erosion control blankets/mats are a manufactured product composed of biodegradable/photodegradable natural or polymer fibers and/or filaments that have been mechanically, structurally or chemically bound together to form a continuous matrix. Their purpose is to provide temporary surface protection to newly seeded and/or disturbed soils to absorb raindrop impact and to reduce sheet and rill erosion and to enhance the establishment of vegetation.

Applicability-

- On disturbed soils where slopes are 2:1 or flatter.
- Where wind and traffic generated air flow may dislodge standard, unarmored mulches.

The success of temporary erosion control blankets is dependent upon strict adherence to the manufacturer's installation recommendations. As such, a final inspection should be planned to ensure that the lap joints are secure, all edges are properly anchored and all staking/stapling patterns follow the manufacturer's recommendations. Inspect temporary erosion control blankets at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.1 inch or greater for failures. Blanket failure has occurred when (1) soils and/or seed have washed away from beneath the blanket and the soil surface can be expected to continue to erode at an accelerated rate, and/or (2) the blanket has become dislodged from the soil surface or is torn. If washouts or breakouts occur, re-install the blanket after re-grading and re-seeding, ensuring that blanket installation still meets design specifications. When repetitive failures occur at the same location, review conditions and limitations for use and determine if diversions, stone check dams or other measures are needed to reduce failure rate. Repair any dislodged or failed blankets immediately.

5.1.1.5. Temporary Filter Inserts

Temporary Filter Inserts are commercially-available geotextile-fabric filters that are configured to fit into the openings of drainage structures. These filters serve as secondary protective measures to trap (filter) sediment that may bypass other control measures and be carried to drainage structure inlets by stormwater run-off during construction. Temporary Filter Inserts will be installed in catch basins and similar drainage structures as secondary protective measures throughout construction. Temporary Filter Inserts will be placed in each existing catch basin and yard drains prior to the start of construction, and in each new catch basin or yard drain during construction. These devices will be removed upon final site stabilization.

Filter inserts will be inspected once every seven (7) calendar days and within 24 hours after every rainfall of 0.1 inches or greater. Replacement of the inserts will be as often as necessary to maintain function of the drainage structure and prevent excessive ponding due to clogged fabric. Ripped or otherwise damaged inserts will be replaced immediately.

5.1.1.6. Stockpile Management

Reference: Section 4-9 of the 2002 Guidelines

Stockpile management of topsoil and other types of erodible soils is necessary to prevent unnecessary damage resulting from erosion of stockpile material. Locate stockpiles so that natural drainage is not obstructed. Attempt to maximize the distance of stockpiles from wetlands, watercourses, drainage ways, and steep slopes. When the stockpile is down gradient from a long slope, divert run-off water away from or around the stockpile. Install a geotextile silt fence or hay bale barrier around the stockpile area approximately 10 feet from the proposed toe of the slope. The side slopes of stockpiled material that is erodible should be no steeper than 2:1. Stockpiles that are not to be used within 30 days need to be seeded and mulched immediately after formation of the stockpile. The seed mix used depends upon the stockpiled material and the length of time it is to remain stockpiled. Information gathered from soil borings and soil delineation can be used to plan the type of seed and any soil amendments that are appropriate for the stockpile. After the stockpile has been removed, the site should be graded and permanently stabilized.

Topsoil stockpiles which will be idle for at least 30 days will be stabilized with temporary seed and mulch no later than 7 days from the last use. Small stockpiles may be covered with impervious tarps or erosion control matting in lieu of seeding and mulching.

5.1.2. Structural Measures

Structural measures are intended to 1) divert flows away from exposed soils, and 2) store flows or otherwise limit runoff and minimize the discharge of pollutants from the site. Unless otherwise specifically approved in writing by DEEP, or if otherwise authorized by another state or federal permit, structural measures shall be installed on upland soils.

Diversion measures include Temporary Fill Berm, Water Bars, Temporary Diversion and Permanent Diversion. These measures serve the common function of redirecting and controlling the direction of water flow. Diversions are used to direct runoff away from or around sensitive construction areas and to fragment drainage areas to reduce the need for a Temporary Sediment Basin. Diversions are preferable to other types of man-made storm water conveyance systems because they more closely simulate natural flow patterns and characteristics. Flow velocities are generally kept to a minimum.

Storage measures include Temporary Sediment Traps. The primary function of this measure is to slow the velocity of sediment laden waters enough to allow suspended sediments to drop out of solution. It is intended to provide 75% – 90% trap efficiency for a 10 year, 2 hour return frequency storm.

Evolving site conditions will determine what structural measures are necessary, and the following general principles should be applied to their selection and placement:

- Prevent clean water from becoming turbid, by diverting runoff from upslope areas away from disturbed areas. Earth dikes, temporary swales, perimeter dike/swales, or diversions that outlet in stable areas can be used in this capacity.

- Remove sediment from turbid water before the water leaves the site. The method of sediment removal depends upon how the water drains from the site. Concentrated flow must be diverted to a trapping device so that suspended sediment can be deposited. Dikes or swales that outlet into traps or basins can accomplish this. A storm drain system may be used to convey concentrated sediment laden water only if the system empties into a trap or basin. Otherwise, all storm drain inlets must be protected so that sediment laden water cannot enter the drainage system before being treated to remove the sediment.
- Surface runoff draining in sheet flow must be controlled and treated before the water leaves the site. Straw bale dikes, silt fences, or vegetative buffer strips can be used to treat sheet flow.
- All practices designed and implemented must be properly maintained in order to remain functional. Sediment accumulated in basins and traps must be removed and disposed of in a manner that stabilizes them on the construction site.

5.1.2.1. Diversion - Temporary Fill Berm

Reference: Section 5-7-3 of the 2002 Guidelines

The Temporary Fill Berm is a non-engineered measure that is a very temporary berm used at the top of active fill slopes whose drainage area at the point of discharge is less than 3 acres. It is intended to divert run-off from unprotected fill slopes during construction to a stabilized outlet or sediment-trapping facility. Its intended duration of use is less than 5 days for any specific fill berm. The use of a berm starts when it is constructed and ends when new fill is placed. When filling is complete and it is determined that a diversion is needed at the top of fill to protect the fill until it is stabilized then a Temporary Diversion is needed.

Applicability-

- On active earth fill slopes where the drainage area at the top of fill drains toward the exposed slope and where ongoing fill operations make the use of a Permanent Diversion unfeasible.
- Where the intended use is 5 days or less. For use longer than 5 days use Temporary Diversion or other measure.
- Where the drainage area at the point of discharge is less than 3 acres.

5.1.2.2. Diversion - Water Bar

Reference: Section 5-7-6 of the 2002 Guidelines

A Water Bar is a channel with a supporting berm on the down slope side constructed across a construction access road, driveway, or other access way. Its purpose is to minimize the concentration of sheet flow across and down sloping roadways and access ways, or similar sloping and unstable areas and to shorten the continuous flow length within a sloping right-of-way.

Applicability-

- On construction access road, driveway, log road or other access way.
- Where the drainage area to each separate water bar is less than 1 acre.

Unless the water bar discharges into a heavily vegetated area of sufficient length to adequately filter run-off, discharges should be settled or filtered through a geotextile silt fence, hay bale barrier or temporary sediment trap.

5.1.2.3. Temporary Diversion

Reference: Section 5-7-9 of the 2002 Guidelines

Temporary diversion is used to divert sheet flow to a stabilized outlet or a sediment-trapping facility, to direct water originating from undisturbed areas away from areas where construction activities are taking place, and to fragment disturbed areas thereby reducing the velocity and concentration of run-off. When used at the top of a slope, the structure protects exposed slopes by directing run-off away from the disturbed areas. When used at the base of a disturbed slope, the structure protects adjacent and downstream areas by diverting sediment-laden run-off to a sediment trapping facility. Temporary diversions must be installed as a first step in the land-disturbing activity and must be functional prior to disturbing the land they are intended to protect.

Applicability-

- Where the drainage area at the point of discharge is 5 acres or less. For drainage areas greater than 5 acres use Permanent Diversion measure.
- Where the intended use is 1 year or less. For uses greater than 1 year use Permanent Diversion measure.

5.1.2.4. Storage - Temporary Sediment Traps

Reference: Section 5-11-25 of the 2002 Guidelines

Temporary Sediment Traps are temporary ponding areas with a stone or engineered outlet formed by excavation and/or construction of an earthen embankment. They are intended to detain sediment-laden run-off from small disturbed areas long enough to allow a majority of the sediment to settle out. If included in the project's erosion and sedimentation control plans, or required based on evolving site conditions, the sizing and location of Temporary Sediment Traps will be completed in conjunction with the project civil engineer.

Applicability-

- Below disturbed areas where the contributing drainage area is 5 acres or less.
- Where the intended use is 2 years or less.
- When diverting sediment-laden water with temporary diversions that meet the above limitations for use.

Maintenance-

Inspect temporary sediment traps at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.1 inch or greater. Check the outlet to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The height of the stone outlet should be maintained at least

1 foot below the crest of the embankment. Also check for sediment accumulation and filtration performance. When sediments have accumulated to one half the minimum required volume of the wet storage, dewater the trap as needed, remove sediments and restore the trap to its original dimensions. Dispose of the sediment removed from the basin in a suitable area and in such a manner that it will not erode and cause sedimentation problems. The temporary sediment trap may be removed after the contributing drainage area is stabilized. If it is to be removed, refer to the project plans for how the site of the temporary sediment trap is to be graded and stabilized after removal.

5.2. Dewatering

Reference: Section 5-13 of the 2002 Guidelines

Dewatering may be utilized at the site to lower the groundwater table to allow for the construction of subsurface improvements (utilities, foundations, etc.) within a relatively dry environment. Several dewatering techniques may be utilized at the contractor's discretion based on the specific nature of the work. These may include:

- Sumps
- Wells
- Wellpoints

Dewatering wastewaters shall be managed in accordance with the 2002 Guidelines. Where feasible and appropriate, dewatering wastewaters will be infiltrated into the ground. Dewatering wastewaters discharged to surface waters will be discharged in a manner that minimizes the discoloration of the receiving waters. No discharge of dewatering wastewater(s) shall contain or cause a visible oil sheen, floating solids, or foaming in the receiving water. Unless otherwise specifically approved in writing by DEEP, or if otherwise authorized by another state or federal permit, dewatering measures shall be installed on upland soils.

The following measures will be employed to ensure that dewatering wastewaters will not cause scouring or erosion or contain suspended solids in amounts that could reasonably be expected to cause pollution:

- Divert surface waters away from areas needing dewatering.
- Consider if well points and sumps can be used to lower the groundwater table, reducing the need for settling facilities.
- For sites that don't require continuous pumping, pump work areas before construction activities begin each work day.
- Provide filtration near the suction intake.
- Locate pumps, intake sumps, and other intake structures in areas which will not require constant moving, when possible.
- Locate pump discharge facilities (portable, permanent, or bio-filtering structures) such that a minimum disturbance of existing wetlands and watercourses is incurred.
- Provide protection at outlets from pumping operations to dissipate pumping surges and prevent erosion at the point of discharge.

5.2.1. Dewatering Plan

This SWPCP provides general measures for the management of dewatering wastewater based on the measures indicated in the 2002 Guidelines. It is recognized that the use of these measures is dependent upon specific site conditions, the contractor's specific method of operations, and the contractor's dewatering equipment. As this plan provides a general description of dewatering operations, the contractor will be required to submit a project-specific Dewatering Plan. This Dewatering Plan will be submitted to the engineer for review and approval prior to its implementation. The project-specific Dewatering Plan will, at a minimum, identify the following:

1. Locations and associated construction where dewatering is required.
2. Specific methods and devices proposed for dewatering.
3. Details on protection at the inlet and outlet of pumps, method for floating the pump intake, or other methods to minimize and retain the sediment.
4. Proposed location of dewatering discharge and details of infiltration basins or other discharge location. Per the General Permit, where feasible and appropriate, dewatering wastewaters will be infiltrated into the ground.
4. Details on any containment berm construction when dewatering earth materials.
5. Identification of a contingency plan for emergency operations should the dewatering operation prove inadequate to meet the dewatering need or is found to be causing unacceptable turbidity problems (e.g., alternative discharge locations or use of a portable sediment tank). If turbidity or siltation problems are not adequately controlled by the contingency plan, then the operation will be ceased and a revised dewatering plan submitted for approval prior to further implementation.

5.3. Emergency Flood Procedures

The site is located outside the designation for a 0.2% chance annual floodplain. However, this SWPCP includes measures that may be taken prior to severe weather events to prevent pollution due to the possibility of any type of flooding.

5.3.1. Weather Monitoring

During the construction, monitoring of weather conditions will be conducted by the contractor using locally-available sources. These sources should be consulted on a daily basis to ascertain the latest weather forecast. Examples of sources of weather information are summarized below. This list should not be considered all-inclusive.

- **National Oceanic and Atmospheric Administration, National Weather Service**

Radio: NWR requires a special radio receiver or scanner capable of picking up the signal. Broadcasts are found in the VHF public service band at these seven frequencies (MHz):

162.4000, 162.425, 162.450, 162.475, 162.500, 162.525, 162.550

Television: None

Web Site: <http://weather.gov/>

- **WTNH**

Radio: None

Television: Channel 8 (may vary based on local cable provider)

Web Site: www.wtnh.com

- **WCBS Connecticut**

Radio: WTIC AM 1080

Television: None

Web Site: <http://connecticut.cbslocal.com/>

- **WFSB Eyewitness News**

Radio: None

Television: Channel 3 (may vary based on local cable provider)

Web Site: www.wsfb.com

- **Fox Connecticut**

Radio: None

Television: Channel 9 (may vary based on local cable provider)

Web Site: <http://www.ctnow.com/>

- **NBC Connecticut**

Radio: None

Television: Channel 4 (may vary based on local cable provider)

Web Site: www.nbcconnecticut.com

5.3.2. Weather Conditions

The National Weather Service uses "Watches" and "Warnings" to provide alerts to potentially dangerous weather.

Weather Watches - A "Watch" means conditions are right for dangerous weather. If a "Watch" is issued, all parties should be alert to evolving weather conditions and be prepared to act.

- For events that come and go quickly, such as severe thunderstorms, tornadoes or flash floods, a watch means that the odds are good for the dangerous weather, but it's not yet happening.
- For longer-lived events, such as hurricanes or winter storms, a watch means that the storm isn't an immediate threat, but is anticipated.

When a severe thunderstorm, tornado, or flash flood watch is in effect, all parties should monitor available weather sources and "watch the sky" for signs of dangerous weather. Severe thunderstorms, tornados, and flash floods often can happen so quickly that warnings cannot be issued in time. If these types of watches are issued, project team notifications

should be made, construction operations immediately suspended, and flood protection measures implemented.

Hurricane or winter storm watches are longer term. If these types of watches are issued, project team notifications should be made, plans should be made to suspend construction operations based on the timing of the weather event, and applicable flood protection measures implemented.

Weather Warnings - A “Warning” means that the dangerous weather is threatening the area. If a “Warning” is issued, all parties should immediately take action to 1) ensure personnel safety, and 2) take immediate and appropriate actions in response to the weather event. For severe thunderstorms, tornadoes and flash floods, a “Warning” means the event is occurring.

Before “Watches” and “Warnings” are issued, the National Weather Service, private forecasters, newspapers, radio and television normally try to alert the public to potential weather dangers. Often, forecasters begin issuing bulletins on hurricanes and winter storms three or four days before the storm is predicted to occur. It should be noted that forecasters cannot issue alerts for the danger of severe thunderstorms, tornadoes and flash floods with significant advance notice.

5.3.3. Contingency Phases

The contractor, in concert with the Permittee and engineer will determine which project team members are responsible for each function during each phase. As tasking is assigned, additional responsibilities, teams, and task lists will be created by the contractor to address specific functions during a specific phase.

Preparation Phase

- In response to a potential flood or associated severe weather event, review all erosion and sedimentation control measures and determine if existing measures require reinforcement and/or if additional temporary measures are required.
- In response to a potential flood or associated severe weather event, structures, materials, and equipment will be reviewed for their potential to cause pollution.
- In response to a potential flood or associated severe weather event, take appropriate actions to ensure that all structures, materials, and equipment will be anchored or restrained to prevent displacement or flotation.
- Provide notifications to Permittee, owner, engineer, and other project participants at the outset and completion of this phase.

Response Phase

- To establish an immediate and controlled presence at the project site. The contractor maintains primary responsibility for response actions.
- To conduct a preliminary assessment of flood incident impact, extent of damage, and disruption to construction operations.
- To evaluate and communicate information regarding other responses, clean-up, and when construction operations can resume.

- To provide contractor personnel, owner, engineer, and other applicable project participants with the facts necessary to make informed decisions regarding subsequent resumption and recovery activity.
- Provide notifications to Permittee, owner, engineer, and other project participants at the outset and completion of this phase.

Resumption Phase

- To establish and organize contractor forces for the resumption of construction operations.
- To mobilize and activate contractor support teams necessary to facilitate and support the resumption process.
- To notify and appraise owner and engineer of the situation.

Recovery/Restoration Phase

- To prepare and implement recovery operations.
- Re-establish erosion and sedimentation controls.
- Re-establishment site controls (fencing, etc.).
- Re-mobilize personnel.
- Re-mobilize materials and equipment
- Perform construction operations required to restore project conditions and continue with construction activities.
- Provide notifications in accordance with Section 2.1 at the outset and completion of this phase.

5.3.4. Contingency Operations

Erosion and Sedimentation Controls

Erosion and sedimentation controls will be present at the project site until final stabilization is achieved.

Procedure – If heavy rains are forecast or in the event of a Weather Watch, Weather Warning, or flood warning, all sedimentation and erosion control measures will be inspected. Based on the inspection coupled with the nature of the forecasted weather event, existing measures will be reinforced and/or additional temporary erosion and sedimentation control measures will be deployed to control erosion and sediment transport.

Structures

Structures at the project site will consist of temporary-type structures such as field trailers, portable storage units, and portable toilets. No permanent structures (e.g. buildings or similar construction) are presently located at the project site.

Procedure - In the event of a flood warning, field trailers, portable storage units, and portable toilets may be removed from project site.

Materials

Various materials will be stored at the project site and utilized during the project. These materials are generally categorized into four categories:

- Natural Materials such as earth fill, gravel, topsoil, trees/shrubs, straw mulch, wood chip mulch.
- Non-Polluting Construction Materials such as silt fencing, plastic or metal temporary construction fencing, lumber, trench boxes, concrete or plastic drainage materials.
- Potentially-Polluting Materials such as fuels, lubricants, cleaning solvents, hydraulic oil, antifreeze/coolant, and fertilizers. These materials pose the greatest threat of causing pollution during a flood event, primarily because they will dissolve and/or disperse quickly in flood waters. During the construction project, only minimal amounts of these types of these materials will be stored within the flood zone, all materials will be stored in a neat, orderly manner in appropriate sealed containers with proper labeling.
- Floatable Materials such as lumber, sealed containers, portable storage units, portable toilets, trash and trash containers, and other buoyant items.

Procedure - In the event of a flood warning, the following procedures will be implemented:

- Natural Materials - Stockpiles of earth materials can remain in-place and should be protected against erosion in accordance with the “2002 Connecticut Guidelines for Soil Erosion and Sediment Control”. If possible natural materials such as shrubs or smaller plantings will be removed from the project site. Larger plantings such a tress should be secured together with rope.
- Non-Polluting Construction Materials - If possible, Non-Polluting Construction Materials will be removed from the project site. If these materials cannot be relocated or removed, they should be consolidated to the extent possible and reviewed item-by-item for materials which have the potential to float. If a material is identified that may float, comply with the procedure for Floatable Materials.
- Potentially-Polluting Materials - All Potentially-Polluting Materials will be removed from the project site.
- Floatable Materials - All Floatable Materials will be removed from the project site. If larger stockpiles of items such as wood chip mulch cannot be relocated, the stockpile will be completely covered with plastic sheeting and secured with sandbags.

Equipment

Equipment at the project site will consist of heavy equipment (excavators, dozers, loaders, trucks, etc.) and small equipment (pumps, generators, plate compactors, etc.). In the event of a flood, the primary concern with this equipment is the potential release of fuels, hydraulics oils, and lubricants associated with the various mechanical components.

Procedure - In the event of a flood warning, equipment will be 1) removed from the project site, or 2) staged in an appropriate location and secured.

5.4. Post Construction Stormwater Management

Haddam Substation 11C is unique in that there is no definitive outlet point for stormwater discharge. For both pre and post construction, the grading for the site is such that all runoff generated at the substation will be collected in a small depressed area in the vicinity of the east property line of the site (considered Analysis Point 2 in the Stormwater Management Study – April 2015). There are no outlet structures or overflow weirs constructed to discharge runoff from the depression indicating that the main discharge from the area is through groundwater infiltration. Historical information and geotechnical analysis also support this idea. The expansion area will include a four (4) inch thick substation stone layer that will also function as a stormwater detention layer. As a result, the Water Quality Volume will be contained onsite.

In addition, the expansion of the substation will reduce the overall surface runoff and promote groundwater recharge by providing a 1.01 acre (expansion area) interface surface area between the runoff collected in the substation stone and the in-situ/imported fill material.

5.4.1. Post Construction Control Measures

- 5.4.1.1. Runoff Reduction and Low Impact Development (“LID”) Practices - The expansion area with the substation stone will reduce the overall runoff from the site and promote groundwater recharge by providing approximately 1.01 acres of interface surface area between the runoff collected in the substation stone and the non-compacted in-situ and imported fill material.
- 5.4.1.2. Suspended Solids and Floatable Removal – Due to the nature of the project and its lack of vehicular access, TSS and floatables are not considered an area of concern.
- 5.4.1.3. Velocity Dissipation – Since the project will reduce the overall runoff from the site, velocity dissipation measures have not been designed in any locations.

5.4.2. Maintenance of Permanent Stabilization

After construction is completed and accepted by Eversource, inspection and maintenance of stabilized surfaces will be the responsibility of Eversource.

- Perimeter areas: Inspect annually. Repair and stabilize any bare or eroded areas and re-stabilize as soon as possible.

6. OTHER POLLUTION CONTROLS

6.1. Waste Disposal

6.1.1. Waste Materials

All waste materials generated at the site will be collected and stored in securely lidded, metal dumpsters rented from a licensed solid waste management company.

All trash and construction debris from the site will be deposited in the dumpsters. When at capacity, the dumpsters will be removed from the site and transported to a state-licensed waste transfer or waste disposal facility. No construction waste materials will be burned, buried, or otherwise disposed-of on-site.

All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the office trailer and a competent person will be assigned day-to-day operation responsibilities.

6.1.2. Recycling

Waste materials generated at the site that are designated for recycling will be collected and stored in securely lidded, metal dumpsters rented from a licensed solid waste management company. Materials designated for recycling will be deposited in the appropriate dumpster based on material type. When at capacity, the dumpsters will be removed from the site and transported to a state-licensed transfer or recycling facility.

6.1.3. Liquid Waste Materials

The dumping of liquid wastes in storm sewers is prohibited. All liquid waste materials generated at the site will be collected and stored in secure containers suitable for the particular type of waste if such liquid waste is not suitable for the "Washout Area" (see below). Containers storing liquid waste will be removed from the site for disposal by a state-licensed company.

6.1.4. Hazardous Materials

All waste materials that are considered "hazardous" such as oils, greases, oil-based paints, solvents, etc. generated by construction will be stored and disposed of in accordance with local, state, and federal regulations. Site personnel must be instructed in the practices of handling, collecting and storage of hazardous materials, and a competent person will be assigned responsibility for seeing that these practices are followed.

6.1.5. Sanitary Waste

All sanitary waste will be collected from portable units on a regular basis as required by applicable regulations.

6.2. Washout Areas

A designated “Washout Area” will be established for the purpose of washing the following:

- Latex paint equipment
- Vehicles, containers, and equipment for concrete
- Applicators and containers for materials which have not contained any oils, greases, oil-based paints, solvents, fuels, lubricants, etc.

The Washout Area shall be established as follows:

- (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 Washout Area shall be clearly delineated with fencing, flagging, or similar highly-visible materials. Washout activities are only permitted within the Washout Area. All wash water shall be directed into a container or pit designed such that no overflows can occur during rainfall or after snowmelt. There shall be no surface discharge of washout wastewaters from the Washout Area.

Hardened concrete waste from the Washout Area will be removed and disposed-of consistent with practices developed for the “Waste Materials” above. At least once per week, any containers or pits used for washout will be inspected 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 containers will be repaired prior to further use. For concrete washout areas, all hardened concrete waste will be removed whenever the hardened concrete has accumulated to a height of one-half (½) of the container or pit or as necessary to avoid overflows. A record of maintenance and inspections for the Washout Area is included in Appendix C.

6.3. Off-Site Vehicle Tracking

Reference: Section 5-12 of the 2002 Guidelines

Stabilized construction entrances (ant-tracking pad) will be used to help reduce the movement of sediments from the site to off-site areas by vehicles. Construction details for these facilities are contained on the project’s Erosion and Sedimentation Control Plans. A stabilized construction entrance will be installed at each primary site access point used by construction equipment.

Stabilized construction entrances will be maintained in a condition which will prevent tracking and washing of sediment onto paved surfaces. Each entrance will be periodically top-dressed with additional stone and/or additional length added as conditions demand.

All sediment spilled, dropped, washed or tracked onto paved surfaces will be immediately removed. Roads adjacent to the site will be left clean at the end of each day. It is also recognized that the use of stabilized construction entrances may not eliminate the need for periodic street sweeping. Therefore, adjacent paved roadways will be swept as necessary.

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

either (1) the construction entrance will be lengthened, (2) the construction access road surface will be modified, or (3) washing racks (or similar devices) will be installed before the vehicle enters a paved surface. If a washing rack or similar device is to be used to wash sediment from tires, provisions will be employed to intercept the wash water and trap the sediment before it is carried off-site. Per the 2002 Guidelines, the sediment trapping facility will be sized to hold the maximum volume of water that would be used over a 2-hour period.

6.4. Dust Control

The generation of fugitive dust will be minimized during all aspects of the work, and measures to suppress fugitive dust will be employed when work activities are conducted which could generate dust. Construction sequencing will be organized and conducted to the extent possible to leave existing pavement or ground coverings in place until just prior to earth excavation for the purpose of minimizing the migration of dust beyond the project limits into the surrounding area. If the amount of fugitive dust and/or particulate generated during the work is deemed unacceptable or exceeds baseline project site conditions the work will be halted and corrective measures implemented. Dust control and suppression will be implemented as follows:

6.4.1. Water

Water will be applied only at the locations, at such times, and in the amount required to control and suppress dust. 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 or cause a visible oil sheen, floating solids, visible discoloration, or foaming in the receiving stream.

6.4.2. Calcium Chloride

Calcium chloride will be applied only at the locations, times, and in the amount approved by the owner (as Permittee). The application of calcium chloride will be by means of a mechanical spreader, or other approved methods.

6.4.3. Mulch

The use of mulch for dust control will be coordinated with erosion and sedimentation control measures. Straw mulch will be applied at a rate of 100 pounds per 1,000 square feet (100 lb./1,000 ft²). Wood chips or wood mulch will be applied at such a rate as to form a layer one (1) inch thick.

6.5. Spill Prevention

6.5.1. Potential Stormwater Pollution Sources

During construction, the following are potential sources of pollutants that could impact stormwater:

- Cleared and disturbed grassed/planted areas;
- Pavement and utility removal;
- Construction site entrances and bituminous access drive lot construction;
- Foundation excavation and building construction.

- Topsoil and mulch installation;
- Dewatering operations;
- Final grading and landscaping.

Potential Stormwater Pollutants

The materials and substances in the following list are potential stormwater pollutants that are likely to be present during construction.

- Concrete
- Detergents
- Paints (enamel and latex)
- Wood Preservatives
- Pesticides
- Plaster
- Fertilizers
- Petroleum Based Products
- Cleaning Solvents
- Asphalt
- Glue, Adhesives
- Curing Compounds
- Hydraulic Oil / Fluids
- Gasoline
- Diesel Fuel
- Kerosene
- Antifreeze / Coolant

6.5.2. Good Housekeeping

The following good housekeeping practices will be followed on-site during the project:

- An effort will be made to store only enough products required to perform the work.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container and opening a new container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The Construction Manager and/or site superintendent will inspect daily to ensure proper use and disposal of materials on-site.
- Dumpsters will be kept covered and drain plugs will remain in place unless being cleaned.

- Products will be kept in original containers unless they are not re-sealable. Leftover product will be properly disposed of or placed in a sealable container.
- Original labels and material safety data will be retained as they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

6.5.3. Product Specific Practices

The following product specific practices will be followed on-site:

- Chemical and Petroleum Product Storage - All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) will be stored in tightly sealed containers that are clearly labeled. All chemical and petroleum product containers will 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 will 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 this requirement.
- Petroleum Products - All on-site construction vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Any asphalt substances used on-site will be applied according to the manufacturer's recommendations. Spill kits will be included with any fueling sources and maintenance activities.
- Fertilizers - Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. Fertilizer will not be stored on site.
- Paints - All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturers' instructions or State and local regulations. Spray guns will be cleaned on a removable tarp.

6.5.4. Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information.

- Materials and equipment necessary for spill cleanup will be kept in the designated material storage areas on-site. Equipment and materials will include, but not be limited to, brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, Speedi-Dry and plastic and metal trash containers specifically made for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous materials will be reported to the appropriate State and/or local government agency, regardless of the size. The National Response Center number is 800-424-8802. The CT DEEP Emergency Reporting number is 800-424-3333.
- The site construction superintendent will be responsible for the day-to-day operations, and act as the person responsible for spill prevention and cleanup. The names of responsible construction spill containment and cleanup personnel will be posted in the material storage area and in the office trailer on-site.

6.6. Post-Construction Cleaning

All post-construction stormwater structures will be cleaned of construction sediment and any remaining silt fence shall be removed upon stabilization of the site, prior to filing notice of termination.

7. INSPECTION AND MONITORING

Throughout all phases of construction, the erosion control measures will be routinely inspected, cleaned, repaired, and replaced as necessary. Maintenance of erosion and sedimentation control measures is critical to their effectiveness. Maintenance will be an ongoing process during the period of construction and will continue until long-term vegetation is established. Mulching and seeding will be inspected throughout all phases of construction: at the end of each workday, if precipitation is forecast and after each rainfall. At the end of each workweek, prior to weekends, all erosion and sediment control measures will be inspected and repairs/replacements made as required.

Throughout the construction process, extra stocks of hay bales and filter fabric will be kept on-site to replace those that may become damaged and/or deteriorated.

Any erosion and sediment control measures, which upon inspection, are found to be damaged, deteriorated, or not functioning properly, will be repaired, replaced and corrected immediately after inspection.

Inspection procedures will be addressed and implemented in the following manner:

7.1. Plan Implementation Inspections

Within the first 30 days following commencement of construction activity on the site, a representative of the Permittee will inspect the site. The Permittee's representative for Plan Implementation Inspections is:

BSC Group
300 Winding Brook Drive
Glastonbury, CT 06033

The Permittee's representative will inspect the site at least once and no more than three times during the first 90 days of commencement of the construction activity to confirm compliance with the General Permit and proper initial implementation of all control measures designated in this SWPCP for the site for the initial phase of construction.

7.2. Routine Inspections

The Permittee will routinely inspect the site for compliance with the General Permit and this SWPCP for the site until a Notice of Termination has been submitted. Inspection procedures for these Routine Inspections will be addressed and implemented in the following manner.

7.2.1. Qualified Inspector

The Permittee will retain a Qualified Inspector meeting the following definition:

“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 Connecticut Department of Transportation (DOT)”.

The Permittee’s Qualified Inspector will be an individual(s) from:

BSC Group
300 Winding Brook Drive
Glastonbury, CT 06033

7.2.2. Rainfall Measurement

The Permittee will maintain a rain gauge on-site to document rainfall amounts.

7.2.3. Inspection Criteria

At least once a week and within 24 hours of the end of a storm that generates a discharge, the Qualified Inspector, will inspect, at a minimum, the following:

- Disturbed areas of the construction activity that have not been finally stabilized.
- All erosion and sedimentation control measures.
- All structural control measures.
- Soil stockpile areas.
- Washout Areas.
- 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, an 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 will occur immediately upon the start of the subsequent normal working hours. Where sites have been temporarily or finally stabilized, inspections will be conducted at least once every month for three months.

The areas noted above will be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to the receiving waters. Locations where vehicles enter or exit the site will also be inspected for evidence of off-site sediment tracking. Where sites have been temporarily or finally stabilized, such inspection will be conducted at least once every month for three months.

The Qualified Inspector will 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).

7.2.4. Inspection Report

Following each inspection, the Qualified Inspector will prepare a report that will summarize the following:

- The scope of the inspection.
- Name(s) and qualifications of personnel making 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 SWPCP.
- A description of the stormwater discharge(s) from the site.
- Any water quality monitoring performed during the inspection.

Report forms are included in Appendix A. The report will be signed by the Permittee or his authorized representative. Reports will be retained as part of the SWPCP.

The report will include a statement that, in the judgment of the Qualified Inspector(s) conducting the Routine Inspection, the site is either in compliance or out of compliance with the terms and conditions of this SWPCP and General Permit. If the site inspection indicates that the site is out of compliance, the inspection report will include a summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions (as identified in the 2002 Guidelines) will be implemented on site within 24 hours and incorporated into a revised SWPCP within three (3) calendar days of the date of inspection unless another schedule is specified in the 2002 Guidelines. Engineered corrective actions (as identified in the 2002 Guidelines) shall be implemented on site within seven (7) days and incorporated into a revised SWPCP within ten (10) days of the date of inspection, unless another schedule is specified in the 2002 Guidelines or is approved by DEEP. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures will be implemented to minimize the potential for the discharge of pollutants from the site.

Inspectors from DEEP may inspect the site for compliance with the General Permit at any time construction activities are ongoing and upon completion of construction activities to verify the final stabilization of the site and/or the installation of post-construction stormwater management measures.

7.2.5. Turbidity Monitoring

The Permittee via the Qualified Inspector, will perform turbidity monitoring in accordance with the following:

Monitoring Frequency

- Sampling will be conducted at least once every month, when there is a discharge of stormwater from the site while construction activity is ongoing, until final stabilization of the drainage area associated with each outfall is achieved.

- The Permittee will collect samples during normal working hours, which for this project are Monday through Friday, between the hours of 7:00 am and 5:00 pm.
- If sampling is discontinued due to the end of normal working hours, the Permittee will resume sampling the following morning or the morning of the next working day following a weekend or holiday, as long as the discharge continues.
- Sampling may be temporarily suspended any time conditions exist that may reasonably pose a threat to the safety of the person taking the sample. Such conditions may include high winds, lightning, impinging wave or tidal activity, intense rainfall or other hazardous condition. Once the unsafe condition is no longer present, sampling will resume.
- If there is no stormwater discharge during a month, sampling will not be conducted.

Sample Collection

- All samples will be collected from discharges resulting from a storm event that occurs at least 24 hours after any previous storm event generating a stormwater discharge.
- Any sample containing snow or ice melt must be identified on the Stormwater Monitoring Report form. Sampling of snow or ice melt in the absence of a storm event is not a valid sample.
- Samples shall be grab samples taken at least three separate times during a storm event and shall be representative of the flow and characteristics of the discharge(s). Samples may be taken manually or by an in-situ turbidity probe or other automatic sampling device equipped to take individual turbidity readings (i.e. not composite). The first sample shall be taken within the first hour of stormwater discharge from the site. In cases where samples are collected manually and the discharge begins outside of normal working hours, the first sample shall be taken at the start of normal working hours.

Sampling Locations

- Sampling is required of all point source discharges of stormwater from disturbed areas.
- Where there are two or more discharge points that discharge substantially identical runoff, based on similarities of the exposed soils, slope, and type of stormwater controls used, a sample may be taken from just one of the discharge points. In such case, the Permittee will report that the results also apply to the substantially identical discharge point(s).
- No more than 5 substantially identical outfalls may be identified for one representative discharge. If such project is planned to continue for more than one year, the Permittee shall rotate twice per year the location where samples are taken so that a different discharge point is sampled every six months.
- The outfall authorized by the General Permit are identified on the Erosion and Sedimentation Control Plans.

Sampling and Analysis

Sampling and turbidity analysis will be conducted in accordance with ASTM D6855. Results will be reported in Nephelometric Turbidity Units (NTU).

Turbidity Values

The stormwater discharge turbidity value for each sampling point will be determined by taking the average of the turbidity values of all samples taken at that sampling point during a given storm.

7.2.6. Stormwater Monitoring Reports

Within thirty (30) days following the end of each month, the Permittee will submit the stormwater sampling result(s) on the Stormwater Monitoring Report (SMR) form included in Appendix B. If there was no discharge during any given monitoring period, the Permittee will submit the form as required with the words “no discharge” entered in place of the monitoring results. If the Permittee monitors any discharge more frequently than required by the General Permit, the results of this monitoring will be included in additional SMRs for the month in which the samples were collected.

8. CONSTRUCTION WORKER TRAINING

A construction employee training program will be developed and implemented by the Construction Manager, General Contractor, or site Contractor, as applicable, to educate project personnel about the requirements of the erosion and sedimentation control specifications and this SWPCP.

8.1. Construction Personnel in Responsible Charge

Training for construction personnel in responsible charge (project managers, supervisors, superintendents, etc.) will be given training to include the following:

- Goals of erosion and sedimentation control.
- The erosion and sedimentation process.
- Review of the General Permit.
- Review of erosion and sedimentation control plans, technical specifications, and this SWPCP.
- Review of erosion control methods and materials.
- Review of spill prevention and response, good housekeeping, and proper material handling
- Review of waste handling and washout
- Inspections and monitoring.

Construction personnel in responsible charge will be given the training prior to, or on, their first day on the project.

8.2. Staff Construction Personnel

Training for staff construction Personnel will be given training to include the following:

- Goals of erosion and sedimentation control.
- Review of erosion and sedimentation control plans, technical specifications, and this SWPCP.
- Review of erosion control methods and materials.
- Review of waste handling and washout.
- Review of reporting procedures for alerting personnel in responsible charge to erosion and sedimentation control problems.

Construction personnel will be given the training prior to, or on, their first day on the project.

9. CERTIFICATION

The following Certification Statement applies to this SWPCP. All project participants who are involved with “site” construction (e.g. Construction Manager, General Contractor, Contractor, Subcontractors, etc.) are required to certify to this plan by signing in the space provided. By signing, each project participant certifies the following:

“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.”

1	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <p>Responsible for (project role):</p>
2	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <p>Responsible for (project role):</p>
3	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <p>Responsible for (project role):</p>

4	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <hr/> <p>Responsible for (project role):</p>
5	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <hr/> <p>Responsible for (project role):</p>
6	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <hr/> <p>Responsible for (project role):</p>
7	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <hr/> <p>Responsible for (project role):</p>
8	<p>_____</p> <p>Signature</p> <p>_____</p> <p>Printed Name</p> <p>_____</p> <p>Date</p>	<p>On behalf of (company):</p> <p>Telephone Number:</p> <hr/> <p>Responsible for (project role):</p>

Attachment 1
Site Location Map

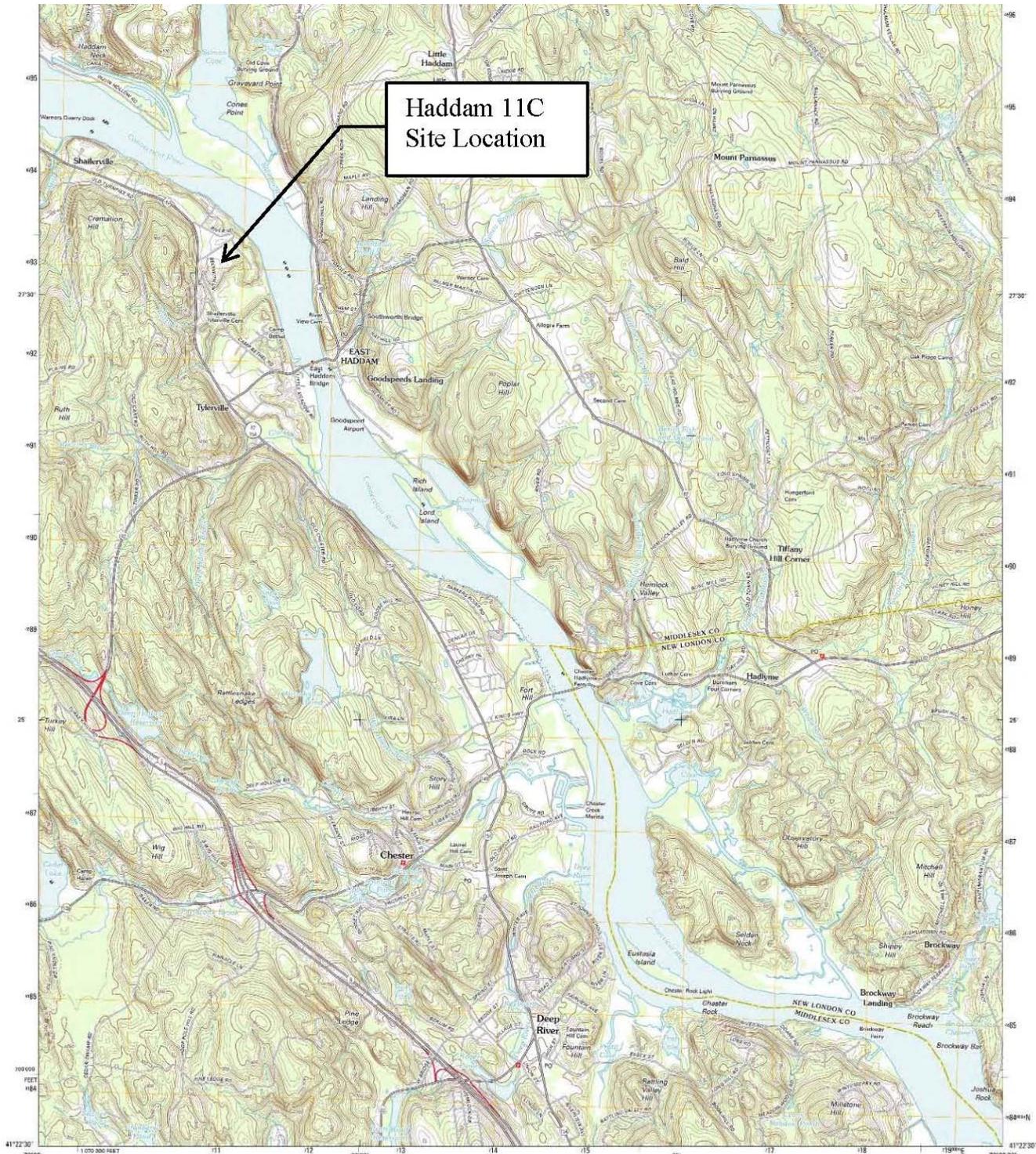
Attachment 1

USGS MAP – Deep River Quadrangle #84

GHCC Haddam 11C Substation Expansion

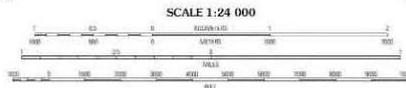
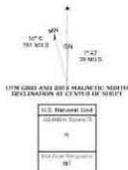
1384 Saybrook Road Haddam, Connecticut

Scale = 1:24,000



Produced by the United States Geological Survey
 North American Datum of 1983 (NAD83)
 World Geodetic System of 1984 (WGS84), Projection and
 1,000-meter grid. Contour Interval: 10 Feet. Zone 18T
 10,000-foot scale. Connecticut Coordinate System of 1983

Source: **USGS**, **NAD**, August 2010
Books, **2000**, 2011 Topom.
Hydrography, **National Hydrographic Dataset**, 2010
Contours, **National Elevation Dataset**, 2012
Boundaries, **Cartus, INC.**, 1982, 1972 - 2010



This map was produced to conform with the
 National Cartographic Program US Topographic Standard, 2011.
 A checklist associated with this product is draft version 6.6.2



DEEP RIVER, CT
2012

Attachment 2

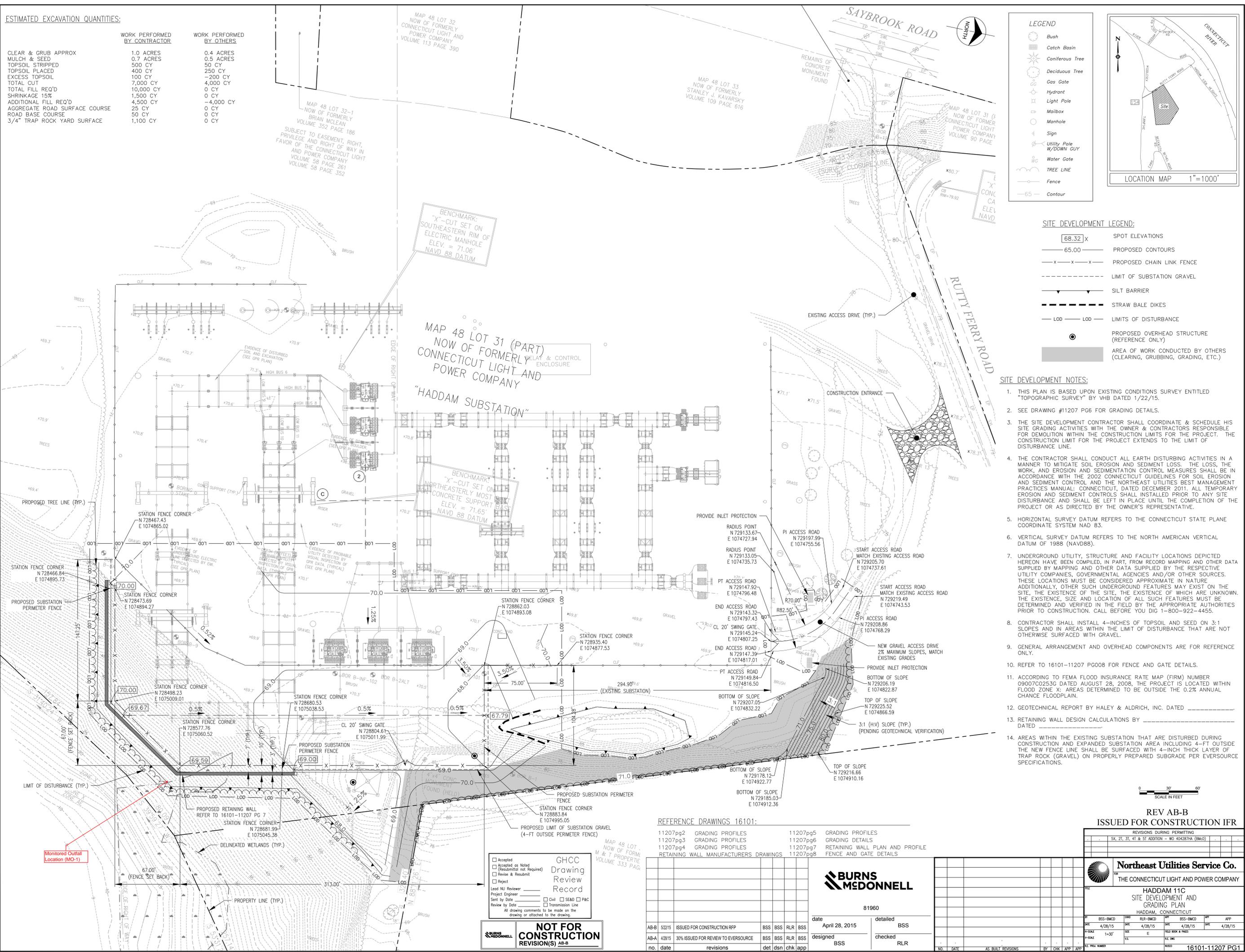
Site Plans

1. 16101-11207 PG1 – Site Development and Grading Plan
2. 16101-11207 PG6 – Grading Details, Grading Plan, Site Development

5/21/2015 1:22 PM - e:\projects\161011-11207 PG08.dwg - 3344 3352

ESTIMATED EXCAVATION QUANTITIES:

WORK PERFORMED BY CONTRACTOR	WORK PERFORMED BY OTHERS
CLEAR & GRUB APPROX	1.0 ACRES
MULCH & SEED	0.7 ACRES
TOPSOIL STRIPPED	500 CY
TOPSOIL PLACED	400 CY
EXCESS TOPSOIL	100 CY
TOTAL CUT	7,000 CY
TOTAL FILL REQ'D	10,000 CY
SHRINKAGE 15%	1,500 CY
ADDITIONAL FILL REQ'D	4,500 CY
AGGREGATE ROAD SURFACE COURSE	25 CY
ROAD BASE COURSE	50 CY
3/4" TRAP ROCK YARD SURFACE	1,100 CY



LEGEND

- Bush
- Catch Basin
- Coniferous Tree
- Deciduous Tree
- Gas Gate
- Hydrant
- Light Pole
- Mailbox
- Manhole
- Sign
- Utility Pole W/DOWN GUY
- Water Gate
- TREE LINE
- Fence
- Contour

SITE DEVELOPMENT LEGEND:

- 68.32 x SPOT ELEVATIONS
- 65.00 PROPOSED CONTOURS
- x-x-x-x- PROPOSED CHAIN LINK FENCE
- LIMIT OF SUBSTATION GRAVEL
- SILT BARRIER
- STRAW BALE DIKES
- L.O.D. --- LIMITS OF DISTURBANCE
- PROPOSED OVERHEAD STRUCTURE (REFERENCE ONLY)
- AREA OF WORK CONDUCTED BY OTHERS (CLEARING, GRUBBING, GRADING, ETC.)

SITE DEVELOPMENT NOTES:

- THIS PLAN IS BASED UPON EXISTING CONDITIONS SURVEY ENTITLED "TOPOGRAPHIC SURVEY" BY VHB DATED 1/22/15.
- SEE DRAWING #11207 PG6 FOR GRADING DETAILS.
- THE SITE DEVELOPMENT CONTRACTOR SHALL COORDINATE & SCHEDULE HIS SITE GRADING ACTIVITIES WITH THE OWNER & CONTRACTORS RESPONSIBLE FOR DEMOLITION WITHIN THE CONSTRUCTION LIMITS FOR THE PROJECT. THE CONSTRUCTION LIMIT FOR THE PROJECT EXTENDS TO THE LIMIT OF DISTURBANCE LINE.
- THE CONTRACTOR SHALL CONDUCT ALL EARTH DISTURBING ACTIVITIES IN A MANNER TO MITIGATE SOIL EROSION AND SEDIMENT LOSS. THE LOSS, THE WORK, AND EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL AND THE NORTHEAST UTILITIES BEST MANAGEMENT PRACTICES MANUAL, CONNECTICUT, DATED DECEMBER 2011. ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO ANY SITE DISTURBANCE AND SHALL BE LEFT IN PLACE UNTIL THE COMPLETION OF THE PROJECT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- HORIZONTAL SURVEY DATUM REFERS TO THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD 83.
- VERTICAL SURVEY DATUM REFERS TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH UNDERGROUND FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
- CONTRACTOR SHALL INSTALL 4-INCHES OF TOPSOIL AND SEED ON 3:1 SLOPES AND IN AREAS WITHIN THE LIMIT OF DISTURBANCE THAT ARE NOT OTHERWISE SURFACED WITH GRAVEL.
- GENERAL ARRANGEMENT AND OVERHEAD COMPONENTS ARE FOR REFERENCE ONLY.
- REFER TO 16101-11207 PG08 FOR FENCE AND GATE DETAILS.
- ACCORDING TO FEMA FLOOD INSURANCE RATE MAP (FIRM) NUMBER 0907C0253C DATED AUGUST 28, 2008, THE PROJECT IS LOCATED WITHIN FLOOD ZONE X; AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- GEOTECHNICAL REPORT BY HALEY & ALDRICH, INC. DATED _____
- RETAINING WALL DESIGN CALCULATIONS BY _____ DATED _____
- AREAS WITHIN THE EXISTING SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION AND EXPANDED SUBSTATION AREA INCLUDING 4-FT OUTSIDE THE NEW FENCE LINE SHALL BE SURFACED WITH 4-INCH THICK LAYER OF TRAP ROCK (GRAVEL) ON PROPERLY PREPARED SUBGRADE PER EVERSOURCE SPECIFICATIONS.

LEGEND

- Bush
- Catch Basin
- Coniferous Tree
- Deciduous Tree
- Gas Gate
- Hydrant
- Light Pole
- Mailbox
- Manhole
- Sign
- Utility Pole W/DOWN GUY
- Water Gate
- TREE LINE
- Fence
- Contour

SITE DEVELOPMENT LEGEND:

- 68.32 x SPOT ELEVATIONS
- 65.00 PROPOSED CONTOURS
- x-x-x-x- PROPOSED CHAIN LINK FENCE
- LIMIT OF SUBSTATION GRAVEL
- SILT BARRIER
- STRAW BALE DIKES
- L.O.D. --- LIMITS OF DISTURBANCE
- PROPOSED OVERHEAD STRUCTURE (REFERENCE ONLY)
- AREA OF WORK CONDUCTED BY OTHERS (CLEARING, GRUBBING, GRADING, ETC.)

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- VERTICAL SURVEY DATUM REFERS TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND OTHER DATA SUPPLIED BY MAPPING AND OTHER DATA SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH UNDERGROUND FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
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- GENERAL ARRANGEMENT AND OVERHEAD COMPONENTS ARE FOR REFERENCE ONLY.
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- GEOTECHNICAL REPORT BY HALEY & ALDRICH, INC. DATED _____
- RETAINING WALL DESIGN CALCULATIONS BY _____ DATED _____
- AREAS WITHIN THE EXISTING SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION AND EXPANDED SUBSTATION AREA INCLUDING 4-FT OUTSIDE THE NEW FENCE LINE SHALL BE SURFACED WITH 4-INCH THICK LAYER OF TRAP ROCK (GRAVEL) ON PROPERLY PREPARED SUBGRADE PER EVERSOURCE SPECIFICATIONS.

REFERENCE DRAWINGS 16101:

11207pg2	GRADING PROFILES	11207pg5	GRADING PROFILES
11207pg3	GRADING PROFILES	11207pg6	GRADING DETAILS
11207pg4	GRADING PROFILES	11207pg7	RETAINING WALL PLAN AND PROFILE
RETAINING WALL MANUFACTURERS DRAWINGS		11207pg8	FENCE AND GATE DETAILS

REV AB-B
ISSUED FOR CONSTRUCTION IFR

REVISIONS DURING PERMITTING

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP

SCALE IN FEET

0 30 60

GHCC
Drawing
Review
Record

Lead Reviewer: _____
Project Engineer: _____
Sent by Date: _____
Review by Date: _____

Accepted
 Accepted as Noted (Resubmittal not Required)
 Revisit & Resubmit
 Reject

Civil SEAD P&C
 Transmission Line

All drawing comments to be made on the drawing or attached to the drawing.

NOT FOR CONSTRUCTION
(REVISION(S) AB-B)

BURNS
MCDONNELL

81960

date April 28, 2015 detailed BSS

designed BSS checked RLR

no.	date	revisions	det	dsn	chk	app
AB-B	5/28/15	ISSUED FOR CONSTRUCTION RFP	BSS	BSS	RLR	BSS
AB-A	4/28/15	30% ISSUED FOR REVIEW TO EVERSOURCE	BSS	BSS	RLR	BSS

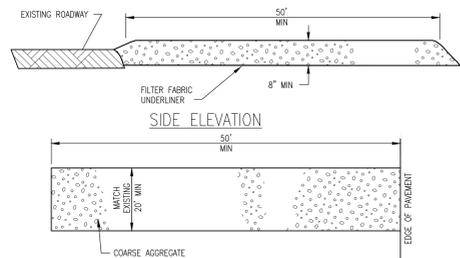
Northeast Utilities Service Co.
THE CONNECTICUT LIGHT AND POWER COMPANY

HADDAM 11C
SITE DEVELOPMENT AND
GRADING PLAN
HADDAM, CONNECTICUT

DATE: 4/28/15
SCALE: 1"=30'

NO. DATE AS BUILT REVISIONS BY CHK APP

16101-11207 PG1



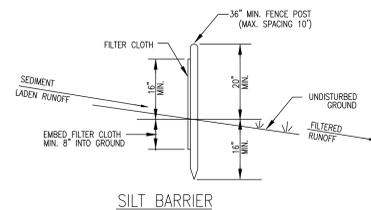
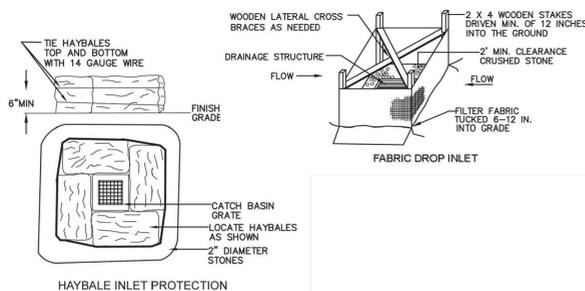
TEMPORARY STONE CONSTRUCTION ENTRANCE
NOT TO SCALE
TEMPORARY STONE CONSTRUCTION ENTRANCE CONSTRUCTION SPECIFICATIONS

1. THE AREA OF THE ENTRANCE MUST BE EXCAVATED A MINIMUM OF 3 INCHES AND MUST BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE FILTER FABRIC UNDERLINER WILL THEN BE PLACED THE FULL WIDTH AND LENGTH OF THE ENTRANCE.
2. FOLLOWING THE INSTALLATION OF THE FILTER CLOTH, THE STONE SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO SPECIFICATIONS. CONVEYANCE OF SURFACE WATER UNDER ENTRANCE THROUGH CULVERTS SHALL BE PROVIDED AS REQUIRED. IF SUCH CONVEYANCE IS IMPOSSIBLE, THE CONSTRUCTION OF A "MOUNTABLE" BEAM WITH 5:1 SLOPES WILL BE PERMITTED.
3. THE FILTER CLOTH UTILIZED SHALL BE A NONWOVEN FABRIC CONSISTING ONLY OF CONTINUOUS CHAIN POLYMERIC FILAMENTS OR YARNS OF POLYESTER. THE FABRIC SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS AND BE MILDEW AND ROT RESISTANT.

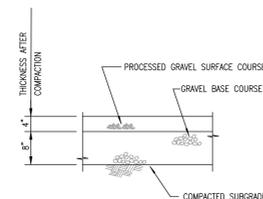
MAINTENANCE

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND POWERING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
2. SITE DEVELOPMENT CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL PUBLIC STREETS FREE OF CONSTRUCTION DEBRIS AND SEDIMENT.

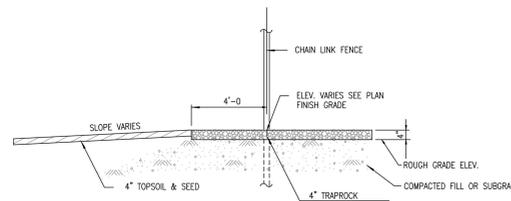
CATCH BASIN / INLET PROTECTION - HAYBALE AND FABRIC DROP INLETS



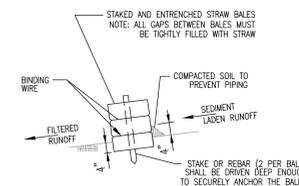
- CONSTRUCTION NOTES FOR FABRICATED SILT BARRIER**
1. FILTER CLOTH TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



AGGREGATE SURFACE DRIVE DETAIL
NTS



SUBSTATION PERIMETER TYPICAL SECTION
NTS



STRAW BALE DIKE (S.B.D.)
NTS
NOTE: THE STRAW BALE DIKE MAY BE SUBSTITUTED FOR GEOTEXTILE SILT FENCE AT CONTRACTORS OPTION

REFERENCE DRAWINGS 16101:

- 11207pg1 SITE DEVELOPMENT AND GRADING PLAN
- 11207pg2 GRADING PROFILES
- 11207pg3 GRADING PROFILES
- 11207pg4 GRADING PROFILES
- 11207pg5 GRADING PROFILES
- 11207pg7 RETAINING WALL PLAN AND PROFILE
- 11207pg8 FENCE AND GATE DETAILS

Accepted
 Accepted as Noted (Resubmittal not Required)
 Revise & Resubmit
 Reject
 GHCC Drawing Review Record
 Lead NJ Reviewer _____
 Project Engineer _____
 Sent by Date _____
 Review by Date _____
 Civil SEAD PAC
 Transmission Line
 All drawing comments to be made on the drawing or attached to the drawing.

NOT FOR CONSTRUCTION
REVISION(S) AB-B

REV AB-B
ISSUED FOR CONSTRUCTION RFP

REVISIONS DURING PERMITTING					
NO.	DATE	DESCRIPTION	BY	CHK	APP
1	4/28/15	ISSUED FOR CONSTRUCTION RFP	BSS	RLR	BSS
2	4/28/15	30% ISSUED FOR REVIEW TO EVERSOURCE	BSS	RLR	BSS

Northeast Utilities Service Co.
THE CONNECTICUT LIGHT AND POWER COMPANY

HADDAM 11C
GRADING DETAILS
GRADING PLAN, SITE DEVELOPMENT
HADDAM, CONNECTICUT

DATE	BY	CHK	APP
4/28/15	BSS	RLR	BSS
4/28/15	BSS	RLR	BSS
4/28/15	BSS	RLR	BSS

FILE NO: 16101-11207 PG6

no.	date	revisions	det	dsn	chk	app
AB-B	5/22/15	ISSUED FOR CONSTRUCTION RFP	BSS	BSS	RLR	BSS
AB-A	4/28/15	30% ISSUED FOR REVIEW TO EVERSOURCE	BSS	BSS	RLR	BSS

BURNS MCDONNELL

81960

date April 28, 2015 detailed BSS
designed BSS checked RLR

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP

APPENDIX A
Maintenance and Inspection Reports

GHCC Haddam 11C Substation Expansion

PROJECT #84185

EVERSOURCE ENERGY

1384 SAYBROOK ROAD

HADDAM, CT 06428

MAINTENANCE AND INSPECTION REPORT

Inspections to be completed every 7 days and within 24 hours of the end of a storm that generates a discharge

Inspection date: _____ **Report Number:** _____

Qualified Inspector's name (Print): _____

Inspector's Title: _____ Inspector's Affiliation: _____

Inspector's qualifications:

Days since last rainfall: _____ Amount of last rainfall: _____ inches (based on rain gage data)

Current Weather: Temperature: _____ degrees F Wind (Speed/Direction): _____

Current Precipitation (Indicate conditions during inspection): _____

Was water quality monitoring performed during the inspection: Yes No

Major observations relating to erosion and sediment controls and the implementation of the Plan. Include a description of the stormwater discharge(s) from the site.

DISTURBED SOIL STABILIZATION MEASURES

Area of the site	Last disturbance (Date)	Next disturbance (Date)	Stabilized? (Yes/No)	Stabilized with?	Condition

STABILIZED CONSTRUCTION ENTRANCES (ANT-TRACKING PAD)

Area of the site	Does much sediment get tracked onto the street?	Is the gravel clean or is it filled with sediment?	Does all traffic use the stabilized entrance to leave the site?	Is the culvert beneath the entrance working? (If applicable)	Does the gravel need to be removed and replaced with clean gravel?

Indicate maintenance required (include additional sheets if necessary)

Item 1: _____

Responsible Party: _____ Address no later than (Date): _____

Item 2: _____

Responsible Party: _____ Address no later than (Date): _____

Item 3: _____

Responsible Party: _____ Address no later than (Date): _____

TEMPORARY STOCKPILES

Area of the site	Is the stockpile surrounded with a hay bale and silt fence barrier?	Condition of hay bales and silt fence	Is the stockpile securely covered with a tarp?	Has the stockpile been temporarily seeded? (If so when?)

Indicate maintenance required (include additional sheets if necessary)

Item 1: _____

Responsible Party: _____ Address no later than (Date): _____

Item 2: _____

Responsible Party: _____ Address no later than (Date): _____

Item 3: _____

Responsible Party: _____ Address no later than (Date): _____

Additional observations/notes:

In the judgment of the Qualified Inspector(s) conducting the site inspection, the site is

In Compliance Out of Compliance

with the terms and conditions of the Plan and General Permit.

Stabilization/repairs or remedial action required (include additional sheets if necessary)

Item 1:

Responsible Party: _____ Address no later than (Date): _____

Item 2:

Responsible Party: _____ Address no later than (Date): _____

Item 3:

Responsible Party: _____ Address no later than (Date): _____

Item 4:

Responsible Party: _____ Address no later than (Date): _____

Item 5:

Responsible Party: _____ Address no later than (Date): _____

Item 6:

Responsible Party: _____ Address no later than (Date): _____

QUALIFIED

INSPECTOR'S

SIGNATURE: _____ DATE: _____

Note: If the site inspection indicates that the site is out of compliance, refer to the summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions (as identified in the 2002 Guidelines) shall be implemented on site within 24 hours unless another schedule is specified in the 2002 Guidelines. Engineered corrective actions (as identified in the 2002 Guidelines) shall be implemented on site within seven (7) days, 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.

APPENDIX B
Stormwater Monitoring Reports

APPENDIX C
Washout Area Maintenance and Inspection Record

GHCC Haddam 11C Substation Expansion

PROJECT #84185

EVERSOURCE ENERGY

1384 SAYBROOK ROAD

HADDAM, CT 06428

WASHOUT AREA INSPECTION AND MAINTENANCE RECORD

Inspector's Name (Print): _____

Inspector's Title: _____ Inspector's Affiliation: _____

WASHOUT AREA INSPECTION SUMMARY

Inspection Date: _____

WASHOUT AREA MAINTENANCE SUMMARY

Maintenance Date: _____

Stabilization/repairs or remedial action required (include additional sheets if necessary)

Item 1: _____

Responsible Party: _____ Address no later than
(Date): _____

Item 2: _____

Responsible Party: _____ Address no later than
(Date): _____

Item 3: _____

Responsible Party: _____ Address no later than
(Date): _____

SIGNATURE: _____ DATE: _____

APPENDIX D
Notice of Termination



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

Notice of Termination Form

Please complete and submit this form in accordance with the general permit (DEP-PED-GP-015) in order to ensure the proper handling of your termination. Print or type unless otherwise noted.

Note: Ensure that for commercial and industrial facilities, registrations under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* (DEP-PED-GP-014) or the *General Permit for the Discharge of Stormwater from Commercial Activities* (DEP-PED-GP-004) have been filed where applicable. For questions about the applicability of these general permits, please call the Department at 860-424-3018.

Part I: Registrant Information

1. Permit number: GSN			
2. Fill in the name of the registrant(s) as indicated on the registration certificate: Registrant: Eversource Energy			
3. Site Address: 1384 Saybrook Road			
City/Town: Haddam	State: CT	Zip Code: 06428	
4. Date all storm drainage structures were cleaned of construction sediment: Date of Completion of Construction: Date of Last Inspection (must be at least three months after final stabilization pursuant to Section 6(b)(6)(D) of the general permit):			
5. Check the post-construction activities at the site (check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Capped Landfill
<input type="checkbox"/> Other (describe):			

Part II: Certification

"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
Name of Permittee (print or type)	Title (if applicable)

Note: Please submit this Notice of Termination Form to:

STORMWATER PERMIT COORDINATOR
BUREAU OF WATER MANAGEMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127