Stormwater Pollution Control Plan

Asnuntuck Community College
New Manufacturing Technology Center
BI-CTC-488

Enfield, Connecticut

July 2015

FUSS & O'NEILL

146 Hartford Road
Manchester, Connecticut 06040

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1 Introduction

This Stormwater Pollution Control Plan is required as part of the registration process for the *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* (General Permit), dated October 1, 2013.

The proposed New Manufacturing Technology Center at Asnuntuck Community College, Project Number BI-CTC-488, herein referred to as the 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 identify procedures and practices that will minimize pollution caused by site use during and after construction. Erosion and sediment control requirements are also shown on the plans. A site location map is provided in *Attachment A* of the General Permit Registration Form, which is in *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. 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 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 Project will not be considered complete until disturbed areas have been satisfactorily stabilized for at least three months, erosion has been repaired, and 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 found in *Appendix B* of this plan.

2 Site Description

Asnuntuck Community College is a public educational institution located at 170 Elm Street in Enfield, Connecticut. The campus property is comprised of a total area of approximately 36.3 acres, which includes an academic building, parking areas, sports fields, and a walking track. Topography of the existing site varies from mildly sloping to relatively flat. According to NRCS soil mapping, which is attached as *Figure 1*, a large portion of the site is composed of Urdothents and Urban Land but other soil types are also present such as Ninigret, Tisbury, and White Sandy Loam. The existing drainage system has two existing outlet points that discharge into Freshwater Brook located at the southern end of the property.

A manufacturing technology center is proposed to be constructed south of the existing school building during this project. The project area is approximately 5 acres. The building will have a footprint of 26,970 square feet and there will also be space reserved to the east for a future 5,000 square foot addition. In addition to the proposed building, associated site features, such as a connecting canopy, 42-vehicle parking lot, sidewalks, and landscaping, will be constructed adjacent to the building. The

building will be served by utilities that will be connected to existing utilities located on site or adjacent to the site.

Additions to the site drainage system will also be installed to manage stormwater runoff created by the proposed building and site improvements. Water quality will be improvement and peak runoff will be mitigated prior to entering the drainage system through the use of three water quality/detention basins. The proposed drainage infrastructure will be connected to the existing on-site drainage system and discharge at the existing outfalls. The two existing outfalls are located at the southern portion of the site and discharge into Freshwater Brook. Design plans and details can be found in *Appendix C*.

2.1 Scope of Construction Activities

The proposed construction activities at the site include construction of the following:

- 26,970 square foot academic building and connecting canopy
- 42-vehicle parking lot
- Walkways and handicap ramps
- Stormwater management systems
- Utilities (water, gas, electric, sanitary sewer, etc.)
- Landscaping

2.2 Area of Disturbance

The total disturbed area within the project site will be approximately 5.0 acres.

2.3 Stormwater Discharge Information

Fuss & O'Neill prepared a detailed drainage report entitled "Stormwater Management Narrative" dated July 2015 for Asnuntuck Community College, New Manufacturing Technology Center. The report is referenced as *Appendix D* of this plan, and provided under separate cover. It was prepared to evaluate existing and proposed hydrologic conditions of the site and predict the impacts that the proposed development will have on the receiving surface water body. The report also presents design calculations for the peak runoff rate and volume of stormwater leaving the site, the runoff coefficient of the site after construction, and water quality measures taken to improve the quality of runoff from the developed site.

Topography of the existing site varies from mildly sloping to relatively flat. The project area is located to the south of the existing school building. Currently, stormwater runoff from the project area flows across the athletic fields, stone dust track, or parking area to the existing storm conveyance systems. The existing drainage system has two outlet points that discharge into Freshwater Brook located at the southern end of the property.

As a result of the proposed development, additions to the site drainage system will be constructed in order to manage runoff created by the proposed building and site improvements. Water quality will be improvement and peak runoff will be mitigated prior to entering the drainage system through the use of three water quality/detention basins.

The estimate of the average runoff coefficient after construction activities are completed will be 88 for the project area.

Despite the introduction of additional impervious surfaces, three water quality/detention basins will reduce the overall peak runoff rates leaving the site. The estimated Post-construction water quality improvement incorporates Best Management Practices (BMPs) and the design incorporates features to help remove 80% of Total Suspended Solids (TSS) that may be present in runoff from the proposed site improvements. The stormwater management design is consistent with the guidelines established in the Connecticut Stormwater Quality Manual as well as Connecticut and federal stormwater regulations.

A small area of the site is within FEMA flood zone AE; however, the project area is outside of this flood zone. A portion of the relevant Flood Insurance Rate Map (Map Number 09003C0227F, Panel Number 227 of 675, Effective Date 9/26/2008) has been included as *Figure 2*.

2.4 Receiving Waters

The site is located within the Connecticut Major Basin, specifically within the Freshwater Brook #4003 sub-basin area as indicated within *Figure 3*. The onsite stormwater system drains to Freshwater Brook at the southern end of the site. The brook was selected as the Design Point for the drainage models.

2.5 Wetlands on Site

The extent of existing wetlands within the property boundary is approximately 1,000 linear feet along Freshwater Brook, as delineated on "Topographic & Utility Survey, Prepared for Asnuntuck Community College, 170 Elm Street, Enfield, Connecticut", Prepared by Fuss & O'Neill, Inc., Drawing #VT-01, Dated 4/22/2015, Scale: 1"=80'. A copy of this drawing has been included as Figure 4. There will be no alteration to the wetlands on-site.

3 Construction Sequencing

The Contractor shall be aware that clearing, grubbing, stripping, and associated earthwork operations all have significant potential to cause erosion and sedimentation until complete stabilization of the site has occurred. Erosion and sedimentation controls are to be modified as grades change to protect areas adjacent to the site.

The project is proposed to be constructed in one phase beginning in the spring of 2016 with a duration of 12 months. Normal working hours for the site will be 7:00 AM to 5:00 PM.

The general sequence of construction shall proceed as follows:

Pre-Construction: Obtain required permits, authorizations, and approvals from State and Local authorities, as well as private entities having jurisdiction over the project. Make required notifications to regulatory authorities and provide copies of such permits, authorizations, approvals, and notifications to the Engineer.

Construction (approximately 5.0 acres of disturbance /365 calendar days)
Improvements are proposed to be constructed starting in the spring of 2016 and will include the following:

- Establishing construction access and implement erosion and sedimentation control measures.
- Inspecting erosion controls.
- Performing earthwork, demolition, and other necessary site preparation.
- Constructing new building and canopy.
- Constructing new site utilities and connect to existing services.
- Constructing new drainage system and connect to existing infrastructure.
- Constructing new site features such as parking areas, walkways, ramps, and water quality basins.
- Installing new landscaping.
- Removing temporary erosion and sedimentation control measures after site is stabilized.

4 Control Measures

The following paragraphs address the controls and measures to be implemented on this 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 Site Erosion Control Plan sheets within the Design Development Drawings and Details included as *Appendix C*. Calculations for stormwater control measures can be found in the Stormwater Management Narrative included as *Appendix D*.

4.1 Erosion and Sediment Controls

The goal of this plan is to control erosion at the site and to prevent movement of sediment into adjacent wetlands, watercourses or storm sewer systems. Note that erosion and sediment controls shall conform to the requirements of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, which will hereafter be referred to as the "Guidelines", and the 2004 Connecticut Stormwater Quality Manual (CTSWQM). 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.

When construction activities have permanently ceased or when final grades are reached in any portion of the site, 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 within seven days in accordance with the Guidelines. Areas that will remain disturbed beyond he 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 redevelopment are as follows:

Temporary Vegetative Cover: All exposed areas that will be inactive for more than seven days, or immediately 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 2lbs./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 90lbs./1,000 sq. ft. Where grass predominates, fertilize according to a soil test at a minimum application rate of 1 lb. of nitrogen per 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. Planting bed preparation and seeding shall be in accordance with the technical specifications for the project. Seeding shall only occur between March 15 and July 1 and August 1 and October 15.

4.1.2 Structural Measures

Structural practices shall be implemented to control the movement of sediment and minimize 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 to receiving wetlands, 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.

- **Sediment Control at Catch Basins:** To prevent sediment from clogging the storm water sewer system after its installation, a wall of haybales will be installed around catch basin grates as

per the detail provided in the drawings. Catch basin inserts may also be installed around catch basins. Haybales shall be replaced and inserts shall be emptied as necessary. Sediment control at catch basins shall be removed only when the entire site has been permanently stabilized.

- **Construction Entrance/ Anti-Tracking Pad:** 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 anti-tracking pad shall not be less than the width of the ingress or egress. Adjacent roadways shall be swept daily to removed material that may be tracked onto pavement.

- **Temporary Sediment Trap:** To minimize the transport of sediment from stormwater before being discharged and to allow sediment to settle out before being infiltrated temporary sediment traps are to be used. Temporary sediment trap details and locations are provided on the drawings. Temporary sediment traps shall remain as temporary measures during construction to protect natural vegetation. Temporary Sediment Trap sizing calculations are provided on the drawing sheet Site Sediment Control Plan, CE-101.

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.

- **Silt Fence and Hay Bales:** Inspect 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 silt fence or hay bales is no longer required shall be removed and placed in a stockpile surrounded by silt fence in a location suitable to the Permittee.

- **Temporary Sediment Traps:** Inspect temporary sediment traps at least once per week and within 24 hours after each rainfall with an amount 0.5 inch or greater. Inspect the outlet for damage. Any required repairs should be made immediately. Observe trap for adequate filtration performance. Sediment deposits should be removed when they reach approximately one-half of the minimum required volume of the wet storage. Dewater trap and restore the trap to original

dimensions, as necessary to provide proper function. Sediment shall be disposed of on-site as non-structural fill.

4.2 Dewatering Wastewaters

Dewatering on this site is not anticipated. However, in such a case where dewatering is necessary, 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.

Final stormwater management structures shall not be used for construction dewatering activities.

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 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. Grassed areas will also serve as a filter to remove sediment from runoff if permanently stabilized areas are properly maintained. Perimeter controls (i.e., silt fence) 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.

Water quality measures have been incorporated into the design using BMPs to treat stormwater runoff prior to discharging to the brook. The goal of the post-construction stormwater management is to remove floatables and 80% of the total suspended solids from stormwater. The design meets the intent, in part, through the implementation of the following:

- On-site catch basins will be inspected a minimum of once every three months, and shall be cleaned out when 25% of the operating depth is occupied by settled sediment and debris.
- Private paved surfaces will be swept of sands and sediments after the winter seasons. Trash and sediment will be also be removed throughout the year as required.

- Water quality basins have been implemented into the drainage design in order to provide natural filtration of stormwater before entry into the drainage system.

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 meets the intent of the CTSWQM, the Guidelines, as well as Connecticut and federal stormwater regulations.

The design provides for treatment of the water quality volume (WQV). The WQV equates to the first inch of runoff that contains the majority of pollutants. The WQV calculations for this project can be found in the Stormwater Management Narrative, included as Appendix D. Calculations indicate that approximately 0.14 acre-feet of water quality volume must be retained on-site. This is accomplished by the implementation of three water quality basins into the drainage design. Water quality basin B-1E provides approximately 0.15 acre-feet of storage volume. Water quality basin B-1W provides approximately 0.11 acre-feet of storage volume. Water quality basin B-1S provides approximately 0.14 acre-feet of storage volume. A total volume of approximately 0.40 acre-feet of available stormwater storage is provided by the basins. The stormwater treatment system has been designed, and shall be installed and maintained to meet the intent of the Stormwater Quality Manual.

4.4 Other Controls

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

Do not operate heavy equipment within the footprint of the water quality basins to prevent compaction of the underlying soils.

4.4.1 Waste Disposal

The following BMPs shall be implemented to minimize the discharge of litter, debris, building 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 ½ 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 and LID measures have been utilized throughout the project area. A detailed erosion and sediment (E&S) control plan has been prepared for the site. During construction, measures will be taken to reduce erosion and manage sedimentation from disturbed surfaces. The following LID BMP will be employed:

- Water quality basins will be installed on the site to improve water quality from the parking areas and recharge the groundwater.

Despite the introduction of new impervious surfaces, water quality basins will reduce the overall peak runoff leaving the site. The Stormwater Management Narrative found in *Appendix D* provides figures for the location of site slopes and natural features, watershed drainage patterns, soil information,

infiltration areas, and post-construction stormwater management features. The Stormwater Management Narrative also provides design calculations for stormwater runoff reductions, water quality volumes and flow rates, velocity dissipation, and effective impervious cover for the site.

6 Inspections

6.1 Plan Implementation Inspections

Within the first 30 days following commencement of the construction activity on the site, the permittee shall contact the owner to arrange for the civil engineer of record to inspect the site. The site 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 site 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 for the site 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, as defined by the General Permit, to inspect the site at least once every seven calendar days 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, and inspection shall occur immediately upon the start of the subsequent normal working hours. Where sites have been temporarily or finally stabilized, 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 entering the drainage system. 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, summarizing 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.

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 site, normal working hours for stormwater monitoring shall be Monday through Friday, 7 am to 6 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 temporality suspended if at any time conditions exist that may reasonable pose a threat to the safety of the person taking the sample (i.e. high winds, lightning, flooding, intense rainfall). Sampling shall resume once the unsafe conditions are no longer present. If there is no stormwater discharge during a month, sampling is not required.

Sampling and monitoring responsibilities shall be assumed by the permittee (the Contractor).

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 all point source discharges of stormwater from disturbed areas. Sampling shall be done in accordance with 40 CFR Part 136/ASTM D1889-00. Sampling locations can be found in *Appendix G* and shall be identified in the field with a flag, stake, or other visible marker.

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 CTDEEP in accordance with the provisions outlined in the General Permit.

7.3 Sampling Points

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

- Sampling Point #1 – Existing storm manhole east of work area. Sampling should be conducted at the 12" RCP which flows into the structure from the west.

- Sampling Point #2 – Existing outfall for the western drainage network. Sampling should be conducted at the headwall.

8 Contractors

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*.

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

9.1 Endangered and Threatened Species

Fuss & O'Neill conducted a review of the map titled Natural Diversity Data Base (NDDB) Areas in Enfield, CT dated December 2014 published by the Connecticut Department of Energy and Environmental Protection (see *Figure 5)*. Preliminary review verified that the project is not located within or within 0.25 miles of an area known to contain State and Federal Listed Species and Significant Natural Communities. Therefore, a self-assessment was sufficient and a NDDB review was not requested.

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 measure shall be removed. A blank copy of the termination form is provided in *Appendix E*.

Appendix C

Drawings and Details

CIVIL GENERAL NOTES

GENERAL

1. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
2. DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
3. PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
4. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDINGS AND ADJACENT SITE ELEMENTS INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. BASE PLAN: THE PROPERTY LINES DEPICTED WERE TAKEN FROM A SURVEY ENTITLED, " EXISTING CONDITION SURVEY PREPARED FOR LAND TO BE UNDER THE CUSTODY, CARE, AND CONTROL OF THE BOARD OF TRUSTEES OF COMMUNITY-TECHNICAL COLLEGES ON BEHALF OF ASNUNTUCK COMMUNITY COLLEGE, ENFIELD, CONNECTICUT", SCALE 1"=80', DATE 10/25/2007 BY WILLIAM R. PALMBERG & SON, LLC. THE TOPOGRAPHY AND PHYSICAL FEATURES DEPICTED ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY FUSS & O'NEILL, INC. DURING APRIL 2015.
6. TOPOGRAPHIC ELEVATIONS ARE BASED ON NAVD88 DATUM.
7. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM CLARENCE WELTI ASSOCIATES, INC.
8. WETLANDS WERE DELINEATED BY JOSHUA WILSON, PWS AND FIELD LOCATED BY FUSS & O'NEILL, INC. IN APRIL 2015.

WORK RESTRICTIONS

1. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
2. WORK IS RESTRICTED TO THE HOURS OF TO THE HOURS 7:00 AM TO 5:00 PM ON MONDAY THROUGH SATURDAY.

REGULATORY REQUIREMENTS

1. WITHIN LOCAL RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS.
2. WITHIN STATE RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS/SUPPLEMENTS.
3. PROVIDE TRAFFIC SIGNAGE AND PAVEMENT MARKINGS IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
5. DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
6. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE CONNECTICUT DEEP STORMWATER AND DEWATERING WASTEWATER FROM CONSTRUCTION ACTIVITIES GENERAL PERMIT PROCESS. CONNECTICUT DIVISION OF CONSTRUCTION SERVICES HAS SUBMITTED INFORMATION TO THE DEEP TO SATISFY THIS GENERAL PERMIT. THE CONTRACTOR MUST HAVE A COPY OF THIS GENERAL PERMIT ON SITE AT ALL TIMES.

EROSION AND SEDIMENT CONTROL

1. INSTALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY WORK ON THE SITE. REFER TO THE EROSION AND SEDIMENT CONTROL DRAWINGS.
2. IMPLEMENT ALL NECESSARY MEASURES REQUIRED TO CONTROL STORMWATER RUNOFF, DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE. PERFORM CORRECTIVE ACTION AS NEEDED FOR EROSION CLEANUP AND REPAIRS TO OFF SITE AREAS, IF ANY, AT NO COST TO OWNER.
3. INSPECT AND MAINTAIN EROSION CONTROL MEASURES PER THE SCHEDULE IN THE EROSION AND SEDIMENT CONTROL DRAWINGS. DISPOSE OF SEDIMENT IN AN UPLAND AREA. DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
4. PERFORM CONSTRUCTION SEQUENCING IN SUCH A MANNER TO CONTROL EROSION AND TO MINIMIZE THE TIME THAT EARTH MATERIALS ARE EXPOSED BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL MEASURES. CLEAN SEDIMENT AND DEBRIS FROM TEMPORARY MEASURES AND FROM PERMANENT STORM DRAIN AND SANITARY SEWER SYSTEMS.

DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS, UNLESS OTHERWISE NOTED.
2. THE SITE PREPARATION PLAN IS PROVIDED FOR INFORMATION ONLY AND MAY NOT INDICATE ALL ITEMS REQUIRED TO BE DEMOLISHED. PERFORM A PRE-BID SITE INSPECTION. COORDINATE DEMOLITION OF UNIDENTIFIED UTILITIES OR STRUCTURES WITH OWNER. DEMOLISH STRUCTURES, SITE IMPROVEMENTS, UTILITIES, ETC. AS REQUIRED TO CONSTRUCT PROPOSED TO CONSTRUCT PROPOSED FACILITY AND UTILITY SERVICES.

CONSTRUCTION LAYOUT

1. PROVIDE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED SITE IMPROVEMENTS. FIELD VERIFY EXISTING PAVEMENT AND GROUND ELEVATIONS AT THE INTERFACE WITH PROPOSED PAVEMENTS AND DRAINAGE STRUCTURES BEFORE START OF CONSTRUCTION.
2. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, FIELD VERIFY PROPOSED UTILITY ROUTES AND IDENTIFY ANY INTERFERENCES OR OBSTRUCTIONS WITH EXISTING UTILITIES OR PUBLIC RIGHTS-OF-WAY.
3. IMMEDIATELY INFORM THE ENGINEER IN WRITING IF EXISTING UTILITY CONDITIONS CONFLICT OR DIFFER FROM THAT INDICATED AND IF THE WORK CANNOT BE COMPLETED AS INDICATED.
4. DIMENSIONS ARE FROM FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS NOTED OTHERWISE.
5. BOUNDS OR MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.

EARTHWORK

1. NOTIFY UTILITY LOCATOR SERVICE AT LEAST 72 HOURS BEFORE STARTING EXCAVATION.
   CT: "CALL BEFORE YOU DIG" AT 1-800-922-4455.
2. STOP WORK IN THE VICINITY OF SUSPECTED CONTAMINATED SOIL, GROUNDWATER OR OTHER MEDIA. IMMEDIATELY NOTIFY THE OWNER SO THAT APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN. RESUME WORK IN THE IMMEDIATE VICINITY ONLY UPON DIRECTION BY THE OWNER.
3. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, PERFORM EARTHWORK OPERATIONS TO SUBGRADE ELEVATIONS. SEE DRAWINGS BY OTHERS FOR WORK ABOVE SUBGRADE.

UTILITIES

1. TERMINATE EXISTING UTILITIES IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. COORDINATE UTILITY SERVICE DISCONNECTS WITH UTILITY REPRESENTATIVES.
2. THE TYPE, SIZE AND LOCATION OF DEPICTED UNDERGROUND UTILITIES ARE APPROXIMATE REPRESENTATIONS OF INFORMATION OBTAINED FROM FIELD LOCATIONS OF VISIBLE FEATURES, EXISTING MAPS AND PLANS OF RECORD, UTILITY MAPPING, AND OTHER SOURCES OF INFORMATION OBTAINED BY THE ENGINEER. ASSUME NO GUARANTEE AS TO THE COMPLETENESS, SERVICEABILITY, EXISTENCE, OR ACCURACY OF UNDERGROUND FACILITIES. FIELD VERIFY THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES.
3. PAY ALL FEES AND COSTS ASSOCIATED WITH UTILITY MODIFICATIONS AND CONNECTIONS, REGARDLESS OF THE ENTITY THAT PERFORMS THE WORK.
4. COORDINATE THE WORK AND WORK SCHEDULE WITH UTILITY COMPANIES. PROVIDE ADEQUATE NOTICE TO UTILITIES TO PREVENT DELAYS IN CONSTRUCTION.
5. INTERIOR DIAMETERS OF STORM DRAIN AND SANITARY SEWER STRUCTURES SHALL BE DETERMINED BY THE PRECAST MANUFACTURER, BASED ON THE INDICATED PIPE SYSTEM LAYOUT AND LOCAL MUNICIPAL STANDARDS.

   MINIMUM INTERIOR DIAMETERS:
   0 TO 20 FEET DEEP: 4 FEET.
   20 FEET OR GREATER; 5 FEET.
5. RIM ELEVATIONS FOR MANHOLES, VALVE COVERS, GATE AND PULL BOXES, AND OTHER STRUCTURES ARE APPROXIMATE. SET OR RESET RIM ELEVATIONS AS FOLLOWS:

   IN PAVEMENTS AND CONCRETE SURFACES: FLUSH
   IN SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   IN LANDSCAPE, SEEDED, AND OTHER EARTH SURFACE AREAS:
   1 INCH ABOVE SURROUNDING AREA; TAPER EARTH TO RIM ELEVATION.
6. INSTALL PROPOSED PRIVATE UTILITY SERVICES ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY THE AUTHORITY HAVING JURISDICTION (WATER, SEWER, GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). COORDINATE FINAL DESIGN LOADS AND LOCATIONS WITH OWNER AND ARCHITECT.

PAVEMENT

1. AT A MINIMUM, CONSTRUCT ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

SITE RESTORATION

1. PROVIDE 6 INCHES OF TOPSOIL AND SEED TO AREAS DISTURBED DURING CONSTRUCTION AND NOT DESIGNATED TO BE RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) UNLESS OTHERWISE NOTED.
2. REPAIR DAMAGES RESULTING FROM CONSTRUCTION LOADS, AT NO ADDITIONAL COST TO OWNER.
3. RESTORE AREAS DISTURBED BY CONSTRUCTION OPERATIONS TO THEIR ORIGINAL CONDITION OR BETTER, AT NO ADDITIONAL COST TO OWNER.

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fuss.com

CONSTRUCTION DOCUMENTS

drawing title: SITE GENERAL NOTES

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

CAD no.
project no. 2011-1084.B20

date 08.05.2015
scale N.A.
drawn by LMD
approved by JOO
drawing no. CN-101

PROTECT DUGOUT TO REMAIN

12' +/- OF GUIDE RAIL TO BE REMOVED

REMOVE EXISTING CATCH BASIN, PLUG PIPE END

REMOVE CHAIN LINK FENCE

REMOVE SIGN

LIGHT TO REMAIN

APPROX. LIMITS OF CURB TO REMAIN

HANDHOLE TO BE RELOCATED

CONTRACT LIMIT LINE

REMOVE AND DISCARD EXISTING GUARDRAIL

REMOVE EXISTING LIGHT POLES

REVISE/REMOVE STRIPING PER LAYOUT PLAN (TYP)

SEE UTILITY PLAN FOR LIMIT OF EXISTING PIPING TO REMAIN

NOTE: STRIP AND STOCKPILE TOPSOIL IN AREA OF DISTURBANCE

REMOVE AND REINSTALL A SECTION OF FENCE FOR UTILITY INSTALLATIONS

APPROX. LIMITS OF BORING TO BE BACKFILLED

REMOVE CATCH BASIN

APPROXIMATE LIMITS OF IRRIGATION PIPING TO BE REMOVED AND REPLACED AS DIRECTED BY OWNER

RESET HYDRANT

REMOVE CONCRETE RAMP

REMOVE SIGN

GAZEBO TO BE RELOCATED

REMOVE TRACK (STOCK PILE MATERIAL)

REMOVE STUMP

GAZEBO TO BE RELOCATED

REMOVE BOLLARDS

REVISE/REMOVE STRIPING PER LAYOUT PLAN (TYP)

RELOCATE EXISTING LIGHT POLE. SEE MEP PLANS.

REVISE/REMOVE STRIPING PER LAYOUT PLAN (TYP)

SAW CUT AND REMOVE PAVEMENT

PADS AT DOORS TO REMAIN

STAIRS TO REMAIN

REMOVE SIGN

FENCE TO REMAIN

REMOVE CONCRETE WALK

REMOVE CONCRETE WALK

EXISTING TREES TO BE REMOVED

REMOVE CONCRETE WALK

REMOVE RAIL

REMOVE BITUMINOUS WALK AND CURB

TRANSFORMER

EMPTY CONDUIT POSSIBLE IRRIGATION

IRRIGATION VAULT

TEST PIT

BORING 3

BORING 6

BORING 7

ELECTRIC HANDHOLE

EMERGENCY CALL BOX

ASNUNTUCK COMMUNITY COLLEGE

N 29°21'57" W 835.75'

N 23°19'14" W 531.7'

S 74°18'00" E 1217.64'

S 74°18'00" E 585.11'

LEGEND:

- CONCRETE WALK TO BE REMOVED
- BITUMINOUS WALK TO BE REMOVED
- BITUMINOUS PAVEMENT AND CURB TO BE REMOVED
- STONE DUST TRACK TO BE REMOVED (STOCK PILE STONE DUST)
- REMOVE AND REPLACE FENCE
- INFILTRATION TEST PIT

PROJECT NORTH

SCALE: 1" = 30' - 0"

CONSTRUCTION DOCUMENTS

drawing title: SITE PREPARATION PLAN

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

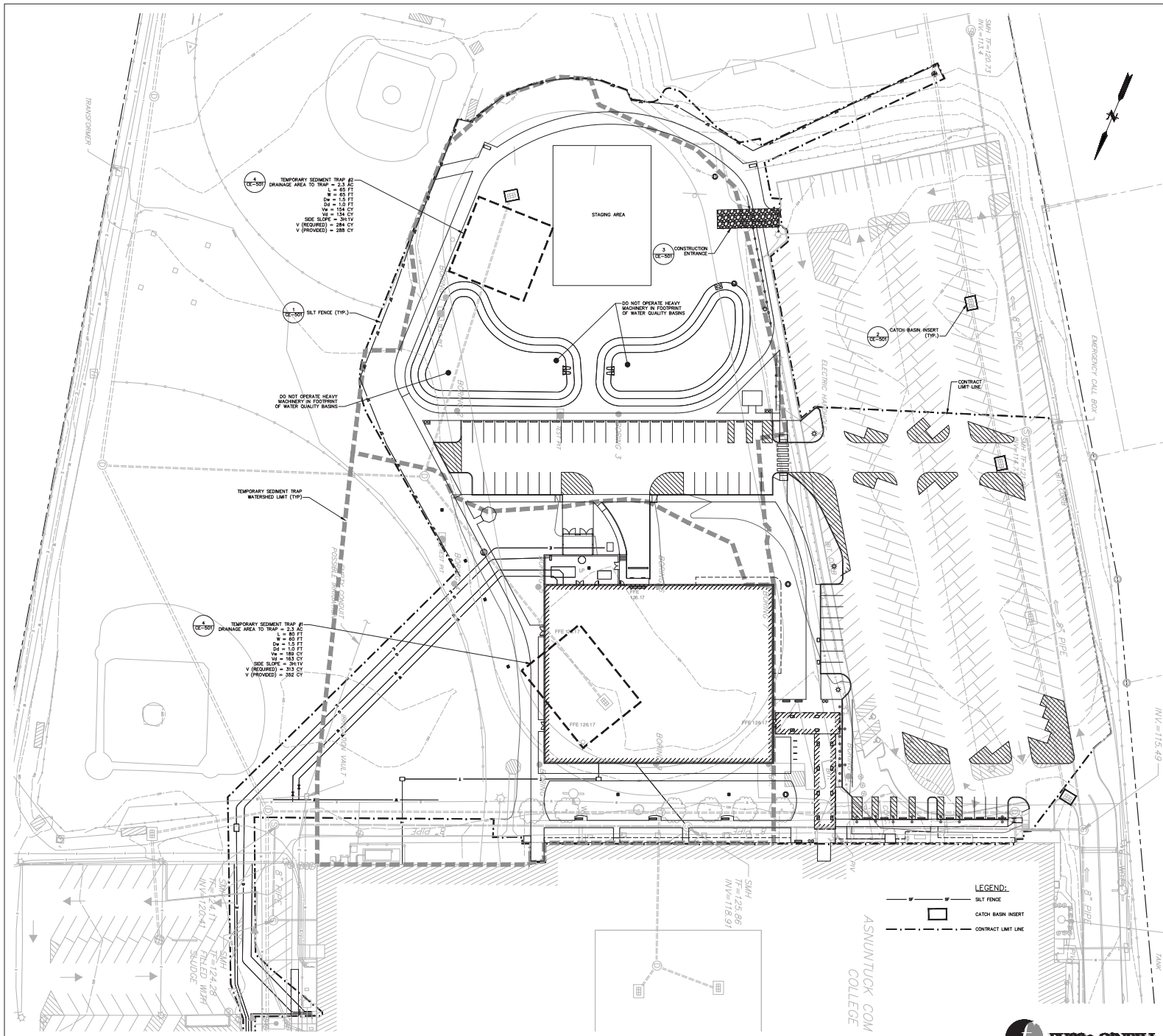
DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

date: 08.05.2015
scale: 1" = 30'
drawn by: LMD
approved by: JOO
drawing no.: CP-101

project: Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

CAD no.
project no.: 2011-1084.B20

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com



EROSION & SEDIMENT CONTROL NOTES

1. CONSTRUCTION STANDARDS — CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT EDITION OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (CT DEP BULLETIN 34). ALL MEASURES SHALL BE MAINTAINED AND UPGRADED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.

2. PLAN IMPLEMENTATION — IMPLEMENT THIS EROSION AND SEDIMENT CONTROL PLAN. THIS IMPLEMENTATION INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES UNTIL PERMANENT STABILIZATION IS ACHIEVED, INFORMING ALL SUBCONTRACTORS OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER MUNICIPAL AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN TO THE NEW OWNER IF THE TITLE OF THE LAND IS TRANSFERRED PRIOR TO ACHIEVING PERMANENT STABILIZATION.

3. INSTALLATION SCHEDULE — INSTALL THE CONSTRUCTION ENTRANCE BEFORE CONSTRUCTION TRAFFIC INTO AND OUT OF THE PROJECT AREA BEGINS. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO STUMP REMOVAL AND CONSTRUCTION. INSTALL ADDITIONAL CONTROL MEASURES DURING THE CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE OWNER, HIS AGENTS OR AGENTS OF THE MUNICIPALITY.

4. FUGITIVE DUST — CONTROL FUGITIVE DUST USING WATER SPRAYS OR CALCIUM CHLORIDE ON SOIL SURFACES, SWEEPING PAVED AREAS, TEMPORARY WINDBREAKS OR NON-ASPHALTIC SOIL TACKIFIERS.

5. HAY BALE LIFE SPAN — INSTALL HAY BALES WHERE PROTECTION AND EFFECTIVENESS IS REQUIRED FOR LESS THAN 90 DAYS. OTHERWISE, INSTALL SILT FENCE.

6. CATCH BASINS — PROTECT CATCH BASINS WITH PROPER CONTROLS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

7. STOCKPILES — ENCIRCLE STOCKPILES OF ERODIBLE SOIL WITH A HAY BALE OR SILT FENCE BARRIER. THE SIDE SLOPES OF ERODIBLE STOCKPILED MATERIAL SHALL BE NO STEEPER THAN 2:1. STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE FORMED.

8. TOE OF SLOPE — ESTABLISH AN EROSION CONTROL BARRIER (SILT FENCE OR HAY BALE BARRIER) APPROXIMATELY 5 TO 10 FEET FROM THE PROPOSED TOE OF THE CUT OR FILL AREA PRIOR TO BEGINNING EARTHWORK.

9. SEDIMENT REMOVAL — SEDIMENT REACHING ½ THE HEIGHT OF THE EROSION CONTROL BARRIER SHALL BE REMOVED. REMOVE AND DISPOSE OF SEDIMENT IN A MANNER CONSISTENT WITH THE INTENT OF THE PLAN.

10. SOIL STABILIZATION SCHEDULE — APPLY PERMANENT SOIL STABILIZATION MEASURES TO ALL GRADED AREAS WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE. APPLY TEMPORARY SOIL STABILIZATION MEASURES IF FINAL GRADING IS TO BE DELAYED MORE THAN 30 DAYS.

11. TEMPORARY SEEDING — TEMPORARILY SEED ERODIBLE SOILS THAT WILL BE EXPOSED GREATER THAN 1 BUT LESS THAN 12 MONTHS WITHIN THE FIRST 7 DAYS OF SUSPENDING GRADING OPERATIONS. APPLY LIME AT A RATE OF 90 LBS/1000 SQ. FT. APPLY 10-10-10 FERTILIZER AT A RATE OF 7 ½ LBS/1000 SQ. FT. APPLY PERENNIAL RYE GRASS AT A RATE OF 2 LBS/1000 SQ. FT. TO A DEPTH OF ½ INCH. OPTIMUM SEEDING DATES ARE MARCH 15 TO JULY 1 AND AUGUST 1 TO OCTOBER 15. MULCH FOR SEED APPLIED WITHIN THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 80%-95% SOIL COVERAGE. MULCH FOR SEED APPLIED OUTSIDE OF THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 95%-100% COVERAGE.

12. PERMANENT SEEDING — SEED PERMANENT LAWN AREAS IN ACCORDANCE WITH THE SPECIFICATIONS.

13. INSPECTION — THE OWNER SHALL SECURE THE SERVICES OF A SOIL SCIENTIST OR PROFESSIONAL ENGINEER TO VERIFY IN THE FIELD THAT THE CONTROLS REQUIRED BY THIS PLAN ARE PROPERLY INSTALLED AND MAINTAINED. THESE INSPECTIONS SHALL BE NOT LESS FREQUENTLY THAN WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM HAVING A RAINFALL AMOUNT OF 0.1 INCH OR GREATER. FOLLOWING THESE INSPECTIONS, A WRITTEN REPORT SHALL BE PREPARED, INFORMING THE OWNER OR HIS AGENT NOT LESS FREQUENTLY THAN WEEKLY AND THE MUNICIPALITY NOT LESS FREQUENTLY THAN MONTHLY OF OBSERVATIONS, MAINTENANCE, AND CORRECTIVE ACTIVITIES UNDERTAKEN.

Trap Capacity

"The temporary sediment trap shall have an initial storage volume of 134 cubic yards per acre of drainage area, half of which shall be in the form of wet storage to provide a stable settling medium. The remaining storage volume shall be in the form of drawdown (dry storage)..."

Temporary Sediment Trap #1

Drainage Area (ac)	A_t=	2.3	ac
Volume of Storage per acre of drainage area (cy)	V_r=	134	cy
Volume of Storage Required (cy)	V_r=	313	cy
Length of Sediment Trap Top	L_t=	80	ft
Width of Sediment Trap Top	W_t=	60	ft
Length of Sediment Trap Bottom	L_b=	65	ft
Width of Sediment Trap Bottom	W_b=	45	ft
Depth of Water Storage (3' Max.)	D_w=	1.5	ft
Depth of Dry Storage (4' Max.)	D_d=	1	ft
Sideslopes		3	ft/ft

Wet Storage Volume Approximated

Equation $V_w = 0.85 \times A_w \times D_w$

surface area of flood area at stone base(sf) A_w= 3996

wet storage volume (cf) V_w= 189 cy

Dry Storage Volume Approximated

Equation $V_d = [(A_w + A_b) / 2] \times D_d$

surface area of flood area at stone wier(sf) A_w= 4800

dry storage volume (cf) V_d= 163 cy

V (provided) = V_r= 352 cy

Temporary Sediment Trap #2

Drainage Area (ac)	A_t=	2.1	ac
Volume of Storage per acre of drainage area (cy)	V_r=	134	cy
Volume of Storage Required (cy)	V_r=	284	cy
Length of Sediment Trap Top	L_t=	80	ft
Width of Sediment Trap Top	W_t=	50	ft
Length of Sediment Trap Bottom	L_b=	65	ft
Width of Sediment Trap Bottom	W_b=	35	ft
Depth of Water Storage (3' Max.)	D_w=	1.5	ft
Depth of Dry Storage (4' Max.)	D_d=	1	ft
Sideslopes		3	ft/ft

Wet Storage Volume Approximated

Equation $V_w = 0.85 \times A_w \times D_w$

surface area of flood area at stone base(sf) A_w= 3256

wet storage volume (cf) V_w= 154 cy

Dry Storage Volume Approximated

Equation $V_d = [(A_w + A_b) / 2] \times D_d$

surface area of flood area at stone wier(sf) A_w= 4000

dry storage volume (cf) V_d= 134 cy

V (provided) = V_r= 288 cy

0 15 30 60'

SCALE: 1" = 30' - 0"

CONSTRUCTION DOCUMENTS

drawing title: SITE SEDIMENT CONTROL PLAN

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

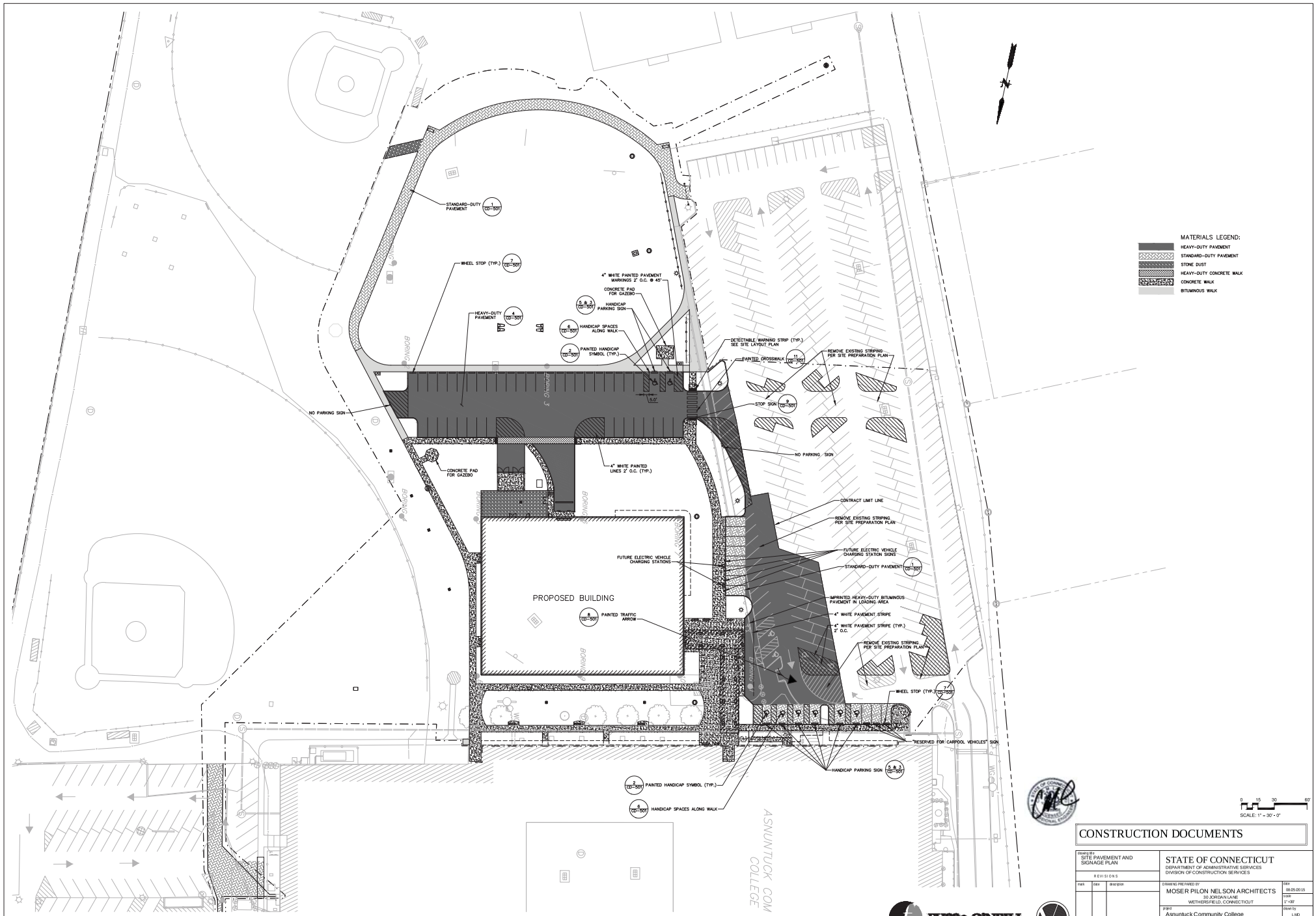
DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

date 08.05.2015
scale 1" = 30'
drawn by LMD
approved by JOO
drawing no. CE-101
CAD no.
project no. 2011-1084.B20

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

PROJECT NORTH



CONSTRUCTION DOCUMENTS

drawing title
SITE PAVEMENT AND SIGNAGE PLAN

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

date: 08.05.2015
scale: 1" = 30'
drawn by: LMD
approved by: JOO
drawing no.: CS-101

project
Asnuntuck Community College
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170 Elm Street
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project no.: 2011-1084.B20

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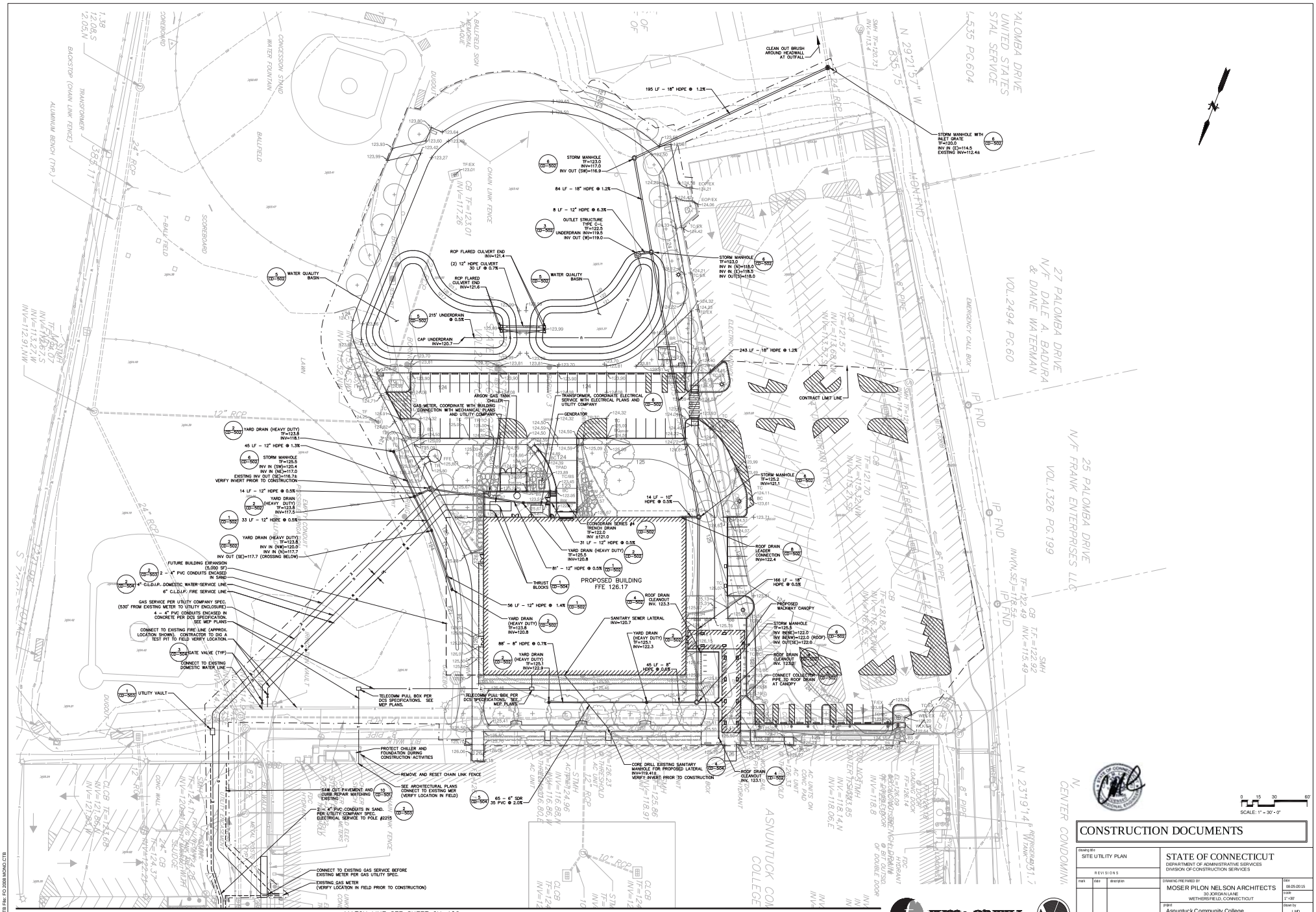
www.fando.com

PROJECT NORTH



CONSTRUCTION DOCUMENTS

drawing title: SITE UTILITY PLAN

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

date: 08.05.2015
scale: 1" = 30'
drawn by: LMD
approved by: JOO
drawing no.: CU-101

project: Asnuntuck Community College New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

CAD no.
project no.: 2011-1084.B20

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fando.com

File Path: J:\DWG\P2011\1084\B20\Plan\cu2011108420_UTL01.dwg Layout: CU-101 Plotted: Tuesday, August 18, 2015 - 4:47 PM User: KDOOCROW
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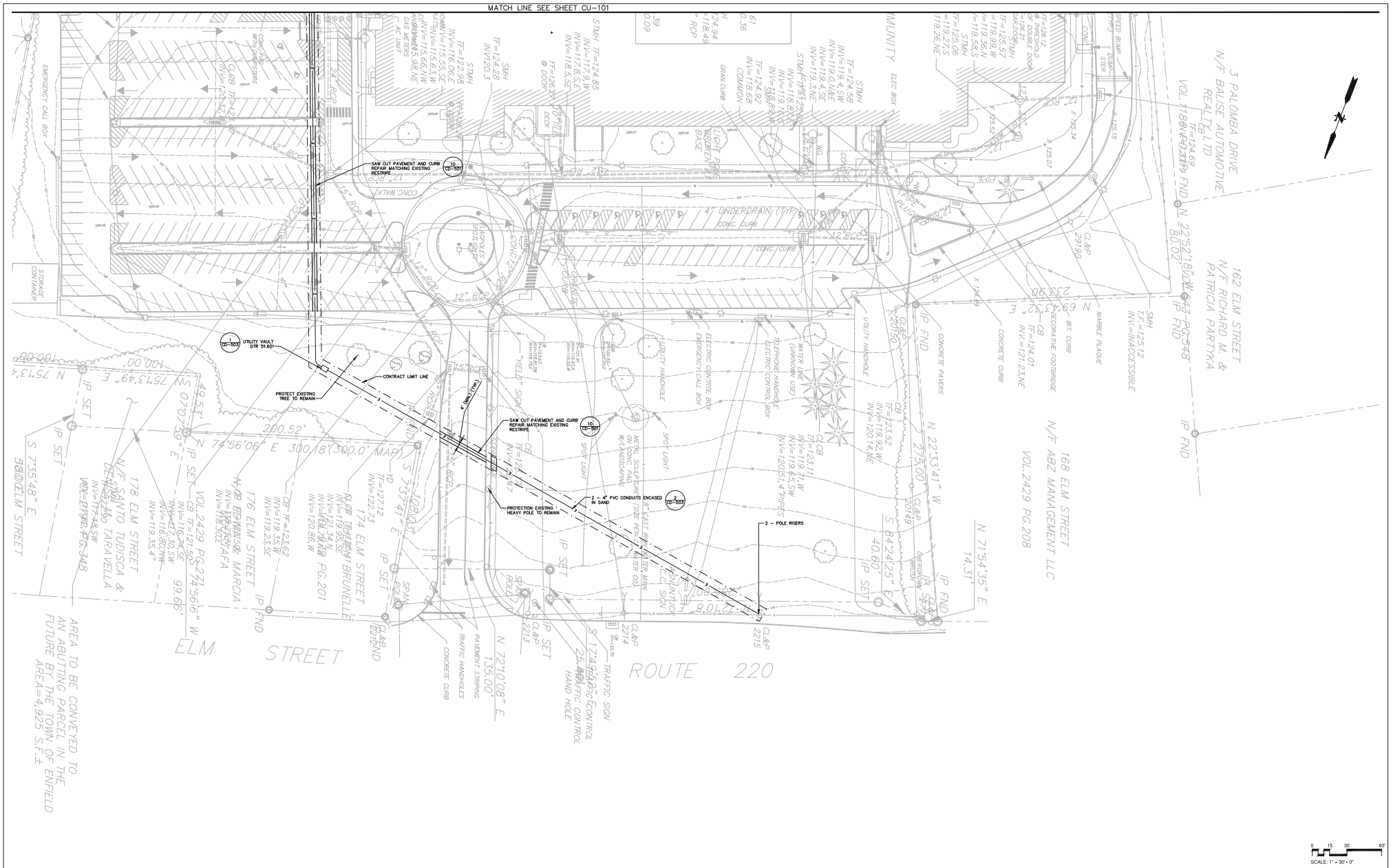
MATCH LINE SEE SHEET CU-101



CONSTRUCTION DOCUMENTS

drawing title
SITE UTILITY PLAN

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

date: 08.05.2015
scale: 1" = 30'
project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut
drawn by: LMD
approved by: JOO
drawing no.: CU-102
CAD no.
project no.: 2011-1084.B20

FUSS & O'NEILL
146 HARTFORD ROAD
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PROJECT NORTH

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Plotted By: NOOOOCKN
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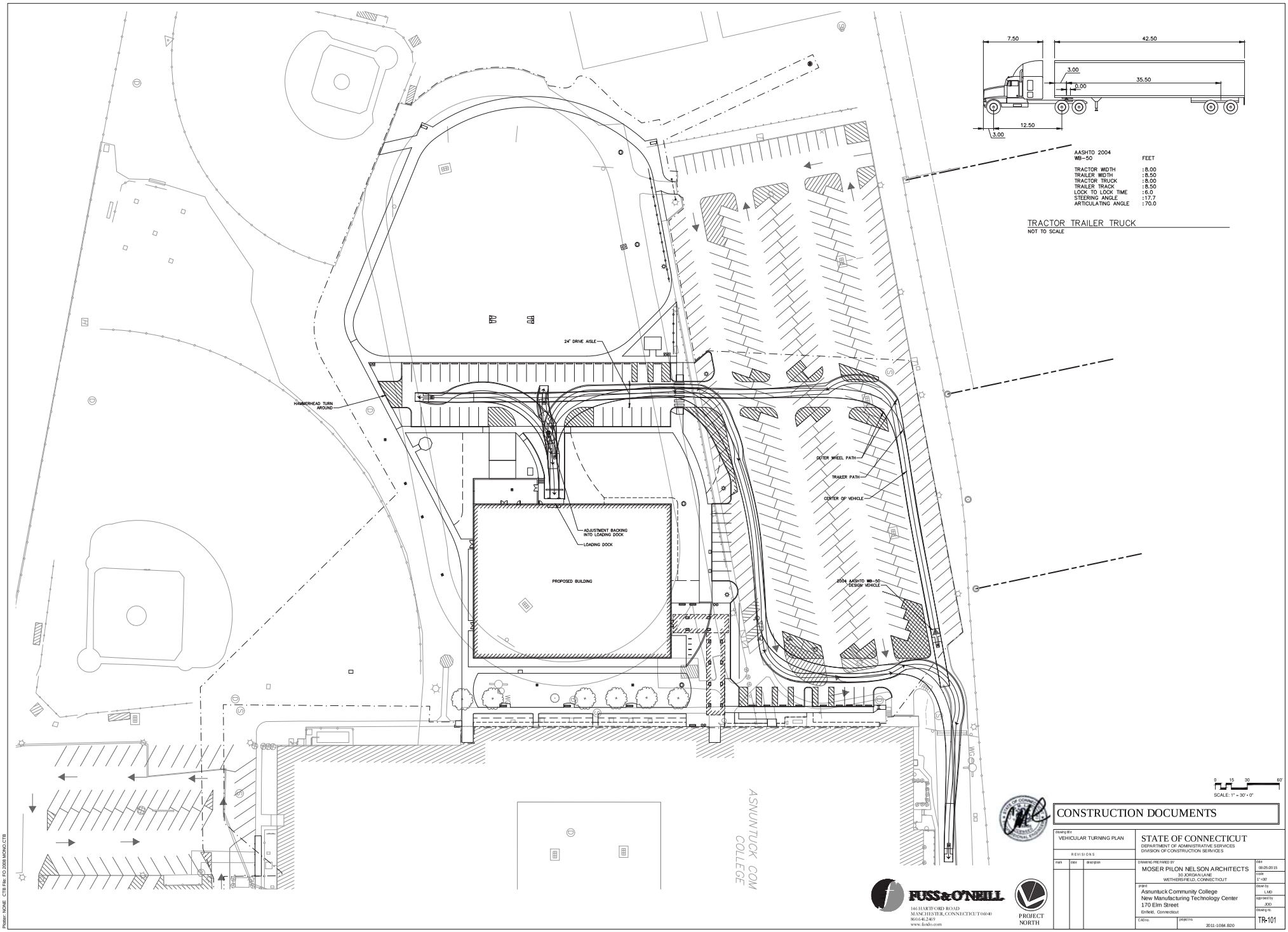
Plot Device: DWG To PDF.pc3



CONSTRUCTION DOCUMENTS

drawing title: VEHICULAR TURNING PLAN	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES
REVISIONS	
mark / date / description	DRAWING PREPARED BY: MOSER PILON NELSON ARCHITECTS 30 JORDAN LANE WETHERSFIELD, CONNECTICUT
	date: 08.05.2015
	scale: 1" =30'
	project: Asnuntuck Community College New Manufacturing Technology Center 170 Elm Street Enfield, Connecticut
	drawn by: LMD
	approved by: JDO
	drawing no.: TR-101
	CAD no. / project no.: 2011-1084.B20

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MANCHESTER, CONNECTICUT 06040
860.646.2469
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PROJECT NORTH

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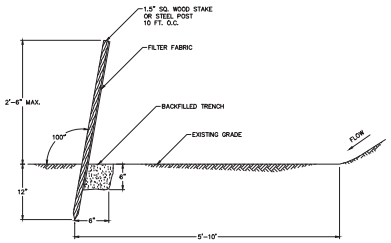
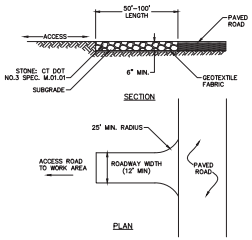
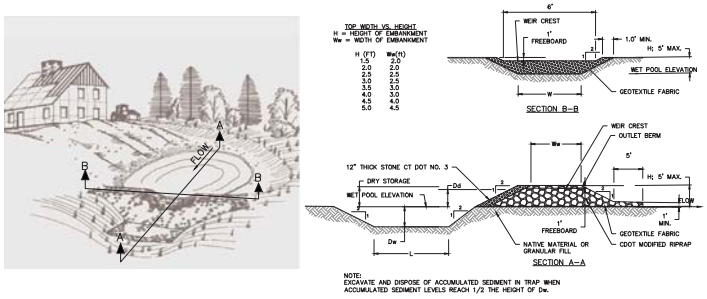


1 SILT FENCE
NOT TO SCALE



3 CONSTRUCTION ENTRANCE
NOT TO SCALE



4 TEMPORARY SEDIMENT TRAP
NOT TO SCALE

SEDIMENT TRAP NOTES

1. **CONTRIBUTING AREA:** 5 ACRES OR LESS.
2. **DURATION OF USE:** LESS THAN 2 YEARS
3. **REQUIRED TOTAL STORAGE VOLUME:** 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA, HALF OF WHICH SHALL BE IN THE WET STORAGE AREA, HALF SHALL BE IN THE DRY STORAGE AREA
4. **LENGTH TO WIDTH RATIO:** 2:1 SHALL BE PROVIDED, IF POSSIBLE.
5. **WET STORAGE VOLUME CALCULATION:** SEE SEDIMENT AND EROSION CONTROL PLANS FOR DIMENSIONS

WSV = 0.85 X AB X D WHERE,

WSV = WET STORAGE VOLUME IN CUBIC FEET

AB = SURFACE AREA IN SQUARE FEET OF THE FLOODED AREA AT THE ELEVATION OF THE BASE OF THE RIPRAP OUTLET BERM (WET POOL ELEVATION, SEE SECTIONS)

D = MAXIMUM DEPTH IN FEET, MEASURED FROM THE LOW POINT IN THE TRAP TO THE BASE OF THE RIPRAP OUTLET BERM (WET POOL ELEVATION)

DRY STORAGE VOLUME: SEE SEDIMENT AND EROSION CONTROL PLANS FOR DIMENSIONS

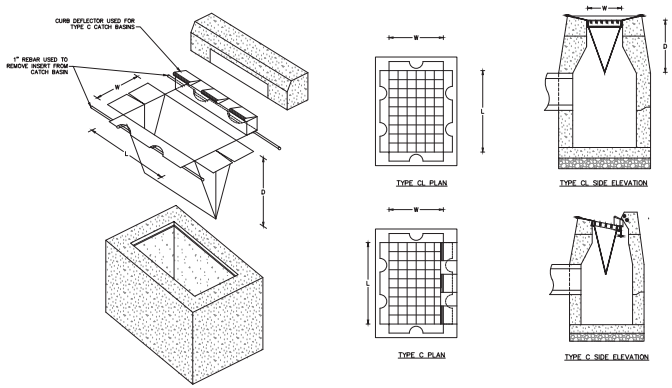
DSV = (AB + AT)/2) X D WHERE,

DSV = DRY STORAGE VOLUME IN CUBIC FEET

AB = SURFACE AREA IN SQUARE FEET OF THE FLOODED AREA AT THE ELEVATION OF THE BASE OF THE RIPRAP OUTLET BERM (WET POOL ELEVATION, SEE SECTIONS)

AT = SURFACE AREA IN SQUARE FEET OF THE FLOODED AREA AT THE ELEVATION OF THE WEIR OF THE RIPRAP OUTLET BERM

D = DEPTH IN FEET, MEASURED FROM THE BASE OF THE RIPRAP OUTLET BERM TO THE ELEVATION OF THE WEIR OF THE RIPRAP OUTLET BERM



2 CATCH BASIN INSERT
NOT TO SCALE

CONSTRUCTION DOCUMENTS

drawing title: SEDIMENT CONTROL DETAILS	STATE OF CONNECTICUT DEPARTMENT OF ADMINISTRATIVE SERVICES DIVISION OF CONSTRUCTION SERVICES
REVISIONS	
mark / date / description	DRAWING PREPARED BY: MOSER PILON NELSON ARCHITECTS, 30 JORDAN LANE, WETHERSFIELD, CONNECTICUT
	date: 08.05.2015
	scale: N.T.S.
	project: Asnuntuck Community College, New Manufacturing Technology Center, 170 Elm Street, Enfield, Connecticut
	drawn by: LMD
	approved by: JDO
	drawing no.: CE-501
	CAD no. / project no.: 2011-1084.B20

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146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
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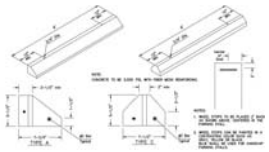
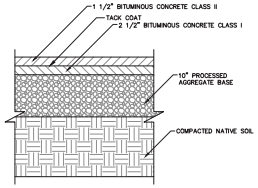
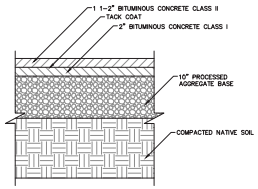
PROJECT NORTH



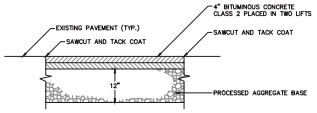
7 WHEEL STOPS REINFORCED PRECAST CONCRETE
NOT TO SCALE



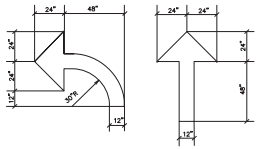
4 BITUMINOUS CONCRETE PAVEMENT (HEAVY DUTY)
NOT TO SCALE



1 BITUMINOUS CONCRETE PAVEMENT (STD. DUTY)
NOT TO SCALE



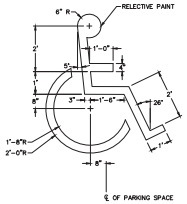
10 BITUMINOUS PAVEMENT REPAIR
NOT TO SCALE



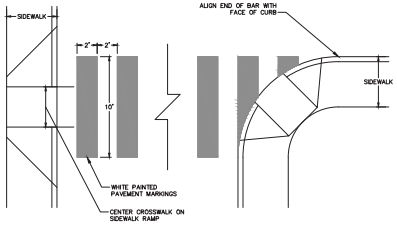
8 PAINTED TRAFFIC ARROWS
NOT TO SCALE

NOTES:
CDOT NUMBER: 31-0629
ALUMINUM THICKNESS: .080"
BACKGROUND: BLUE (REF.)
LEGEND: SILVER (REF.)
POSTS: SEE "ACCESSIBLE PARKING SIGN AND POST" DETAIL

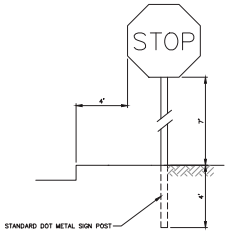
5 HANDICAP PARKING SIGN
NOT TO SCALE



2 HANDICAP SYMBOL
NOT TO SCALE

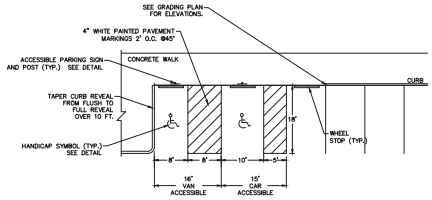


11 PAINTED CROSS WALK
NOT TO SCALE

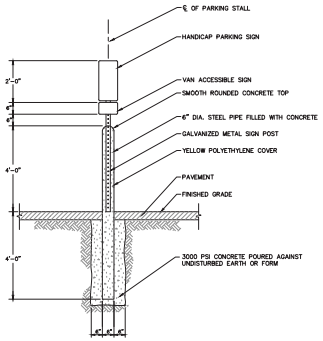


NOTE:
TYPICAL SIGN DETAIL, SEE PLANS FOR SIGN TYPES AND LOCATIONS

9 SIGN
NOT TO SCALE



6 HANDICAP PARKING SPACES ALONG WALK
NOT TO SCALE



3 ACCESSIBLE PARKING SIGN POST
NOT TO SCALE

CONSTRUCTION DOCUMENTS

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CONNECTICUT 06040
860.646.2469
www.fuss.com

PROJECT NORTH

drawing title: SITE DETAILS

REVISIONS

mark	date	description

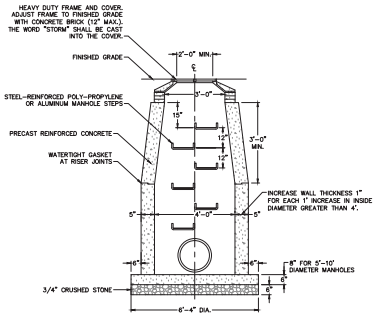
STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

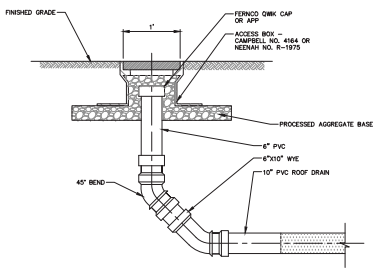
project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

CAD no.
project no. 2011-1084.B20

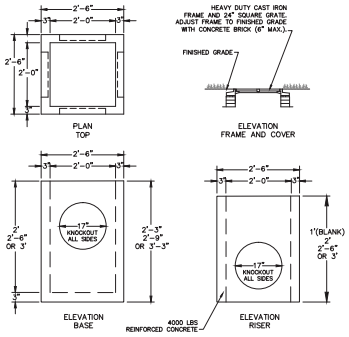
date 08.05.2015
scale N.T.S.
drawn by LMD
approved by JOD
drawing no. CD-501



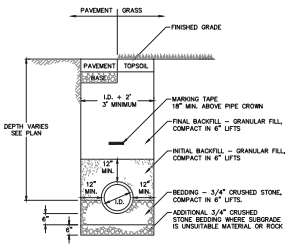
6 STORM MANHOLE
NOT TO SCALE



4 CLEAN OUT AT ROOF DRAIN
NOT TO SCALE



2 YARD DRAIN
SCALE: N.T.S.



1 STORM SEWER TRENCH
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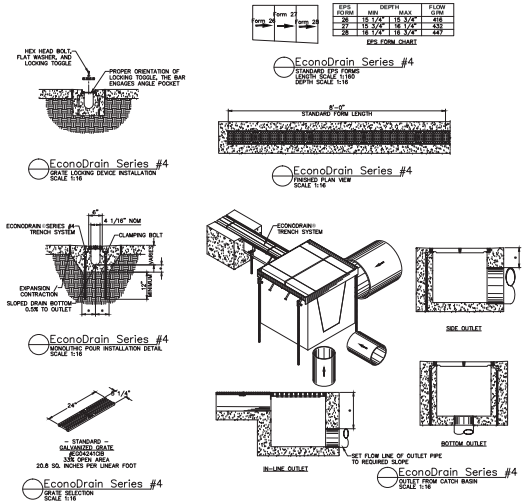
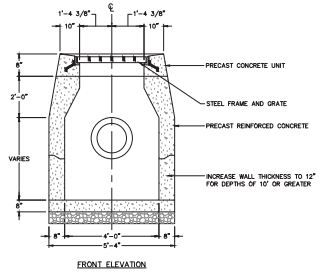
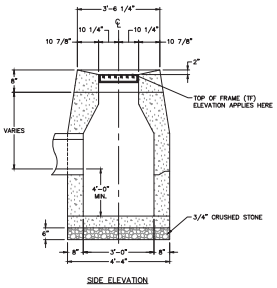
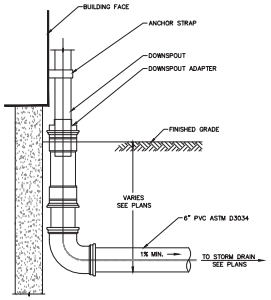


7 TRENCH DRAIN – ECONODRAIN SERIES #4 (BASIS OF DESIGN)
NOT TO SCALE

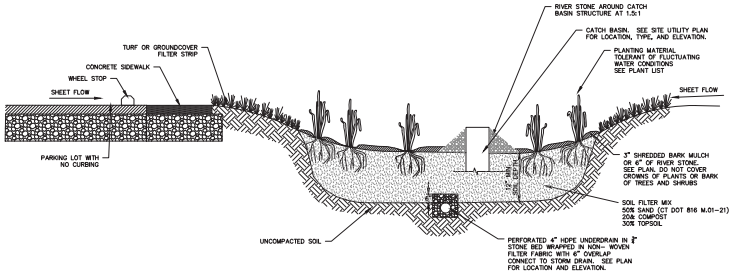




3 TYPE "C-L" CATCH BASIN
NOT TO SCALE



8 ROOF LEADER DRAIN CONNECTION
NOT TO SCALE



5 WATER QUALITY BASIN CROSS SECTION
NOT TO SCALE

CONSTRUCTION DOCUMENTS

drawing title: SITE STORM DRAINAGE DETAILS

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

date: 08.05.2015
scale: N.T.S.
drawn by: LMD
approved by: JOO
drawing no.: CD-502
CAD no.
project no.: 2011-1084.B20

FUSS & O'NEILL
146 HARTFORD ROAD
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860.646.2469
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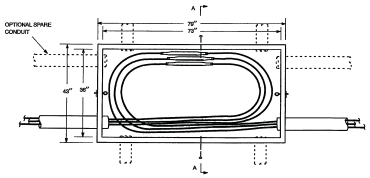
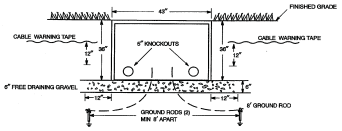
PROJECT NORTH





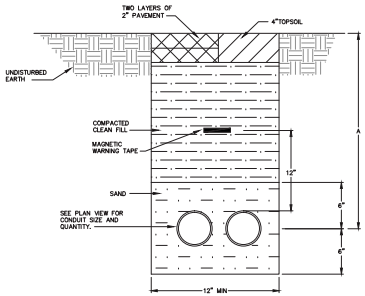
SECTION A–A

Notes

1. Install polymar concrete vault. Vault is rated for occasional vehicular traffic, however, do not install in roadway applications. Vault shall be used to splice one three–phase cable, maximum #4/0 Al.
2. The excavation shall be carried to a minimum depth of 6" below the bottom and 12" beyond the edge.
3. Install two 8' galvanized steel ground rods adjacent to the vault and ground per DTR 78.151. Provide #6 Cu bond for communications companies.
4. Select splices from DTR 33.801–002.
5. Install warning tape 12" above top of conduit.
6. Install schedule 40 PVC conduit, minimum 4" diameter. Install conduit plugs in spare conduits.

ORIGINAL REVIEW APPROVED ISSUED	VAULT – POLYMER CONCRETE – FOR SPLICING THREE–PHASE PRIMARY – DIRECT–BURIED CONDUIT SYSTEM		
	NORTHEAST UTILITIES	CONSTRUCTION STANDARD	DTR 51.601

1



CONDUIT DEPTHS	
SERVICE	DIM "A"
PRIMARY	36"
SECONDARY	24"
SPARE TO UTILITY POLE	36"

NOTE:
WHEN MULTIPLE CONDUITS ARE BURIED TOGETHER THERE SHALL BE A MINIMUM OF 2" CLEARANCE BETWEEN CONDUITS

2 BURIED CONDUIT DETAIL

SCALE: N.T.S.

CONSTRUCTION DOCUMENTS

drawing title
SITE UTILITY DETAILS

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

date 08.05.2015
scale N.T.S.
drawn by LMD
approved by JOO
drawing no. CD-503

project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
Enfield, Connecticut

CAD no.
project no. 2011-1084.B20

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MANCHESTER, CONNECTICUT 06040
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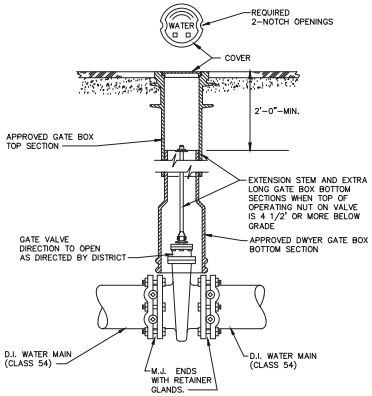
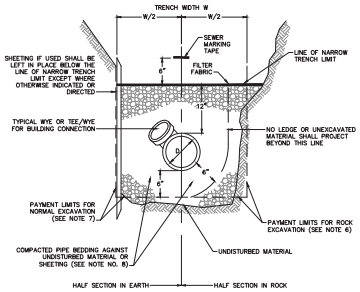
PROJECT NORTH



3 TYPICAL GATE VALVE INSTALLATION
12" & SMALLER



5 TYPICAL SEWER TRENCH
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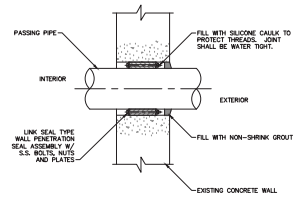

4 CORE DRILL & LINK SEAL DETAIL
SCALE: N.T.S.

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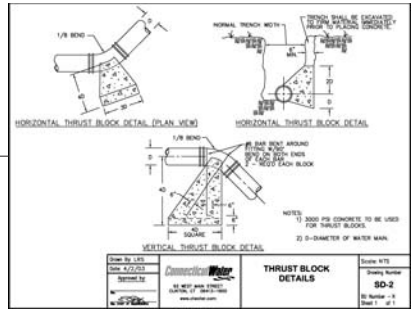

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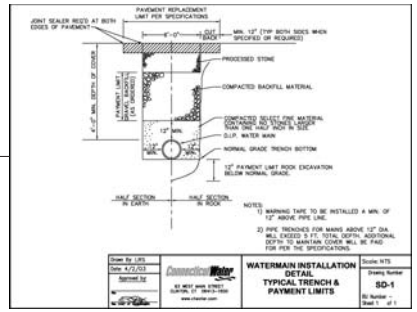

CONSTRUCTION DOCUMENTS

drawing title
SITE WATER AND SEWER DETAILS

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF CONSTRUCTION SERVICES

DRAWING PREPARED BY
MOSER PILON NELSON ARCHITECTS
30 JORDAN LANE
WETHERSFIELD, CONNECTICUT

project
Asnuntuck Community College
New Manufacturing Technology Center
170 Elm Street
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date 08.05.2015
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MANCHESTER, CONNECTICUT 06040
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PROJECT NORTH