

# Stormwater Pollution Control Plan

## Mix Avenue Substation Project

The United Illuminating Company

November 2015



56 Quarry Road  
Trumbull, Connecticut 06611

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D	Water Quality Volume Calculation Spreadsheet
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F	Sedimentation and Erosion Control Inspection Report Form
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## 1 Introduction

This Stormwater Pollution Control Plan is required as part of the registration process under the *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* (General Permit), dated August 21, 2013.

The Mix Avenue Substation Project is considered a construction activity in accordance with the Connecticut Department of Energy and Environmental Protection (CT DEEP) General Permit. The purpose of this plan is to specify parameters to follow to minimize pollution caused by use of the project sites during and after construction is completed. Erosion and sediment control requirements are also shown on the plans. A location map of the project site along Mix Avenue in Hamden, Connecticut can be found in *Attachment A* of the General Permit Registration Form, under *Appendix A* of this plan.

During construction, the contractor(s) shall be responsible for implementing all elements of the erosion and sedimentation control measures as defined on the drawings and in this plan. Major construction activities will be phased to minimize areas of disturbance throughout construction. Erosion and sedimentation controls will be implemented and adjusted as needed throughout construction to minimize soil erosion.

Throughout the construction process, the Permittee or Permittee's agent shall periodically inspect all erosion control measures. A monitoring program will be put in place to observe potential off-site impacts due to erosion. After construction, the Permittee shall be responsible for maintaining these erosion and sedimentation control measures. The Mix Avenue Substation Project will not be considered complete until all disturbed areas have been satisfactorily stabilized for at least three months, all erosion has been repaired, and all temporary erosion control measures have been removed as called for on the plans.

The general contractor(s) and subcontractor(s) will be required to sign the certification statement located in *Appendix B* of this plan.

## 2 Site Description

The United Illuminating Company (UI) will be conducting construction activities at the Substation located at 690 Mix Avenue in Hamden, Connecticut. The work at the Mix Avenue Substation involves clearing for the substation expansion, expansion of the control house building, installing substation towers, construction of two retaining walls, installing storm drainage piping, trench drain, catch basins, stormwater treatment unit and underground detention basin, adding fencing, paving, and laying a crushed rock base within the substation limits. The Substation expansion area is located to the north and west of the two proposed retaining walls as seen on the Erosion Control – Site Plan sheet found in *Appendix C*.

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## 2.1 Scope of Construction Activities

The proposed construction activities at the Mix Avenue Substation include the following:

- Establishing erosion and sedimentation controls
- Conducting limited clearing
- Expanding control house building
- Installing substation towers
- Building retaining walls
- Installing storm drainage system, treatment unit, and underground detention basin
- Expanding fencing
- Laying Pavement and crushed rock
- Restoring work site

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## 2.2 Area of Disturbance

The total disturbed area for the Mix Avenue substation project will be approximately 2.5 acres.

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## 2.3 Stormwater Discharge Information

The Mix Avenue Substation project limits consists of crushed rock, pavement, and grass areas.

The stormwater runoff generated at the western expansion of the site will sheet flow down the grassed slope and infiltrate directly through the proposed crushed rock. The site is graded to promote sheet flow from the west to east and north to south with stormwater infiltrating through the crushed rock and also collected into a trench drain or collected in one of the proposed catch basins on site. The eastern side of the site slopes north to south and east to west, also infiltrating stormwater through the crushed rock and into proposed catch basin. Once in the on-site storm drainage system, flows are conveyed to a stormwater treatment unit and then to an underground detention structure proposed at the southeast corner of the site. From the detention chamber the flows will be conveyed southwesterly to the existing storm drainage network located on the property to the south. The proposed construction will alter the runoff coefficient of the project site due to the decrease in undeveloped grass and wooded areas when compared to existing conditions. The substation expansion will not promote any new channeled or areas of concentrated runoff. Existing drainage patterns will not change from pre- to post- construction activities.

A portion of the relevant Flood Insurance Rate Map for the area of work can be found as *Figure 1* of this plan.

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## 2.4 Receiving Waters

The Mix Avenue Substation project site is located within the Southwest Eastern Regional Complex of the Southwest Coast Major Basin, as indicated within the *Public Water Supply Sources & Drainage Basins of Connecticut* mapping provided in *Figure 2* of this plan. No directly channeled or concentrated flow is anticipated from the project site expansion to the receiving waters.

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## 2.5 Wetlands on Site

There are no known wetlands on this site.

# 3 Construction Sequencing

The Contractor shall be aware that grubbing, stripping, and associated earthwork operations all have significant potential to cause erosion and sedimentation until complete stabilization of the site has occurred.

Pre-Construction activities include obtaining required permits, authorizations, and approvals from State authorities, as well as private entities including the Permittee having jurisdiction over the Project. In addition, notifications to regulatory authorities will be made and copies of such permits, authorizations, approvals, and notifications will be provided to the Engineer.

The general Construction Sequencing for construction activities shall proceed as follows:

- Install construction entrance, silt fencing and other erosion & sediment controls as shown on the Erosion Control - Site Plan and detail sheets. *Note: Erosion and sedimentation controls shall be modified with changing grades to enable protection of areas adjacent to the site.*
- Clear expansion area.
- Construct control house building addition.
- Install substation towers in expanded area.
- Install storm drainage system, including trench drains, catch basins, stormwater treatment unit, underground detention basin, and piping.
- Perform final site work including, construction of retaining walls, fence expansion, paving and crushed rock placement, stabilization of disturbed soil surfaces.
- Establish vegetation on lawn areas to stabilize final grades.

## 4 Control Measures

The following paragraphs address the controls and measures to be implemented on the work site both during and after construction to minimize stormwater pollution to the waters of the State of Connecticut. Control measures during construction activities are shown on the Erosion Control – Site Plan sheet within the Construction Drawings included as *Appendix C*.

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### 4.1 Erosion and Sediment Controls

The goal of this plan is to control erosion on the site and to control and minimize the movement of sediment into adjacent wetlands, watercourses or storm sewer systems. Note that erosion and sediment controls shall conform to the requirements of the *Connecticut Guidelines for Soil Erosion and Sediment Control*, dated May 2002, which will hereafter be referred to as the “Guidelines”, and the *2004 Connecticut Stormwater Quality Manual*, which will hereafter be referred to as the “Standards”. To meet these goals, stabilization, structural and maintenance practices shall be implemented by the Contractor as outlined below.

#### 4.1.1 Stabilization Practices and Protection

Both temporary and permanent stabilization practices shall be implemented throughout the project to minimize erosion of soil from the disturbed site. Temporary and permanent stabilization measures are proposed to provide protection against erosion both during and after construction. Existing vegetation shall be preserved to the maximum extent practicable.

The contractor shall maintain compost filter socks and haybales until seeding/stabilization. When construction activities have permanently ceased or when final grades are reached on any portion of the sites, stabilization and protection practices shall be implemented within seven days. Areas that will remain disturbed but inactive for at least 30 days shall receive temporary seeding or soil protection in accordance with the Guidelines. Areas that will remain disturbed beyond the seeding season shall receive long term non-vegetative stabilization and protection measures sufficient to protect the site through the winter. In all cases, stabilization and protection measures shall be implemented as soon as possible in accordance with the Guidelines.

The stabilization practices to be implemented during the construction of the proposed project are as follows:

**Temporary Vegetative Cover:** Exposed areas that will be inactive for more than seven days, or immediately (as schedules allow) for stockpiles not to be used for 30 days, and areas that have not yet reached finished grades shall receive a temporary vegetative cover during the planting season of March 15 to July 1 and August 1 to October 15. This temporary vegetative cover shall consist of perennial rye grass. The rye grass shall be planted at a rate of 2 lbs./1,000 sq. ft. at a depth of ½ inch. Limestone (equivalent to be 50% calcium plus magnesium oxide) shall be applied as seedbed prepared at a rate of 90 lbs./1,000 sq. ft. Where grass predominates, fertilize according to a soil test at a minimum application rate of 1 lb. of nitrogen per ton, areas to be left bare before finish grading and seeding outside of

planting seasons shall receive an air-dried woodchip mulch, free of coarse matter, treated with 12 lbs. of nitrogen per ton, applied at a rate of 185—275 lbs./1,000 sq. ft.

**Permanent Vegetative Cover:** Once the planting season begins, temporary stabilization measures shall be removed and slopes shall be prepared and seeded. Seeding shall be in accordance with the technical specifications for the project. Seeding shall only occur between April 1 and June 1 and August 15 and October 15.

## 4.1.2 Structural Measures

Structural practices shall be implemented to control the movement of sediment and minimize any discharge of pollutants from the site, divert flows away from exposed soils, store flows, and limit runoff. The structural practices to be implemented during construction are as follows:

- **Geotextile Sediment Filter Fence:** To minimize the transport of sediment from the disturbed areas, geotextile sediment filter fence has been shown on the plans at select areas around the site to filter runoff from the disturbed areas. Geotextile sediment filter fence details and locations are provided on the drawings. A row of geotextile sediment filter fence shall be placed around stockpiles during stockpiling operations. Geotextile sediment filter fence shall be removed only when the entire site has been permanently stabilized.
- **Compost Filter Sock:** To minimize the transport of sediment from the disturbed areas to receiving properties, compost filter socks have been shown on the plans at select areas around the site to filter runoff from the disturbed areas. Compost filter sock details and locations are provided on the Erosion Control – Site Erosion Control Details sheets. Compost filter socks shall be removed only when the entire site has been permanently stabilized. Alternatively, the sock may be left in place and vegetated with the stakes removed once the site has been permanently stabilized.
- **Haybale Barriers:** To reduce velocity of stormwater traveling across the site, haybale barriers may be installed across the direction of high runoff flows. Haybale barriers shall remain as temporary measures during construction to protect downgradient disturbed surfaces during establishment. Stacked haybales shall be placed around stockpiles during stockpiling operations.
- **Construction Entrance:** To prevent soil or sediment from being carried off site by construction equipment, a construction entrance will be installed before construction traffic into and out of the project area. The width of the construction entrance shall not be less than the width of the ingress or egress. Adjacent roadways shall be swept daily to remove material that may be tracked onto pavement.

## 4.1.3 Maintenance

The erosion and sediment controls must be maintained in a condition that will protect waters of the State from pollution during site construction. The Contractor shall conduct the following maintenance to promote the proper performance of erosion and sediment control measures.

- **Temporary and Permanent Vegetation:** At any eroded areas, repair by filling to finished grades, replace vegetative support material and seed, fertilize and lime, as specified for temporary and permanent stabilization. Add additional mulch as required.
- **Pavement Sweeping:** Sweep surfaces adjacent to the construction entrances, the soil management areas, and designated haul routes daily. Properly dispose of sediment or debris collected during sweeping.
- **Compost Filter Socks, Silt Fence, and Haybales:** Inspect compost filter socks, silt fence, and haybales immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs should be made immediately. Should the barrier decompose or become ineffective while the barrier is still needed, the barrier shall be replaced promptly. Sediment deposits should be removed when they reach approximately one-half the height of the barrier. Sediment shall be disposed of on-site as non-structural fill. Sediment deposits remaining in place after the compost filter socks, silt fence, and haybales are no longer required shall be removed and placed in a stockpile surrounded by silt fence in a location suitable to the Permittee.

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## 4.2 Dewatering Wastewaters

Dewatering wastewaters from the construction activity is not anticipated. Should dewatering be necessary water will be discharged into dewatering pumping settling basins. There will be no discharge directly into watercourses or storm sewer structures.

Proper methods and devices shall be utilized to the extent permitted by law, such as pumping water into a temporary pumping settling basin, providing surge protection at the inlet and outlet of pumps, floating the intake of the pump, or other methods to minimize and retain the suspended solids. If a pumping operation causes turbidity problems beyond the control of these measures, the operation shall cease until feasible means of controlling turbidity (e.g., discharge to the sanitary sewer) are determined and implemented.

All dewatering activities will be in compliance with both state and federal guidance/regulations.

Where treatment is not required for dewatering, wastewater from dewatering pumps will be infiltrated into the ground where possible. Where this is impracticable, proper methods and devices shall be utilized to the extent permitted by law, such as pumping water into a temporary sedimentation depression, providing surge protection at the inlet and outlet of pumps, floating the intake of the pump, or other methods to minimize and retain the suspended soils. These wastewaters will not be discharged directly without treatment. If a pumping operation causes turbidity problems beyond the control of these measures, the operation shall cease until feasible means of controlling turbidity (e.g. discharge to the sanitary sewer) are determined and implemented.

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## 4.3 Post-Construction Stormwater Management

### 4.3.1 Standards

Detailed erosion and sedimentation controls in accordance with the Guidelines have been proposed for this site. This system will protect the wetlands during and after construction until the site is stabilized. The water quality of runoff from the stabilized, developed site will be improved using widely accepted Best Management Practices (BMPs).

### 4.3.2 Control Measures

At the end of construction, areas disturbed by construction activities shall be stabilized. As a result, the potential for erosion at this site after construction is minimal. Crushed rock areas will also serve as a filter to remove sediment from runoff if permanently stabilized areas are properly maintained. Perimeter controls (i.e., compost filter sock) will be actively maintained until final stabilization of those portions of the site up-gradient of the perimeter control. Temporary perimeter controls will be removed after final stabilization.

The substation expansion will not promote any new channeled or areas of concentrated runoff. Existing drainage patterns will not change from pre- to post- construction activities. The water quality rain event will infiltrate through the crushed rock, thus providing removal of the total suspended solids (TSS) from stormwater runoff.

The contractor shall be responsible for cleaning all post-construction stormwater structures and removal of remaining silt fence before filing a termination notice, a copy of which is included as *Appendix E*. After filing the termination, maintenance and cleaning of the unit shall become the responsibility of the Permittee.

The design will meet the requirements of the Connecticut Stormwater Quality Manual, the Connecticut Guidelines for Soil Erosion and Sediment Control, and federal stormwater regulations.

### 4.3.3 Redevelopment Project Performance Standards

The Mix Avenue Substation site surfacing consists of crushed rock, bituminous pavement, and concrete areas for the bases of the additional towers, and grassed areas. The proposed conditions will increase impervious cover when compared to existing conditions, due to the decrease in undeveloped/pervious areas for the expansion. For this condition of existing imperviousness below 40%, the project should be designed to retain the entire water quality volume from the proposed development (see *Appendix D*). The site is being designed to retain runoff volume to the maximum extent achievable by using crushed rock as the proposed surfacing for the majority of the site. Based on the geotechnical investigation of the project site, a rock layer is present. The rock layer will hinder or prevent infiltration via a subsurface infiltration system. In addition, soils on site are contaminated; therefore, an infiltration system is not

recommended. An underground detention basin is proposed to attenuate post flow rates and volumes leaving the site.

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## 4.4 Other Controls

Good housekeeping will be maintained to minimize impacts of protected areas by pollutants, soil, and fugitive sediment.

### 4.4.1 Waste Disposal

The following BMPs shall be implemented to minimize the discharge of litter, debris, construction materials, hardened concrete waste, or similar materials to waters of the State.

- Construction waste will be removed from the site and disposed of legally.
- Waste will be removed from the site as soon as practical.
- Containers will be appropriate for the material stored.
- Where necessary, containers will be sealed/covered to prevent waste from escaping the container.
- Containers will only be located where approved by the engineer or regulatory agency.
- Waste storage areas shall be located, designed, and operated to prevent polluted runoff from leaving the waste storage area.
- Fences or covers shall be provided to prevent waste from blowing out of the waste storage area.

### 4.4.2 Construction Materials

Construction materials needed for this project will be properly stored in a neat and orderly manner until used. Construction materials shall not be stored outside of any buffers and at least 50 feet from any stream, wetland or other sensitive resource.

### 4.4.3 Washout Areas

Washout of applicators, containers, vehicles, and equipment for concrete, paint, and other materials shall be conducted in a designed washout area. There shall be no surface discharge of washout wastewaters from this area. To eliminate overflows during rainfall or after snowmelt all washwater shall be directed into a pit. This area shall be outside of any buffers and at least 50 feet from any stream, wetland, or other sensitive resource. The area shall be completely self-contained and clearly marked.

In addition, dumping of liquid wastes in storm sewers is prohibited. All wastes including hardened concrete waste from washouts shall be disposed of legally at an off-site location. At least once per week, all containers or pits used for washout should be inspected for structural integrity, adequate holding capacity, and to check for leaks or overflows. If any deficiencies are discovered, corrective action shall be taken immediately. Washout areas shall be emptied when levels reach  $\frac{1}{2}$  the height of the container or pit.

#### 4.4.4 Vehicle Tracking and Dust Control

As shown on the plans, a construction entrance shall be installed and maintained to prevent vehicles from tracking sediments onto City roads. The Contractor shall be responsible for performing dust suppression techniques during construction, including but not limited to:

- Spraying water or calcium chloride as necessary to control dust from construction activities. The volume of water sprayed for controlling dust shall be minimized so as to prevent runoff of water. No discharge of dust control water shall contain or cause a visible oil sheen, floating solids, visible discoloration, or foaming. Calcium chloride may also be used to control dust.
- Sweeping surfaces adjacent to the construction entrances and the soil management areas daily. The designated haul routes will be swept as required.

If at any time fugitive dust is observed to be generated from the construction site, the Contractor shall be responsible for employing additional dust suppression techniques to remedy the situation.

#### 4.4.5 Chemical and Petroleum Products

All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area. Containers of 100 gallon capacity or more may be stored without a roof only if stored in a double-walled tank.

On-site vehicles shall be monitored for leaks and receive maintenance as needed.

#### 4.4.6 Fertilizers

Fertilizers, if used in conjunction with the seeding operation, will be applied only in the amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. Storage will be in a covered area. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

#### 4.4.7 Spill Control Practices

The following practices shall be implemented during construction activities to mitigate spills of material and prevent their release to the waters of the State.

- Manufacturers' 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 and cleanup supplies.

- Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- Spills will be cleaned up immediately after discovery.
- Spills of toxic or hazardous material will be reported to the appropriate State and local government agency, regardless of size.

## 5 Runoff Reduction and Low Impact Development (LID) Information

Runoff reduction practices have been utilized for the Mix Ave Substation expansion project. A detailed erosion control site plan has been prepared for the site. During construction, measures will be taken to reduce erosion and manage sedimentation from disturbed surfaces. This includes the use of compost filter socks, silt fence, and haybales which will be installed at the down-gradient areas of disturbed surfaces within the project limits.

## 6 Inspections

### 6.1 Plan Implementation Inspections

Within the first 30 days following commencement of the construction activity on the sites, the permittee shall contact Fuss & O'Neill, who have been selected as the qualified soil erosion and sediment control professionals to inspect the sites. The sites shall be inspected at least once and no more than three times during the first 90 days to confirm compliance with the General Permit and proper initial implementation of all controls measures designated in the Plan for the sites for the initial phase of construction.

### 6.2 Routine Inspections

The Permittee shall routinely inspect the site for compliance with the General Permit and the Plan until a Notice of Termination has been submitted. Inspection procedures for these routine inspections shall be addressed and implemented in the following manner: The Permittee shall maintain a rain gauge on-site to document rainfall amounts. The Permittee shall engage a qualified inspector (Fuss & O'Neill), to inspect the site at least once a week and within 24 hours of the end of a storm that generates a discharge. For storms that equal or exceed 0.5 inches 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. For storms of less than 0.5 inches, an inspection shall occur immediately upon the start of the subsequent normal working hours. Where sites have been temporarily or finally stabilized, an inspection shall be conducted at least once every month for three months to confirm compliance with the General Permit.

The items to be inspected shall include, at a minimum, the following:

- Disturbed areas of the construction activity that have not been permanently stabilized
- All erosion and sediment control measures
- All structural control measures
- Stockpile areas
- Washout areas
- Drainage control facilities including diversion and perimeter drainage ditches
- Locations where vehicles enter or exit the site

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants leaving the work site. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be visually inspected to ascertain whether erosion control measures are effective in preventing significant impacts, such as turbidity to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the description of potential sources and pollution prevention measures identified in the plan shall be revised as appropriate by the Permittee or his agent as soon as practicable after such inspection.

A report shall be prepared for every inspection and retained as part of the plan. The report shall, at a minimum, summarize the following;

- The scope of the inspection
- Name(s) and qualifications of personnel making the inspection
- Date(s) of the inspection
- Weather conditions including precipitation information
- Major observations relating to the implementation of the storm water pollution control plan
- Descriptions of the stormwater discharge(s) from the site
- Any water quality monitoring performed during the inspection
- Statement that, in the judgment of the qualified inspector(s), the site is either in compliance or out of compliance with the terms and conditions of the Plan and General Permit.

The report shall be signed by both the qualified inspector and the permittee or his/her authorized representative in accordance with the General Permit. A blank copy of the inspection report is provided in *Appendix F*.

If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance. 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 to the site.

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## 6.3 Corrective Actions

If at any time an inspection determines that the site is out of compliance with the terms and conditions of this Plan and the General Permit, corrective actions shall be taken. Non-engineered corrective actions (as identified in the Guidelines) shall be implemented on site within 24 hours and incorporated into a revised Plan within three calendar days of the date of inspection unless another schedule is specified in the Guidelines. Engineered corrective actions (as identified in the Guidelines) shall be implemented on site within seven days and incorporated into a revised Plan within ten calendar days of the date of inspection unless another schedule is specified in the Guidelines.

## 7 Monitoring

Stormwater sampling is required for monitoring turbidity. Sampling shall occur on a monthly basis, during storm events that generate a discharge of stormwater from the site while construction activity is ongoing, until final stabilization of the drainage areas associated with each outfall is achieved. Sampling shall continue on a monthly basis until final stabilization of the drainage area associated with each outfall is achieved.

Sampling is only required during normal working hours, as defined by the General Permit. For this project, normal working hours will be Monday through Friday, 7am to 5 pm. If sampling is discontinued due to the end of normal working hours, it shall be resumed the next working day as long as the discharge continues. Sampling may be temporarily suspended if at any time conditions exist that may reasonably pose a threat to the safety of the person taking the sample (e.g. high winds, lightning, flooding, intense rainfall etc.). Sampling shall resume once the unsafe conditions are no longer present. If there is no stormwater discharge during a month, sampling is not required.

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### 7.1 Monitoring Requirements

All samples shall be collected from discharges resulting from a storm event that occurs at least 24 hours after any previous storm event that generated a discharge. 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. The samples shall be representative of the flow and characteristics of the discharge. The first sample shall be taken within the first hour of stormwater discharge from the site. In cases where discharges begin outside of normal working hours, the first sample shall be taken at the start of normal working hours.

Sampling is required of areas of concentrated runoff of stormwater from disturbed areas. Sampling shall be done in accordance with 40 CFR Part 136/ASTM D1889-00. Sampling locations are shown on the Erosion Control – Site Plan of *Appendix C* and shall be identified in the field with a flag, stake, or other visible marker.

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## 7.2 Monitoring Reports

The stormwater turbidity value for each sampling point shall be determined by taking the average of the turbidity values of all samples at that sampling point during a given storm. Any samples containing snow or ice melt must be noted. A blank copy of the stormwater monitoring report for submitting turbidity sampling data is provided in *Appendix G*.

Monitoring reports shall be submitted to CT DEEP in accordance with the provisions outlined in the General Permit.

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## 7.3 Sampling Points

The plan showing the proposed sampling point is provided in *Appendix G*. The site has two sampling points described below:

Sampling Point 1 (SP-001) is located at the stormwater treatment unit to the west of the underground detention basin located in the south eastern corner of the site. The drainage area includes the northeastern area of the site along the proposed access road where runoff is conveyed to this sampling point from sheet flow entering the drainage structure just north of the detention chamber via a 15" RCP. Stormwater from the western expansion area of the site is collected in the trench drain located centrally within the site and is pipe to the sampling point via an 18" RCP to the detention chamber. Stormwater is collected in the underground detention basin before outletting into an existing storm drainage network located on the property to the south of the site. Sampling for SP-001 shall occur in the stormwater treatment unit. The proposed substation expansion work does not create new outfalls and will not promote channeled or concentrated flow. The monitor will review the worksite and take a sample if concentrated runoff is observed leaving the work area.

Sampling Point 2 (SP-002) is located at a low point located at elevation 168.6 along the southern access road (southwest of the control house). The proposed site grading slopes from west to east at a 4% slope along the southern end of the site on the crushed rock surface. Sheet flow from the southern access road along may collect at this low point. Sampling for SP-002 shall occur at the low point where stormwater could promote runoff off the site.

## 8 Contractors

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### 8.1 General

All contractors and subcontractors who will perform actions on site that may reasonably be expected to cause or have the potential to cause pollution of the waters of the State will be identified in *Appendix B*.

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### 8.2 Certification Statement

All contractors and subcontractors must sign the certification included in *Appendix B*. All certifications will be included in the Stormwater Pollution Control Plan.

## 9 Additional Requirements

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### 9.1 Endangered and Threatened Species

Preliminary review of the maps titled Natural Diversity Data Base (NDDB) Areas in Hamden, CT dated July 2015 published by the Connecticut Department of Energy and Environmental Protection, verified that the project site is not located within or in close proximity to areas known to contain State and Federal Listed Species and Significant Natural Communities.

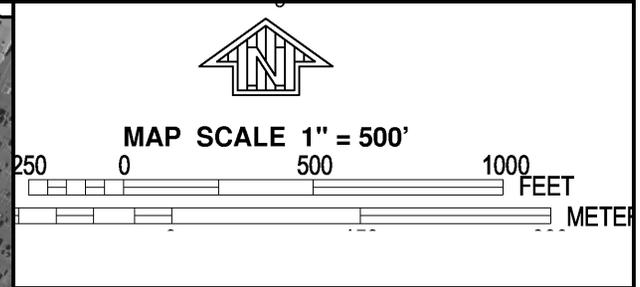
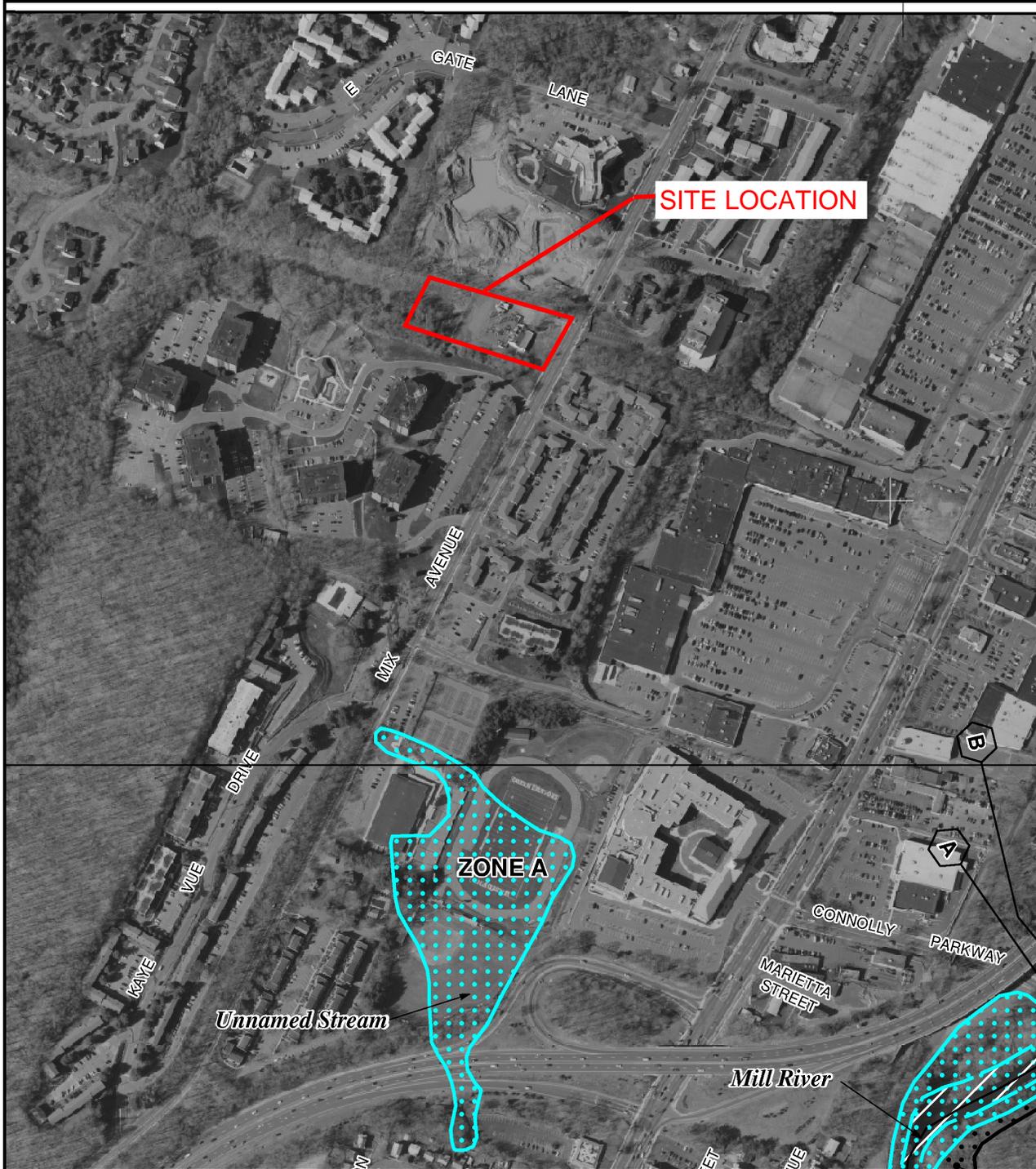
## 10 Termination

Once the site has been stabilized and all final inspections have occurred, the registrant shall file a termination notice. Prior to filing for termination, all temporary erosion and sediment control measures shall be removed. A blank copy of the Notice of Termination Form is provided in *Appendix E*.

## Figures

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**NATIONAL FLOOD INSURANCE PROGRAM**

**NFIP**

**PANEL 0431H**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**NEW HAVEN COUNTY,**  
**CONNECTICUT**  
**(ALL JURISDICTIONS)**

**PANEL 431 OF 635**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

<u>COMMUNITY</u>	<u>NUMBER</u>	<u>PANEL</u>	<u>SUFFIX</u>
HAMDEN, TOWN OF	090078	0431	H
NORTH HAVEN, TOWN OF	090086	0431	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



**MAP NUMBER**  
09009C0431H

**EFFECTIVE DATE**  
DECEMBER 17, 2010

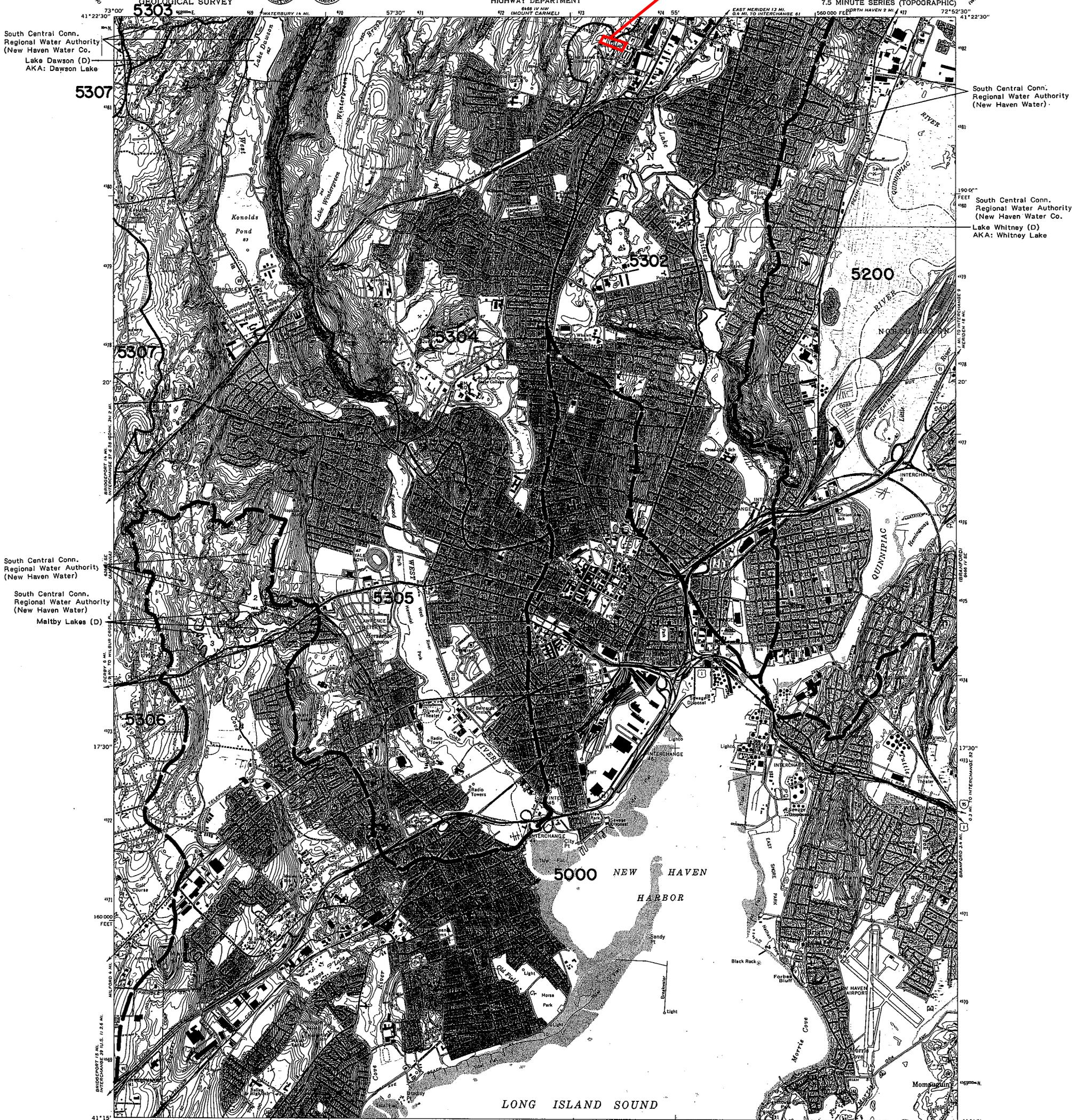
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

**FIGURE 1**



SITE LOCATION



South Central Conn.  
Regional Water Authority  
(New Haven Water Co.)  
Lake Dawson (D)  
AKA: Dawson Lake

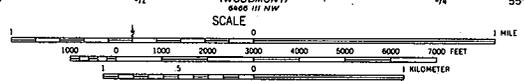
South Central Conn.  
Regional Water Authority  
(New Haven Water Co.)

South Central Conn.  
Regional Water Authority  
(New Haven Water Co.)  
Lake Whitney (D)  
AKA: Whitney Lake

South Central Conn.  
Regional Water Authority  
(New Haven Water)

South Central Conn.  
Regional Water Authority  
(New Haven Water)  
Maltby Lakes (D)

Mapped, edited, and published by the Geological Survey  
Control by USGS, USC&GS, and Connecticut Geodetic Survey  
Topography by photogrammetric methods from aerial photographs  
taken 1949. Field checked 1954. Revised from aerial  
photographs taken 1966. Field checked 1967.  
Selected hydrographic data compiled from USC&GS Chart 218 (1964)  
This information is not intended for navigational purposes  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on Connecticut coordinate system  
1000-meter Universal Transverse Mercator grid ticks,  
zone 18, shown in blue  
Red tint indicates areas in which only landmark  
buildings are shown



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929  
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS MEAN LOW WATER  
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE  
SHOULDER SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER  
THE MEAN RANGE OF TIDE IS APPROXIMATELY 6.2 FEET



ROAD CLASSIFICATION

Primary highway, all weather, hard surface	Light-duty road, all weather, improved surface
Secondary highway, all weather, hard surface	Unimproved road, fair or dry weather

○ Interstate Route   □ U.S. Route   ○ State Route

NEW HAVEN, CONN. - 95  
N4115-W7252.5/7.5  
1967  
PHOTOREVISED 1972  
AMS 6466 IV SW-SERIES V818

FIGURE 2

## Appendix A

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### CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities Registration Form and General Permit





## General Permit Registration Form for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, effective 10/1/13 (non-electronic form)

Prior to completing this form, you **must** read the instructions for the subject general permit available at [DEEP-WPED-INST-015](#).  
 This form must be filled out electronically before being printed.  
 You must submit the registration fee along with this form.

The [status of your registration](#) can be checked on the DEEP's ezFile Portal. Please note that DEEP will no longer mail certificates of registration.

CPPU USE ONLY	
App #:	_____
Doc #:	_____
Check #:	_____
Program: Stormwater	

### Part I: Registration Type

Select the appropriate boxes identifying the registration type and registration deadline.

Registration Type		Registration Timeline	
<input checked="" type="checkbox"/>	<b>New Registration</b>	<input type="checkbox"/> Locally Approvable Projects <b>Size of soil disturbance:</b>	<b>New registration - Sixty (60) days prior to the initiation of the construction activity for:</b> Sites with a total soil disturbance area of 5 or more acres
	(Refer to Section 2 of the permit for definitions of Locally Exempt and Locally Approvable Projects)	<input checked="" type="checkbox"/> Locally Exempt Projects <b>Size of soil disturbance:</b>  <b>2.5 Acres</b>	<input checked="" type="checkbox"/> <b>New registration - Sixty (60) days prior to the initiation of the construction activity for:</b> Sites with a total disturbance area of one (1) to twenty (20) acres except those with discharges to impaired waters or tidal wetlands
			<input type="checkbox"/> <b>New registration - Ninety (90) days prior to the initiation of the construction activity for:</b> (i) Sites with a total soil disturbance area greater than twenty (20) acres, or (ii) Sites discharging to a tidal wetland (that is not fresh-tidal and is located within 500 feet), or (iii) Sites discharging to an impaired water listed in the "Impaired Waters Table for Construction Stormwater Discharges"

## Part II: Fee Information

### 1. New Registrations

#### a. Locally approvable projects (registration only):

\$625 [#1855]

#### b. Locally exempt projects (registration and Plan):

\$3,000 total soil disturbance area  $\geq$  one (1) and < twenty (20) acres. [#1856]

\$4,000 total soil disturbance  $\geq$  twenty (20) acres and < fifty (50) acres. [#1857]

\$5,000 total soil disturbance  $\geq$  fifty (50) acres. [#1858]

*The fees for municipalities shall be half of those indicated in subsections 1.a., 1.b., and 2 above pursuant to section 22a-6(b) of the Connecticut General Statutes. State and Federal agencies shall pay the full fees specified in this subsection. The registration will not be processed without the fee. The fee shall be non-refundable and shall be paid by certified check or money order payable to the Department of Energy and Environmental Protection.*

## Part III: Registrant Information

- If a registrant is a corporation, limited liability company, limited partnership, limited liability partnership, or a statutory trust, it must be registered with the Secretary of the State. If applicable, the registrant's name shall be stated **exactly** as it is registered with the Secretary of the State. This information can be accessed at [CONCORD](#).
- If a registrant is an individual, provide the legal name (include suffix) in the following format: First Name; Middle Initial; Last Name; Suffix (Jr, Sr., II, III, etc.).

### 1. Registrant /Client Name: The United Illuminating Company

**Registrant Type** ▾

Registration Type: Business Entity

Business Type: Corporation

Secretary of the State business ID #: 0159106

Mailing Address: 180 Marsh Hill Road

City/Town:

State: CT

Zip Code: 06477

Business Phone: (203) 926-4500

ext.:

*Example:(xxx) xxx-xxxx*

Contact Person: Richard J. Reed, PMP Title: Vice President - Engineering and Project Excellence

E-Mail:

Additional Phone Number (if applicable):

ext.

### 2. List billing contact, if different than the registrant:

Name: UIL Holding Corporation

Mailing Address: 180 Marsh Hill Road

City/Town:

State: CT

Zip Code: 06477

Business Phone: (203) 926-4595

ext.:

Contact Person: Shawn C. Crosbie

Title: Environmental Analyst

(shawn.crosbie@uinet.com)

### Part III: Registrant Information (continued)

3. List primary contact for departmental correspondence and inquiries, if different than the registrant:

Name: **UIL Holding Corporation**  
Mailing Address: **180 Marsh Hill Road**  
City/Town: **Orange** State: **CT** Zip Code: **06477**  
Business Phone: **(203) 926-4595** ext.:  
Site Phone: Emergency Phone:  
Contact Person: **Shawn C. Crosbie** Title: **Environmental Analyst**  
(shawn.crosbie@uinet.com)  
Association (e.g. developer, general or site contractor, etc.): **Employee / Contact for Registrant**

4. List owner of the property on which the activity will take place, if different from registrant:

Name:  
Mailing Address:  
City/Town: State: Zip Code:  
Business Phone: ext.:  
Contact Person:

5. List developer, if different from registrant or primary contact:

Name: **Black & Veatch**  
Mailing Address: **11401 Lamar Avenue**  
City/Town: **Overland Park** State: **KS** Zip Code: **66211**  
Business Phone: **913-458-7328** ext.:  
Contact Person: **John Rector** Title:

6. List general contractor, if different from registrant or primary contact:

Name: **Black & Veatch**  
Mailing Address: **11401 Lamar Avenue**  
City/Town: **Overland Park** State: **KS** Zip Code: **66211**  
Business Phone: **913-458-7328** ext.:  
Site Phone: Off Hours Phone:  
Contact Person: **John Rector** Title:

7. List any engineer(s) or other consultant(s) employed or retained to assist in preparing the registration and/or Stormwater Pollution Control Plan.  Please select if additional sheets are necessary, and label and attach them to this sheet.

Name: **Fuss & O'Neill, Inc.**  
Mailing Address: **56 Quarry Road**  
City/Town: **Trumbull** State: **CT** Zip Code: **06611**  
Business Phone: **(203) 374-3748** ext.: **3509**  
Contact Person: **Joseph E. Lenahan III** Title: **Senior Project Manager**  
PE, LEED AP  
Service Provided: **Consultant and Registration Form/ Plan Preparation** Email: **jlenahan@fando.com**

8. List Reviewing Qualified Professional (for locally approvable projects only). This information must match the information provided in Part IX of this registration.

Name: Contact Person:  
Mailing Address: Email:  
City/Town: State: Zip Code:  
Business Phone: ext.:



## Part IV: Site Information (continued)

### 6. ENDANGERED OR THREATENED SPECIES:

In order to be eligible to register for this General Permit, each registrant must perform a self-assessment, obtain a limited one-year determination, or obtain a safe-harbor determination regarding threatened and endangered species. This may include the need to develop and implement a mitigation plan. While each alternative has different limitations, the alternatives are not mutually exclusive; a registrant may register for this General Permit using more than one alternative. See Appendix A of the General Permit. Each registrant must complete this section AND Attachment C to this Registration form and a registrant who does not or cannot do so is not eligible to register under this General Permit.

Each registrant must perform a review of the Department's Natural Diversity Database maps to determine if the site of the construction activity is located within or in proximity (within ¼ mile) to a shaded area.

- a. Verify that I have completed Attachment C to this Registration Form.  Yes
- b. Provide the date the NDDDB maps were reviewed: 7/16/2015 Date of map should be **one** year or less than the submittal date of this application. Print a copy of the NDDDB map you viewed since it must be submitted with this registration as part of Attachment C.
- c. For a registrant using a limited one-year determination or safe harbor determination to register for this General Permit, provide the Department's Wildlife Division NDDDB identification number for any such determination: \_\_\_\_\_ (The number is on the determination issued by the Department's Wildlife Division).

For more information on threatened and endangered species requirements, refer to Appendix A and Section 3(b)(2) of this General Permit, visit the DEEP website at [www.ct.gov/deep/nddbrequest](http://www.ct.gov/deep/nddbrequest) or call the NDDDB at 860-424-3011.

7. WILD AND SCENIC RIVERS: Is the proposed project within the watershed of a designated Wild and Scenic River? ( See Appendix H for guidance)  Yes  No
8. AQUIFER PROTECTION AREAS: Is the site located within a mapped aquifer protection area [www.ct.gov/deep/aquiferprotection](http://www.ct.gov/deep/aquiferprotection) as defined in section 22a-354h of the CT General Statutes? (For additional guidance, please refer to Appendix C of the General Permit)  Yes  No
9. CT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL: Is the activity in accordance with CT Guidelines for Erosion and Sediment Control and local erosion & sediment control ordinances, where applicable?  Yes  No
10. HISTORIC AND/OR ARCHAEOLOGICAL RESOURCES:  
Verify that the site of the proposed activity been reviewed (using the process outlined in Appendix G of this permit) for historic and/or archaeological resources:  Yes
- a. The review indicates the proposed site does not have the potential for historic/ archaeological resources, OR  Yes  No
- b. The review indicated historic and/ or archaeological resource potential exists and the proposed activity is being or has been reviewed by the Offices of Culture and Tourism, OR  Yes  No
- c. The proposed activity has been reviewed and authorized under an Army Corps of Engineers Section 404 wetland permit.  Yes  No
11. CONSERVATION OR PRESERVATION RESTRICTION:  
Is the property subject to a conservation or preservation restriction?  Yes  No
- If Yes, proof of written notice of this registration to the holder of such restriction or a letter from the holder of such restriction verifying that this registration is in compliance with the terms of the restriction, must be submitted as Attachment D.

## Part V: Stormwater Discharge Information

Table 1						
Outfall #	a) Type	b) Pipe Material	c) Pipe Size	d) Note: To find lat/long, go to: <a href="#">CT ECO</a> . A decimal format is required here. Directions on how to use CT ECO to find lat./long. and conversions can be found in Part V, Section d of the <a href="#">DEEP-WPED-INST-015</a> .		e) What method was used to obtain your latitude/longitude information?
				Longitude	Latitude	
1	Pipe	Concrete	18"	-72.92431	41.37198	Select One: CT ECO
2	other	not applicable	not applicable	-72.92388	41.37224	Select One: CT ECO
	Select One:	Select One:	Select One:	-		Select One:
	Select One:	Select One:	Select One:	-		Select One:
	Select One:	Select One:	Select One:	-		Select One:

Table 2						
Outfall #	a) For temporary and permanent outfalls, provide a start date. For temporary discharges, also provide a date the discharge will cease.	b) For the drainage area associated with each outfall: Effective Impervious Area Before Construction	c) For the drainage area associated with each outfall: Effective Impervious Area After Construction	d) To what system or receiving water does your stormwater runoff discharge? either "storm sewer or wetlands" or "waterbody" (If you select "storm sewer or wetland" proceed to Part VI of the form. If you select "waterbody" proceed to next question)	e) For each outfall, does it discharge to any of the following towns: <i>Branford, Kent, Manchester, Meriden, North Branford, Norwalk, or Wilton?</i> (If no, proceed to Part VI of the form. If yes, proceed to next question.)	f) For each outfall, does it discharge to a "freshwater" or "salt water" ? (If you select "freshwater" proceed to Table 3. If you selected "salt water", proceed to Part VI of the form.)
1	03/07	10,605sq feet	21,837sq feet	Storm Sewer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Select one:
2	03/07	0 sq feet	900 sq feet	Storm Sewer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Select one:
	- mm/dd-mm/dd	sq feet	sq feet	Select one:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Select one:
	- mm/dd-mm/dd	sq feet	sq feet	Select one:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Select one:
	- mm/dd-mm/dd	sq feet	sq feet	Select one:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Select one:
		<b>10,605 total sq feet</b>	<b>22,737 total sq feet</b>			

**Part V: Stormwater Discharge Information (continued)**

<b>Table 3</b> Provide the following information about the receiving water(s)/wetland(s) that receive stormwater runoff from your site:			
Outfall #	a) What is your 305b ID # (water body ID #)?  (Section 3.b, of the <a href="#">DEEP-WPED-INST-015</a> , explains how to find this information)	b) Is your receiving water identified as a impaired water in the " <a href="#">Impaired Waters Table for Construction Stormwater Discharges</a> "? If yes, proceed to next question. If no, proceed to Part VI: Pollution Control Plan.	c) Has any Total Maximum Daily Load (TMDL) been approved for the impaired water?
█	█	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
█	█	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
█	█	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
█	█	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
█	█	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

## Part V: Stormwater Discharge Information (continued)

**Impaired waters:** If you answered “yes” to Table 3, question b., **verify** that the project’s Pollution Control Plan (Plan) addresses the control measures below in Question 1 or 2, as appropriate.

1. If the impaired water does not have a TMDL, confirm compliance by selecting 1.a. or 1.b. below:

a. No more than 3 acres is disturbed at any time;  Yes

**OR**

b. Stormwater runoff from a 2 yr, 24 rain event is **retained**.  Yes

2. If the impaired water has a TMDL, confirm compliance by selecting 2.a. and 2.b. below and either question 2.c.1. or 2.c.2. below:

a. The Plan documents there is sufficient remaining Waste Load Allocations (WLA) in the TMDL for the proposed discharge,  Yes

**AND**

b. Control measures shall be implemented to assure the WLA will not be exceeded,  Yes

**AND**

c. 1. Stormwater discharges will be monitored for the indicator pollutant identified in the TMDL,  Yes

**OR**

2. The Plan documents specific requirements for stormwater discharges specified in the TMDL.  Yes

## Part VI: Pollution Control Plan (select one of the following three categories)

I am registering a Locally Exempt project and submitting the required electronic Plan (in Adobe™ PDF or similar publically available format) pursuant to Section 3(c)(2)(E) of this permit. (If you do not have the capability to submit the Plan electronically please call 860-418-5982).

Plan is attached to this registration form

Plan is available at the following Internet Address (URL):

I am registering a Locally Approvable project and have chosen not to submit the Plan with this registration pursuant to Section 3(c)(1) of this permit.

I am registering a Locally Approvable project and have chosen to make my Plan electronically available pursuant to Section 4(c)(2)(N) of this permit.

Plan is attached to this registration form

Plan is available at the following Internet Address (URL):

## Part VII: Registrant Certification

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered incomplete unless all required signatures are provided.

### For New Registrants:

" I hereby certify that I am making this certification in connection with a registration under such general permit,  
[INSERT NAME OF REGISTRANT BELOW]

submitted to the commissioner by The United Illuminating Company for  
[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

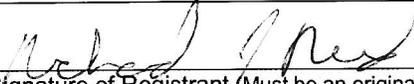
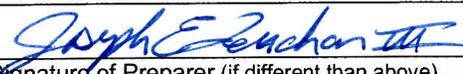
an activity located at Mix Avenue Substation, Hamden, CT and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all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

### For Re-registrants:

" I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner  
[INSERT NAME OF REGISTRANT BELOW]

by [INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW] for an activity located at

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

	11/2/15
Signature of Registrant (Must be an original signature, not a copy or fax)	Date
Richard J. Reed, PMP	Vice President - Engineering and Project Excellence The United Illuminating Company
Name of Registrant (print or type)	Title (if applicable)
	11/2/2015
Signature of Preparer (if different than above) (Must be an original signature, not a copy or fax)	Date
Joseph E. Lenahan III, PE, LEED AP	Senior Project Manager - Fuss & O'Neill
Name of Preparer (print or type)	Title (if applicable)



## Part IX: Reviewing Qualified Professional Certification

The following certification must be signed by a) a Conservation District reviewer OR, b) a qualified soil erosion and sediment control and/or professional engineer

**Review certification by Conservation District:**

1.) District: list of districts

Date of Affirmative Determination:

" I am making this certification in connection with a registration under General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner

[INSERT NAME OF REGISTRANT BELOW]

by \_\_\_\_\_ for an activity located at  
[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

I have personally examined and am familiar with the information that provides the basis for this certification, and I affirm, based on the review described in Section 3(b)(11)(C) of this general permit and on the standard of care for such projects, that the Stormwater Pollution Control Plan is adequate to assure that the activity authorized under this general permit will comply with the terms and conditions of such general permit and that all stormwater management systems: (i) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual; (ii) will function properly as designed; (iii) are adequate to ensure compliance with the terms and conditions of this general permit; and (iv) will protect the waters of the state from pollution."

\_\_\_\_\_  
Signature of District Professional and Date (Must be an original signature, not a copy or fax)

\_\_\_\_\_  
Name of District Professional and License Number (if applicable)

Or

**Review certification by Qualified Professional**

Company: Fuss & O'Neill, Inc. \_\_\_\_\_

Name: \_\_\_ Craig M. Lapinski, PE \_\_\_\_\_

License # : 23625 \_\_\_\_\_

**Level of independency of professional:**

**Required for all projects disturbing over 1 acre:**

1. I verify I am not an employee of the registrant.  Yes
2. I verify I have no ownership interest of any kind in the project for which the registration is being submitted.  Yes

**Required for projects with 15 or more acres of site disturbance ( in addition to questions 1&2):**

3. I verify I did not engage in any activities associated with the preparation, planning, designing or engineering of the soil erosion and sediment control plan or stormwater management systems plan for this registrant.  Yes
4. I verify I am not under the same employ as any person associated with the preparation, planning, designing or engineering of the soil erosion and sediment control plan or stormwater management systems plan for this registrant.  Yes

**Part IX: Reviewing Qualified Professional Certification (continued)**

"I hereby certify that I am a qualified professional engineer or qualified soil erosion and sediment control professional, or both, as defined in the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and as further specified in Sections 3(b)(11)(A) and (B) of such general permit. I am making this certification in connection with a registration under such general permit,

[INSERT NAME OF REGISTRANT BELOW]

submitted to the commissioner by The United Illuminating Company

[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

for an activity located at Mix Avenue Substation, Hamden, CT

I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(11)(C) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I further certify that I have made the affirmative determination in accordance with Sections 3(b)(11)(D)(i) and (ii) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Reviewing Qualified Professional  
(Must be an original signature, not a copy or fax)

Date: 11-6-15

Craig M. Lapinski, P.E.

Name of Reviewing Qualified Professional

License No.: 23625

Affix P.E./L.A. Stamp Here



## Part X: Supporting Documents

Select the applicable box below for each attachment being submitted with this registration form. When submitting any supporting documents, please label the documents as indicated below (e.g., Attachment A, etc.) and be sure to include the registrant's name as indicated on this certification form.

**Note: See Appendix A of the Stormwater Pollution Control Plan for all attachments.**

- Attachment A:** Select here as verification that an 8 ½" X 11" copy of the relevant portion of a USGS Quadrangle Map with a scale of 1:24,000, showing the exact location of the facility has been submitted with this registration. Indicate the quadrangle name on the map, and be sure to include the registrant's name. (To obtain a copy of the relevant USGS Quadrangle Map, call your town hall or DEEP Maps and Publications Sales at 860-424-3555)
- Attachment B:** Documentation related to *Coastal Consistency Review*, if applicable.
- Attachment C:** Threatened and Endangered Species Form and any additional information (such as a copy of a NDDB map)
- Attachment D:** Conservation or Preservation Restriction Information, if applicable.
- Attachment E:** Where applicable, non-electronic Pollution Control Plan.

Note: Please submit the fee along with a completed, printed and signed Registration Form and all additional supporting documents to:

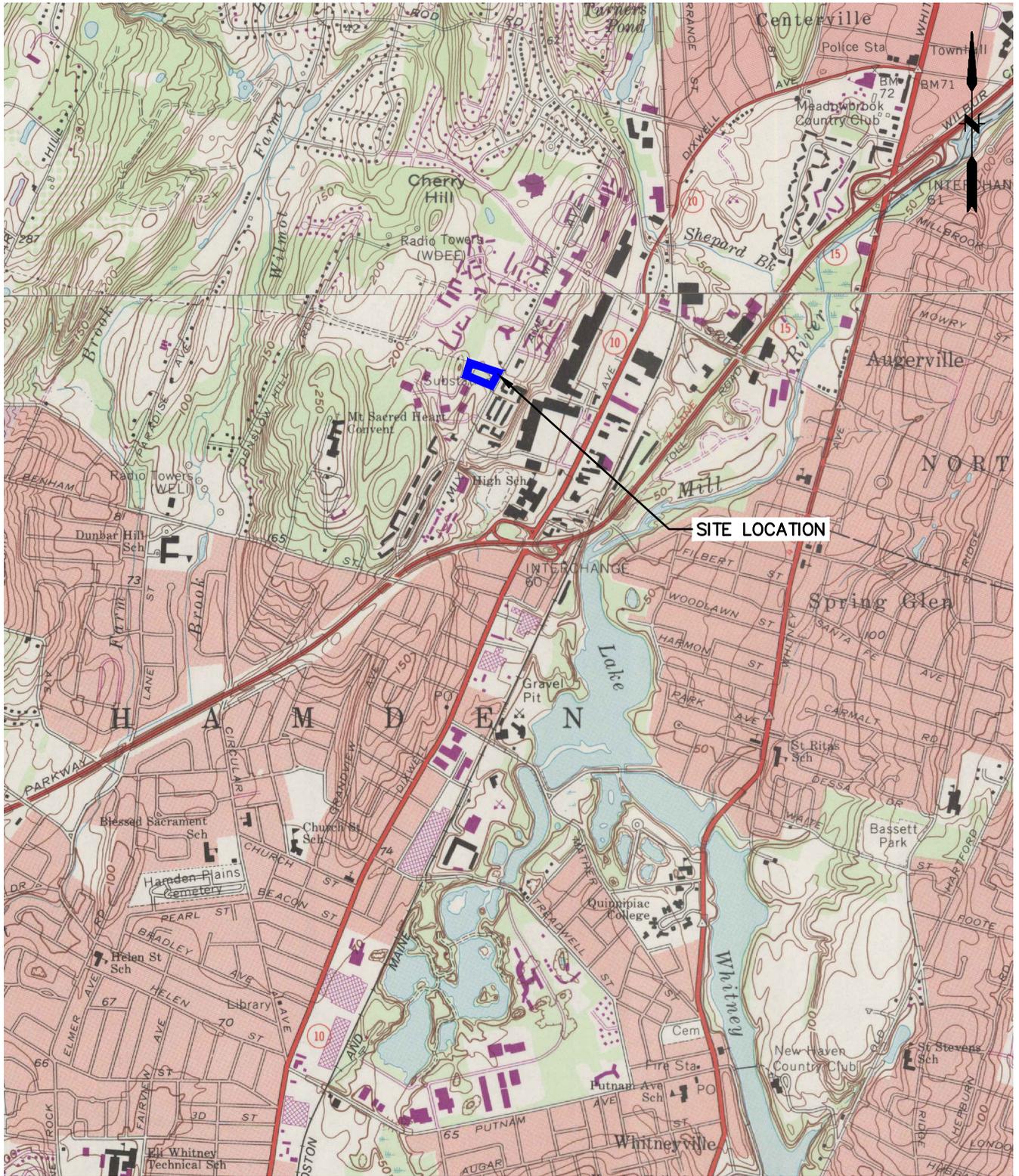
**CENTRAL PERMIT PROCESSING UNIT  
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127**

# Attachment A

---

## Site Location Map





**MAP REFERENCE**  
 THIS MAP WAS PREPARED FROM THE FOLLOWING 7.5  
 MINUTE SERIES TOPOGRAPHIC MAPS:  
 NEW HAVEN, CONNECTICUT, 1968 PHOTOREVISED 1984  
 MOUNT CARMEL, CONNECTICUT 1967 PHOTOREVISED 1984

SCALE:
HORZ.: 1" = 2000'
VERT.:
DATUM:
HORZ.:
VERT.:
0 1000 2000
<b>GRAPHIC SCALE</b>



**FUSS & O'NEILL**

146 HARTFORD ROAD  
 MANCHESTER, CONNECTICUT 06040  
 860.646.2469  
 www.fando.com

THE UNITED ILLUMINATING COMPANY

SITE LOCATION MAP

MIX AVENUE

HAMDEN

CONNECTICUT

PROJ. No.: 20150138.A20  
 DATE: SEPTEMBER 2015

ATTACHMENT A

## Attachment C

---

### Threatened and Endangered Species Form / NDDDB Determination



# Natural Diversity Data Base Areas

HAMDEN, CT

December 2014

-  State and Federal Listed Species & Significant Natural Communities
-  Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources. Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

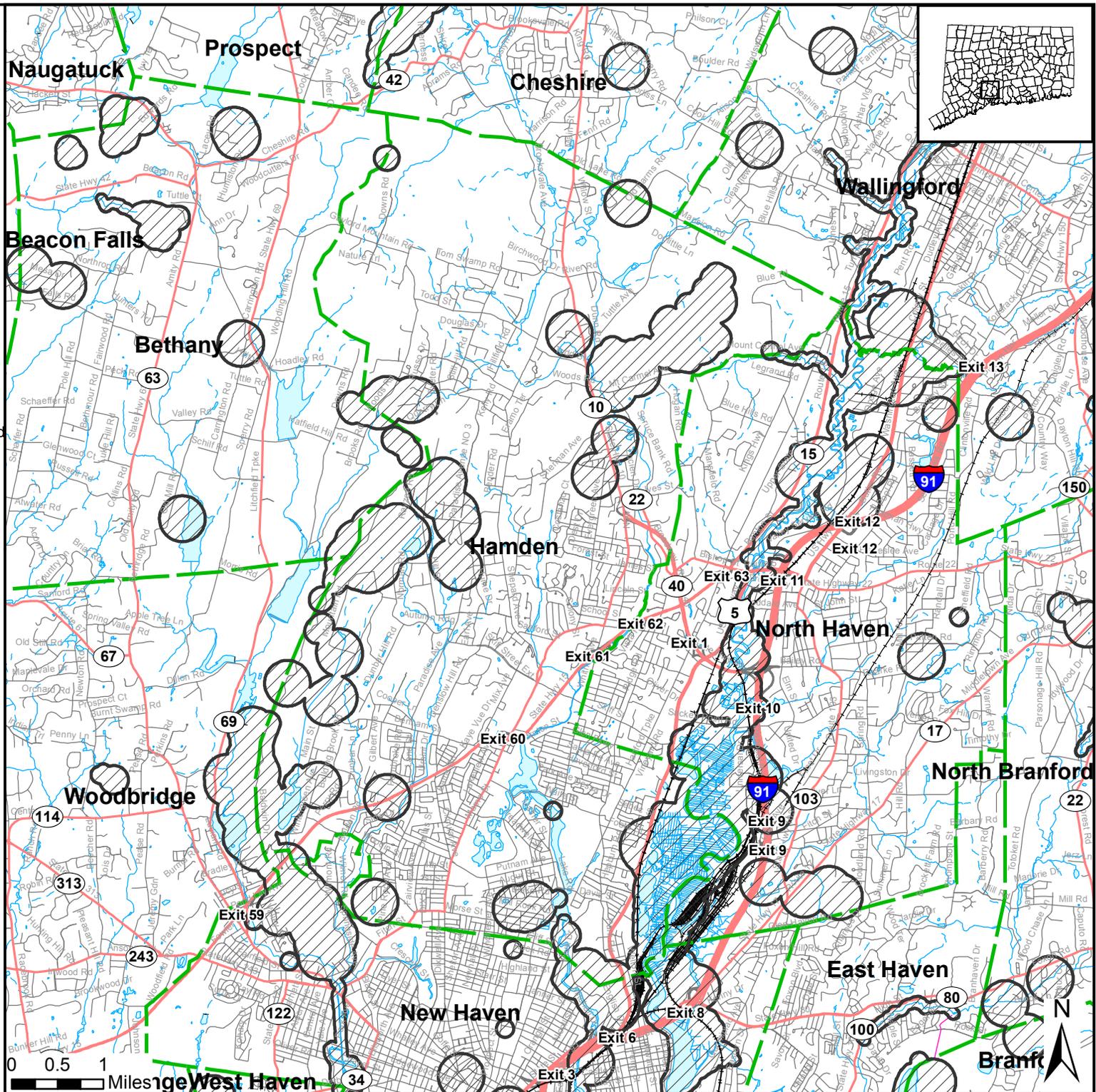
[www.ct.gov/deep/nddbrequest](http://www.ct.gov/deep/nddbrequest)

Use the CTECO Interactive Map Viewers at [www.cteco.uconn.edu](http://www.cteco.uconn.edu) to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)  
79 Elm St., Hartford CT 06106  
Phone (860) 424-3011



Connecticut Department of Energy & Environmental Protection  
Bureau of Natural Resources  
Wildlife Division



# ATTACHMENT C: THREATENED AND ENDANGERED SPECIES

Information about compliance with the requirements of Section 3(b)(2) of this general permit, regarding threatened and endangered species, is in Appendix A of the general permit. Choose one or more (if applicable) of the following in order to be eligible to register for this General Permit. A registrant who does not or cannot do so is not eligible to register under this General Permit.

Self Assessment using the NDDDB maps – Select this only if:

a. The site of the construction activity is not entirely, partially or within a ¼ mile of a shaded area depicted on the Department’s Natural Diversity Database maps and this determination was made not more than six months before the date of submitting this registration;

AND

b. The entity registering for this General Permit has no reasonably available verifiable scientific, or other credible information that the construction activity could reasonably be expected to have an adverse impact upon a federal or state species listed as threatened or endangered.

Attach a copy of the NDDDB map used to conduct the self assessment used to register for this general permit.

Note: Both a and b as used in this section, must be true in order for a Registrant to register for this General Permit using the self-assessment option. If neither is true, a Registrant cannot use the self-assessment option to comply with Section 3(b)(2) and Appendix A of the General Permit.

Limited One-Year Determination – Select this only if:

a. The entity registering for this General Permit has obtained a limited one-year determination from the Department’s Wildlife Division regarding threatened and endangered species: i) within a year of the date of submitting this registration; or ii) more than 1 year before submitting this registration, but such determination has been extended by the Department within one year of the date of submitting this registration;

AND

b. The Registrant has provided to the Department’s Wildlife Division any reasonably available verifiable scientific, or other credible information that the construction activity could reasonably be expected to have an adverse impact upon a federal or state species listed as threatened or endangered.

Provide the date the limited one-year determination was issued by the Department’s Wildlife Division \_\_\_\_\_;

or

Provide the date that the most recent extension to a limited one year determination was issued by the Department’s Wildlife Division \_\_\_\_\_.

Note: Both a and b as used in this section, must be true in order for a Registrant to register for this General Permit using the Limited One-Year Determination option. If a Limited One-Year Determination or extension to any such determination was issued by the Department’s Wildlife Division more than one year before the submission of this registration, a Registrant cannot use any such determination or extension to comply with Section 3(b)(2) and Appendix A of the General Permit.

# ATTACHMENT C: THREATENED AND ENDANGERED SPECIES (continued)

- Select here if the Limited One-Year Determination issued by the Department includes a Mitigation Plan.**

Provide the date the Mitigation Plan was approved: \_\_\_\_\_

Governmental Entity Approving the Plan: \_\_\_\_\_

**As of the date this Registration is submitted,**

Has the Mitigation Plan been fully implemented?  Yes  No

Date commenced: \_\_\_\_\_ Date completed: \_\_\_\_\_

Is the Mitigation Plan partially implemented?  Yes  No

If yes, what actions have been taken? \_\_\_\_\_

And which actions are yet to be implemented and what is the timeframe for completion of such actions: \_\_\_\_\_

Is the Mitigation Plan yet to be implemented?  Yes  No

If yes, specify the timeframe for implementation: \_\_\_\_\_ to \_\_\_\_\_

And summarize actions to be implemented: \_\_\_\_\_

- Safe Harbor Determination - Select this only if:

a. The entity registering for this General Permit has obtained a Safe Harbor Determination from the Department's Wildlife Division regarding threatened and endangered species: i) within 3 years of the date of submitting this registration; or ii) more than 3 years before submitting this registration, but within one-year of a one-year extension issued by the Department's Wildlife Division to a safe harbor determination;

AND

b. The entity registering for this General Permit has provided to the Department's Wildlife Division any reasonably available verifiable scientific, or other credible information that the construction activity could reasonably be expected to have an adverse impact upon a federal or state species listed as threatened or endangered.

Provide the date the Department's Wildlife Division issued a Safe Harbor Determination: \_\_\_\_\_

If applicable, provide the date that any one-year extension to a Safe Harbor Determination was issued by the Department's Wildlife Division: \_\_\_\_\_.

Note: Both a and b as used in this section, must be true in order for a Registrant to register for this General Permit using the Safe Harbor Determination option. If a Safe Harbor Determination was issued by the Department's Wildlife Division more than three years before the submission of this registration, and has not been extended, a Registrant cannot use any such safe harbor to comply with section 3(b)(2) and Appendix A of this General Permit. If a Safe Harbor Determination was granted and extended for one-year, more than four years before the submission of this registration, a Registrant cannot use any such Safe Harbor Determination to comply with Section 3(b)(2) and Appendix A of the general permit.

# ATTACHMENT C: THREATENED AND ENDANGERED SPECIES (continued)

- Select here if the safe harbor noted above includes a Mitigation Plan.**

Provide the date the Mitigation Plan was approved: \_\_\_\_\_

Governmental Entity Approving the Plan: \_\_\_\_\_

**As of the date this Registration is submitted,**

Has the Mitigation Plan been fully implemented?  Yes  No

Date commenced: \_\_\_\_\_ Date completed: \_\_\_\_\_

Is the Mitigation Plan partially implemented?  Yes  No

If yes, what actions have been taken? \_\_\_\_\_

And which actions are yet to be implemented and what is the timeframe for completion of such actions: \_\_\_\_\_

Is the Mitigation Plan yet to be implemented?  Yes  No

If yes, specify the timeframe for implementation: \_\_\_\_\_ to \_\_\_\_\_

And summarize actions to be implemented: \_\_\_\_\_

## Attachment E

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### Stormwater Pollution Control Plan (as submitted)



## Appendix B

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### Identification of Contractor and Certification Statements





**THE UNITED ILLUMINATING COMPANY  
MIX AVENUE**

**GENERAL CONTRACTOR**

“I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor 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.”

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**THE UNITED ILLUMINATING COMPANY  
MIX AVENUE**

**SUBCONTRACTOR**

“I certify under penalty of law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a 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.”

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Title: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

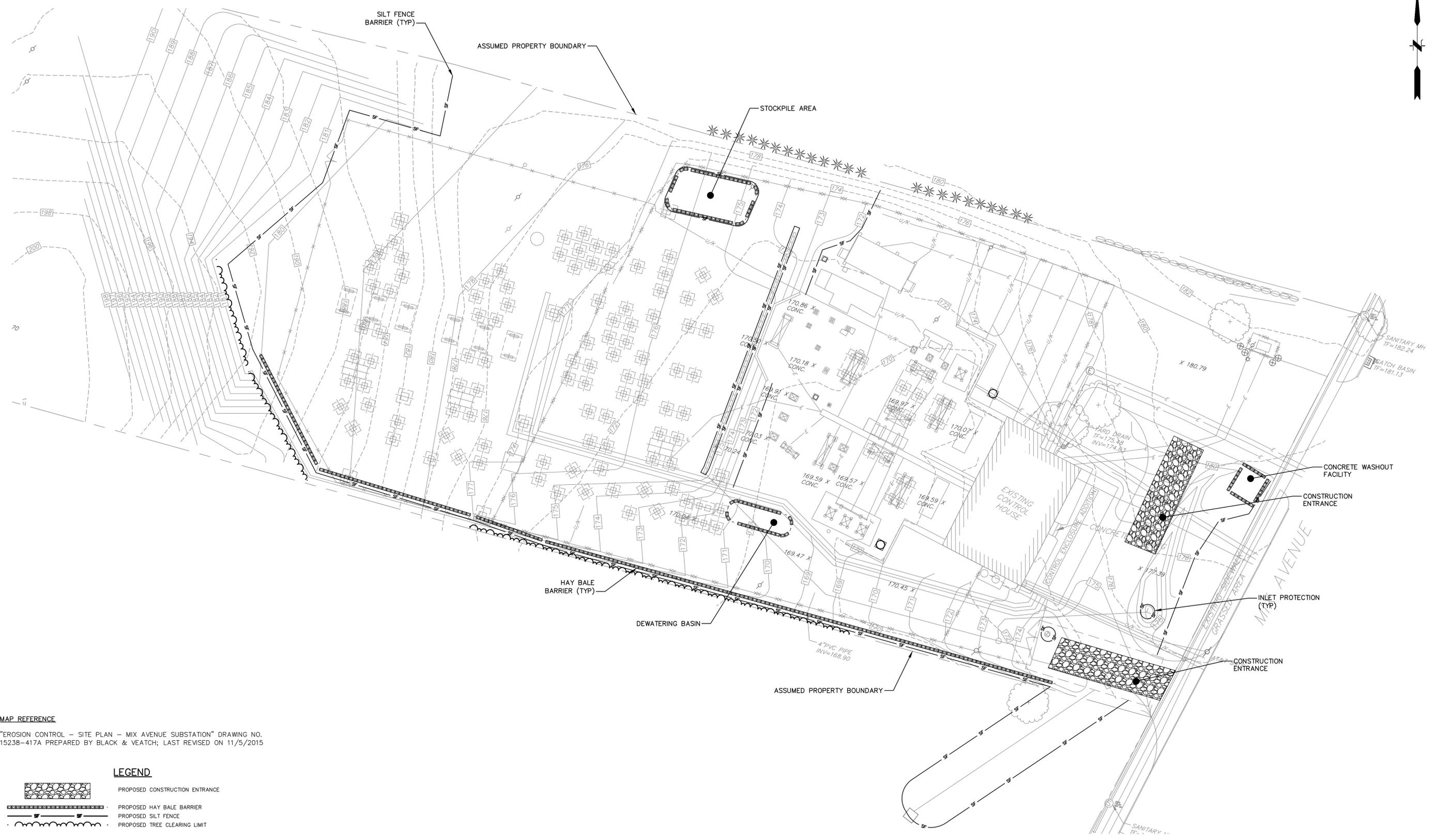
\_\_\_\_\_

## Appendix C

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### Construction Drawings





**MAP REFERENCE**  
 "EROSION CONTROL - SITE PLAN - MIX AVENUE SUBSTATION" DRAWING NO. 15238-417A PREPARED BY BLACK & VEATCH; LAST REVISED ON 11/5/2015

**LEGEND**

	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED HAY BALE BARRIER
	PROPOSED SILT FENCE
	PROPOSED TREE CLEARING LIMIT

File Path: J:\DWG\20150138A20\Civil\Plan\20150138A20\_EROD1.dwg Layout: CE-101 Plotted: Mon, November 09, 2015 - 11:55 AM User: smacedonald  
 PLOTTER: DWG TO PDF.PC3 CTB File: FO 2008 MONO.CTB  
 LAYER STATE:

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				

SEAL	SEAL
------	------



SCALE:

HORIZ.: 1" = 20'
VERT.:

DATUM:

HORIZ.:
VERT.:

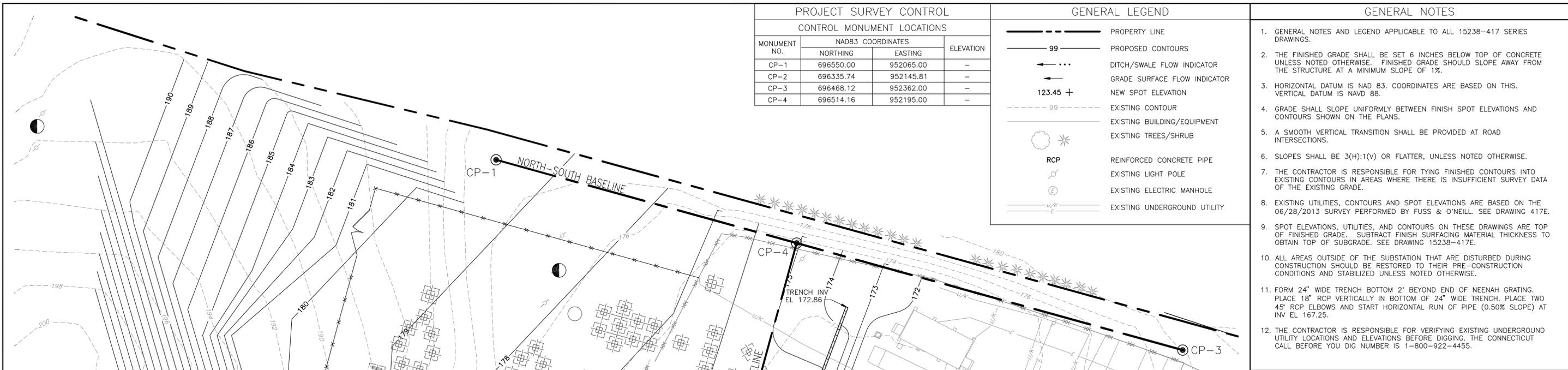
GRAPHIC SCALE

**FUSS & O'NEILL**  
 56 QUARRY ROAD  
 TRUMBULL, CONNECTICUT 06611  
 203.374.3748  
 www.fando.com

THE UNITED ILLUMINATING COMPANY  
 EROSION & SEDIMENTATION CONTROL PLAN  
 MIX AVENUE SUBSTATION  
 HAMDEN CONNECTICUT

PROJ. No.: 20150138.A20  
 DATE: 11/6/2015  
**CE-101**

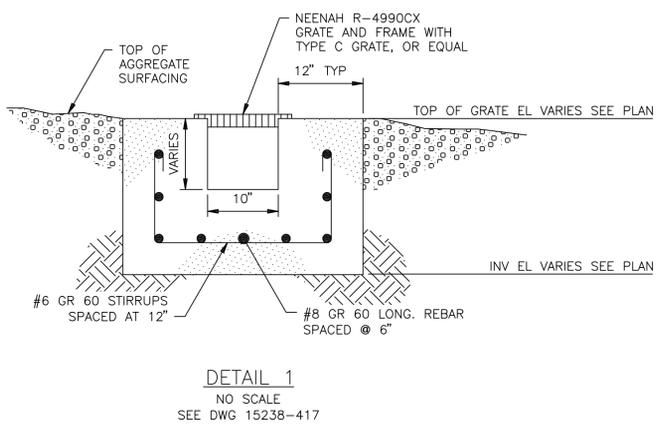




PROJECT SURVEY CONTROL			
CONTROL MONUMENT LOCATIONS			
MONUMENT NO.	NAD83 COORDINATES		ELEVATION
	NORTHING	EASTING	
CP-1	696550.00	952065.00	-
CP-2	696335.74	952145.81	-
CP-3	696468.12	952362.00	-
CP-4	696514.16	952195.00	-

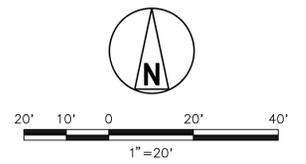
GENERAL LEGEND	
	PROPERTY LINE
	PROPOSED CONTOURS
	DITCH/SWALE FLOW INDICATOR
	GRADE SURFACE FLOW INDICATOR
	NEW SPOT ELEVATION
	EXISTING CONTOUR
	EXISTING BUILDING/EQUIPMENT
	EXISTING TREES/SHRUB
	RCP
	EXISTING LIGHT POLE
	EXISTING ELECTRIC MANHOLE
	EXISTING UNDERGROUND UTILITY

- | GENERAL NOTES |   |
|---------------|---|
| 1.            | GENERAL NOTES AND LEGEND APPLICABLE TO ALL 15238-417 SERIES DRAWINGS.   |
| 2.            | THE FINISHED GRADE SHALL BE SET 6 INCHES BELOW TOP OF CONCRETE UNLESS NOTED OTHERWISE. FINISHED GRADE SHOULD SLOPE AWAY FROM THE STRUCTURE AT A MINIMUM SLOPE OF 1%.  |
| 3.            | HORIZONTAL DATUM IS NAD 83. COORDINATES ARE BASED ON THIS. VERTICAL DATUM IS NAVD 88.   |
| 4.            | GRADE SHALL SLOPE UNIFORMLY BETWEEN FINISH SPOT ELEVATIONS AND CONTOURS SHOWN ON THE PLANS.   |
| 5.            | A SMOOTH VERTICAL TRANSITION SHALL BE PROVIDED AT ROAD INTERSECTIONS.   |
| 6.            | SLOPES SHALL BE 3(H):1(V) OR FLATTER, UNLESS NOTED OTHERWISE.   |
| 7.            | THE CONTRACTOR IS RESPONSIBLE FOR TYING FINISHED CONTOURS INTO EXISTING CONTOURS IN AREAS WHERE THERE IS INSUFFICIENT SURVEY DATA OF THE EXISTING GRADE.  |
| 8.            | EXISTING UTILITIES, CONTOURS AND SPOT ELEVATIONS ARE BASED ON THE 06/28/2013 SURVEY PERFORMED BY FUSS & O'NEILL. SEE DRAWING 417E.  |
| 9.            | SPOT ELEVATIONS, UTILITIES, AND CONTOURS ON THESE DRAWINGS ARE TOP OF FINISHED GRADE. SUBTRACT FINISH SURFACING MATERIAL THICKNESS TO OBTAIN TOP OF SUBGRADE. SEE DRAWING 15238-417E.                         |
| 10.           | ALL AREAS OUTSIDE OF THE SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION SHOULD BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS AND STABILIZED UNLESS NOTED OTHERWISE.                                     |
| 11.           | FORM 24" WIDE TRENCH BOTTOM 2" BEYOND END OF NEENAH GRATING. PLACE 18" RCP VERTICALLY IN BOTTOM OF 24" WIDE TRENCH. PLACE TWO 45" RCP ELBOWS AND START HORIZONTAL RUN OF PIPE (0.50% SLOPE) AT INV EL 167.25. |
| 12.           | THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS BEFORE DIGGING. THE CONNECTICUT CALL BEFORE YOU DIG NUMBER IS 1-800-922-4455.                               |



DETAIL 1  
NO SCALE  
SEE DWG 15238-417

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



No.	Date	Revision	By	Chkd.	Engr.	Supv.

**The United Illuminating Company**

Drawn	JRH	Date	08/09/2013	Scale:	1"=20'
Chkd.		Design Engr.	SMR	Design Supv.	

- REFERENCE DRAWINGS
- |                                     |                   |
|-------------------------------------|-------------------|
| GRADING AND DRAINAGE PLAN & DETAILS | 15238-417 & 417J  |
| EROSION CONTROL PLAN & DETAILS      | 15238-417A & 417B |
| SURFACING AND FENCING PLAN          | 15238-417C        |
| ROADS AND PARKING PLAN              | 15238-417D        |
| FUSS AND O'NEILL SURVEY             | 15238-417E        |

DESIGNER	SMR	DRAWN	JRH						
PROJECT #	180592								
NO.	DATE	REVISION	DRN	CHKD	DESN	SUPR.			
F	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH	-	SMR	MAV			
E	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL	-	SMR	MAV			
D	10/26/2015	ISSUED FOR PERMITTING - PROJECT 180592 - CAP BANK AND REACTOR	JDL	-	SMR	MAV			
C	07/09/2015	ISSUED FOR BID - PROJECT 180592 - CAP BANK AND REACTOR	MEM	-	JJD	MAV			
B	05/20/2015	ISSUED FOR UI 30% REVIEW - PROJECT 180592 - CAP BANK AND REACTOR	MEM	-	JJD				
A	08/09/2013	ISSUED FOR UI 30% REVIEW	JRH	-	SMR				

GRADING AND DRAINAGE - SITE PLAN

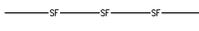
MIX AVENUE SUBSTATION

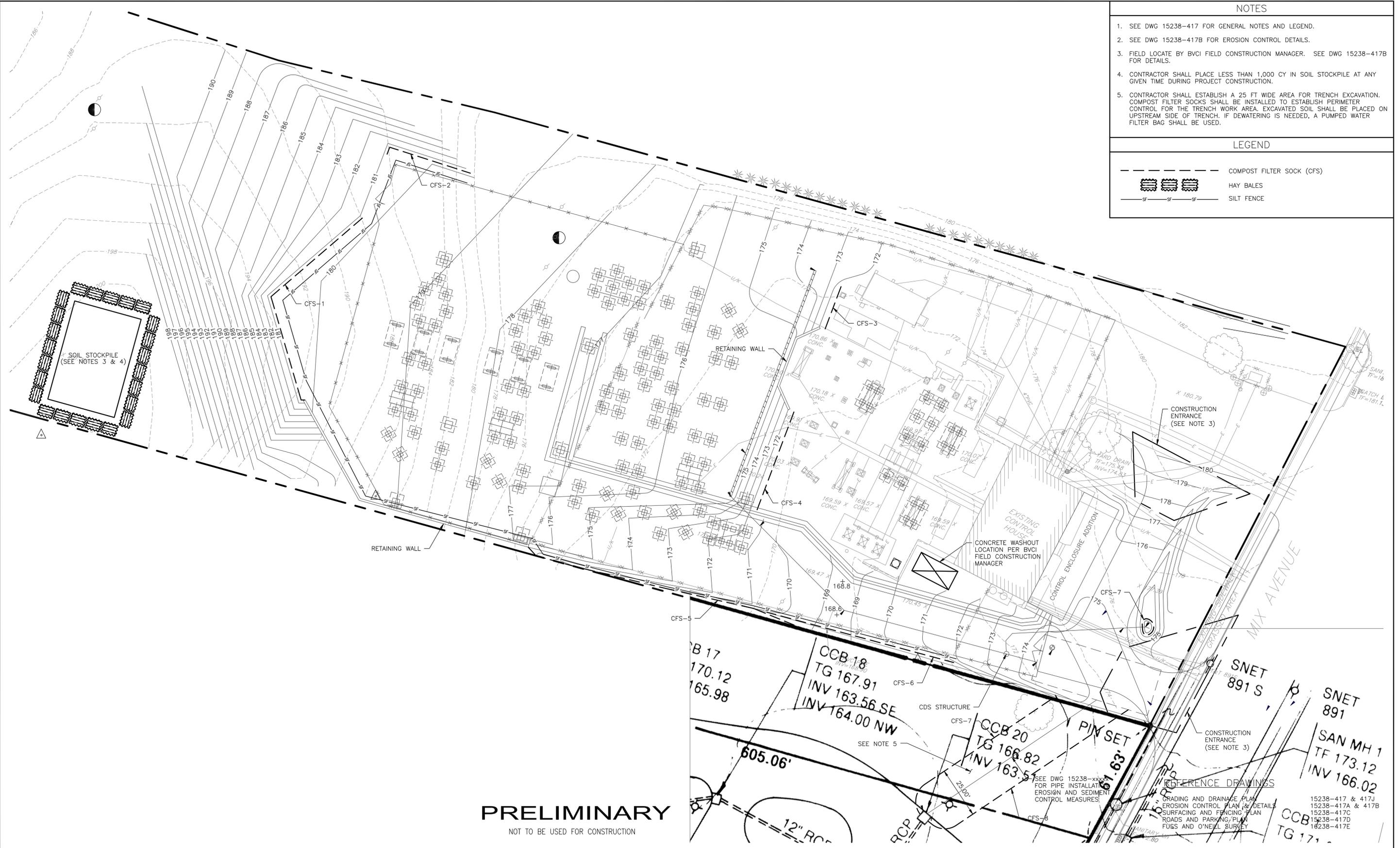
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
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NOTES

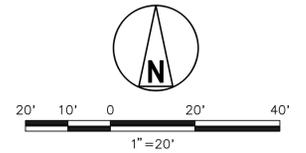
- SEE DWG 15238-417 FOR GENERAL NOTES AND LEGEND.
- SEE DWG 15238-417B FOR EROSION CONTROL DETAILS.
- FIELD LOCATE BY BVCI FIELD CONSTRUCTION MANAGER. SEE DWG 15238-417B FOR DETAILS.
- CONTRACTOR SHALL PLACE LESS THAN 1,000 CY IN SOIL STOCKPILE AT ANY GIVEN TIME DURING PROJECT CONSTRUCTION.
- CONTRACTOR SHALL ESTABLISH A 25 FT WIDE AREA FOR TRENCH EXCAVATION. COMPOST FILTER SOCKS SHALL BE INSTALLED TO ESTABLISH PERIMETER CONTROL FOR THE TRENCH WORK AREA. EXCAVATED SOIL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH. IF DEWATERING IS NEEDED, A PUMPED WATER FILTER BAG SHALL BE USED.

LEGEND

-  COMPOST FILTER SOCK (CFS)
-  HAY BALES
-  SILT FENCE



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



No.	Date	Revision	By	Chkd.	Engr.	Supr.

**ui**  
The United Illuminating Company

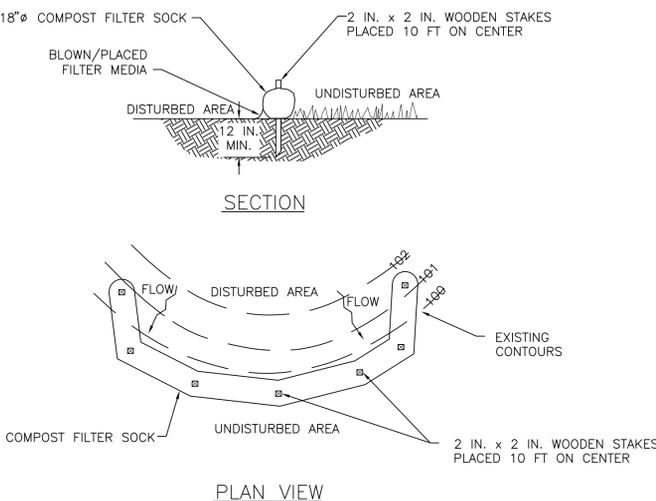
Drawn: JRH Date: 08/09/2013 Scale: 1"=20'  
 Design Engr.: SMR Design Supv.: -

EROSION CONTROL - SITE PLAN MIX AVENUE SUBSTATION		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	15238-417A

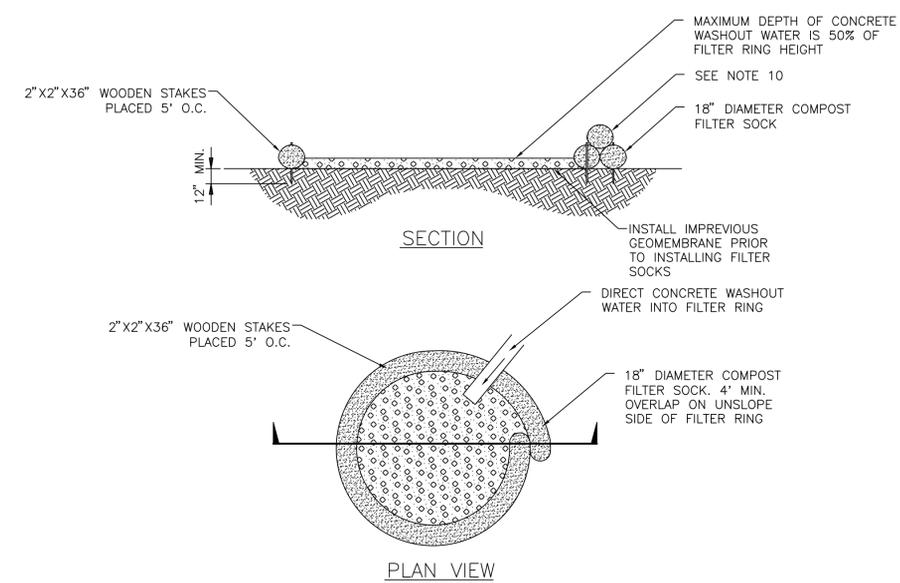
**BLACK & VEATCH**  
Building a world of difference®

DESIGNER: JRH DRAWN: SMR  
 CHECKED: - DATE: -  
 PROJECT # 180592

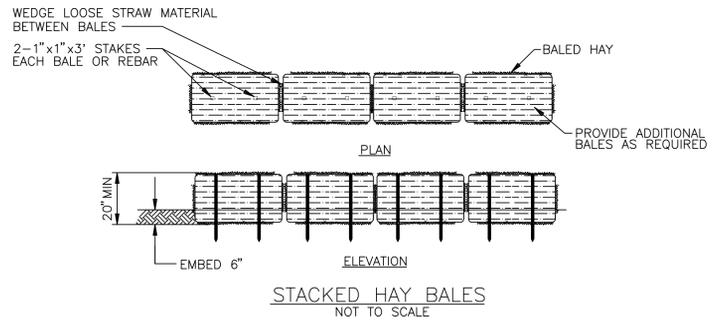
NO.	DATE	REVISION	DRN	CHKD	DESIGN	SUPR.
E	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH	-	SMR	MAV
D	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL	-	SMR	MAV
C	10/26/2015	ISSUED FOR PERMITTING - PROJECT 180592 - CAP BANK AND REACTOR	JDL	-	SMR	MAV
B	07/09/2015	ISSUED FOR BID - PROJECT 180592 - CAP BANK AND REACTOR	MEM	-	JJD	MAV
A	08/09/2013	ISSUED FOR UI 30% REVIEW	JRH	-	SMR	-



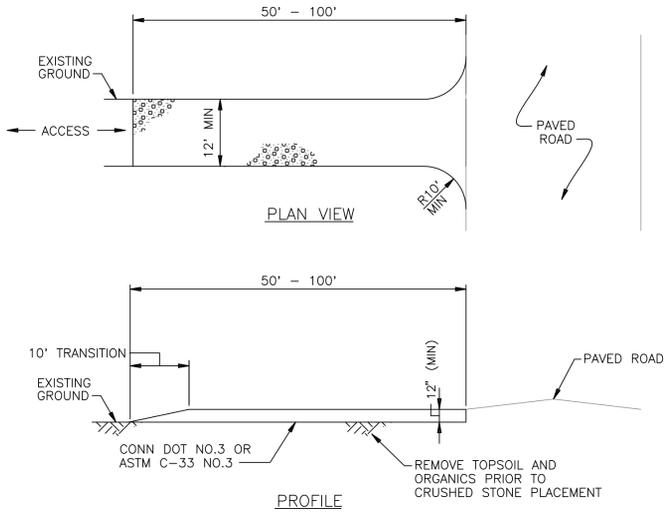
**COMPOST FILTER SOCK**  
NOT TO SCALE  
SEE NOTES 6-9



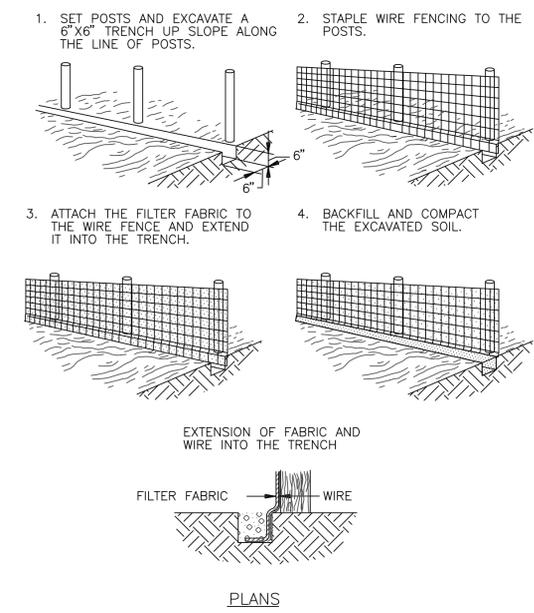
**TYPICAL COMPOST SOCK WASHOUT INSTALLATION**  
NOT TO SCALE



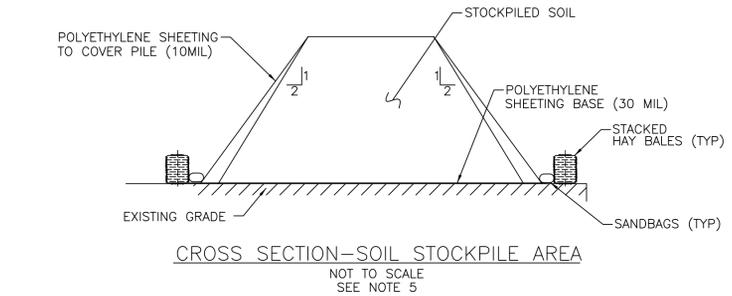
**STACKED HAY BALES**  
NOT TO SCALE



**CONSTRUCTION ENTRANCE**  
NOT TO SCALE  
SEE NOTES 3 & 4



**SILT FENCE DETAIL**  
NO SCALE



**CROSS SECTION-SOIL STOCKPILE AREA**  
NOT TO SCALE  
SEE NOTE 5

**NOTES**

1. SEE DWG 15238-417 FOR GENERAL NOTES AND LEGEND.
2. SEE DWG 15238-417A FOR EROSION CONTROL PLAN INFORMATION.
3. CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING SITE. CONSTRUCTION ENTRANCE SHALL BE FULL WIDTH OF ROAD OR EGRESS POINT. A MINIMUM 12" THICK PAD SHALL BE MAINTAINED.
4. DESIGN CRITERIA FOR CONSTRUCTION ENTRANCE.
  - A. WIDTH - NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS.
  - B. LENGTH - 50 FEET MINIMUM WHERE THE SOILS ARE SANDS OR GRAVEL OR 100 FEET MINIMUM WHERE SOILS ARE CLAYS OR SILTS, EXCEPT WHERE THE TRAVELED LENGTH IS LESS THAN 50 OR 100 FEET RESPECTIVELY. THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE.
  - C. FILTER CLOTH - WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE AND SHALL BE MIRAFI 500X OR EQUIVALENT.
  - D. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC RIGHT-OF-WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
5. ALL SOILS REMOVED SHALL BE EITHER PUT DIRECTLY INTO TRUCKS AND SHIPPED OFF SITE OR STORED WITHIN A CONSTRUCTED SOIL STOCKPILE AREA (SSA) AS INDICATED ON THIS PLAN. SSA'S SHALL BE KEPT COVERED AT ALL TIMES EXCEPT WHEN SOIL IS BEING ADDED OR REMOVED. THE TOP LINER SHALL PREVENT PRECIPITATION FROM CONTACTING CONTAINED SOILS AND SHALL BE SECURED TO PREVENT IT FROM BEING DISLODGED BY WIND. SOILS POTENTIALLY TO BE REUSED AS BACKFILL AFTER CHARACTERIZATION TESTING SHALL BE STORED IN SEPARATE SSA'S. CONTRACTOR SHALL PLACE LESS THAN 1,000 CY IN SSA DURING CONSTRUCTION.
6. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.
7. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
8. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
9. 18" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
10. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

**REFERENCE DRAWINGS**

GRADING AND DRAINAGE PLAN	15238-417 & 417J
EROSION CONTROL PLAN & DETAILS	15238-417A & 417B
SURFACING AND FENCING PLAN	15238-417C
ROADS AND PARKING PLAN	15238-417D
FUSS AND O'NEILL SURVEY	15238-417E

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

<b>BLACK &amp; VEATCH</b> Building a world of difference®							
DESIGNER	SMR	DRAWN	JRH				
CHECKED	-	DATE	-				
PROJECT #	180592						
NO	DATE	REVISION	DRN	CHKD	DESN	SUPR.	
E	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH	-	SMR	MAV	
D	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL	-	SMR	MAV	
C	10/26/2015	ISSUED FOR PERMITTING - PROJECT 180592 - CAP BANK AND REACTOR	JDL	-	SMR	MAV	
B	07/09/2015	ISSUED FOR BID - PROJECT 180592 - CAP BANK AND REACTOR	MEM	-	JJD	MAV	
A	08/09/2013	ISSUED FOR UI 30% REVIEW	JRH	-	SMR	-	

No	Date	Revision	By	Chkd.	Engr.	Supv.

**ui**  
*The United Illuminating Company*

Drawn: JRH Date: 08/09/2013 Scale: 1"=20'  
 Chkd.: - Design Engr.: SMR Design Supv.: -

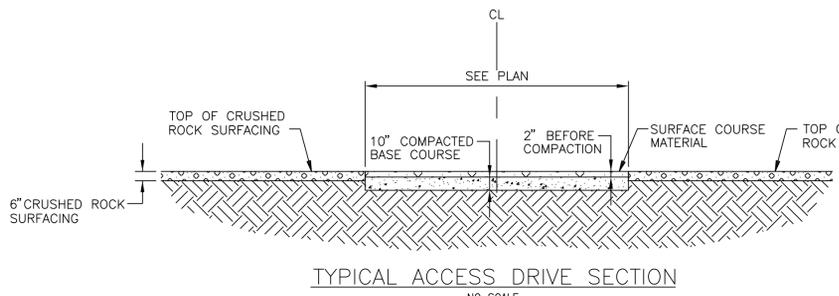
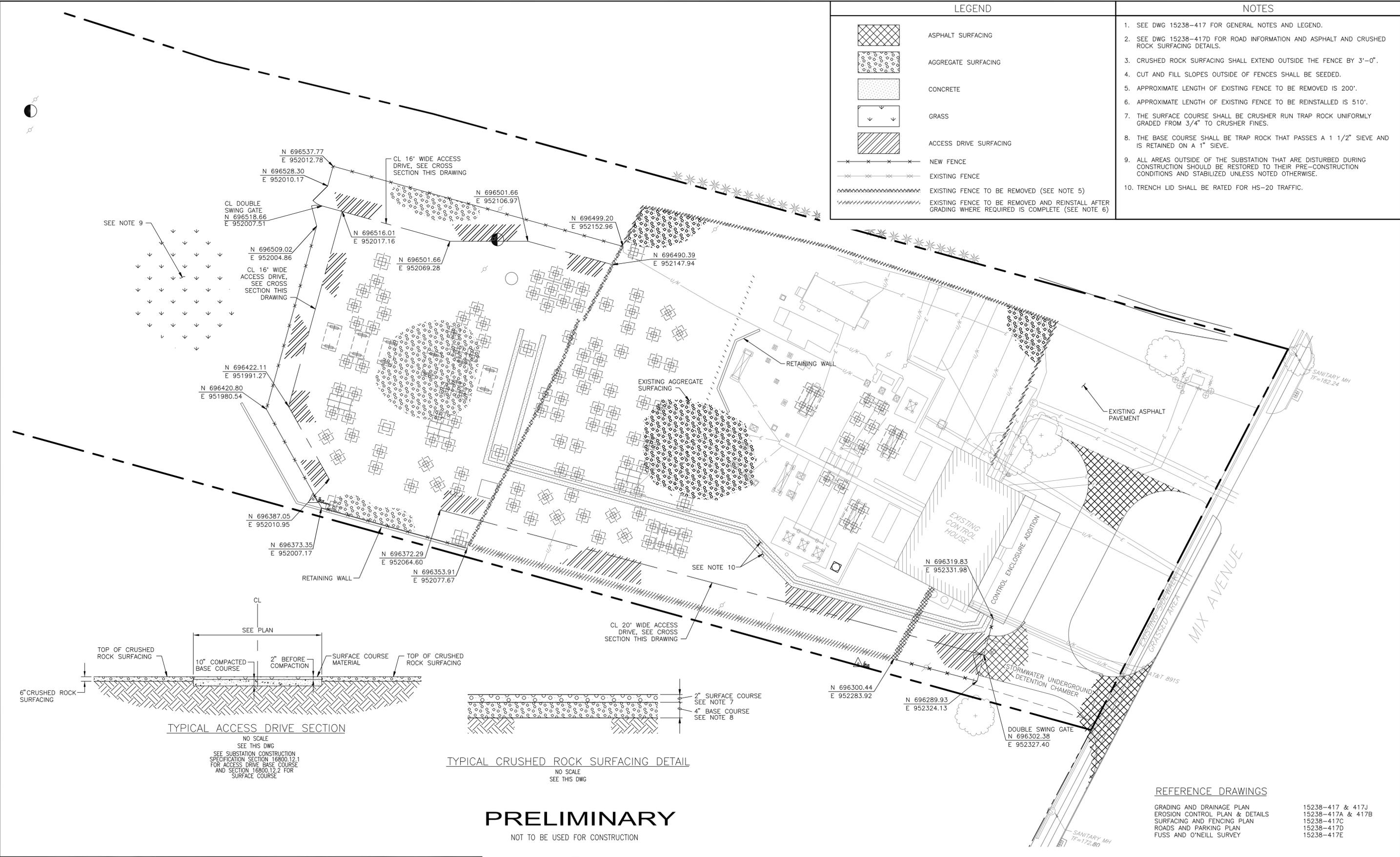
<b>EROSION CONTROL - SITE EROSION CONTROL DETAILS MIX AVENUE SUBSTATION</b>		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	15238-417B

LEGEND

-  ASPHALT SURFACING
-  AGGREGATE SURFACING
-  CONCRETE
-  GRASS
-  ACCESS DRIVE SURFACING
-  NEW FENCE
-  EXISTING FENCE
-  EXISTING FENCE TO BE REMOVED (SEE NOTE 5)
-  EXISTING FENCE TO BE REMOVED AND REINSTALL AFTER GRADING WHERE REQUIRED IS COMPLETE (SEE NOTE 6)

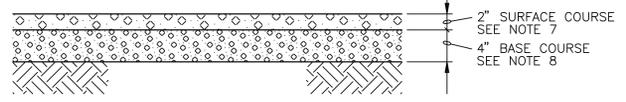
NOTES

1. SEE DWG 15238-417 FOR GENERAL NOTES AND LEGEND.
2. SEE DWG 15238-417D FOR ROAD INFORMATION AND ASPHALT AND CRUSHED ROCK SURFACING DETAILS.
3. CRUSHED ROCK SURFACING SHALL EXTEND OUTSIDE THE FENCE BY 3'-0".
4. CUT AND FILL SLOPES OUTSIDE OF FENCES SHALL BE SEEDED.
5. APPROXIMATE LENGTH OF EXISTING FENCE TO BE REMOVED IS 200'.
6. APPROXIMATE LENGTH OF EXISTING FENCE TO BE REINSTALLED IS 510'.
7. THE SURFACE COURSE SHALL BE CRUSHER RUN TRAP ROCK UNIFORMLY GRADED FROM 3/4" TO CRUSHER FINES.
8. THE BASE COURSE SHALL BE TRAP ROCK THAT PASSES A 1 1/2" SIEVE AND IS RETAINED ON A 1" SIEVE.
9. ALL AREAS OUTSIDE OF THE SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION SHOULD BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS AND STABILIZED UNLESS NOTED OTHERWISE.
10. TRENCH LID SHALL BE RATED FOR HS-20 TRAFFIC.



TYPICAL ACCESS DRIVE SECTION

NO SCALE  
SEE THIS DWG  
SEE SUBSTATION CONSTRUCTION SPECIFICATION SECTION 16800.12.1 FOR ACCESS DRIVE BASE COURSE AND SECTION 16800.12.2 FOR SURFACE COURSE



TYPICAL CRUSHED ROCK SURFACING DETAIL

NO SCALE  
SEE THIS DWG

**PRELIMINARY**

NOT TO BE USED FOR CONSTRUCTION

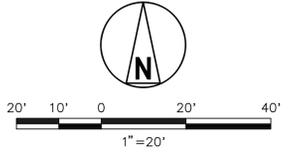
REFERENCE DRAWINGS

- |                                |                   |
|--------------------------------|-------------------|
| GRADING AND DRAINAGE PLAN      | 15238-417 & 417J  |
| EROSION CONTROL PLAN & DETAILS | 15238-417A & 417B |
| SURFACING AND FENCING PLAN     | 15238-417C        |
| ROADS AND PARKING PLAN         | 15238-417D        |
| FUSS AND O'NEILL SURVEY        | 15238-417E        |

ACAD 15:37:49-1 18.0s (LMS Tech)



DESIGNER	SMR	DRAWN	JRH						
CHECKED	-	DATE	-						
PROJECT #	180592								
NO	DATE	REVISION	DRN	CHKD	DESN	SUPR.			
E	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH	-	SMR	MAV			
D	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL	-	SMR	MAV			
C	10/26/2015	ISSUED FOR PERMITTING - PROJECT 180592 - CAP BANK AND REACTOR	JDL	-	SMR	MAV			
B	07/09/2015	ISSUED FOR BID - PROJECT 180592 - CAP BANK AND REACTOR	MEM	-	JJD	MAV			
A	08/09/2013	ISSUED FOR UI 30% REVIEW	JRH	-	SMR	-			



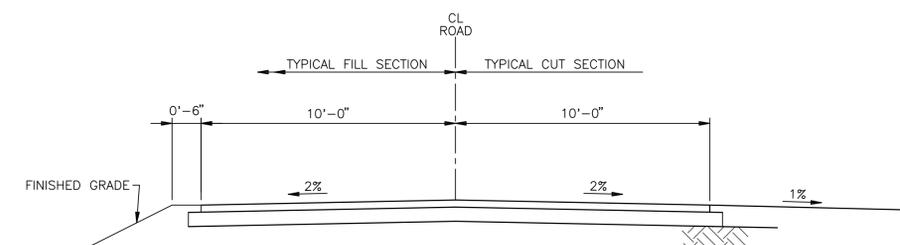
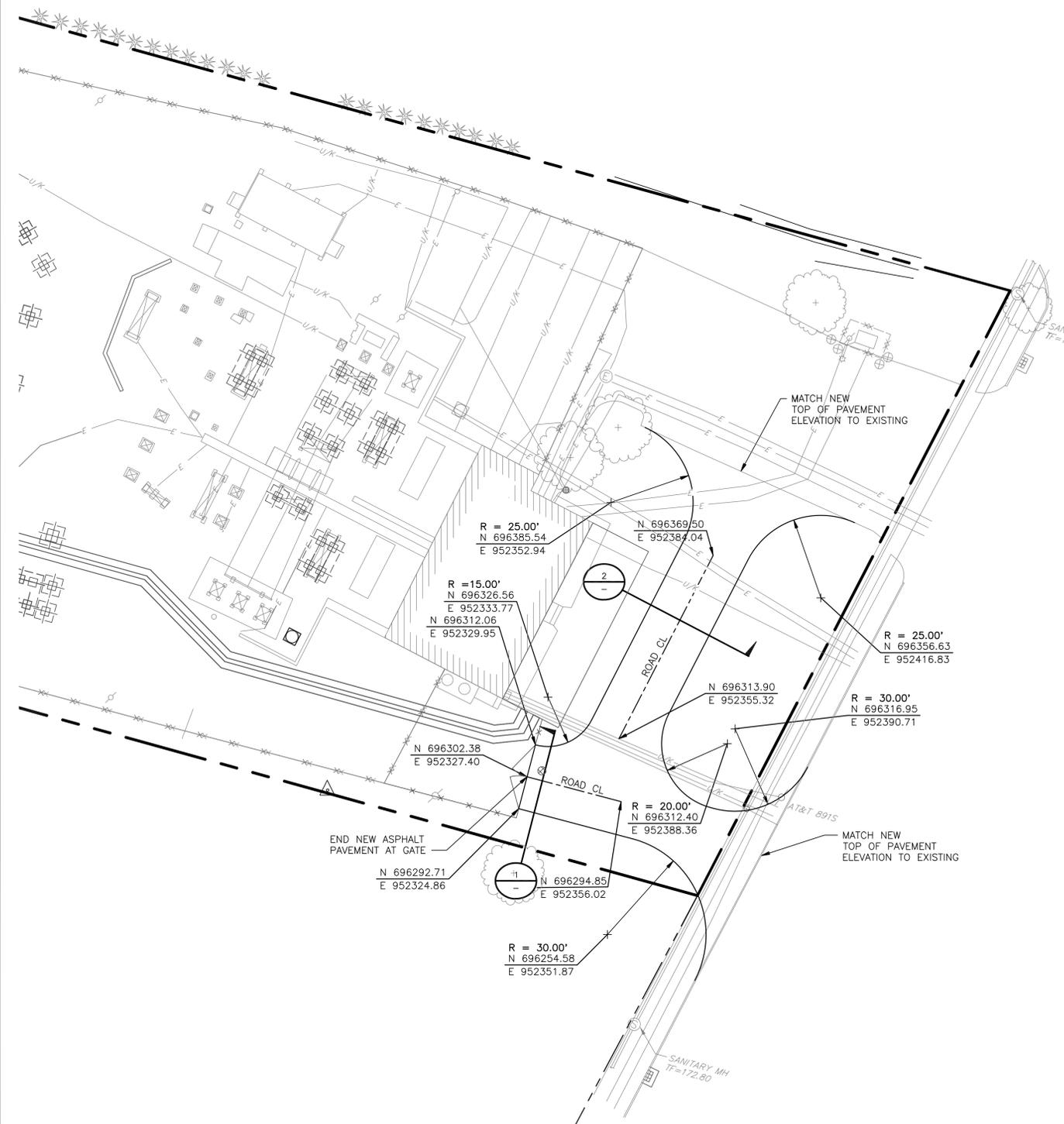
No	Date	Revision	By	Chkd.	Engr.	Supv.

Drawn	JRH	Date	08/09/2013	Scale:	1"=20'
Chkd.	-	Design Engr.	SMR	Design Supv.	-

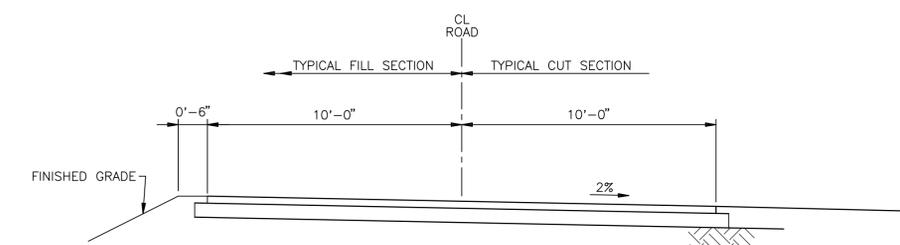
SURFACING AND FENCING - SITE PLAN MIX AVENUE SUBSTATION		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	15238-417C

NOTES

- SEE DWG 15238-417 FOR GENERAL NOTES AND LEGEND.
- REFER TO UI DWG "SUBSTATION ACCESS DRIVE STANDARD PAVEMENT SECTION DETAILS" REVISION 1 FOR ASPHALT PAVEMENT CROSS SECTION AND FOR TYPICAL PAVEMENT SECTIONS.



SECTION 1  
TYPICAL ASPHALT SURFACE ROAD SECTION  
NO SCALE  
SEE NOTE 2



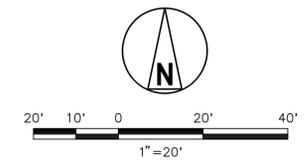
SECTION 2  
TYPICAL ASPHALT SURFACE ROAD SECTION  
NO SCALE  
SEE NOTE 2

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

REFERENCE DRAWINGS

GRADING AND DRAINAGE PLAN	15238-417 & 417J
EROSION CONTROL PLAN & DETAILS	15238-417A & 417B
SURFACING AND FENCING PLAN	15238-417C
ROADS AND PARKING PLAN	15238-417D
FUSS AND O'NEILL SURVEY	15238-417E

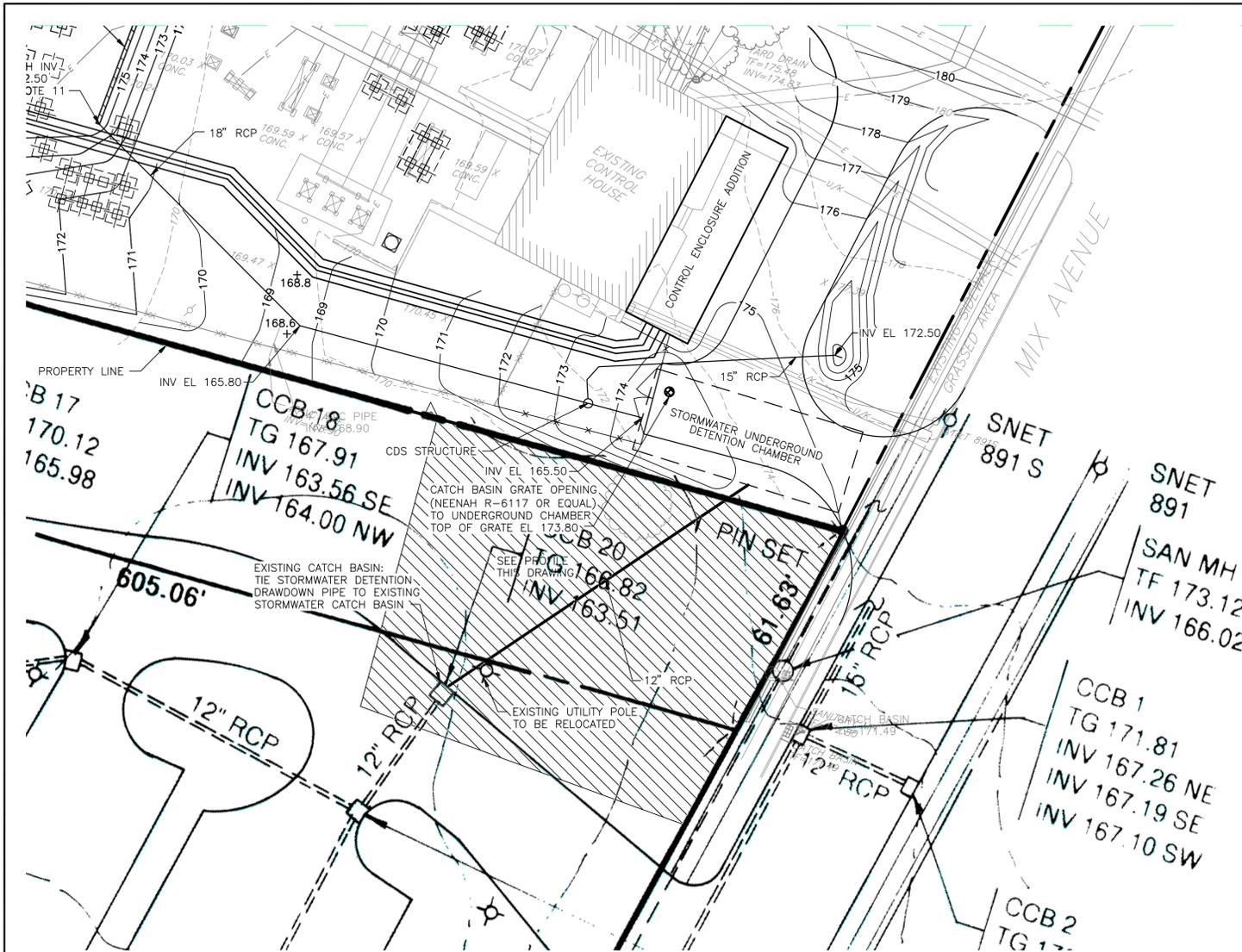
<b>BLACK &amp; VEATCH</b> Building a world of difference®							
DESIGNER	SMR	DRAWN	JRH				
CHECKED	-	DATE	-				
PROJECT #	180592						
NO	DATE	REVISION	DRN	CHKD	DESN	SUPR.	
E	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH	-	SMR	MAV	
D	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL	-	SMR	MAV	
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B	07/09/2015	ISSUED FOR BID - PROJECT 180592 - CAP BANK AND REACTOR	MEM	-	JJD	MAV	
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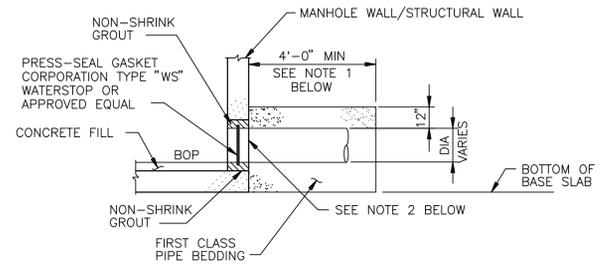
No	Date	Revision	By	Chkd.	Engr.	Supv.

Drawn: JRH Date: 08/09/2013 Scale: 1"=20'  
 Chkd.: - Design Engr.: SMR Design Supv.: -

ROADS AND PARKING - SITE PLAN MIX AVENUE SUBSTATION		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	15238-417D

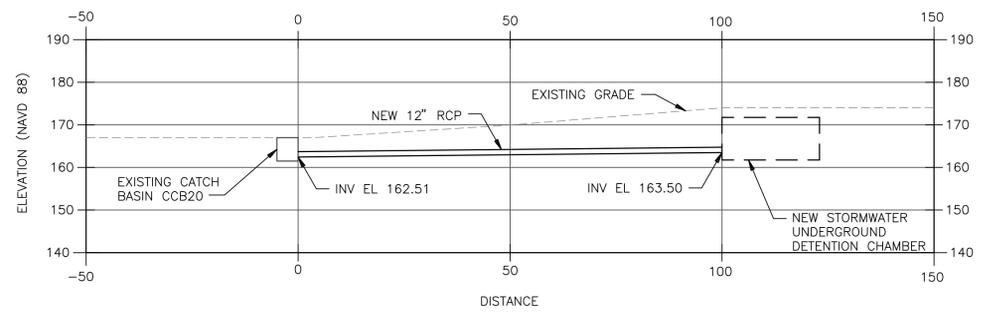


GRADING AND DRAINAGE - SITE PLAN  
SCALE 1"=20'



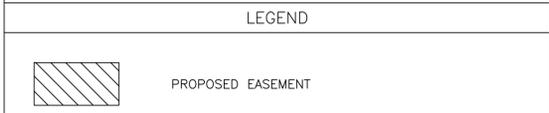
- NOTES:
- FIRST CLASS PIPE BEDDING TO LIMITS SHOWN OR EDGE OF MANHOLE EXCAVATION WHICHEVER IS GREATER.
  - CUT A NEW HOLE IN THE EXISTING MANHOLE AT THE ELEVATION INDICATED TO RECEIVE A 12" DIAMETER RCP PIPE. PLACE GASKET AND GROUT IN PLACE AS INDICATED IN THE DETAIL.

TYPICAL WALL PENETRATION DETAIL  
NO SCALE

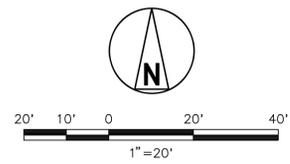


STORMWATER PROFILE  
HORIZONTAL AND VERTICAL SCALES 1"=20'

- NOTES
- ELEVATIONS SHOWN NORTH OF THE PROPERTY LINE ARE IN DATUM NAVD88. ELEVATIONS SHOWN SOUTH OF THE PROPERTY LINE ARE IN DATUM NGVD29. NAVD88 IS APPROXIMATELY EQUAL TO NGVD29 - 1'.
  - BACKGROUND FOR APPLE HILL APARTMENT COMPLEX IS FROM A .PDF FILE AND LOCATIONS ARE APPROXIMATE.
  - SEE DWG 15238-417A FOR EROSION AND SEDIMENT CONTROL DETAILS.



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



REFERENCE DRAWINGS

GRADING AND DRAINAGE PLAN	15238-417 & 417J
EROSION CONTROL PLAN & DETAILS	15238-417A & 417B
SURFACING AND FENCING PLAN	15238-417C
ROADS AND PARKING PLAN	15238-417D
FUSS AND O'NEILL SURVEY	15238-417E

<b>BLACK &amp; VEATCH</b> Building a world of difference®							
DESIGNER	JJD	DRAWN	MEM				
CHECKED	-	DATE	-				
PROJECT #	180592						
NO	DATE	REVISION	DRN	CHKD	DESN	SUPR.	
E	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH	-	SMR	MAV	
D	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL	-	SMR	MAV	
C	10/26/2015	ISSUED FOR PERMITTING - PROJECT 180592 - CAP BANK AND REACTOR	JDL	-	SMR	MAV	
B	07/23/2015	GENERAL REVISIONS	MEM	-	JJD	MAV	
A	07/01/2015	ISSUED FOR U.I. REVIEW	MEM	-	JJD	MAV	

No	Date	Revision	By	Chkd.	Engr.	Supv.
-	-	-	-	-	-	-

Drawn - Date 07/01/2015 Scale: 1"=20'  
 Chkd. - Design Engr. - Design Supv. -

GRADING AND DRAINAGE - SITE PLAN  
MIX AVENUE SUBSTATION

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	-	15238-417J

## Appendix D

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### Water Quality Volume Calculation Spreadsheet





**Water Quality Volume & Flow Calculations  
Mix Avenue  
Substation  
Hampden, Connecticut**

	Description	Symbol	Unit of Measure	Quantity
<b>Water Quality Volume (WQV)</b>	<b>Input</b>			
	Drainage Area	A	AC	2.50
	Percent Impervious Cover	I	%	20%
	<b>Calculations</b>			
	Volumetric Runoff Coefficient	R		0.230
	Water Quality Volume	WQV	ac-ft	<b>0.048</b>
<b>Water Quality Flow (WQF)</b>	<b>Input</b>			
	Design Precipitation	P	IN	1
	<b>Calculations</b>			
	Runoff Depth	Q	IN	0.230
	Runoff Curve Number*	CN		91
	Initial Abstraction (From Table 4-1, Ch 4, TR-55 Manual)	I <sub>A</sub>		0.198
	I <sub>A</sub> /P (Rounded)			0.20
	Time of Concentration (Min .10 Hours from Exhibit 4-III, TR-55)	T <sub>C</sub>	Hr	0.10
	Unit Peak Discharge (from Exhibit 4-III, Ch 4, TR-55 Manual)	q <sub>u</sub>	csm/ (mi <sup>2</sup> *in)	625
	Drainage Area	A	mi <sup>2</sup>	0.004
	Water Quality Flow	WQF	cfs	<b>0.56</b>
Date: September 24, 2015		Prepared By: SBM		

**Notes:**

1. All water quality calculations based on 2004 Connecticut Stormwater Quality Manual.
2. Shaded cells indicate numbers inputted from other sources.
3. Existing Conditions < 40% Imperviousness (10%), therefore need to retain 100% WQV of proposed site.

## Appendix E

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### Notice of Termination Form





# 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: <b>GSN</b>			
2. Fill in the name of the registrant(s) as indicated on the registration certificate: Registrant:			
3. Site Address: City/Town: _____ State: _____ Zip Code: _____			
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

## Appendix F

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### Sedimentation and Erosion Control Inspection Report Form



**SEDIMENTATION AND EROSION CONTROL INSPECTION REPORT  
THE UNITED ILLUMINATING COMPANY  
MIX AVENUE**

**INSPECTION INFORMATION**  
DATE:  
QUALIFIED INSPECTOR:  
RAIN EVENT   
WEEKLY   
SPECIAL

**WEATHER INFORMATION**  
CURRENT FORECAST:  
DATE OF LAST RAIN EVENT:  
AMOUNT OF LAST RAIN EVENT:

---

**GENERAL PROJECT COMPLIANCE**

APPROXIMATE CURRENT ACRES DISTURBED:		DUST CONTROL MEASURES ESTABLISHED:	Y / N
CONSTRUCTION ENTRANCE INSTALLED:	Y / N	SILT FENCE INSTALLED & FUNCTIONAL:	Y / N
WASHOUT AREA ESTABLISHED:	Y / N	INLET PROTECTION INSTALLED & FUNCTIONAL:	Y / N
WASTE DISPOSAL AREA ESTABLISHED:	Y / N	ALL OTHER E&S CONTROLS INSTALLED & FUNCTIONAL:	Y / N
IN-ACTIVE AREAS STABILIZED:	Y / N	STORMWATER DISCHARGE OBSERVED:	Y / N
DESCRIPTION OF STORMWATER DISCHARGE:			

---

**DISTRIBUTION:**

In my judgment the site is in / out of compliance with the terms and conditions of the Stormwater Pollution Control Plan and permit.

\_\_\_\_\_  
Signature of Qualified Inspector

\_\_\_\_\_  
Date

“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/Authorized Representative

\_\_\_\_\_  
Date

**ITEMS NOTED IN THIS INSPECTION:**

List specific items relating to erosion & sediment controls, implementation of the plan, description of stormwater discharges, and any water quality monitoring performed during the inspection.

ITEM #	ITEM NOTED	DESCRIPTION OF DEFICENCY	REMEDIAL ACTIONS REQUIRED	IN COMPLIANCE	DATE NOTED	CURRENT STATUS

**ITEMS NOTED IN THIS INSPECTION:**

\*\*Note: The item numbers listed above correspond to the circled numbering on the attached reference map.

**ADDITIONAL COMMENTS OR NOTES:**

- Additional Comments

## Appendix G

---

### Stormwater Monitoring Report Form (Turbidity Sampling Data)





**Connecticut Department of  
Energy & Environmental Protection**  
Bureau of Materials Management & Compliance Assurance  
Water Permitting & Enforcement Division

**General Permit for the Discharge of Stormwater and Dewatering Wastewaters from  
Construction Activities, issued 8/21/13, effective 10/1/13**  
**Stormwater Monitoring Report**

**SITE INFORMATION**

Permittee: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Business Phone: \_\_\_\_\_ ext.: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_  
 Site Name: \_\_\_\_\_  
 Site Address: \_\_\_\_\_  
 Receiving Water (name, basin): \_\_\_\_\_  
 Stormwater Permit No. GSN \_\_\_\_\_

**SAMPLING INFORMATION (Submit a separate form for each outfall)**

Outfall Designation: \_\_\_\_\_ Date/Time Collected: \_\_\_\_\_  
 Outfall Location(s) (lat/lon or map link): \_\_\_\_\_  
 Person Collecting Sample: \_\_\_\_\_  
 Storm Magnitude (inches): \_\_\_\_\_ Storm Duration (hours): \_\_\_\_\_  
 Size of Disturbed Area at any time: \_\_\_\_\_

**MONITORING RESULTS**

Sample #	Parameter	Method	Results (units)	Laboratory (if applicable)
1	Turbidity			
2	Turbidity			
3	Turbidity			
4	Turbidity			

(provide an attachment if more than 4 samples were taken for this outfall)

Avg = \_\_\_\_\_

**STATEMENT OF ACKNOWLEDGMENT**

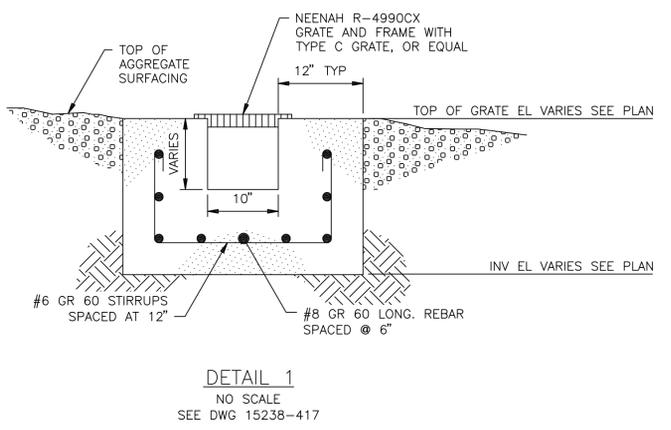
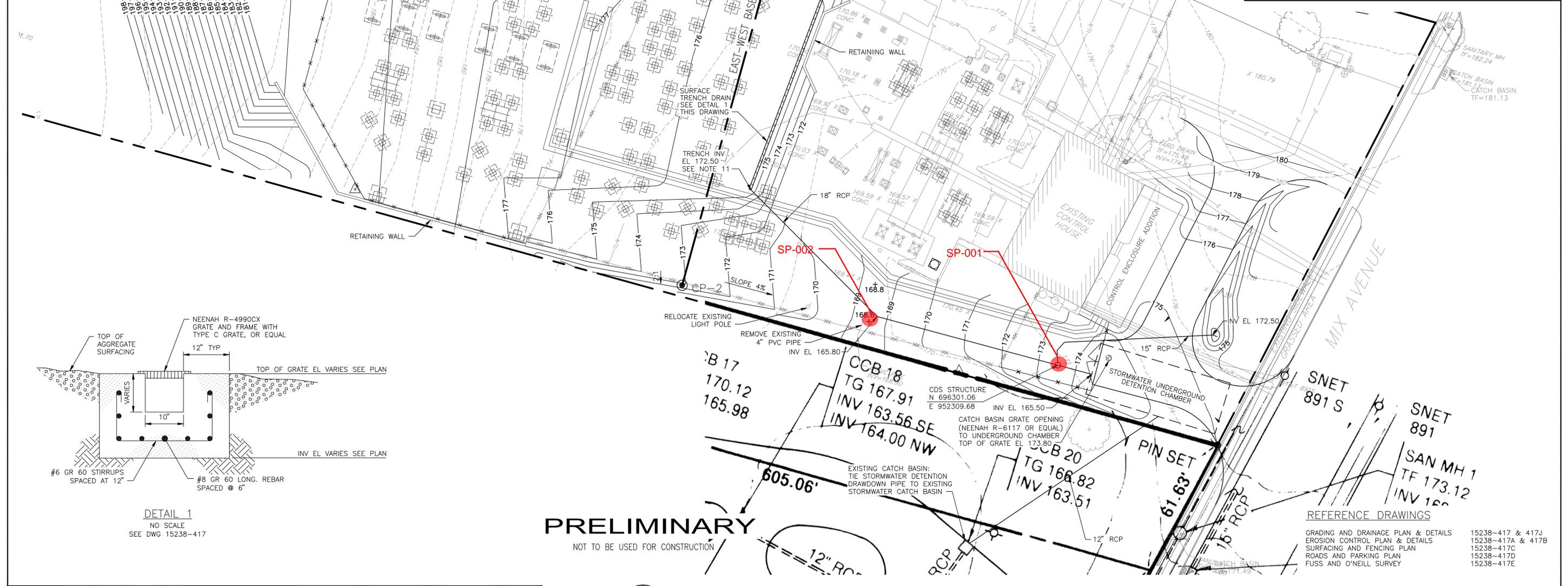
I certify that the data reported on this document were prepared under my direction or supervision in accordance with the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

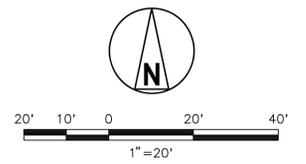
Please send completed form to:

DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION  
 BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
 79 ELM STREET  
 HARTFORD, CT 06106-5127  
 ATTN: NEAL WILLIAMS

PROJECT SURVEY CONTROL				GENERAL LEGEND		GENERAL NOTES	
CONTROL MONUMENT LOCATIONS							
MONUMENT NO.	NAD83 COORDINATES		ELEVATION				
	NORTHING	EASTING					
CP-1	696550.00	952065.00	-	---	PROPERTY LINE	1. GENERAL NOTES AND LEGEND APPLICABLE TO ALL 15238-417 SERIES DRAWINGS. 2. THE FINISHED GRADE SHALL BE SET 6 INCHES BELOW TOP OF CONCRETE UNLESS NOTED OTHERWISE. FINISHED GRADE SHOULD SLOPE AWAY FROM THE STRUCTURE AT A MINIMUM SLOPE OF 1%. 3. HORIZONTAL DATUM IS NAD 83. COORDINATES ARE BASED ON THIS. VERTICAL DATUM IS NAVD 88. 4. GRADE SHALL SLOPE UNIFORMLY BETWEEN FINISH SPOT ELEVATIONS AND CONTOURS SHOWN ON THE PLANS. 5. A SMOOTH VERTICAL TRANSITION SHALL BE PROVIDED AT ROAD INTERSECTIONS. 6. SLOPES SHALL BE 3(H):1(V) OR FLATTER, UNLESS NOTED OTHERWISE. 7. THE CONTRACTOR IS RESPONSIBLE FOR TYING FINISHED CONTOURS INTO EXISTING CONTOURS IN AREAS WHERE THERE IS INSUFFICIENT SURVEY DATA OF THE EXISTING GRADE. 8. EXISTING UTILITIES, CONTOURS AND SPOT ELEVATIONS ARE BASED ON THE 06/28/2013 SURVEY PERFORMED BY FUSS & O'NEILL. SEE DRAWING 417E. 9. SPOT ELEVATIONS, UTILITIES, AND CONTOURS ON THESE DRAWINGS ARE TOP OF FINISHED GRADE. SUBTRACT FINISH SURFACING MATERIAL THICKNESS TO OBTAIN TOP OF SUBGRADE. SEE DRAWING 15238-417E. 10. ALL AREAS OUTSIDE OF THE SUBSTATION THAT ARE DISTURBED DURING CONSTRUCTION SHOULD BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS AND STABILIZED UNLESS NOTED OTHERWISE. 11. FORM 24" WIDE TRENCH BOTTOM 2' BEYOND END OF NEENAH GRATING. PLACE 18" RCP VERTICALLY IN BOTTOM OF 24" WIDE TRENCH. PLACE TWO 45° RCP ELBOWS AND START HORIZONTAL RUN OF PIPE (0.50% SLOPE) AT INV EL 167.25. 12. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING UNDERGROUND UTILITY LOCATIONS AND ELEVATIONS BEFORE DIGGING. THE CONNECTICUT CALL BEFORE YOU DIG NUMBER IS 1-800-922-4455.	
CP-2	696335.74	952145.81	-	---	PROPOSED CONTOURS		
CP-3	696468.12	952362.00	-	---	DITCH/SWALE FLOW INDICATOR		
CP-4	696514.16	952195.00	-	---	GRADE SURFACE FLOW INDICATOR		
				123.45 +	NEW SPOT ELEVATION		
				---	EXISTING CONTOUR		
				---	EXISTING BUILDING/EQUIPMENT		
				---	EXISTING TREES/SHRUB		
				○*	RCP		
				○	EXISTING LIGHT POLE		
				○	EXISTING ELECTRIC MANHOLE		
				---	EXISTING UNDERGROUND UTILITY		



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION



REFERENCE DRAWINGS

GRADING AND DRAINAGE PLAN & DETAILS	15238-417 & 417J
EROSION CONTROL PLAN & DETAILS	15238-417A & 417B
SURFACING AND FENCING PLAN	15238-417C
ROADS AND PARKING PLAN	15238-417D
FUSS AND O'NEILL SURVEY	15238-417E

<b>BLACK &amp; VEATCH</b> Building a world of difference®							
DESIGNER	SMR	DRAWN	JRH	F	11/05/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	RRH - SMR MAV
CHECKED	-	DATE	-	E	10/28/2015	ISSUED FOR SWPCP PERMITTING-PROJECT 180592-CAP BANK AND REACTOR	JDL - SMR MAV
PROJECT #	180592			D	10/26/2015	ISSUED FOR PERMITTING - PROJECT 180592 - CAP BANK AND REACTOR	JDL - SMR MAV
				C	07/09/2015	ISSUED FOR BID - PROJECT 180592 - CAP BANK AND REACTOR	MEM - JJD MAV
				B	05/20/2015	ISSUED FOR UI 30% REVIEW - PROJECT 180592 - CAP BANK AND REACTOR	MEM - JJD -
				A	08/09/2013	ISSUED FOR UI 30% REVIEW	JRH - SMR -
NO	DATE	REVISION	DRN	CHKD	DESN	SUPR.	

No	Date	Revision	By	Chkd.	Engr.	Supv.

**ui**  
The United Illuminating Company

Drawn: JRH Date: 08/09/2013 Scale: 1"=20'  
 Design Engr.: SMR Design Supv.: -

GRADING AND DRAINAGE - SITE PLAN  
MIX AVENUE SUBSTATION

CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
-	091560	15238-417