Stormwater Pollution Control Plan (SPCP)

Goodwin Industry 5.0 High School
East Hartford, Connecticut

PREPARED FOR

Goodwin University
One Riverside Drive
East Hartford, CT

PREPARED BY

Date: August 2024 | Project No. 1118
Revised: March 2026

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1.0 INTRODUCTION

This Stormwater Pollution Control Plan (SPCP or Plan) was originally developed in fulfillment of the requirements set forth in Section 5(b) of General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (Effective Date December 31, 2020) State of Connecticut Department of Energy & Environmental Protection (DEEP), Bureau of Water Management.) and has been updated to fulfill the requirements set forth in Section 5.2 of the General Permit for the Discharge of Stormwater from Construction Activities (Effective Date January 1, 2026) hereafter referred to as the "General Permit" issued by the DEEP to replace the prior permit.

This SPCP was prepared in accordance with sound engineering practices and sets forth procedures and protocol, which, when followed, significantly minimize the potential for discharge or release of pollutants from the facility via stormwater runoff. The Contractor is required to maintain compliance with this plan as a condition of the Stormwater General Permit, and to make modifications to this Plan throughout the duration of construction activities, as conditions warrant. In addition, the Contractor is required to comply with all other conditions of the permit.

Erosion control measures implemented during the construction activities shall comply with the most recent version of the "Connecticut Guidelines for Soil Erosion and Sediment Control" as published by the Connecticut Council on Soil and Water Conservation in collaboration with DEEP, also referred to as the "Guidelines", the Connecticut Stormwater Quality Manual with effective date March 30, 2024, the requirements of the General Permit, and current best management practices.

Upon completion of the construction activities and following cleaning of all drainage structures and removal of construction debris, the contractor shall notify the Registrant and schedule a final inspection of the site and provide the necessary information for completion of the Notice of Termination Form. A copy of the Termination Form is included in Attachment 1. The Registrant is responsible for completion of this form and submittal to the DEEP.

2.0 CERTIFICATION STATEMENTS AND SIGNATURES

Permittee (Applicant) Certification:

"I hereby certify that I am making this certification in connection with an application under the General Permit for the Discharge of Stormwater from Construction Activities (general permit), submitted to the Commissioner by Goodwin University, Inc. for an activity located at 2 & 3 Pent Road in East Hartford, CT and that all terms and conditions of the general permit will be met for all discharges which will be 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 application 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 2.2.13.1 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 2.2.13.2 of this general permit. I understand that the application filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Conn. Gen. Stat. I also understand that knowingly making any false statement 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 Conn. Gen. Stat. and any other applicable law."

SIGNATURE	TITLE Interim Vice President, Facilities	DATE 3/16/26
Mark McGovern	860-727-6733	Goodwin University
PRINTED NAME	CONTACT NUMBER	COMPANY

Design Professional Certification:

"I hereby certify that I am a professional engineer Licensed in the State of Connecticut. I am making this certification in connection with a application under the General Permit for the Discharge of Stormwater from Construction Activities (general permit), submitted to the Commissioner by Goodwin University, Inc. for an activity located at 2 & 3 Pent Road in East Hartford, CT. I certify that I have thoroughly and completely reviewed the Stormwater Pollution Control Plan for the project or activity covered by this certification. I further certify, based on such review and on the standard of care for such projects, that the Stormwater Pollution Control Plan has been prepared in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, the Stormwater Quality Manual, as amended, and the conditions of the general permit, and that the controls required for such SPCP are appropriate for the site. I further certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement in this certification may subject me to sanction by the Department and/or be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Conn. Gen. Stat. and any other applicable law."

SIGNATURE	TITLE	DATE
Judy Ascano Schuler	860-729-9326	East-West Engineering, PLLC
PRINTED NAME	CONTACT NUMBER	COMPANY

SPCP Plan Preparer Certification:

"I hereby certify that I am a Qualified Professional engineer licensed in the state of Connecticut and in good standing or a qualified soil erosion and sediment control professional, or both, as defined in the General Permit for Discharge of Stormwater from Construction Activities (general permit) and as further specified in Sections 2.2.16.1.a and 2.2.16.1.b of the general permit. I am making this certification in connection with an application under such general permit, submitted to the Commissioner by Goodwin University, Inc. for an activity located at 2 & 3 Pent Road, East Hartford, 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 2.2.16.3 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 2.2.13.2 and 2.2.16.4 of this general permit. I understand that this certification is part of an application submitted in accordance with Section 22a-430b of Conn. Gen. Stat. 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 Conn. Gen. Stat. and any other applicable law."

	President & Principal Engineer	March 27, 2026
SIGNATURE	TITLE	DATE
Judy Ascano Schuler	860-729-9326	East-West Engineering, PLLC
PRINTED NAME	CONTACT NUMBER	COMPANY

Contractor Certification:

"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater from Construction Activities and the site-specific Stormwater Pollution Control Plan ("SPCP"). I understand that as a contractor or subcontractor at the site, I must comply with the terms and conditions of this general permit and the SPCP."

CONTRACTOR SIGNATURE	DATE
CONTRACTOR NAME & TITLE	NAME OF FIRM, ADDRESS & TELEPHONE NO.
SUBCONTRACTOR SIGNATURE	DATE
SUBCONTRACTOR NAME & TITLE	NAME OF FIRM, ADDRESS & TELEPHONE NO.
SUBCONTRACTOR SIGNATURE	DATE
SUBCONTRACTOR NAME & TITLE	NAME OF FIRM, ADDRESS & TELEPHONE NO.
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CONTRACTOR SIGNATURE	DATE 3/26/26
Philip Rees Sr. Project MGR CONTRACTOR NAME & TITLE	FIP Construction Inc 860-410-1800 1536 New Britain Ave Farmington, CT 06033 NAME OF FIRM, ADDRESS & TELEPHONE NO.
Steve Gerber SUBCONTRACTOR SIGNATURE	03/26/2026 DATE
Steve Gerber (VP) SUBCONTRACTOR NAME & TITLE	Gerber Construction Inc NAME OF FIRM, ADDRESS & TELEPHONE NO.
SUBCONTRACTOR SIGNATURE	DATE
SUBCONTRACTOR NAME & TITLE	NAME OF FIRM, ADDRESS & TELEPHONE NO.
SUBCONTRACTOR SIGNATURE	DATE
SUBCONTRACTOR NAME & TITLE	NAME OF FIRM, ADDRESS & TELEPHONE NO.

3.0 SITE PLAN/MAPS

Site maps and plans are included in Attachment 2.

3.1 Site Description

3.1.1 Nature of the Construction Activity

The Scope of work includes the demolition of a 200+ vehicle parking lot and Construction of a 35,000 SF+/- High School with associated parking, sidewalks, bus drop off area and athletic Field at 2 Pent Road. As part of the new High School, 56 additional parking spaces will be added on the 3 Pent Road site. Construction activities also include the installation of a new storm drainage system on 2 Pent Road, modifications to the drainage system at 3 Pent Road, and the installation of underground utilities to service the new High School building.

Construction activities on the site include installation of sewer, water, electric, CATV and gas mains, excavation, and grading, saw cutting, trenching, backfilling, adjusting utilities, restoration of paved roadways, installation of erosion control devices and installation of lighting and landscaping.

3.1.2 Site and Disturbed Areas

Construction activities will occur on both 2 & 3 Pent Road. The total area of disturbance on 2 Pent Road and 3 Pent Road is 3.70 acres. Both 2 and 3 Pent Road have been previously developed, and the majority of construction activities will be occurring on 2 Pent Road in the previously developed parking lot.

3.1.3 Average Runoff Coefficient and Soils

Site soils are generally classified as fill material and are listed as either B or D series soils. A copy of the Geotechnical Investigation Information report is provided in Attachment 3. Additional Geotechnical information is provided within the construction documents.

3.1.4 Name of Receiving Waters

2 and 3 Pent Road presently drain via two separate pipes to the Connecticut River through the 1 Pent Road property. The existing drainage patterns will be maintained during and after completion of construction activities.

3.1.5 Extent of Wetlands

There are no wetlands on either 2 or 3 Pent Road.

3.1.6 Endangered Species

A copy of the DEEP correspondence regarding endangered species is provided in Attachment 4.

4.0 CONSTRUCTION SEQUENCING and SCHEDULE

The construction project is separated into two phases. The first phase consisted of work associated with soil stabilization activities associated with the new High School building. The second phase contains the majority of work and contains the construction of the building, parking, and other site improvements. The first phase was completed in the Fall of 2025, and construction of the second phase began in Fall 2025. A detailed sequence and schedule is included in Attachment 5. This schedule will be updated as site conditions, weather, and other factors affect construction activities. In general, the project has followed and will proceed in accordance with the sequence below:

1. Contact "call before you dig" at 1-800-922-4455 at least 72 hours prior to the start of construction to have existing utilities marked.
2. Notify the Town's Engineering Dept. of the start of construction a minimum of 72 hours beforehand.
3. Silt sacks shall be installed at all catch basins subject to runoff from construction areas as shown on the Erosion and Sedimentation Control Standard Details in Attachment 2.
4. Place sediment fence, as shown on the Erosion and Sedimentation Control Standard Details to establish perimeter controls and as shown, prior to the start of any excavation.
5. Install construction entrance/exit where required.
6. Start phase 1 work. Work to include demolition of pavement and other improvements, excavation activities and work associated with preparation of subgrade for building foundation.
7. Maintain erosion controls.
8. Start phase II work.
9. Start foundation construction. Construct school building.
10. Demolition of remaining improvements required to construct the new High School.
11. Install new utilities and drainage system.
12. Install light pole bases and wiring.
13. Prepare subgrade, base for pavement, sidewalks, and other hardscape improvements.
14. Prepare lawn and loam and seed. Water until stabilized.
15. Install plantings, final appurtenances, signs, pavement striping, etc.

16. Remove erosion controls after disturbed areas are paved/landscaped or stabilized. Complete final cleaning.
17. Construction started in June 2025. The estimated substantial completion date is February 2027.

All revisions by the Contractor to the phasing and construction schedules will be included as updates and included as part of Attachment 5 of this Plan.

5.0 CONTROL MEASURES

Control measures are incorporated into the plan to minimize discharge of soil and sediments and other pollutants into the waters of the State. These include temporary management practices to be implemented during construction of the site and postconstruction management practices to be implemented following construction.

Design elements and considerations for removal of sediments and floatables, as well as for velocity dissipation controls and Low Impact Design (LID) measures have been incorporated into the design of stormwater management facilities, to the extent practicable.

5.1 Sediment and Floatables Removal Control

The following controls are anticipated to minimize sediment discharge, capture sediment in suspension and minimize sedimentation off site:

- Installation of Geotextile Silt Fencing Perimeter Controls
- Installation of Straw or Hay Bale Sedimentation Check in Swales
- Installation of Catch Basin Silt Sack Sediment Control Devices
- Temporary Paving of trenches as appropriate
- Stabilized Construction Entrances/Exits
- Relocate and Maintain Existing Water Quality Structure on 2 Pent Road

Together these measures provide for removal of sediments and floatable pollutants.

5.2 Velocity Dissipation Controls

All stormwater discharges from the site will be through the existing stormwater systems on 1 Pent Road. As part of the redevelopment of the site, there will be an overall decrease in impervious coverage and as such a decrease in peak stormwater discharges from 2 & 3 Pent Road.

5.3 Low Impact Design (LID) Information

The project entails the construction of a new High School with associated parking and other site improvements. As part of the redevelopment of 2 and 3 Pent Road, there will be a reduction in impervious coverage. Infiltration of stormwater runoff on the site is not applicable due to the historical industrial nature of the site.

6.0 STORMWATER CONTROL MEASURES

6.1 Erosion and Sedimentation Controls

6.1.1 General Approach

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. One of the main purposes of this SPCP is to outline and implement the Best Management Practices (BMPs) for erosion control to protect the soil surface by covering and/or binding soil particles. This project will implement the following erosion control measures in accordance with most recent version of "Guidelines for Soil Erosion and Sediment Control" as published by the Connecticut Council on Soil and Water Conservation", also referred to as the "Guidelines", the 2024 Connecticut Stormwater Quality Manual, requirements of the general permit, and current best management practices.

- Preserve existing roadways, driveways, sidewalks, landscaped areas, etc. where required and when feasible.
- Install temporary erosion control measures prior to the start of construction activities. Inspect, clean, and maintain the control measures regularly and as necessary to ensure effectiveness.
- Stabilize non-active areas as soon as feasible after the cessation of construction activities.
- Control erosion in concentrated flow paths by applying erosion control barriers and temporary/permanent paving, as required in the contract documents.
- Temporary and permanent paving and landscaping will be applied to areas deemed substantially complete during construction or to areas which will not be actively worked for extended periods of time.
- At completion of construction, apply permanent stabilization measures to all remaining disturbed soil areas.

These measures are to be used as a base from which to start as it is likely that changes will be made in the project sequence and timing before the project is complete. These changes may require modifications to the soil erosion and sedimentation control measures shown on these plans. In addition, it is impossible to predict exactly how a given site, at any given point of construction, will respond to a heavy rain or exactly how well the installed control measures will function. Site

construction and site response are dynamic and therefore the soil erosion and sedimentation control plan must be dynamic. Thus, considerable emphasis is given in this Plan to providing basic information on erosion control planning and pollution prevention and to describing a wide range of control measures that can be implemented as needed.

This SPCP also emphasizes the importance of monitoring the installation and maintenance of control measures, and of inspecting the site during and after rainfall events to ensure that control measures are adequate to prevent pollution of protected areas. The type and amount of pollution control measures in place is less important than the net performance of these measures in preventing pollution.

Finally, it must be emphasized that it is fully the contractor's responsibility to ensure that protected areas are not polluted. While the owner and engineer have prepared this plan and may make recommendations for additional control measures, it remains the contractor's responsibility to implement these and any other measures that may be needed to prevent pollution.

The Contractor is responsible for following all necessary erosion control measures required by State and local authorities. Recommended erosion and sedimentation control measures and details of devices are shown on the details.

For the proposed project, the disturbed areas will include:

- 2 Pent Road from edge of curb on the Pathways School west to the western property line.
- 3 Pent Road within the private Pent Road for utility installation
- 3 Pent Road for installation of 56 additional parking spaces.

Areas that need to be protected from stormwater pollution include:

- Adjacent properties to 2 and 3 Pent Road
- Storm drainage systems on 1 Pent Road that collect discharge from 2 & 3 Pent Road
- Underground detention system on 2 Pent Road
- Storm drainage system on 3 Pent Road.

Where practical, construction activities should be planned and scheduled as follows:

- Limiting the extent of disturbed areas.
- Limiting the time that unprotected surface soils are exposed.

The grades on the site in general are flat with grades of 1-2% in general. The perimeter will be protected with silt fencing or straw and hay bale barriers where there is a possibility of runoff to neighboring properties. Existing and new catch basins will be protected with silt sacks. Once construction is

complete, all disturbed areas will be stabilized. In addition to these key elements, both non-structural and structural practices shall be implemented to reduce on-site erosion and to minimize off-site discharge of sediments.

Soil stockpiles will have a maximum slope of 2:1 and will be protected with silt fencing, or straw/hay bale fencing, and then stabilized with vegetation or covered.

The following controls are anticipated to minimize soil loss from the construction site area. The controls should help to minimize soil from being transported from water and wind as well as aid in the establishment of temporary and permanent restoration. Prior to construction, areas of no-disturbance should be flagged, staked, or otherwise delineated.

6.1.2 Stabilization Practices

Stabilization practices are generally minimally disruptive measures that can be readily implemented throughout the site. These include, but are not limited to:

- Installation of Silt Fencing Perimeter Controls
- Temporary/Permanent Landscaping
- Restoration of Trenches and Disturbed Surface Areas
- Stabilized Construction Entrances/Exits

Temporary/permanent protection can usually be provided by covering or restoring the disturbed areas with pavement or seeding/landscaping.

Locations for the installation of stabilization practices (i.e., trench restoration, seeding/stabilization) are shown on the site plans attached. These locations represent typical placement locations for these practices. At a minimum, the practices as shown on these plans shall be implemented. Site conditions should constantly be monitored throughout construction, and additional practices shall be installed as conditions warrant.

6.1.3 Structural Practices

Structural practices shall be implemented to divert flows away from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from the site, or to settle sediments from runoff. Structural practices include, but are not limited to:

- Temporary Diversions (Drainage Swales)
- Installation of Catch Basin Silt Sack Sediment Control Devices

- Straw/Hay Bale Erosion Dams, Sediment Checks, and Barriers
- Temporary/Permanent Pavement Restoration
- Outlet Protection
- Dewatering Basins
- Dirt bags for sediment capture

Structural measures shall be implemented to:

1. Direct surface waters away from disturbed areas.

This applies when the disturbed area is down slope from a large area of surface runoff or a concentrated flow such as from a ditch, swale, roof drain, or storm drain outlet. A temporary diversion (swale or ditch with an erosion dam or dewatering basin) should be created along the edge of the disturbed area to intercept and direct runoff around the disturbed area or wetlands resource. *Unless otherwise specifically approved in writing from the Commissioner, structural means shall be installed on upland soils.*

2. Prevent concentrated flows within disturbed trenches.

This is achieved by temporary/permanent paving. Where swales enter an area, install silt fencing or straw/hay bale barriers to divert the flows.

3. Limit Runoff Velocities and Preventing Scour

Runoff must be controlled so that the water velocity is below that which will scour or erode the surface over which it is running. This applies to both sheet flow and concentrated flow. Install temporary/permanent paving within disturbed trenches as soon as practical during the construction process to minimize erosion within the trenches. Restore sidewalks, drives and landscaped areas as soon as practical after disturbance.

4. Trap Sediment Prior to Reaching Protected Areas

Even where the best control measures are provided it is almost impossible to completely eliminate erosion during heavy rainfall. It is therefore essential that additional measures be provided to trap sediment before it reaches any of the protected areas. Temporary paving will prevent erosion within the trenches. When paving is not possible, or additional control methods are required, silt fencing and straw/hay bale barriers may be used along contours to trap sediment in sheet flow and reduce concentrated flows. Straw or hay bale erosion sedimentation checks are used in swales. All function by filtering sediment and slowing the runoff velocity so that sediment will drop out. Filter fabric/mesh can be installed around storm drain inlets in grassy areas. Silt Sack inserts shall be installed in all catch basins in paved areas. Hay bale erosion barriers/dams shall be installed at any specified catch basins.

The silt sacks must be inspected and maintained properly to prevent failure.

Structural practices appropriate for the site include the use of straw and hay bale barriers, sedimentation checks and dams, inlet protection, temporary/permanent paving, and dewatering basins. Locations for the installation of structural practices are shown on the Site Plans. These locations represent typical placement locations for these practices. At a minimum, the practices as shown on the Plan shall be implemented. Site conditions should constantly be monitored, however, throughout construction and additional practices shall be installed as conditions warrant.

6.1.4 Maintenance

Practices implemented to control erosion shall be maintained. The stabilizing and structural practices implemented shall be inspected immediately following each measurable storm event (i.e., greater than 0.5 inches of rain in any one storm event) and at a minimum, weekly. Additional stabilizing practices shall be immediately implemented, as necessary, when erosion conditions are noted. These may include, but are not limited to:

- Restoration of disturbed or eroded areas, followed by installation of additional erosion control measures within those restored areas such as fencing, barriers, or landscaping.
- Removal of accumulated silt and the repair or replacement of silt fencing.
- Removal of accumulated silt from catch basin silt sacks.
- Maintenance of construction entrance pads.

In addition, all structural elements noted to be damaged or not properly functioning shall be restored to proper functioning order. Additional structural measures, when necessary, shall be immediately designed and implemented. Sediments which accumulate in the temporary sedimentation basins or sedimentation structures installed will be removed and disposed of offsite.

6.2 Dewatering Wastewaters

Based upon the soil boring results, at least some of the storm drainage installation work is expected to require the discharge of dewatering wastewaters. Dewatering wastewaters from construction activities must be considered contaminated and treated prior to discharge. Discharge from dewatering activities will need to be directed through an appropriate treatment system prior to discharge. All dewatering activities shall comply with the technical specifications and CTDEEP regulations. The Contractor shall not commence dewatering discharge without the express written approval of the Engineer or Owner, as specified.

6.2.1 Turbidity Monitoring

For construction activities with dewatering operations, the Permittee shall carry out initial and weekly monitoring for turbidity from each dewatering discharge point for the duration of dewatering operations. Samples shall be taken after the dewatering water has been treated by any treatment device or control measure. The Permittee shall measure turbidity in accordance with 40 CFR 136. The Permittee shall take the first turbidity measurement within 30 minutes of initiating the dewatering discharge. Following this initial monitoring, the Permittee shall conduct weekly monitoring during the Routine Inspection pursuant to Section 5.2.4.2. A record of the turbidity monitoring results shall be kept on-site with the SPCP and submitted to the Commissioner on the first day of each month following the initiation of the dewatering discharge as long as the discharge exists. Turbidity Monitoring Reports shall be submitted by email to DEEP.StormwaterConstruction@ct.gov with subject line "Construction turbidity monitoring" on forms prescribed by the Commissioner pursuant to Section 5.3.2.2 of the general permit.

6.3 Post Construction Stormwater Management

Street Sweeping

During construction, sediments shall be routinely cleaned from roadways and driveways to prevent their discharge to the storm drain systems. Following construction activities, the roadways and driveways shall generally be swept at least once annually, in the spring, following winter sanding operations.

Catch Basins and Manholes

Following construction activities, the catch basin sumps will be maintained at regular intervals by the Owner.

Water quality structures shall be inspected quarterly to establish maintenance schedule. Clean when required, then inspect yearly, and clean per established maintenance schedule.

Underground Detention Basin shall be inspected yearly for proper operation. Remove any accumulated sediment.

Lawn Areas to be maintained in a stable non-eroded condition. Any eroded areas to be stabilized with seed and mulch to establish a uniform stand of grass.

6.4 Other Controls

Good housekeeping is necessary to ensure that pollutants (in addition to soil sediment) do not contaminate protected areas. Particular emphasis is given to liquids that could contaminate surface or ground waters.

6.4.1 Construction Materials and Wastes

Throughout the construction activities, care should be exercised to prevent the following potential pollutants from discharging to waters of the State via storm water runoff or other means:

- Trash and Construction Debris
- Concrete
- Waste materials from cutting of metal pipe
- Excess Soil Materials
- Landscape Materials and Debris
- Waste Roadway, Driveway and Sidewalk Debris
- Packing Materials
- Antifreeze
- Petroleum Products
- Fertilizers
- Paints and Solvents
- Sediment
- Other material and debris

Construction Wastes

To minimize the potential for discharge of construction waste to the waters of the State, the following practices shall be implemented during construction activities:

- All 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.
- 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.
- Trucks and equipment will only be washed down in approved areas where the material will not enter protected areas. Nor should concrete wash down be discharged to ditches that lead to protected areas. A concrete washout area shall be provided in areas downgradient and at least 100 feet from wetlands resource areas. The Contractor shall follow the recommendations of the Guidelines in construction of the concrete washout areas.

Construction Materials

To minimize the potential for discharge of construction materials to the waters of the State, the following practices shall be implemented during construction activities:

- An effort will be made to store only enough product required to do this job.
- All materials stored on-site will be stored in a neat, orderly manner in their appropriate containers and/or where applicable, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufactures label.
- Hazardous materials, petroleum products, paints and fertilizers shall be kept in a secure location to discourage vandalism.
- Original labels and material safety data sheets will be retained.
- If surplus product must be disposed of, manufacturers or local and State recommended methods for proper disposal will be followed.
- Construction materials shall not be stored within 100 feet of wetlands or watercourses.
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Special Material Precautions

To minimize the potential for discharge of construction materials to the waters of the State, the following additional precautions shall be followed on the site:

- Petroleum Products: All on-site vehicles will be monitored for leaks and receive maintenance as needed. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any asphalt materials used on-site will be installed according to the manufacturer's recommendations.
- Fertilizers: Fertilizers used will be applied only in the amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. 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.
- Paints and Solvents: All containers will be tightly sealed and stored when not required for use. Washing or rinsing of paint buckets, brushes, or accessories/or excess material will not be discharged to the ground surface or the storm sewer system but will be properly disposed of according to manufacturer's instructions and State and local regulations.

6.4.2 Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete, excavation, pavement, paint, and other materials shall be conducted in a designated washout area. There shall be no surface discharge of washout wastewaters from this area. Such washout shall be conducted: (1) downgradient and outside (at least 100 feet from any stream, wetland, or other sensitive resource); or (2) in an entirely self-contained washout system. The area shall be clearly delineated and only used for washing of

equipment. All wash water shall be directed into a container or pit designed such that no overflows can occur during rainfall or after snowmelt. In addition, dumping of liquid wastes in storm sewers is prohibited. The Contractor shall remove and dispose of hardened concrete and asphalt waste off-site. At least once per week, the containers or pits used for washout shall be inspected to ensure structural integrity, adequate holding capacity, and to check for leaks or overflows. If there are signs of leaks, holes or overflows in the containers or pits that could lead to a discharge, they shall immediately be repaired prior to further use. The washout areas waste shall be removed whenever it has accumulated to a height of ½ of the container or pit or as necessary to avoid overflows. The maintenance/cleaning activities of the washout area shall be recorded in the logs. The Contractor shall remove and dispose of such hardened concrete waste in accordance with the practices developed for "Waste Disposal" (see Section 5.2.2.11.a of the general permit).

6.4.3 Spill Control Practices

The following practices shall be implemented during construction activities to mitigate spills of materials 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.
- All 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 the size.

6.4.4 Construction Exit Pads

Construction exit pads are special sediment traps that should be used wherever construction vehicles will be leaving disturbed areas and moving onto public streets or other protected areas. The pads shall be monitored, and sediments removed, or the pads reconstructed upon substantial sediment accumulation. The construction exits shall be installed at all points where construction traffic enters the paved surface.

6.4.5 Dust Control

Adequate dust control shall be implemented at all times. The contractor shall implement necessary measures to prevent dust generation, and shall include, but not be limited to:

- Keeping paved surfaces within public access areas clean at all times.
- Sweeping paved surfaces in construction areas, as necessary.

- Using water or dust control materials as necessary to control dust.

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

6.4.6 Removal of Sediment from Post-Construction Stormwater Structures

All post-construction stormwater structures shall be cleaned of construction sediment prior to filing of termination notice pursuant to Section 5 of the General Permit.

6.4.7 Chemical and Petroleum Storage

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 except for those chemicals stored in containers of 100-gallon capacity or more, in which case a roof is not required. Double-walled tanks satisfy this requirement.

7.0 INSPECTIONS

Inspections shall be made in accordance with the requirements and conditions of Section 5.2.4 of the general permit. Inspectors shall 1) not be an employee, as defined by the Internal Revenue Service in the Internal Revenue Code of 1986, of the registrant, and 2) shall have no ownership interest of any kind in the project.

7.1 Plan Implementation Inspections

Within the first 30 days following commencement of the construction activity on the site, the site shall be inspected by a qualified soil erosion and sediment control professional or a qualified professional engineer. The site shall be inspected initially and at least three times, with seven or more days between inspections, within the first 90 days of construction to confirm compliance with the General Permit and proper initial implementation of all control's measures designated in the SPCP for the site for the initial phase of construction.

7.2 Routine Inspections

Routine inspections of the site shall be made by a qualified inspector for compliance with the general permit and the SPCP until a Notice of Termination has been submitted. Inspection procedures for these

routine inspections shall be addressed and implemented in the following manner:

- A rain gauge shall be maintained on-site to document rainfall amounts.
- At least once a week and within 24 hours of the end of a storm that generates a discharge, a qualified inspector shall inspect, at a minimum, the following:
    - Disturbed areas of the construction activity that have not been finally stabilized; all erosion and sedimentation control measures; all structural control measures; soil stockpile areas; washout areas and locations where vehicles enter or exit the site. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to the receiving waters. Locations where vehicles enter or exit the site shall also be inspected for evidence of off-site sediment tracking. For storms that end on a weekend, holiday, or other time after which normal working hours will not commence within 24 hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For storms of less than 0.5 inches, an inspection shall occur immediately upon the start of the subsequent normal working hours. Where sites have been temporarily or permanently stabilized, such inspection shall be conducted at least once every month for three months.
    - The qualified inspector(s) shall evaluate the effectiveness of erosion and sediment controls, structural controls, stabilization practices, and any other controls implemented to prevent pollution and determine if it is necessary to install, maintain, or repair such controls and/or practices to improve the quality of stormwater discharge(s).
    - A report shall be prepared and retained as part of the Plan. This report shall summarize: the scope of the inspection; name(s) and qualifications of personnel making the inspection; the date(s) of the inspection; weather conditions including precipitation information; major observations relating to erosion and sediment controls and the implementation of the Plan; a description of the stormwater discharge(s) from the site; and any water quality monitoring performed during the inspection.
    - The report shall be signed by the Permittee or his/her authorized employee. The report shall include a statement that, in the judgment of the qualified inspector(s) conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the SPCP and permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions shall be implemented on site within 24 hours and incorporated into a revised SPCP within three (3) calendar days of the date of inspection unless another schedule is specified in the Guidelines. Engineered corrective actions (as identified in the Guidelines) shall be implemented on site within seven (7) days and incorporated into a revised SPCP within ten (10) days of the date of inspection unless another schedule is specified in the Guidelines or is approved by the Commissioner. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures shall be implemented to minimize the potential for the discharge of pollutants

from the site. If the Contractor must repeatedly (i.e., three (3) or more times) make the same routine maintenance fixes to the same control at the same location, even if the fix can be completed within the time periods described above, the designing Qualified Professional shall investigate and develop a revised control measure to remedy the failure. A record of all corrective actions shall be maintained in the SPCP.

- Inspection logs shall be completed at each inspection. A copy of the inspection logs is included in Attachment 6. Following completion, the logs will become an integral part of this Plan and will constitute an inspection report. Copies of the completed logs shall be retained as part of the Plan for a minimum of five years after the date of the Notice of Termination is accepted by the Commissioner.

7.3 Post-Construction Inspection

Once all post-construction stormwater measures have been installed in accordance with Section 5.2.2.10 of the general permit, and cleaned of any construction sediment or debris, the Permittee shall ensure that a qualified soil erosion and sediment control professional or a qualified professional engineer, as appropriate, inspects the site to confirm compliance with the postconstruction stormwater management requirements. The Permittee shall ensure that the person inspecting the site pursuant to this paragraph is not an employee, as defined by the Internal Revenue Service in the Internal Revenue Code of 1986, of the Permittee and that such person has no ownership interest of any kind in the project for which the site's application was submitted. A report shall be prepared and certified in accordance with Sections 4.2.2, 5.1.6, and 5.2.1.2.h of the general permit to indicate compliance with this requirement on the Notice of Termination form.

7.4 Final Stabilization Inspection

Once the site has achieved final stabilization defined in Section 10 of the general permit as "no disturbed areas remain exposed and there are no signs of erosion or sedimentation on site; the vegetation must be at least 6" tall with a minimum of one hundred (100) plans per square foot across all seeded areas, or a permanent non-vegetative ground cover has been fully established over the entire site." As defined on the Notice of Termination Form, "the Final Stabilization Inspection must occur at least one full growing season after final stabilization has been achieved. A full growing season is defined as the timeframe encompassed by two consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved. The Permittee shall have the site inspected by a Qualified Professional Engineer. The inspection shall confirm that all temporary erosion and sedimentation measures (silt fence, haybales, etc.) have been removed, all areas of the site are fully stabilized and vegetated, and that all post-construction stormwater management measures are implemented and functioning as designed. The inspection report shall include ground and/or aerial photographs to document final stabilization. All photographs must be clear and in focus, and in the original format and resolution; and include the date each photograph was taken, and a brief description of the area of the site captured by the photograph.

7.5 Termination Inspection

Once the site has maintained final stabilization at least one (1) year following the Final Stabilization Inspection, the Permittee shall have the site inspected by a Qualified Inspector to confirm such stabilization has been maintained. The inspection report shall include ground or aerial photographs to document final stabilization. All photographs must be clear and in focus, and in the original format and resolution; and include the date each photograph was taken, and a brief description of the area of the site captured by the photograph. The Permittee shall submit the Termination Inspection report with the Notice of Termination form.

8.0 KEEPING POLLUTION CONTROL PLAN CURRENT

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

1. The Permittee shall amend the SPCP if the actions required by the SPCP fail to prevent pollution or fail to prevent pollution or unauthorized discharges to the waters of the State or fail to comply with any other provision of this general permit. The SPCP shall also be amended whenever there is an addition of or change in contractors or subcontractors at the site, the designing Qualified Professional, District personnel, or a change in design, construction, operation, or maintenance at the site which has not otherwise been addressed in the SPCP. The Permittee shall comply with Section 3.5 if submission of a Notice of Change is required pursuant to that section.

2. The Commissioner may notify the Permittee at any time that the SPCP or the site do not meet one or more of the minimum requirements of this general permit. Within seven (7) days of such notice, or such other time as the Commissioner may allow, the Permittee shall make the required changes to the SPCP and perform all actions required by such revised SPCP. Within fifteen (15) days of such notice, or such other time as the Commissioner may allow, the Permittee shall submit to the Commissioner a written certification that the requested changes have been made and implemented and such other information as the Commissioner requires. Any such certification or information shall be submitted in accordance with the "Duty to Provide Information" and "Certification", Sections 8.9 and 8.21.4 of the general permit.

9.0 REPORTING AND RECORD KEEPING REQUIREMENTS

For a period of at least five years from the date the Notice of Termination is accepted by the Commissioner, retain copies of the Plan and all reports required by this general permit, and records of all data used to complete the registration. The Contractor shall retain an updated copy of the Plan required by the general permit at the construction site from the date construction is initiated at the site until the date construction at the site is completed.

10.0 ATTACHMENTS

Attachment 1

Notice of Termination Form

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

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

Notice of Termination Form: Non-Solar Projects

This Notice serves as a request to terminate the below listed permit as well as any applicable Letter(s) of Credit.

Part I: Permittee Information

The below information is required in accordance with Section 6(b) of the General Permit.

1. Permit Number: GSN _____
2. Registrant: _____
3. Site Address: _____

   City/Town: _____ State: _____ Zip Code: _____
4. Date of completion of construction: _____

   Date all storm drainage structures were cleared of construction sediment and debris: _____

   Beginning and Ending Dates of post-construction inspections: _____

   Date of final stabilization inspection(s)*: _____

   Qualified Inspector who conducted the Final Stabilization Inspection: (This person must sign Part III) _____
5. Check the post-construction activity(ies)** at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Capped Landfill

   ☐ Commercial ☐ Solar Array ☐ Other: _____

* The Final Stabilization Inspection must occur at least one full growing season after final stabilization has been achieved. A full growing season is defined as the timeframe encompassed by two consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved.

** If the post-construction activity involves solar arrays, the Department may require that the "Solar Projects: Notice of Termination Form" be used. Any questions regarding the necessity of such a form for the project can be sent via email to DEEP.StormwaterStaff@ct.gov.

Locally Approvable Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Approvable Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(i) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / District Representative

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional / a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / Representative of the District	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / Representative of the District	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional ☐ Representative of the District

Locally Exempt Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Exempt Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(ii) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional

State Agency Projects Must Complete the following Part II - (Attach additional sheets as needed)

Part II: State Agency Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(iii) of the General Permit.

Certification by a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency

"I hereby certify that I am a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature	Date
Printed Name	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional ☐ Representative of the District

All Projects Must Complete the following Part III - *(Attach additional sheets as needed)*

Part III: Final Stabilization Inspection Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by a Qualified Inspector

"I hereby certify that I am a qualified inspector as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that the site has been stabilized, as defined in Section 2 of the general permit, for a period of no less than one full growing season following the cessation of construction activities. I further certify that there is no active erosion or sedimentation present on site and no disturbed areas remain exposed. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Inspector	Date
Printed Name of Qualified Inspector	Title

All Projects Must Complete the following Part IV - *(Attach additional sheets as needed)*

Part IV: Permittee Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by the Permittee

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

Signature of Permittee	Date
Printed Name of Permittee	Title

All Projects Must Complete the following Part V - *(Attach additional documentation as needed)*

Part V: Additional Submittals

The following attachments are required to be submitted along with the Notice of Termination Form:

☐ Post-Construction Inspection Report (must contain photos with time stamps)

☐ Final Stabilization Inspection Report (must contain photos with time stamps)

Complete and submit this form in accordance with the general permit (DEEP-WPED-GP-015) to ensure the proper handling of the termination. Print or type unless otherwise noted.

Submit this Notice of Termination Form to the address below, as well as via email to DEEP.StormwaterStaff@ct.gov:

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

Attachment 2

Site Map/Plans – Phase 1

GENERAL NOTES

1. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND/OR THE FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE. THE CONTRACTOR SHALL NOT PROCEED WITH SUCH WORK UNTIL THE ENGINEER/ OWNER HAS BEEN CONTACTED FOR CLARIFICATION AND PROPER DIRECTION.
2. THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" LOCATING SERVICE AT 1-800-922-4455 AT LEAST SEVENTY TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION IN ORDER TO HAVE ALL UTILITIES LOCATED AND MARKED.
4. NO STUMPS, BUILDING DEBRIS, OR UNSUITABLE MATERIALS ARE TO BE BURIED ON SITE.
5. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S REQUIREMENTS AND STANDARDS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE UTILITY RELATED WORK WITH THE RESPECTIVE UTILITY COMPANY.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF SNOW FROM ALL ROADS, SIDEWALKS AND DRIVEWAYS WITHIN THE LIMITS OF THE WORK AREA AS WELL AS THE CONTRACTOR'S STAGING AREA UNTIL SUBSTANTIAL COMPLETION.
7. REPLACE EXISTING SURVEY MONUMENTS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION OPERATIONS. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.
8. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN.
9. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
10. ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE COVERED WITH TURF ESTABLISHMENT OR AS INDICATED ON THE PLANS. THE PERMANENT SEED MIX FOR TURF ESTABLISHMENT IS AS FOLLOWS:

NAME	MINIMUM PROPORTION BY WEIGHT
KENTUCKY BLUEGRASS	45%
CREEPING RED FESCUE	10%
PERENNIAL RYE GRASS	45%

11. ANY AND ALL EXISTING SEWERS, DRAINS, AND/OR UTILITIES ENCOUNTERED OR DAMAGED DURING CONSTRUCTION SHALL BE RECONNECTED TO OPERATING SEWERS, DRAINS, AND/OR UTILITIES AS DIRECTED BY THE ENGINEER/ OWNER AT NO ADDITIONAL COST TO OWNER.
12. THE CONTRACTOR SHALL INSTALL TEMPORARY PUMPING SYSTEMS, UNDERDRAINS, CURTAIN DRAINS, AND/OR OTHER MEASURES AS REQUIRED IN ORDER TO PROVIDE DRY, STABLE SUBGRADES.
13. CONTRACTOR SHALL RELOCATE, REMOVE, AND/OR OTHERWISE MODIFY ANY EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION AS REQUIRED TO AVOID CONFLICTS WITH THE PROPOSED WORK AS DIRECTED BY ENGINEER/ OWNER AT NO ADDITIONAL COST TO OWNER.
14. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AS DIRECTED BY ENGINEER/OWNER AT NO ADDITIONAL COST TO OWNER.
15. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION PRIOR TO APPROVAL FOR BACKFILL, IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY, THE TOWN OF EAST HARTFORD, AND/OR STATE OF CONNECTICUT REQUIREMENTS.

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL DEMOLISH AND REMOVE ANY AND ALL ITEMS AS REQUIRED TO CONSTRUCT WORK AT NO ADDITIONAL COST TO THE OWNER.
2. DEMOLITION AND/OR ABANDONMENT OF EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY'S REQUIREMENTS AND STANDARDS. CONTRACTOR SHALL COORDINATE DEMOLITION AND/OR ABANDONMENT WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL PROPERLY ABANDON AND/OR DEMOLISH AND REMOVE ANY AND ALL UNEXPECTED UTILITIES DISCOVERED DURING CONSTRUCTION AS APPROVED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
4. EXCAVATION OPERATIONS SHALL BE EXECUTED CAREFULLY AT ALL LOCATIONS ADJACENT TO EXISTING UNDERGROUND UTILITIES AND VAULTS. PROTECTION OF EXISTING UTILITIES, SIGNS, STRUCTURES, ETC. WITHIN THE WORK LIMIT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES.
5. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS INDICATED ON THE PLANS.
6. ANY DAMAGE TO EXISTING PAVEMENT, CURBS, SIDEWALKS, STRUCTURES OR ANY OTHER APPURTENANCES SHALL BE REPLACED (IN-KIND OR BETTER) BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. SAW-CUT DAMAGED SECTIONS BACK TO THE NEAREST JOINT WHERE APPROPRIATE AND MATCH EXISTING MATERIALS, THICKNESS, AND PATTERNS.
7. CONTRACTOR SHALL SAW-CUT BITUMINOUS AND CONCRETE SURFACES AT LIMITS OF DEMOLITION AS REQUIRED TO ACHIEVE A SMOOTH TRANSITION BETWEEN EXISTING SURFACES (TO REMAIN) AND NEW SURFACES. APPLY/INSTALL TACK COATS AND EXPANSION JOINTS AS REQUIRED. ANY EXISTING SURFACES DIRECTLY ADJACENT TO THE LIMIT OF DEMOLITION, NOT PREVIOUSLY DAMAGED OR DETERIORATED AND DAMAGED BY CONTRACTOR SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR TO COORDINATE ALL WORK WITH OWNER AND FOLLOW SAFETY PROCEDURES RECOMMENDED IN MATERIAL SAFETY DATA SHEETS (MSDS), AS APPLICABLE.

LEGEND (PROPOSED)

(NOT ALL SYMBOLS MAY BE USED)

- PROPERTY LINE
- EASEMENT LINE
- CURB
- EDGE OF PAVEMENT (EOP)
- METAL BEAM GUIDE RAIL
- TIMBER BARRIER RAIL
- CHAIN LINK FENCE
- TREE/VEGETATION LINE
- MAJOR CONTOUR (25)
- MINOR CONTOUR (21)
- SPOT ELEVATION (+21.25)
- TOP/BOTTOM OF CURB ELEVATION (TC21.25 / BC20.75)
- PIPES (24" RCP)
- TELEPHONE/COMMUNICATIONS (—T—)
- STORM DRAINAGE (—D—)
- UNDERGROUND ELECTRIC (—E—)
- OVERHEAD ELECTRIC (—OE—)
- SANITARY SEWER FORCE MAIN (—FM—)
- SANITARY SEWER (—S—)
- WATER (—W—)
- FIRE PROTECTION LINE (—F—)
- NATURAL GAS (—G—)
- EXISTING PIPE TO BE REMOVED
- EXISTING PIPE TO BE ABANDONED
- GEOTEXTILE SILT FENCE
- SEDIMENT CONTROL AT CATCH BASIN
- LIMIT OF EROSION CONTROL MATTING
- LIMIT TURF ESTABLISHMENT
- STONE BED
- CONCRETE
- RIPRAP
- EXISTING SITE FEATURE TO BE REMOVED
- EXISTING SITE FEATURE TO BE ABANDONED
- BIT. CONCRETE PAVEMENT
- BIT. CONCRETE PERMANENT PAVEMENT RESTORATION PER CT DOT STANDARDS
- SOIL BORING
- SOIL PROBE
- MONITORING WELL
- TEST PIT
- TYPE 'C' CATCH BASIN
- TYPE 'CL' CATCH BASIN
- YARD DRAIN
- STORM DRAINAGE MANHOLE
- SANITARY SEWER MANHOLE
- ELECTRICAL MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- MISCELLANEOUS MANHOLE
- GAS VALVE
- ELECTRICAL BOX
- HAND HOLE
- PAD MOUNTED TRANSFORMER
- HYDRANT
- WATER VALVE
- UTILITY POLE W/ GUY WIRE
- POLE MOUNTED LIGHT FIXTURE
- LUMINAIRE ON STANDARD
- SIGNS
- POST
- BOLLARD
- TREES
- SHRUBS
- STUMP
- GRADE TO DRAIN
- PORTABLE DUMPSTER CONTAINER (D)

ABBREVIATIONS

(NOT ALL ABBREVIATIONS MAY BE USED)

ABND	ABANDONED	HP	HIGH POINT
AM	AIR MAIN	HYD	HYDRANT
ACCMP	ASPHALT COATED CORRUGATED METAL PIPE	ID	INSIDE DIAMETER
APPROX.	APPROXIMATE	IE	INVERT ELEVATION
BC	BOTTOM OF CURB	INV	INVERT
BCLC	BITUMINOUS CONCRETE LIP CURB	KVE	ELECTRIC CABLE
BOT	BOTTOM	LP	LOW POINT
BIT.	BITUMINOUS	MH	MANHOLE
BL	BASELINE	NTS	NOT TO SCALE
BM	BENCHMARK	O.C.	ON CENTER
BO	BLOW OFF	O.D.	OUTSIDE DIAMETER
BOW	BOTTOM OF WALL	PB	PULL BOX
℄	CENTER LINE	℘	PROPERTY LINE
CW	CITY WATER	PVMT	PAVEMENT
C-CB	TYPE "C" CATCH BASIN	PCCP	PRESTRESSED CONCRETE CYLINDRICAL PIPE
CL-CB	TYPE "C-L" CATCH BASIN	PVC	POLYVINYL CHLORIDE
CI	CAST IRON	RCP	REINFORCED CONCRETE PIPE
CIP	CAST IRON PIPE	R	RADIUS
CLF	CHAIN LINK FENCE	RD	ROOF DRAINAGE
CMU	CONCRETE MASONRY UNIT	RWL	RAIN WATER LEADER
C.O.	CLEAN OUT	S	PIPE SLOPE
CONC.	CONCRETE	SAN	SANITARY
CPP	CORRUGATED PLASTIC PIPE	SD	STORM DRAIN
DI	DUCTILE IRON	SHT	DRAWING NO. SHEET
DIP	DUCTILE IRON PIPE	SMH	SANITARY MANHOLE
DEG	DEGREES	SPCP	STORMWATER POLLUTION CONTROL PLAN
DIA	DIAMETER	STM	STORM
DMH	DRAINAGE MANHOLE	SW	SERVICE WATER
DR	DRAIN LINE	TC	TOP OF CURB
DW	DOMESTIC WATER	TEMP.	TEMPORARY
ELEC	ELECTRICAL	TEL.	TELEPHONE
EL	ELEVATION	TF	TOP OF FRAME
EMH	ELECTRICAL MANHOLE	TMH	TELEPHONE/COMMUNICATIONS MANHOLE
EOP	EDGE OF PAVEMENT	TOG	TOP OF GRATE
EX.	EXISTING	TOS	TOP OF SLAB
EXIST.	EXISTING	TOW	TOP OF WALL
FE	FLARED END	TYP.	TYPICAL
F.D.	FLOOR DRAIN	UD	UNDERDRAIN
FF	FINISHED FLOOR	UKWN	UNKNOWN
FFE	FINISHED FLOOR ELEVATION	VC	VITRIFIED CLAY
FLR	FLOOR	VIF	VERIFY IN FIELD
FRP	FIBERGLASS REINFORCED PLASTIC	W	WATER
G	GAS	WM	WATER METER
GM	GAS METER	WMH	WATER MANHOLE
GTD	GRADE TO DRAIN	WS	WATER STOP
HC	HANDICAP	WV	WATER VALVE
HDPE	HIGH DENSITY POLYETHYLENE	YD	YARD DRAIN
HDS	HYDRODYNAMIC SEPARATOR STRUCTURE		
HH	HANDHOLE		

EROSION AND SEDIMENTATION CONTROL PLAN

NARRATIVE

THE SUBJECT SITE (2 PENT ROAD) IS LOCATED ON THE SOUTH SIDE OF PENT ROAD AND THE WEST SIDE OF HIGH STREET IN THE TOWN OF EAST HARTFORD, CONNECTICUT.

THE SUBJECT SITE IS PRESENTLY A DEVELOPED PARCEL OF LAND WITH AN EXISTING BUILDING AND PAVED PARKING LOT.

THERE IS NO WORK WITHIN WETLANDS, THOUGH PARTS OF THE SITE ARE WITHIN THE 500-YEAR FLOOD ZONE.

WORK INCLUDES CONSTRUCTION OF AN ADDITIONAL BUILDING. SITE IMPROVEMENTS INCLUDE REMOVAL OF EXISTING PAVEMENT, SIDEWALKS AND OTHER IMPROVEMENTS AND CONSTRUCTION OF NEW PAVEMENT, SIDEWALKS AND OTHER IMPROVEMENTS. THE EXISTING UNDERGROUND STORM DETENTION SYSTEM WILL BE MAINTAINED AND ADDITIONAL STORM DRAINAGE STRUCTURES AND PIPING WILL BE CONSTRUCTED. THE SITE HAS VERY GENTLE GRADES AND STANDARD EROSION CONTROL MEASURES WILL BE ADEQUATE.

SITE WORK WILL BE DIVIDED INTO 2 PHASES. PHASE 1 WILL INCLUDE CONSTUCTION OF A PARKING AREA ON 3 PENT ROAD, REMOVAL OF PAVEMENT AND OTHER SITE IMPROVEMENTS ON A PORTION OF 2 PENT ROAD AND WORK ASSOCIATED WITH PREPARATION OF THE BUILDING SITE FOUNDATION, INSTALLATION OF A PORTION OF THE STORM DRAINAGE SYSTEM ON 2 PENT ROAD AND OTHER SITE IMPROVEMENTS. PHASE 2 WILL INCLUDE THE REMAINING SITE IMPROVEMENTS.

CONSTRUCTION SCHEDULE (PHASE 1)

ESTIMATED START OF CONSTRUCTION IS NOVEMBEER 2024. ESTIMATED COMPLETION OF CONSTRUCTION IS FEBRUARY 2025. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

RESPONSIBLE CONTACT

THE RESPONSIBLE CONTACT PERSON FOR ASSURING THAT ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE PROPERLY INSTALLED AND MAINTAINED WILL BE THE SITE CONTRACTOR. THE RESPONSIBLE CONTACT PERSON FOR MAINTAINING THE PERMANENT MEASURES WHEN THE PROJECT IS COMPLETE WILL BE THE PROPERTY OWNER.

GENERAL EROSION AND SEDIMENTATION CONTROL NOTES

1. THE EROSION AND SEDIMENT CONTROLS SHOWN ON THE DRAWINGS DEPICT THE MINIMUM EROSION AND SEDIMENT CONTROL PRACTICES REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT ERODED MATERIALS FROM LEAVING THE SITE.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND APPROVED PRIOR TO THE START OF LAND CLEARING AND CONSTRUCTION.
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL AREAS ARE STABILIZED. IF FULL IMPLEMENTATION OF APPROVED EROSION CONTROL PLANS DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER/OWNER TO CONTROL OR TREAT THE SEDIMENT SOURCE AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL KEEP ALL PUBLIC ROADWAYS CLEAN AND CLEAR OF ALL MUD AND DEBRIS DURING CONSTRUCTION. THE CONTRACTOR SHALL IMPLEMENT MEASURES NECESSARY FOR DUST CONTROL, INCLUDING BUT NOT LIMITED TO PAVEMENT SWEEPING AND WATERING OF DISTURBED AREAS.
5. APPLY TEMPORARY SEEDING OR MULCH TO AREAS WHERE ROUGH GRADING HAS BEEN COMPLETED BUT FINAL GRADING IS NOT ANTICIPATED TO BEGIN WITHIN 30 DAYS OF THE COMPLETION OF ROUGH GRADING. WHEN CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR WHEN FINAL GRADES ARE REACHED, STABILIZATION AND PROTECTION MEASURES SHALL BE IMPLEMENTED WITHIN SEVEN (7) DAYS.
6. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL CONFORM TO THE REQUIREMENTS OF THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS AMENDED.

GENERAL CONSTRUCTION SEQUENCE

1. INSTALL SOIL AND EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO: CONSTRUCTION ENTRANCE PAD, SILT FENCE AND INLET PROTECTION AT CATCH BASIN.
2. CLEAR AND GRUB WITHIN LIMITS OF CLEARING.
3. STRIP AND STOCKPILE TOPSOIL. NO TOPSOIL SHALL BE REMOVED FROM THE SITE WITHOUT THE PERMISSION OF THE OWNER.
4. PERFORM ROUGH GRADING. EXCESS MATERIAL SHALL BE TAKEN DIRECTLY OFF-SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
5. CONTINUE EARTHWORK IN EXPEDITIOUS MANNER, AND STABILIZE. INSTALL ADDITIONAL EROSION CONTROLS AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
6. BUILDING CONSTRUCTION TO OCCUR THROUGHOUT CONSTRUCTION PROCESS.
7. COMPLETE INSTALLATION OF THE SITE UTILITIES.
8. COMPLETE INSTALLATION OF BITUMINOUS CONCRETE PAVEMENT, CONCRETE WALKS, ETC.
9. PREPARE FINAL GRADE FOR AREAS DISTURBED BY CONSTRUCTION NOT RECEIVING A HARD SURFACE OR OTHER SURFACE AS INDICATED ON PLAN. PLACE 6" OF TOPSOIL ON DISTURBED AREAS AFTER FINAL GRADING IS COMPLETED. FERTILIZE, SEED AND MULCH IN ACCORDANCE WITH THESE PLANS.
10. REMOVE EROSION CONTROLS AFTER AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES

SILT FENCE

A. SILT FENCE SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE SITE PLAN AND AS DIRECTED BY THE ENGINEER.
B. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
C. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND INSTALL THE POST AT LEAST 1.5 FEET INTO THE GROUND.
D. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
E. BACKFILL THE TRENCH AND COMPACT.

HAYBALES

A. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
B. BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.
C. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.
D. THE GAPS BETWEEN BALES SHELL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.
E. THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUN-OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, NOT AROUND IT.

INLET PROTECTION AT CATCH BASINS

A. PLACE INLET PROTECTION UNDER GRATE AT EACH CATCH BASIN AT LOCATIONS SHOWN ON DRAWINGS.

CONSTRUCTION ENTRANCE PAD

A. CLEAR THE AREA OF THE ENTRANCE OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
B. PLACE THE STONE TO THE SPECIFIED DIMENSION.

OPERATION AND MAINTENANCE OF TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

SILT FENCE

A. ALL SILT FENCES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED.
B. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY EXCEED A HEIGHT OF ONE FOOT OR 1/2 THE HEIGHT OF THE BARRIER.

INLET PROTECTION AT CATCH BASINS AND HAYBALES

A. INSPECT INLET PROTECTION AND/OR HAYBALES WEEKLY AND AFTER EACH RAINFALL.
B. INLET PROTECTION SHALL BE EMPTIED WHEN THEY HAVE COLLECTED 6" TO 12" OF SEDIMENT.
C. HAYBALES SHALL BE REPLACED IF VISIBLE DETERIORATION IS OBSERVED. DEPOSITS SHALL BE REMOVED AND CLEANED OUT WHEN ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

CONSTRUCTION ENTRANCE PAD

A. MAINTAIN THE ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING AND WASHING OF SEDIMENT ONTO PAVED SURFACES. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND. REPAIR ANY MEASURES USED TO TRAP SEDIMENTATION AS NEEDED.
B. ROADS ADJACENT TO CONSTRUCTION SITE SHALL BE LEFT CLEAN AT THE END OF EACH DAY.

GENERAL NOTE FOR OPERATION AND MAINTENANCE OF TEMPORARY SOIL AND EROSION AND SEDIMENTATION CONTROL MEASURES

A. CONTRACTOR TO KEEP WEEKLY CHECKLIST LOGS FOR INSPECTIONS OF ALL SEDIMENT AND EROSION CONTROL DEVICES AND HAVE THEM READILY AVAILABLE ON-SITE AT ALL TIMES FOR INSPECTION BY THE ENGINEER, OWNER'S REPRESENTATIVE OR CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CT DEEP).

OPERATION AND MAINTENANCE POST CONSTRUCTION (BY OWNER)

THE FOLLOWING OPERATION AND MAINTENANCE SCHEDULE IS REQUIRED TO ENSURE THE PROPER AND EFFICIENT OPERATION OF THE STORMWATER MANAGEMENT SYSTEM POST CONSTRUCTION.

LAWN AREAS: TO BE MAINTAINED IN A STABLE NON-ERODED CONDITION. ANY ERODED AREAS TO BE STABILIZED WITH SEED AND MULCH TO ESTABLISH A UNIFORM STAND OF GRASS.

CATCH BASINS: CLEAN SILT WHEN DEPTH REACHES 1'.

PAVED AREAS: SWEEP MINIMUM OF ONCE PER YEAR IN SPRING AFTER END OF SNOW SEASON.

UNDERGROUND DETENTION BASINS: INSPECT YEARLY FOR PROPER OPERATION. REMOVE ANY ACCUMULATED SEDIMENT.

WATER QUALITY STRUCTURE: INSPECT QUARTERLY TO ESTABLISH MAINTENANCE SCHEDULE. CLEAN WHEN REQUIRED, THEN INSPECT YEARLY AND CLEAN PER ESTABLISHED MAINTENANCE SCHEDULE.

CONTINGENCY EROSION PLAN

SHOULD UNFORESEEN EROSION OR SEDIMENTATION PROBLEMS ARISE, THE DESIGN ENGINEER OF RECORD (EAST-WEST ENGINEERING, PLLC) SHALL BE NOTIFIED IMMEDIATELY. AN INSPECTION OF THE AFFECTED AREA(S) SHALL BE PROMPTLY PERFORMED. A REMEDIAL ACTION PLAN SHALL BE FORMULATED. THE SITE CONTRACTOR SHALL THEN IMPLEMENT THE RECOMMENDED COURSE OF ACTION WHICH HAS BEEN DETERMINED BY THE ENGINEER.

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SIGN AND STAMP

GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

PHASE 1 OF 4

KEY PLAN

DRAWING TITLE

CIVIL GENERAL NOTES & LEGEND

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	09/09/2024
DRAWN BY:	GBS
CHECKED BY:	JAS

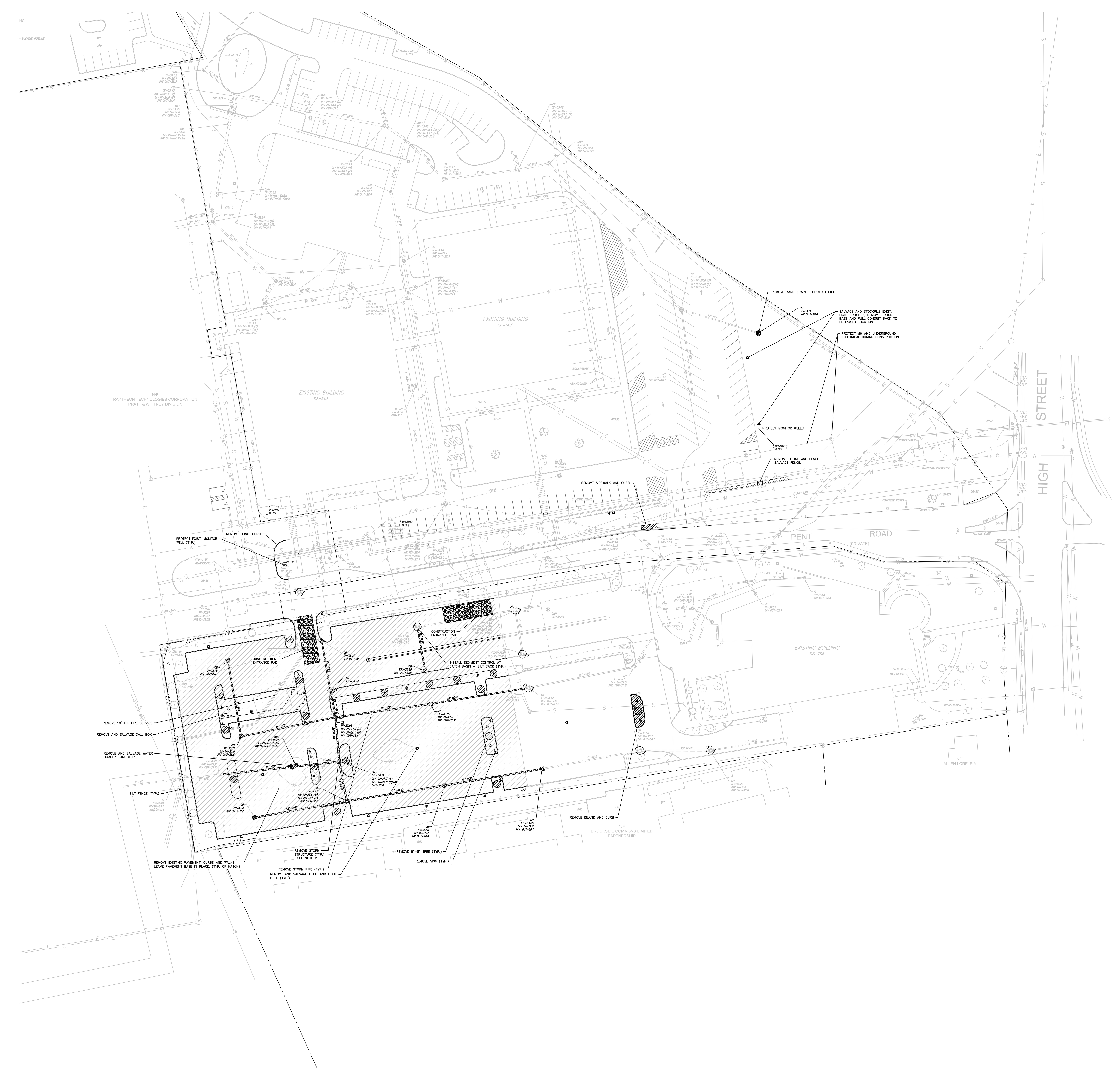
ISSUE DATES

NO.	DATE	PURPOSE

C.1

11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

A | B | C | D | E | F | G | H | I | J


HIGH
STREET
PENT
ROAD
(PRIVATE)
EXISTING BUILDING
EXISTING BUILDING
EXISTING BUILDING
N/F
RAYTHEON TECHNOLOGIES CORPORATION
PRATT & WHITNEY DIVISION
N/F
BROOKSIDE COMMONS LIMITED
PARTNERSHIP
N/F
ALLEN LORELEIA
REMOVE YARD DRAIN – PROTECT PIPE
SALVAGE AND STOCKPILE EXIST. LIGHT FIXTURES, REMOVE FIXTURE BASE AND PULL CONDUIT BACK TO PROPOSED LOCATION
PROTECT MH AND UNDERGROUND ELECTRICAL DURING CONSTRUCTION
PROTECT MONITOR WELLS
MONITOR WELLS
REMOVE HEDGE AND FENCE. SALVAGE FENCE.
REMOVE SIDEWALK AND CURB
PROTECT EXIST. MONITOR WELL (TYP.)
REMOVE CONC. CURB
MONITOR WELL
CONSTRUCTION ENTRANCE PAD
CONSTRUCTION ENTRANCE PAD
INSTALL SEDIMENT CONTROL AT CATCH BASIN – SILT SACK (TYP.)
REMOVE 10" D.I. FIRE SERVICE
REMOVE AND SALVAGE CALL BOX
REMOVE AND SALVAGE WATER QUALITY STRUCTURE
SILT FENCE (TYP.)
REMOVE EXISTING PAVEMENT, CURBS AND WALKS. LEAVE PAVEMENT BASE IN PLACE. (TYP. OF HATCH)
REMOVE STORM STRUCTURE (TYP.) –SEE NOTE 2
REMOVE STORM PIPE (TYP.)
REMOVE AND SALVAGE LIGHT AND LIGHT POLE (TYP.)
REMOVE 6"–8" TREE (TYP.)
REMOVE SIGN (TYP.)
REMOVE ISLAND AND CURB

NOTES:

1. SEE GP-1 FOR ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
2. ANY STORM DRAINAGE STRUCTURES TO BE REMOVED THAT ARE LEFT TEMPORARILY DURING CONSTRUCTION TO COLLECT RUNOFF FROM DISTURBED AREAS SHALL HAVE SEDIMENT CONTROL AT CATCH BASIN - SILT SACK'S INSTALLED.

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GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

PHASE 1 OF 4

KEY PLAN

DRAWING TITLE

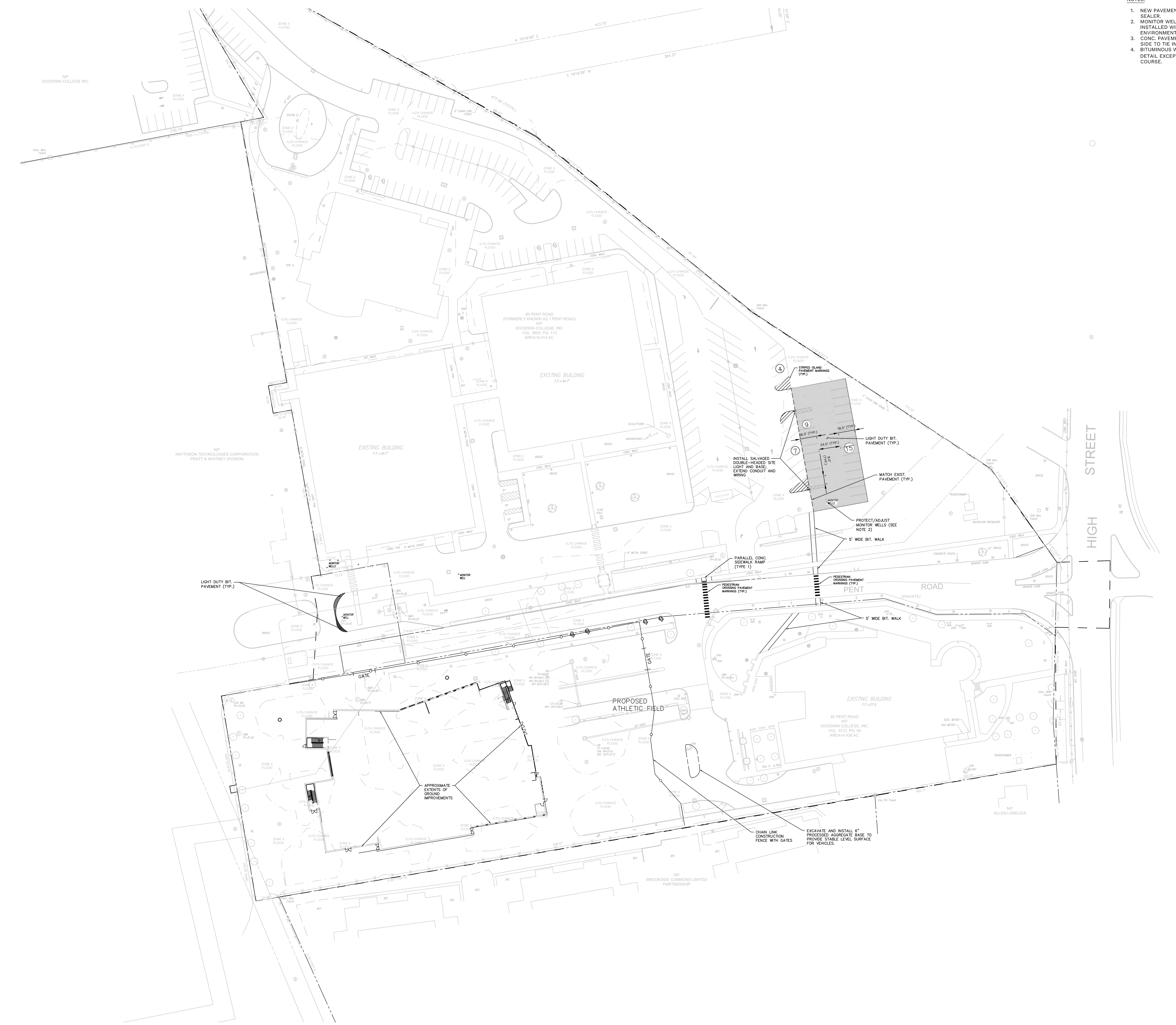
CIVIL
SITE REMOVAL PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	09/09/2024
DRAWN BY:	GBS
CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.2



NOTES:

1. NEW PAVEMENT TO MATCH EXIST. PAVEMENT. SEAL JOINT WITH ASPHALT SEALER.
2. MONITOR WELLS TO BE ADJUSTED TO GRADE AND UTILITY ROAD BOXES INSTALLED WITHIN A CONCRETE PAD. COORDINATE WORK WITH ENVIRONMENTAL CONSULTANT.
3. CONC. PAVEMENT TO HAVE A MINIMUM OF 3 DOWELS INSTALLED PER SIDE TO TIE INTO EXIST. CONC. PAVEMENT.
4. BITUMINOUS WALK TO BE CONSTRUCTED TO LIGHT DUTY ASPHALT DETAIL EXCEPT PAVEMENT SECTION TO INCLUDE ONLY 1½" BASE COURSE.

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SIGN AND STAMP

GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

PHASE 1 OF 4

KEY PLAN

DRAWING TITLE

CIVIL
SITE LAYOUT PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	09/09/2024
DRAWN BY:	GBS
CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.3

NOTES:

1. ALL STORM STRUCTURES WITH THE LOWEST INSIDE ELEVATION OF 27.0 OR LESS SHALL BE CONSTRUCTED WATERTIGHT.
2. ALL STORM SEWER PIPE SHALL BE HDPE UNLESS INDICATED OTHERWISE ON PLANS. PIPE SHALL BE INSTALLED WATERTIGHT WITH GASKET.

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GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

PHASE 1 OF 4

KEY PLAN

DRAWING TITLE

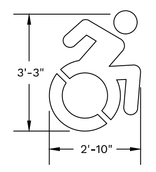
CIVIL
SITE GRADING PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	09/09/2024
DRAWN BY:	GBS
CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.4

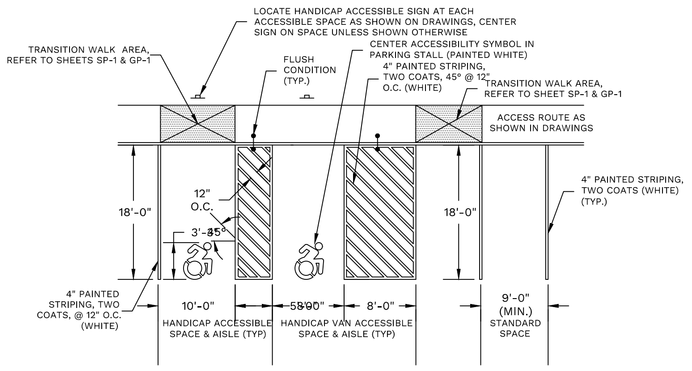


ACCESSIBLE PARKING SPACE SYMBOL

ACCESSIBLE PARKING SIGN

NOTE: ACCESSIBLE PARKING SIGNS SHALL CONFORM WITH CURRENT STATE AND LOCAL REGULATIONS.

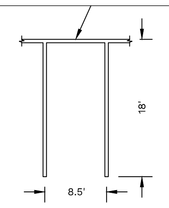
VAN ACCESSIBLE PARKING SIGN



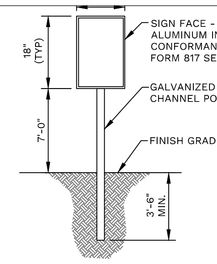
NOTES:

1. SLOPE ON PAVEMENT SHALL BE NO MORE THAN 2% IN ANY DIRECTION FOR ACCESSIBLE PARKING SPACES.
2. CROSS HATCH AISLES MAY BE SHARED BETWEEN TWO SPACES.
3. AISLE WIDTH IS 8' FOR VAN ACCESSIBLE SPACES, AND 5' FOR ALL OTHER ACCESSIBLE SPACES.

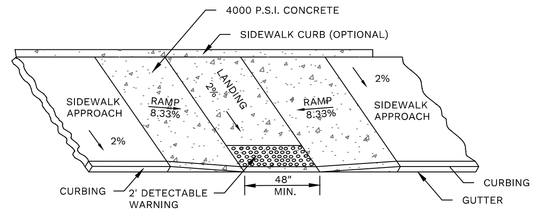
ACCESSIBLE PARKING SPACES
NOT TO SCALE



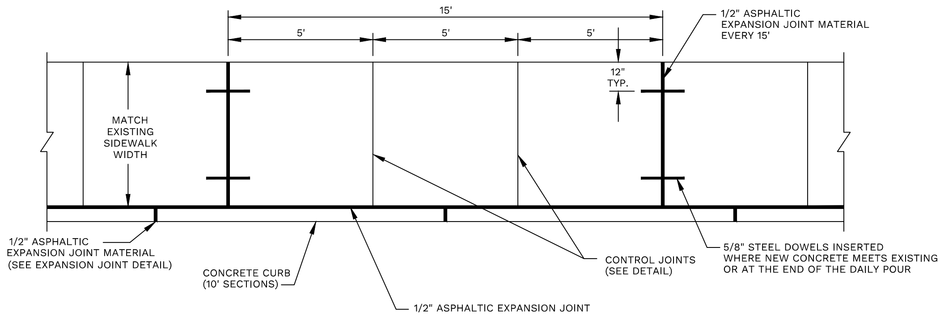
TYPICAL PARKING SPACE
NOT TO SCALE



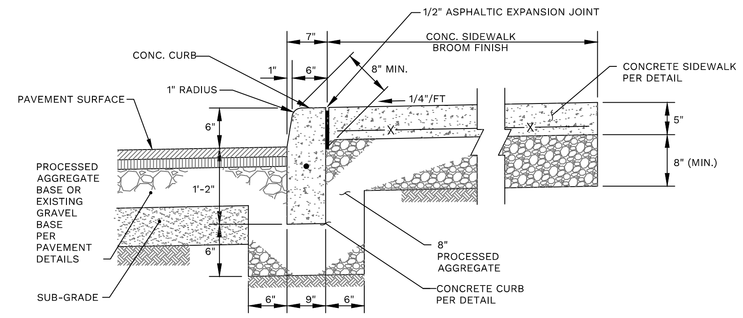
TYPICAL SIGN POST
NOT TO SCALE



PARALLEL SIDEWALK RAMP (TYPE 1)
NOT TO SCALE



SIDEWALK PLAN VIEW

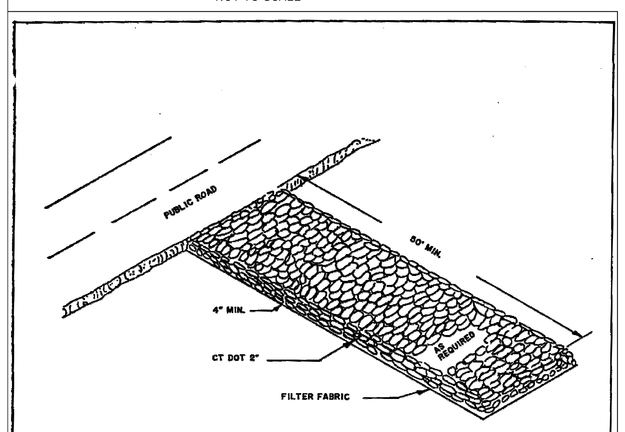


SIDEWALK SECTION

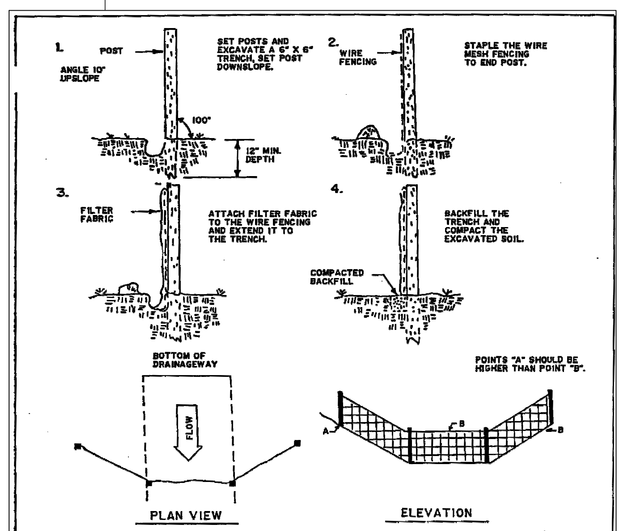
NOTES:

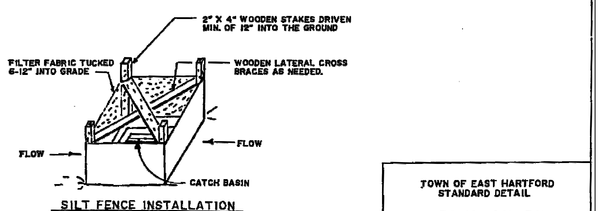
1. REMOVE CONCRETE WALKS TO THE NEAREST EXPANSION JOINT AT THE LOCATIONS NOTED ON THE PLANS.
2. AT LOCATIONS WHERE NEW CONCRETE WALKS ARE TO BE INSTALLED ADJACENT TO EXISTING CONCRETE WALKS, MATCH SIDEWALK WIDTH AND PROVIDE FLUSH TRANSITION BETWEEN EXISTING AND NEW WALK.

CONCRETE SIDEWALK AND CURB
NOT TO SCALE



CONSTRUCTION ENTRANCE





SILT FENCE INSTALLATION AT CATCH BASINS

TOWN OF EAST HARTFORD STANDARD DETAIL	
CONSTRUCTION ENTRANCE	

NO.	DESCRIPTION	DATE	APPROVE
REVISIONS			

DATE: JUNE 1993

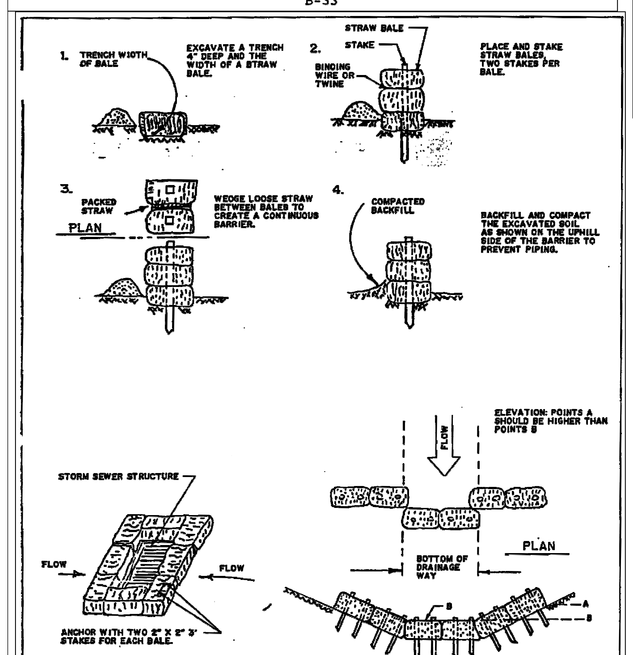
B-33

TOWN OF EAST HARTFORD STANDARD DETAIL	
EROSION CONTROL SILT FENCE	

NO.	DESCRIPTION	DATE	APPROVE
REVISIONS			

DATE: JUNE 1993

B-32



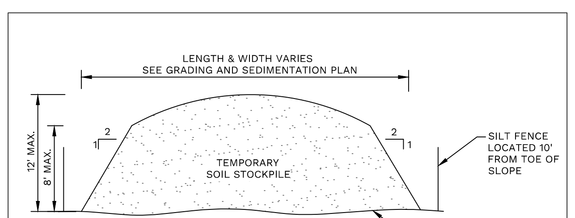
HAYBALE INSTALLATION AT CATCH BASINS

TOWN OF EAST HARTFORD STANDARD DETAIL	
EROSION CONTROL HAYBALE	

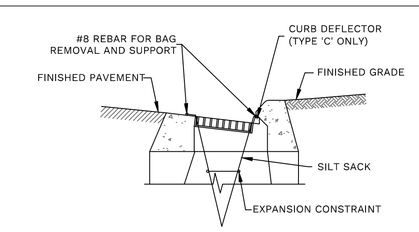
NO.	DESCRIPTION	DATE	APPROVE
REVISIONS			

DATE: JUNE 1993

B-31



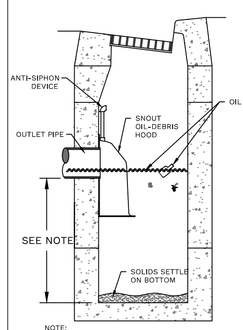
TEMPORARY SOIL STOCKPILE
NOT TO SCALE



NOTES:

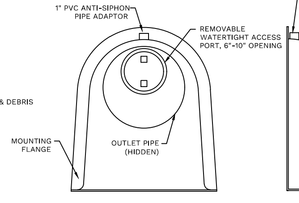
1. SILT SACKS MAY BEUSED IN OTHER TYPES OF STORM DRAINAGE INLETS. TYPE 'C' CATCH BASIN SHOWN FOR CLARITY.

SEDIMENT CONTROL AT CATCH BASIN - SILT SACK
NOT TO SCALE

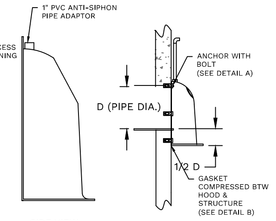


NOTE:
STORE DEPTH OF 36" MIN. OR 12" DIA. OUTLET (OR LESS). FOR OUTLETS LARGER THAN 12", SUMP DEPTH=2.5~3*D, WHERE D=PIPE DIA.

TYPICAL INSTALLATION

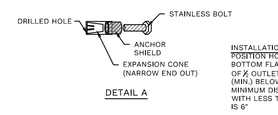


FRONT VIEW



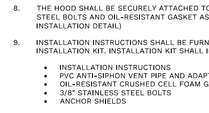
SIDE VIEW

SNOUT OIL-WATER DEBRIS SEPARATOR



DETAIL A

INSTALLATION NOTE:
POSITION HOOD SUCH THAN BOTTOM LIP IS A DISTANCE EQUAL TO 1/2 THE PIPE DIA. (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES WITH LESS THAN A 12" DIAMETER IS 6"



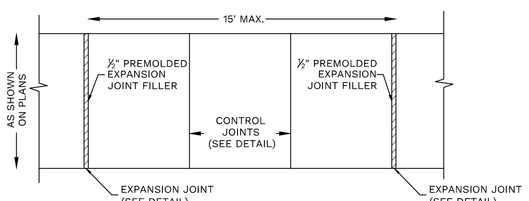
DETAIL B

NOTES:

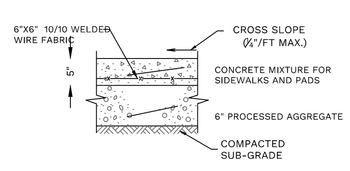
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:

   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8' STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:
   - INSTALLATION INSTRUCTIONS
   - PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   - OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   - 3/8" STAINLESS STEEL BOLTS
   - ANCHOR SHIELDS

CATCH BASIN HOODED OUTLET
NOT TO SCALE



PLAN

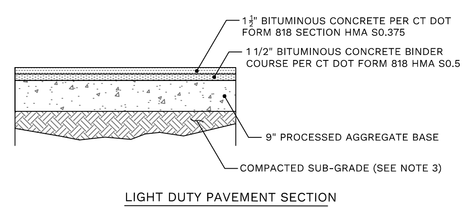


SECTION

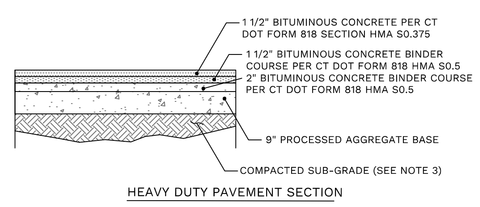
NOTES:

1. INCREASE SLAB THICKNESS TO 8" FOR SIDEWALKS CROSSING DRIVEWAYS AND OTHER VEHICULAR TRAFFIC LOADED AREAS.
2. REMOVE CONCRETE WALKS TO THE NEAREST EXPANSION JOINT AT THE LOCATIONS NOTED ON THE PLANS.
3. MATCH WIDTH AND PROVIDE FLUSH TRANSITION BETWEEN NEW AND EXISTING CONCRETE SIDEWALK.

CONCRETE SIDEWALK
NOT TO SCALE



LIGHT DUTY PAVEMENT SECTION

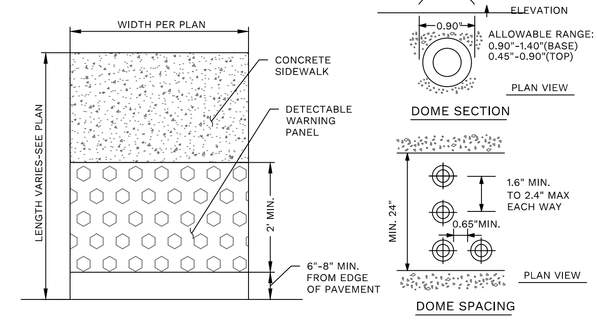


HEAVY DUTY PAVEMENT SECTION

NOTES:

1. BITUMINOUS CONCRETE PAVEMENT AND PERMANENT PAVEMENT REPAIR SHALL MEET THE REQUIREMENTS OF THE TOWN OF EAST HARTFORD.
2. PAVEMENT SUBGRADE SHALL BE FREE OF TOPSOIL, ASPHALT, AND LOOSE SOILS PRIOR TO PLACING PROCESSED AGGREGATE BASE. MATERIAL SHALL BE PLACED AS SOON AS POSSIBLE AFTER EXCAVATION SO THAT DISTURBANCE OF BEARING MATERIALS DOES NOT OCCUR.
3. PROOF ROLL SUBGRAGE PRIOR TO LIFT PLACEMENT WITH 12-TON VIBRATORY ROLLER.

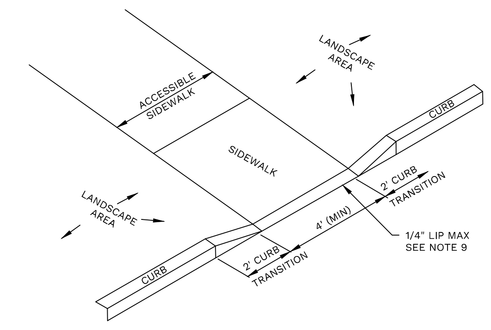
BITUMINOUS CONCRETE PAVEMENT SECTIONS
NOT TO SCALE



NOTES:

1. INSTALL DETECTABLE WARNING PANELS AT LOCATIONS SHOWN ON PLANS.
2. DETECTABLE WARNING PANEL SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES EITHER LIGHT ON DARK OR DARK ON LIGHT. COLOR SHOULD BE BRICK RED.

DETECTABLE WARNING PANEL
NOT TO SCALE



NOTES:

1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. RAMP, CURB, AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. TYPICAL SIDEWALK SECTION FOR RAMP SECTION CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' X 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.

ACCESSIBLE CURB RAMP (ACR) TYPE 'M'
NOT TO SCALE

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TSKP STUDIO
One Hartford Square West
146 Wyllys Street, Bldg 1-203
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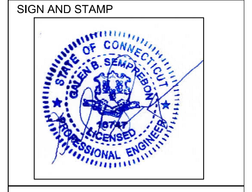
EAST-WEST ENGINEERING

SIGN AND STAMP



GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

PHASE 1 OF 4

KEY PLAN

DRAWING TITLE

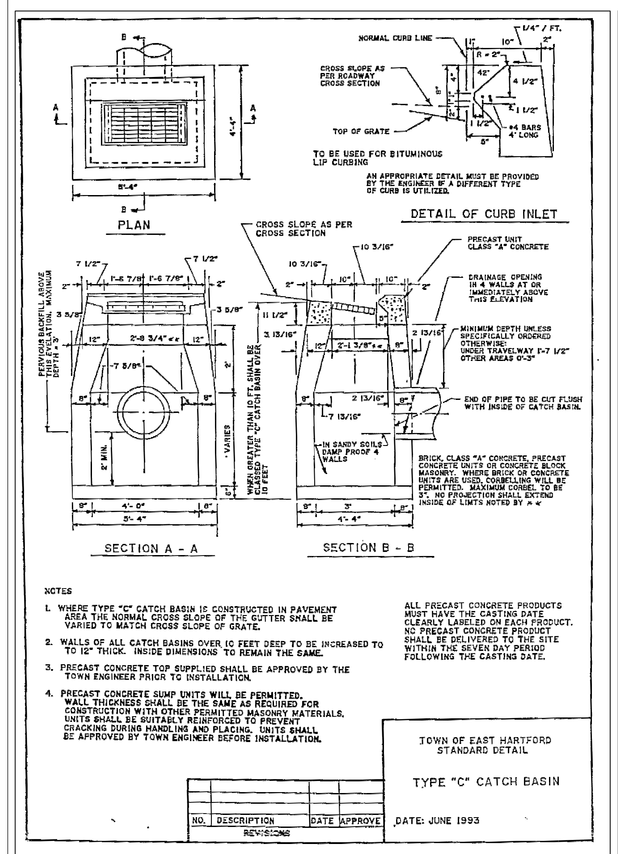
CIVIL DETAILS

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	09/09/2024
DRAWN BY:	GBS
CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.5



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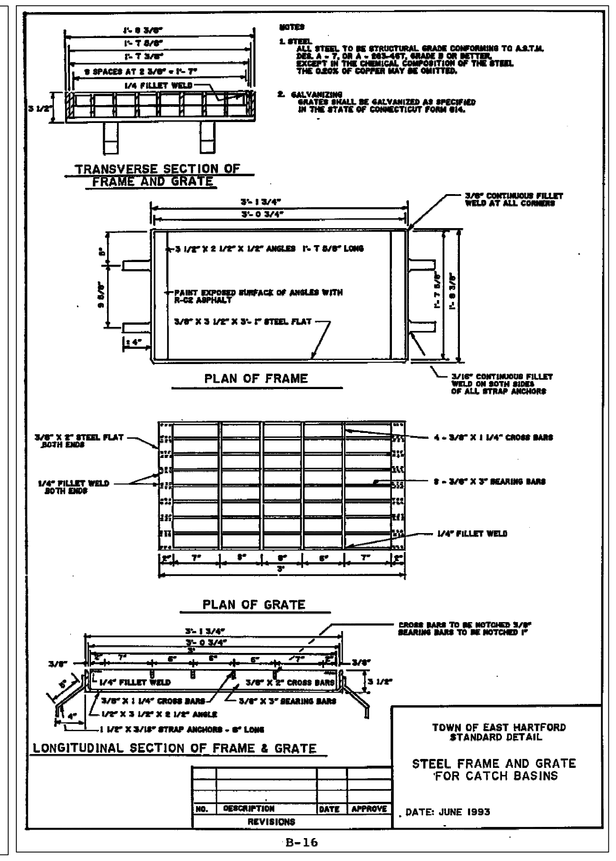

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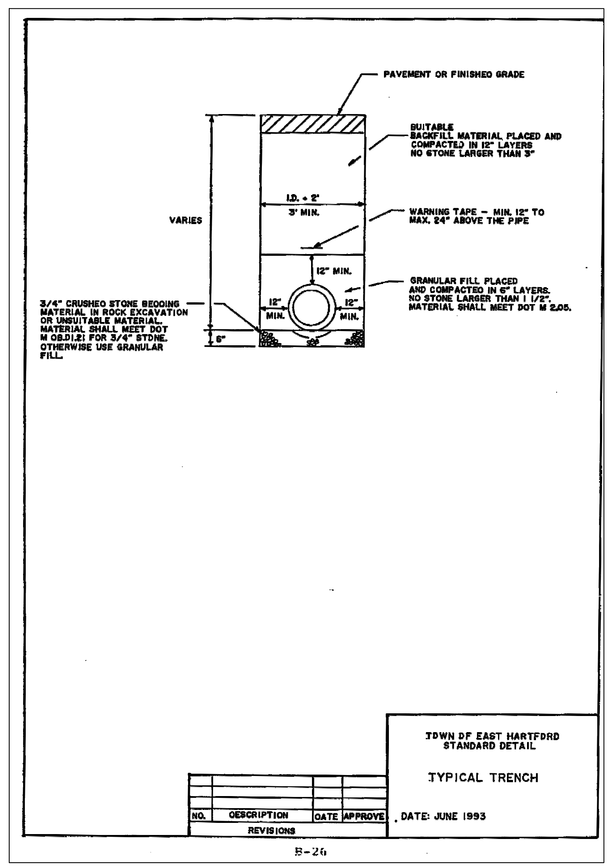

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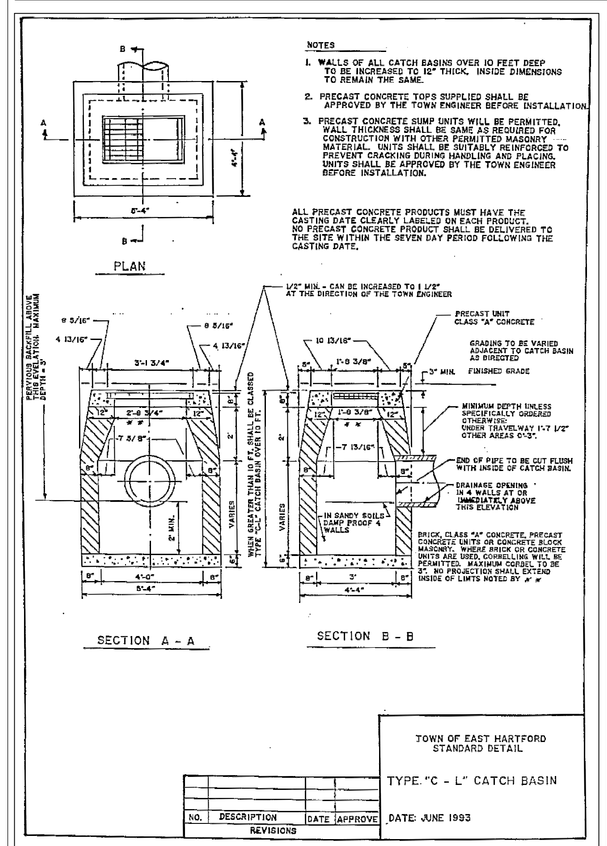

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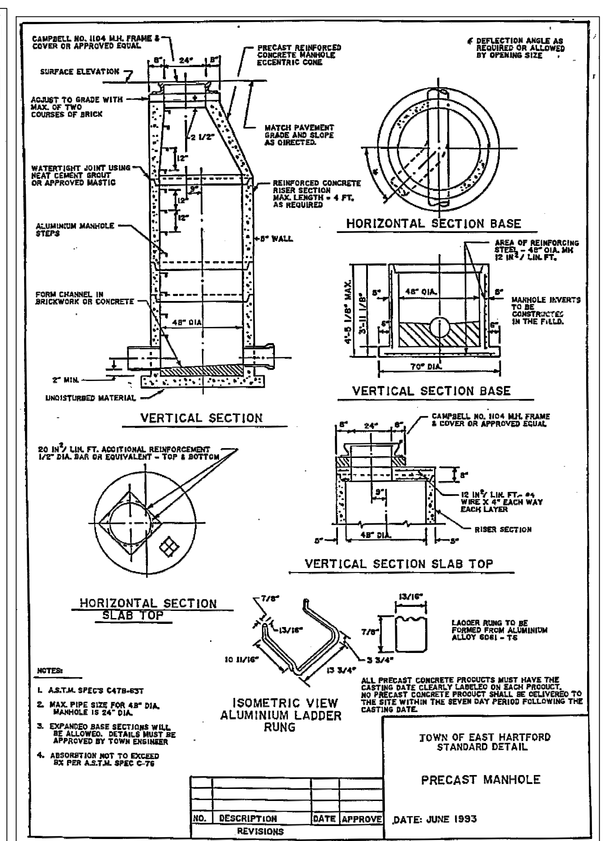

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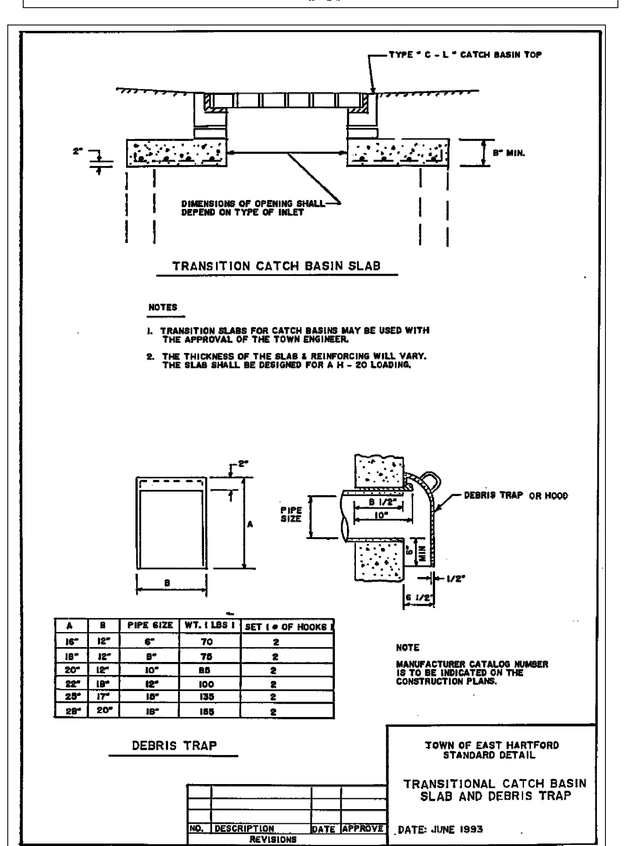

A	B	PIPE SIZE	WT. (LBS)	SET (# OF HOOKS)
16"	12"	6"	70	2
18"	16"	8"	70	2
20"	18"	10"	85	2
22"	19"	12"	100	2
23"	21"	15"	135	2
28"	20"	15"	165	2

B-15

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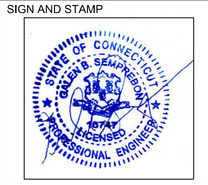

GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

PHASE 1 OF 4

KEY PLAN

DRAWING TITLE

CIVIL DETAILS

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	09/09/2024
DRAWN BY:	GBS
CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.6

Attachment 2

Site Map/Plans – Phase 2

GENERAL NOTES

1. EXISTING CONDITIONS MAY VARY FROM THOSE SHOWN ON THESE PLANS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND/OR THE FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE. THE CONTRACTOR SHALL NOT PROCEED WITH SUCH WORK UNTIL THE ENGINEER/ OWNER HAS BEEN CONTACTED FOR CLARIFICATION AND PROPER DIRECTION.
2. THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" LOCATING SERVICE AT 1-800-922-4455 AT LEAST SEVENTY TWO (72) HOURS PRIOR TO THE START OF CONSTRUCTION IN ORDER TO HAVE ALL UTILITIES LOCATED AND MARKED.
4. NO STUMPS, BUILDING DEBRIS, OR UNSUITABLE MATERIALS ARE TO BE BURIED ON SITE.
5. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S REQUIREMENTS AND STANDARDS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE UTILITY RELATED WORK WITH THE RESPECTIVE UTILITY COMPANY.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF SNOW FROM ALL ROADS, SIDEWALKS AND DRIVEWAYS WITHIN THE LIMITS OF THE WORK AREA AS WELL AS THE CONTRACTOR'S STAGING AREA UNTIL SUBSTANTIAL COMPLETION.
7. REPLACE EXISTING SURVEY MONUMENTS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION OPERATIONS. PERFORM THE WORK TO PRODUCE THE SAME LEVEL OF ACCURACY AS THE ORIGINAL MONUMENT(S) IN A TIMELY MANNER, AND AT THE CONTRACTOR'S EXPENSE.
8. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN.
9. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
10. ALL DISTURBED AREAS NOT RECEIVING A HARD SURFACE SHALL BE COVERED WITH TURF ESTABLISHMENT OR AS INDICATED ON THE PLANS. THE PERMANENT SEED MIX FOR TURF ESTABLISHMENT IS AS FOLLOWS:

NAME	MINIMUM PROPORTION BY WEIGHT
KENTUCKY BLUEGRASS	45%
CREEPING RED FESCUE	10%
PERENNIAL RYE GRASS	45%

11. ANY AND ALL EXISTING SEWERS, DRAINS, AND/OR UTILITIES ENCOUNTERED OR DAMAGED DURING CONSTRUCTION SHALL BE RECONNECTED TO OPERATING SEWERS, DRAINS, AND/OR UTILITIES AS DIRECTED BY THE ENGINEER/ OWNER AT NO ADDITIONAL COST TO OWNER.
12. THE CONTRACTOR SHALL INSTALL TEMPORARY PUMPING SYSTEMS, UNDERDRAINS, CURTAIN DRAINS, AND/OR OTHER MEASURES AS REQUIRED IN ORDER TO PROVIDE DRY, STABLE SUBGRADES.
13. CONTRACTOR SHALL RELOCATE, REMOVE, AND/OR OTHERWISE MODIFY ANY EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION AS REQUIRED TO AVOID CONFLICTS WITH THE PROPOSED WORK AS DIRECTED BY ENGINEER/ OWNER AT NO ADDITIONAL COST TO OWNER.
14. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR AS DIRECTED BY ENGINEER/OWNER AT NO ADDITIONAL COST TO OWNER.
15. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION PRIOR TO APPROVAL FOR BACKFILL, IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY, THE TOWN OF EAST HARTFORD, AND/OR STATE OF CONNECTICUT REQUIREMENTS.

GENERAL DEMOLITION NOTES

1. CONTRACTOR SHALL DEMOLISH AND REMOVE ANY AND ALL ITEMS AS REQUIRED TO CONSTRUCT WORK AT NO ADDITIONAL COST TO THE OWNER.
2. DEMOLITION AND/OR ABANDONMENT OF EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY'S REQUIREMENTS AND STANDARDS. CONTRACTOR SHALL COORDINATE DEMOLITION AND/OR ABANDONMENT WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL PROPERLY ABANDON AND/OR DEMOLISH AND REMOVE ANY AND ALL UNEXPECTED UTILITIES DISCOVERED DURING CONSTRUCTION AS APPROVED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
4. EXCAVATION OPERATIONS SHALL BE EXECUTED CAREFULLY AT ALL LOCATIONS ADJACENT TO EXISTING UNDERGROUND UTILITIES AND VAULTS. PROTECTION OF EXISTING UTILITIES, SIGNS, STRUCTURES, ETC. WITHIN THE WORK LIMIT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES.
5. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS INDICATED ON THE PLANS.
6. ANY DAMAGE TO EXISTING PAVEMENT, CURBS, SIDEWALKS, STRUCTURES OR ANY OTHER APPURTENANCES SHALL BE REPLACED (IN-KIND OR BETTER) BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. SAW-CUT DAMAGED SECTIONS BACK TO THE NEAREST JOINT WHERE APPROPRIATE AND MATCH EXISTING MATERIALS, THICKNESS, AND PATTERNS.
7. CONTRACTOR SHALL SAW-CUT BITUMINOUS AND CONCRETE SURFACES AT LIMITS OF DEMOLITION AS REQUIRED TO ACHIEVE A SMOOTH TRANSITION BETWEEN EXISTING SURFACES (TO REMAIN) AND NEW SURFACES. APPLY/INSTALL TACK COATS AND EXPANSION JOINTS AS REQUIRED. ANY EXISTING SURFACES DIRECTLY ADJACENT TO THE LIMIT OF DEMOLITION, NOT PREVIOUSLY DAMAGED OR DETERIORATED AND DAMAGED BY CONTRACTOR SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR TO COORDINATE ALL WORK WITH OWNER AND FOLLOW SAFETY PROCEDURES RECOMMENDED IN MATERIAL SAFETY DATA SHEETS (MSDS), AS APPLICABLE.

LEGEND (PROPOSED)

(NOT ALL SYMBOLS MAY BE USED)

- PROPERTY LINE
- EASEMENT LINE
- CURB
- EDGE OF PAVEMENT (EOP)
- METAL BEAM GUIDE RAIL
- TIMBER BARRIER RAIL
- CHAIN LINK FENCE
- TREE/VEGETATION LINE
- 25 MAJOR CONTOUR
- 21 MINOR CONTOUR
- +21.25 SPOT ELEVATION
- TC21.25 BC20.75 TOP/BOTTOM OF CURB ELEVATION
- 24" RCP PIPES
- T TELEPHONE/COMMUNICATIONS
- D STORM DRAINAGE
- E UNDERGROUND ELECTRIC
- OE OVERHEAD ELECTRIC
- FM SANITARY SEWER FORCE MAIN
- S SANITARY SEWER
- W WATER
- F FIRE PROTECTION LINE
- G NATURAL GAS
- EXISTING PIPE TO BE REMOVED
- EXISTING PIPE TO BE ABANDONED
- GEOTEXTILE SILT FENCE
- SEDIMENT CONTROL AT CATCH BASIN
- LIMIT OF EROSION CONTROL MATTING
- LIMIT TURF ESTABLISHMENT
- STONE BED
- CONCRETE
- RIPRAP
- EXISTING SITE FEATURE TO BE REMOVED
- EXISTING SITE FEATURE TO BE ABANDONED
- BIT. CONCRETE PAVEMENT
- BIT. CONCRETE PERMANENT PAVEMENT RESTORATION PER CT DOT STANDARDS

- SOIL BORING
- SOIL PROBE
- MONITORING WELL
- TEST PIT
- TYPE 'C' CATCH BASIN
- TYPE 'CL' CATCH BASIN
- YARD DRAIN
- STORM DRAINAGE MANHOLE
- SANITARY SEWER MANHOLE
- ELECTRICAL MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- MISCELLANEOUS MANHOLE
- GAS VALVE
- ELECTRICAL BOX
- HAND HOLE
- PAD MOUNTED TRANSFORMER
- HYDRANT
- WATER VALVE
- UTILITY POLE W/ GUY WIRE
- POLE MOUNTED LIGHT FIXTURE
- LUMINAIRE ON STANDARD
- SIGNS
- POST
- BOLLARD
- TREES
- SHRUBS
- STUMP
- GRADE TO DRAIN
- D PORTABLE DUMPSTER CONTAINER

ABBREVIATIONS

(NOT ALL ABBREVIATIONS MAY BE USED)

ABND	ABANDONED	HH	HANDHOLE
AM	AIR MAIN	HP	HIGH POINT
ACCMP	ASPHALT COATED CORRUGATED METAL PIPE	HYD	HYDRANT
APPROX.	APPROXIMATE	ID	INSIDE DIAMETER
BC	BOTTOM OF CURB	IE	INVERT ELEVATION
BCLC	BITUMINOUS CONCRETE LIP CURB	INV	INVERT
BOT	BOTTOM	KVE	ELECTRIC CABLE
BIT.	BITUMINOUS	LP	LOW POINT
BL	BASELINE	MH	MANHOLE
BM	BENCHMARK	NTS	NOT TO SCALE
BO	BLOW OFF	O.C.	ON CENTER
BOW	BOTTOM OF WALL	O.D.	OUTSIDE DIAMETER
℄	CENTER LINE	PB	PULL BOX
CW	CITY WATER	℄	PROPERTY LINE
C-CB	TYPE "C" CATCH BASIN	PVMT	PAVEMENT
CL-CB	TYPE "C-L" CATCH BASIN	PCCP	PRESTRESSED CONCRETE CYLINDRICAL PIPE
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CIP	CAST IRON PIPE	RCP	REINFORCED CONCRETE PIPE
CLF	CHAIN LINK FENCE	R	RADIUS
CMU	CONCRETE MASONRY UNIT	RD	ROOF DRAINAGE
C.O.	CLEAN OUT	RWL	RAIN WATER LEADER
CONC.	CONCRETE	S	PIPE SLOPE
CPP	CORRUGATED PLASTIC PIPE	SAN	SANITARY
DI	DUCTILE IRON	SD	STORM DRAIN
DIP	DUCTILE IRON PIPE	SHT	DRAWING NO. SHEET
DEG	DEGREES	SMH	SANITARY MANHOLE
DIA	DIAMETER	SPCP	STORMWATER POLLUTION CONTROL PLAN
DMH	DRAINAGE MANHOLE	STM	STORM
DR	DRAIN LINE	SW	SERVICE WATER
DW	DOMESTIC WATER	TC	TOP OF CURB
ELEC	ELECTRICAL	TEMP.	TEMPORARY
EL.	ELEVATION	TEL.	TELEPHONE
EMH	ELECTRICAL MANHOLE	TF	TOP OF FRAME
EOP	EDGE OF PAVEMENT	TMH	TELEPHONE/COMMUNICATIONS MANHOLE
EX.	EXISTING	TOG	TOP OF GRATE
EXIST.	EXISTING	TOS	TOP OF SLAB
FE	FLARED END	TOW	TOP OF WALL
F.D.	FLOOR DRAIN	TYP.	TYPICAL
FF	FINISHED FLOOR	UD	UNDERDRAIN
FFE	FINISHED FLOOR ELEVATION	UKWN	UNKNOWN
FLR	FLOOR	VC	VITRIFIED CLAY
FRP	FIBERGLASS REINFORCED PLASTIC	VIF	VERIFY IN FIELD
G	GAS	W	WATER
GM	GAS METER	WM	WATER METER
GTD	GRADE TO DRAIN	WMH	WATER MANHOLE
HC	HANDICAP	WS	WATER STOP
HDPE	HIGH DENSITY POLYETHYLENE	WV	WATER VALVE
HDS	HYDRODYNAMIC SEPARATOR STRUCTURE	YD	YARD DRAIN

EROSION AND SEDIMENTATION CONTROL PLAN

NARRATIVE

THE SUBJECT SITE (2 PENT ROAD) IS LOCATED ON THE SOUTH SIDE OF PENT ROAD AND THE WEST SIDE OF HIGH STREET IN THE TOWN OF EAST HARTFORD, CONNECTICUT.

THE SUBJECT SITE IS PRESENTLY A DEVELOPED PARCEL OF LAND WITH AN EXISTING BUILDING AND PAVED PARKING LOT.

THERE IS NO WORK WITHIN WETLANDS, THOUGH PARTS OF THE SITE ARE WITHIN THE 500-YEAR FLOOD ZONE.

WORK INCLUDES CONSTRUCTION OF AN ADDITIONAL BUILDING. SITE IMPROVEMENTS INCLUDE REMOVAL OF EXISTING PAVEMENT, SIDEWALKS AND OTHER IMPROVEMENTS AND CONSTRUCTION OF NEW PAVEMENT, SIDEWALKS AND OTHER IMPROVEMENTS. THE EXISTING UNDERGROUND STORM DETENTION SYSTEM WILL BE MAINTAINED AND ADDITIONAL STORM DRAINAGE STRUCTURES AND PIPING WILL BE CONSTRUCTED. THE SITE HAS VERY GENTLE GRADES AND STANDARD EROSION CONTROL MEASURES WILL BE ADEQUATE.

SITE WORK WILL BE DIVIDED INTO 2 PHASES. PHASE 1 WILL INCLUDE CONSTUCTION OF A PARKING AREA ON 3 PENT ROAD, REMOVAL OF PAVEMENT AND OTHER SITE IMPROVEMENTS ON A PORTION OF 2 PENT ROAD AND WORK ASSOCIATED WITH PREPARATION OF THE BUILDING SITE FOR THE FOUNDATION, INSTALLATION OF A PORTION OF THE STORM DRAINAGE SYSTEM ON 2 PENT ROAD AND OTHER SITE IMPROVEMENTS. PHASE 2 WILL INCLUDE THE REMAINING SITE IMPROVEMENTS.

CONSTRUCTION SCHEDULE - PHASE 2

ESTIMATED START OF CONSTRUCTION IS FEBRUARY 2025. ESTIMATED COMPLETION OF CONSTRUCTION IS FALL 2026. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

RESPONSIBLE CONTACT

THE RESPONSIBLE CONTACT PERSON FOR ASSURING THAT ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE PROPERLY INSTALLED AND MAINTAINED WILL BE THE SITE CONTRACTOR. THE RESPONSIBLE CONTACT PERSON FOR MAINTAINING THE PERMANENT MEASURES WHEN THE PROJECT IS COMPLETE WILL BE THE PROPERTY OWNER.

GENERAL EROSION AND SEDIMENTATION CONTROL NOTES

1. THE EROSION AND SEDIMENT CONTROLS SHOWN ON THE DRAWINGS DEPICT THE MINIMUM EROSION AND SEDIMENT CONTROL PRACTICES REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT ERODED MATERIALS FROM LEAVING THE SITE.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND APPROVED PRIOR TO THE START OF LAND CLEARING AND CONSTRUCTION.
3. EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL AREAS ARE STABILIZED. IF FULL IMPLEMENTATION OF APPROVED EROSION CONTROL PLANS DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER/OWNER TO CONTROL OR TREAT THE SEDIMENT SOURCE AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR SHALL KEEP ALL PUBLIC ROADWAYS CLEAN AND CLEAR OF ALL MUD AND DEBRIS DURING CONSTRUCTION. THE CONTRACTOR SHALL IMPLEMENT MEASURES NECESSARY FOR DUST CONTROL, INCLUDING BUT NOT LIMITED TO PAVEMENT SWEEPING AND WATERING OF DISTURBED AREAS.
5. APPLY TEMPORARY SEEDING OR MULCH TO AREAS WHERE ROUGH GRADING HAS BEEN COMPLETED BUT FINAL GRADING IS NOT ANTICIPATED TO BEGIN WITHIN 30 DAYS OF THE COMPLETION OF ROUGH GRADING. WHEN CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR WHEN FINAL GRADES ARE REACHED, STABILIZATION AND PROTECTION MEASURES SHALL BE IMPLEMENTED WITHIN SEVEN (7) DAYS.
6. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL CONFORM TO THE REQUIREMENTS OF THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" AS AMENDED.

GENERAL CONSTRUCTION SEQUENCE

1. INSTALL SOIL AND EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO: CONSTRUCTION ENTRANCE PAD, SILT FENCE AND INLET PROTECTION AT CATCH BASIN.
2. CLEAR AND GRUB WITHIN LIMITS OF CLEARING.
3. STRIP AND STOCKPILE TOPSOIL; NO TOPSOIL SHALL BE REMOVED FROM THE SITE WITHOUT THE PERMISSION OF THE OWNER.
4. PERFORM ROUGH GRADING. EXCESS MATERIAL SHALL BE TAKEN DIRECTLY OFF-SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
5. CONTINUE EARTHWORK IN EXPEDITIOUS MANNER, AND STABILIZE. INSTALL ADDITIONAL EROSION CONTROLS AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
6. BUILDING CONSTRUCTION TO OCCUR THROUGHOUT CONSTRUCTION PROCESS.
7. COMPLETE INSTALLATION OF THE SITE UTILITIES.
8. COMPLETE INSTALLATION OF BITUMINOUS CONCRETE PAVEMENT, CONCRETE WALKS, ETC.
9. PREPARE FINAL GRADE FOR AREAS DISTURBED BY CONSTRUCTION NOT RECEIVING A HARD SURFACE OR OTHER SURFACE AS INDICATED ON PLAN. PLACE 6" OF TOPSOIL ON DISTURBED AREAS AFTER FINAL GRADING IS COMPLETED. FERTILIZE, SEED AND MULCH IN ACCORDANCE WITH THESE PLANS.
10. REMOVE EROSION CONTROLS AFTER AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES

SILT FENCE

A. SILT FENCE SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE SITE PLAN AND AS DIRECTED BY THE ENGINEER.
B. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
C. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND INSTALL THE POST AT LEAST 1.5 FEET INTO THE GROUND.
D. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
E. BACKFILL THE TRENCH AND COMPACT.

HAYBALES

A. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
B. BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.
C. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.
D. THE GAPS BETWEEN BALES SHELL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.
E. THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUN-OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, NOT AROUND IT.

INLET PROTECTION AT CATCH BASINS

A. PLACE INLET PROTECTION UNDER GRATE AT EACH CATCH BASIN AT LOCATIONS SHOWN ON DRAWINGS.

CONSTRUCTION ENTRANCE PAD

A. CLEAR THE AREA OF THE ENTRANCE OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
B. PLACE THE STONE TO THE SPECIFIED DIMENSION.

OPERATION AND MAINTENANCE OF TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

SILT FENCE

A. ALL SILT FENCES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED.
B. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY EXCEED A HEIGHT OF ONE FOOT OR 1/2 THE HEIGHT OF THE BARRIER.

INLET PROTECTION AT CATCH BASINS AND HAYBALES

A. INSPECT INLET PROTECTION AND/OR HAYBALES WEEKLY AND AFTER EACH RAINFALL.
B. INLET PROTECTION SHALL BE EMPTIED WHEN THEY HAVE COLLECTED 6" TO 12" OF SEDIMENT.
C. HAYBALES SHALL BE REPLACED IF VISIBLE DETERIORATION IS OBSERVED. DEPOSITS SHALL BE REMOVED AND CLEANED OUT WHEN ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

CONSTRUCTION ENTRANCE PAD

A. MAINTAIN THE ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING AND WASHING OF SEDIMENT ONTO PAVED SURFACES. PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND. REPAIR ANY MEASURES USED TO TRAP SEDIMENTATION AS NEEDED.
B. ROADS ADJACENT TO CONSTRUCTION SITE SHALL BE LEFT CLEAN AT THE END OF EACH DAY.

GENERAL NOTE FOR OPERATION AND MAINTENANCE OF TEMPORARY SOIL AND EROSION AND SEDIMENTATION CONTROL MEASURES

A. CONTRACTOR TO KEEP WEEKLY CHECKLIST LOGS FOR INSPECTIONS OF ALL SEDIMENT AND EROSION CONTROL DEVICES AND HAVE THEM READILY AVAILABLE ON-SITE AT ALL TIMES FOR INSPECTION BY THE ENGINEER, OWNER'S REPRESENTATIVE OR CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CT DEEP).

OPERATION AND MAINTENANCE POST CONSTRUCTION

THE FOLLOWING OPERATION AND MAINTENANCE SCHEDULE IS REQUIRED TO ENSURE THE PROPER AND EFFICIENT OPERATION OF THE STORMWATER MANAGEMENT SYSTEM POST CONSTRUCTION.

LAWN AREAS: TO BE MAINTAINED IN A STABLE NON-ERODED CONDITION. ANY ERODED AREAS TO BE STABILIZED WITH SEED AND MULCH TO ESTABLISH A UNIFORM STAND OF GRASS.

CATCH BASINS: CLEAN SILT WHEN DEPTH REACHES 1'.

PAVED AREAS: SWEEP MINIMUM OF ONCE PER YEAR IN SPRING AFTER END OF SNOW SEASON.

UNDERGROUND DETENTION BASINS: INSPECT YEARLY FOR PROPER OPERATION. REMOVE ANY ACCUMULATED SEDIMENT.

WATER QUALITY STRUCTURE: INSPECT QUARTERLY TO ESTABLISH MAINTENANCE SCHEDULE. CLEAN WHEN REQUIRED, THEN INSPECT YEARLY AND CLEAN PER ESTABLISHED MAINTENANCE SCHEDULE.

CONTINGENCY EROSION PLAN

SHOULD UNFORESEEN EROSION OR SEDIMENTATION PROBLEMS ARISE, THE DESIGN ENGINEER OF RECORD (EAST-WEST ENGINEERING, PLLC) SHALL BE NOTIFIED IMMEDIATELY. AN INSPECTION OF THE AFFECTED AREA(S) SHALL BE PROMPTLY PERFORMED. A REMEDIAL ACTION PLAN SHALL BE FORMULATED. THE SITE CONTRACTOR SHALL THEN IMPLEMENT THE RECOMMENDED COURSE OF ACTION WHICH HAS BEEN DETERMINED BY THE ENGINEER.

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SIGN AND STAMP

GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN

DRAWING TITLE

CIVIL
GENERAL NOTES & LEGEND

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	
DATE:	05/01/2025
DRAWN BY:	GBS
CHECKED BY:	JAS

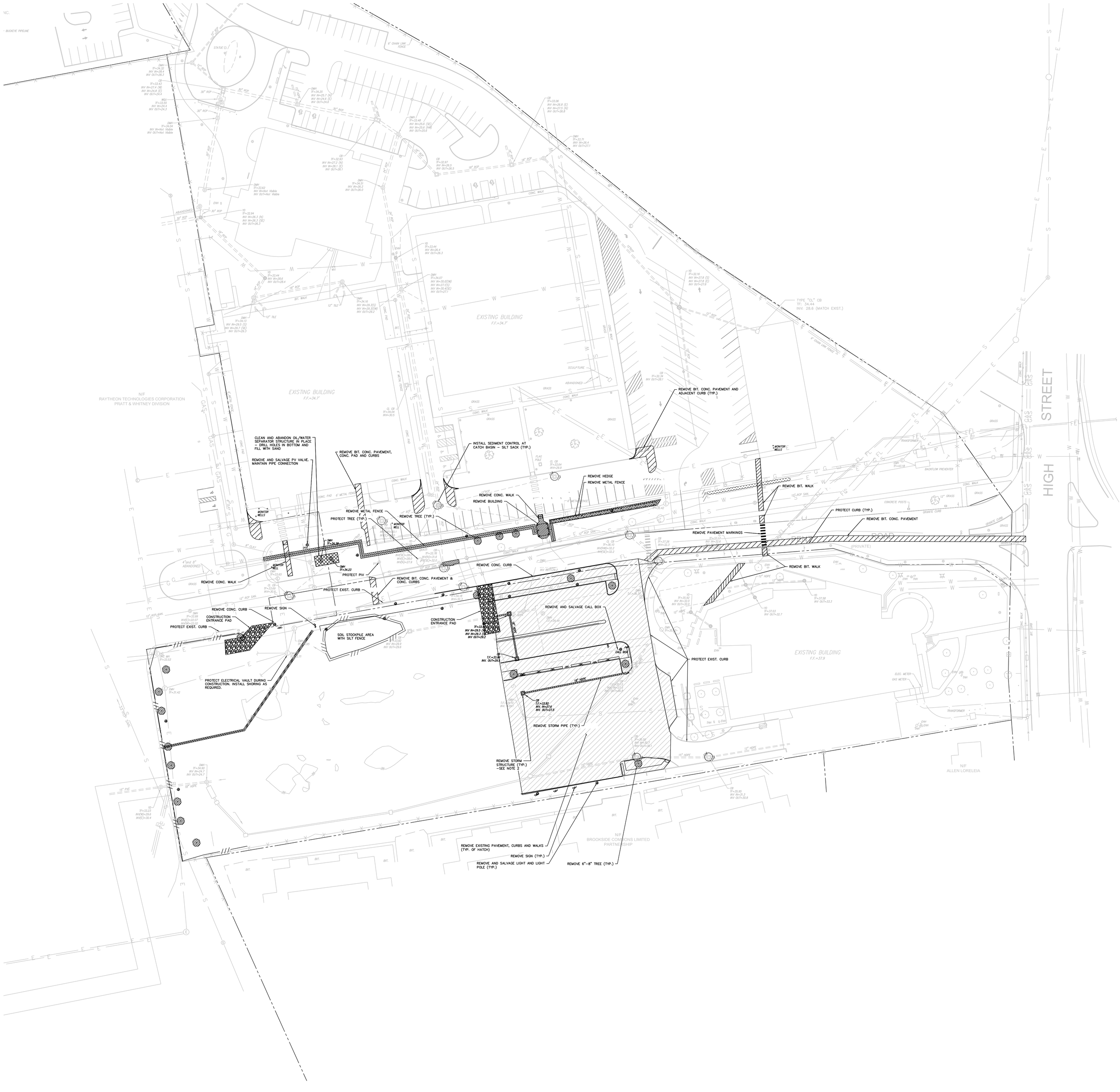
ISSUE DATES

NO.	DATE	PURPOSE

C.1

NOTES:

1. SEE GP-1 FOR ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
2. ANY STORM DRAINAGE STRUCTURES TO BE REMOVED THAT ARE LEFT TEMPORARILY DURING CONSTRUCTION TO COLLECT RUNOFF FROM DISTURBED AREAS SHALL HAVE SEDIMENT CONTROL AT CATCH BASIN – SILT SACK'S INSTALLED.
3. SEE SHEETS SE.10 AND SE.11 FOR LOCATION OF TRENCHES FOR POWER, LIGHTING AND COMMUNICATION CONDUITS. CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION OF ASPHALT AND CONCRETE PAVEMENT AND WALKS AS REQUIRED FOR INSTALLATION OF CONDUITS.



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GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN

DRAWING TITLE

CIVIL
SITE REMOVAL PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	05/01/2025
DRAWN BY:	GBS
CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.2

NOTES:

1. NEW PAVEMENT TO MATCH EXIST. PAVEMENT. SEAL JOINT WITH ASPHALT SEALER.
2. MONITOR WELLS TO BE ADJUSTED TO GRADE AND UTILITY ROAD BOXES INSTALLED WITHIN A CONCRETE PAD. COORDINATE WORK WITH ENVIRONMENTAL CONSULTANT.
3. CONC. PAVEMENT TO HAVE A MINIMUM OF 3 DOWELS INSTALLED PER SIDE TO TIE INTO EXIST. CONC. PAVEMENT.
4. BITUMINOUS WALK TO BE CONSTRUCTED TO LIGHT DUTY ASPHALT DETAIL EXCEPT PAVEMENT SECTION TO INCLUDE ON LY 1 ½" BASE COURSE.
5. PENT ROAD SHALL HAVE 1 ½" OF BIT. CONC. MILLED AND A 1 ½" BIT. CONC. OVERLAY INSTALLED USING HMA Q.375 BIT. CONC.. OVERLAY TO BE INSTALLED AT END OF PROJECT AFTER ALL TRENCHING IS COMPLETED ON PENT ROAD. SEE DETAIL, SHT. C7.
6. SEE SHEETS SE.10 AND SE.11 FOR LOCATION OF POWER, LIGHTING AND COMMUNICATION CONDUITS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPHALT AND CONCRETE PAVEMENT REPAIR AND SIDEWALK REPAIR ASSOCIATED WITH INSTALLATION OF CONDUITS. ALL TRENCHES IN NON-IMPERVIOUS AREAS SHALL BE RESTORED WITH LOAM AND SEED.
7. FIRE LANE SIGNAGE (NO PARKING FIRE LANE) SHALL BE SPACED A MAXIMUM OF 50'. SIGNAGE AT END OF FIRE LANES SHALL ALSO HAVE AN ARROW TO INDICATE DIRECTION OF FIRE LANE.
8. FIRE LANE STRIPING SHALL EXTEND 4' OFF EDGE OF CURB AND CONSIST OF 4" WIDE STRIPES SET AT 60 DEGREE ANGLE TO CURB. STRIPING TO BE SPACED 3' APART. FIRE LANE STRIPING TO BE YELLOW.

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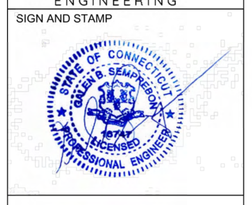


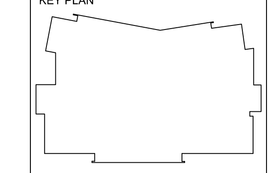
GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN



DRAWING TITLE

CIVIL
SITE LAYOUT PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	05/01/2025
DRAWN BY:	GBS
CHECKED BY:	JAS

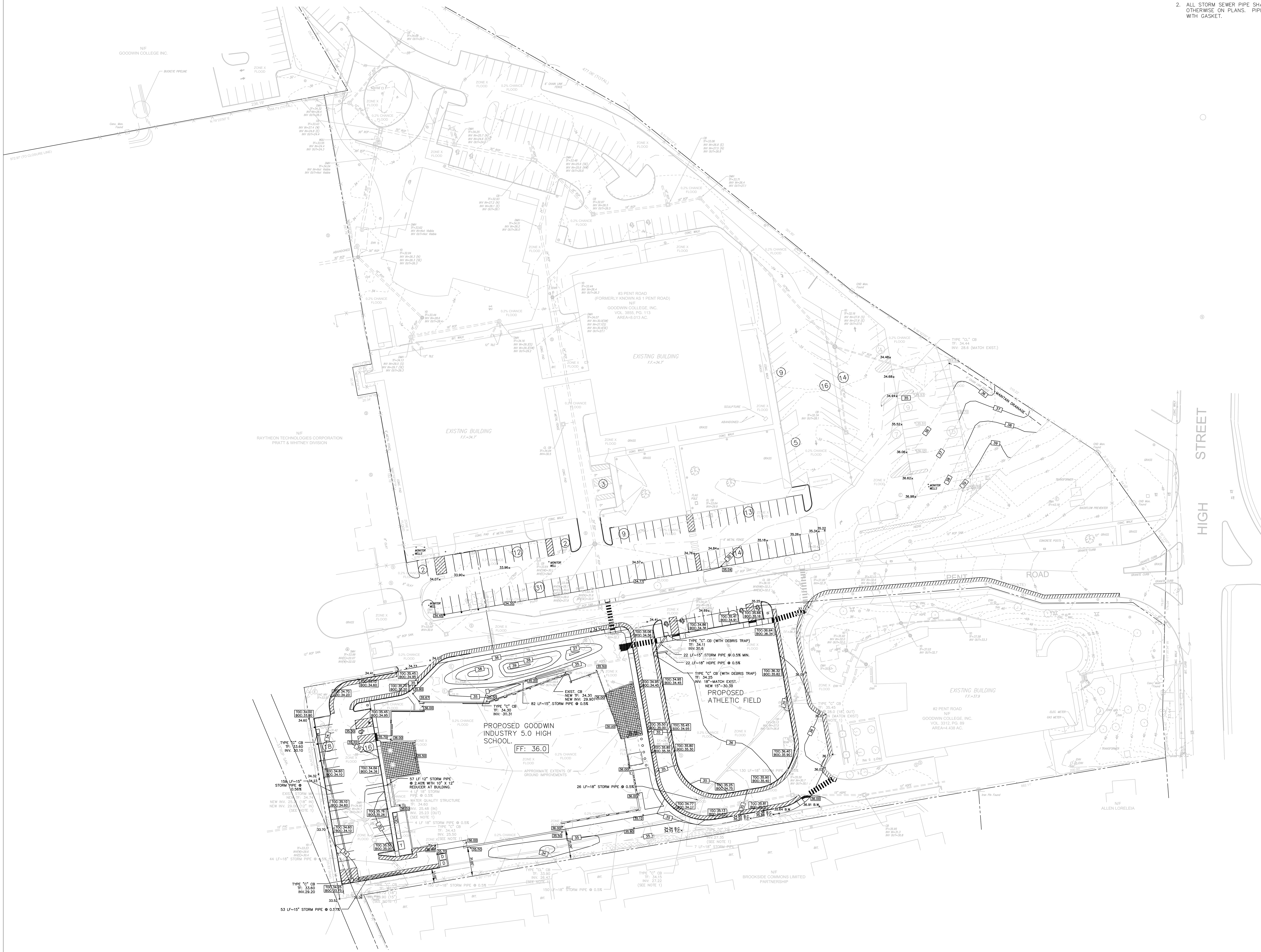
ISSUE DATES

NO.	DATE	PURPOSE

C.3

NOTES:

1. ALL STORM STRUCTURES WITH THE LOWEST INSIDE ELEVATION OF 27.0 OR LESS SHALL BE CONSTRUCTED WATERTIGHT.
2. ALL STORM SEWER PIPE SHALL BE HDPE UNLESS INDICATED OTHERWISE ON PLANS. PIPE SHALL BE INSTALLED WATERTIGHT WITH GASKET.



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GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN

DRAWING TITLE

CIVIL
SITE GRADING PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	05/01/2025
DRAWN BY:	GBS
CHECKED BY:	JAS

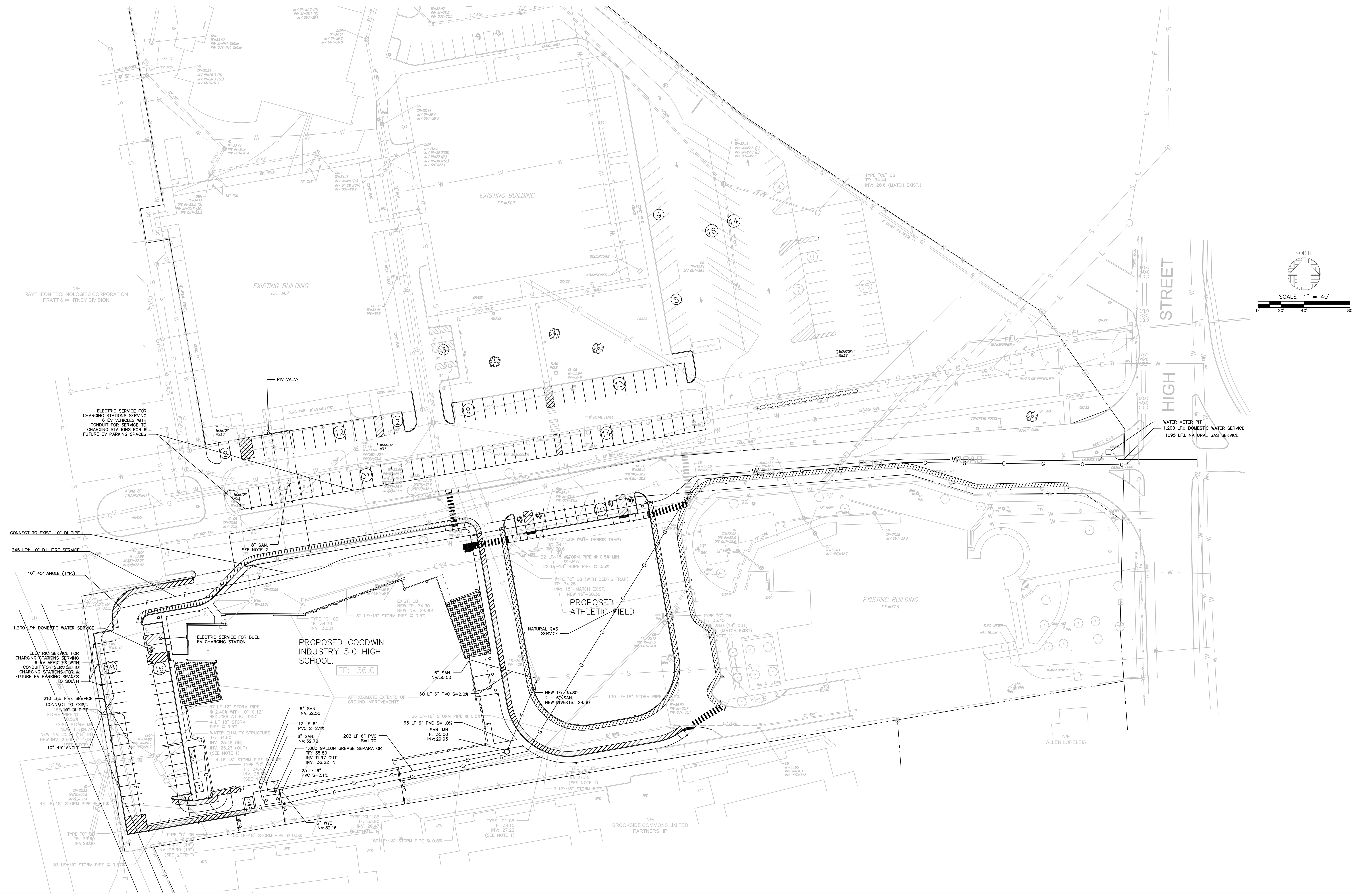
ISSUE DATES

NO.	DATE	PURPOSE

C.4

NOTES:

1. RESTRAIN JOINTS FOR 10" DI FIRE MAIN IN ACCORDANCE WITH MDC REQUIREMENTS.
2. INSTALL 8" PIPE TO MAINTAIN SEWER LINE AFTER ABANDONMENT OF OIL/WATER SEPARATOR TANK. INSTALL LONG RADIUS ELBOWS AS REQUIRED.
3. SEE SHEETS SE.10 AND SE.11 FOR POWER, LIGHTING AND COMMUNICATIONS CONDUITS.



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GOODWIN INDUSTRY 5.0 HIGH SCHOOL

4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN

DRAWING TITLE

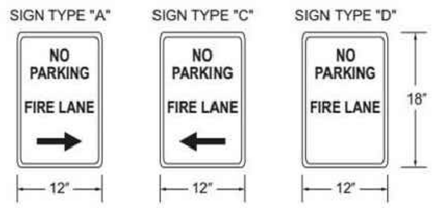
CIVIL
SITE UTILITY
PLAN

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	1"=40'
DATE:	05/01/2025
DRAWN BY:	GBS
CHECKED BY:	JAS

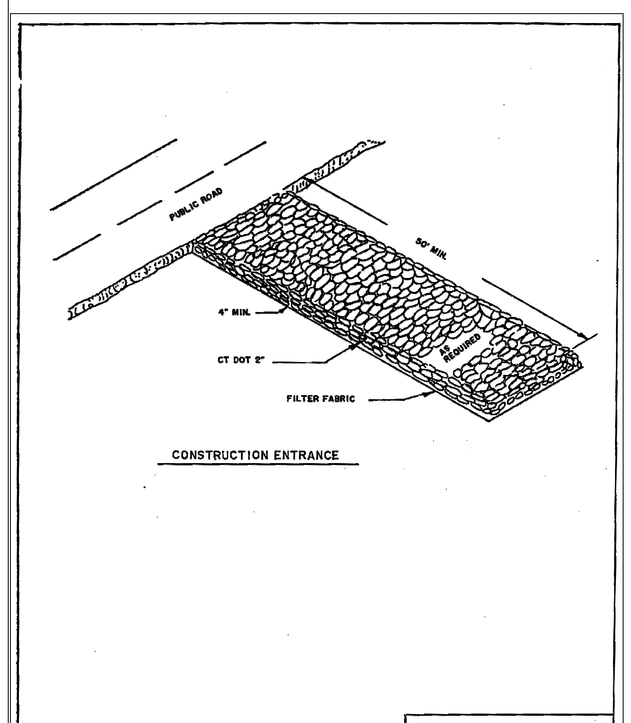
ISSUE DATES

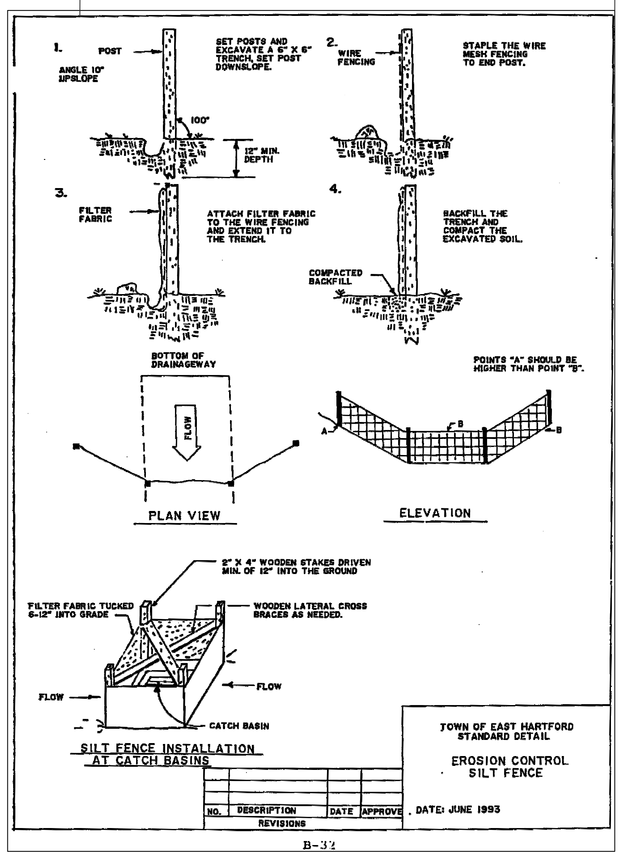
NO.	DATE	PURPOSE

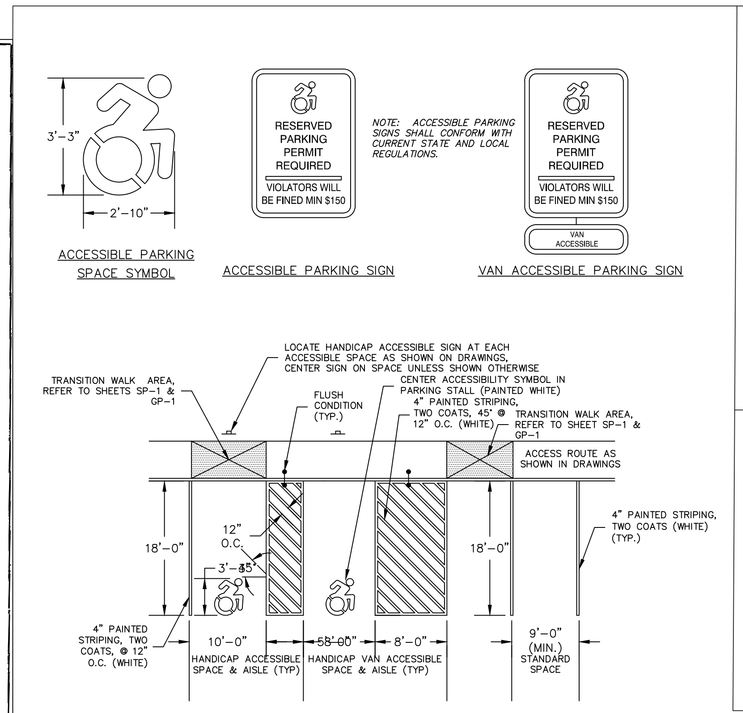
C.5



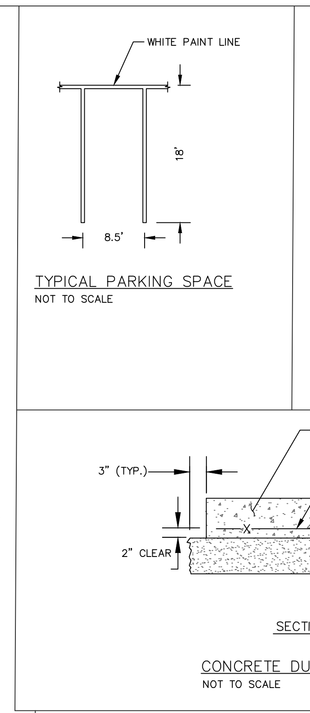
FIRE LANE SIGNAGE
NOT TO SCALE



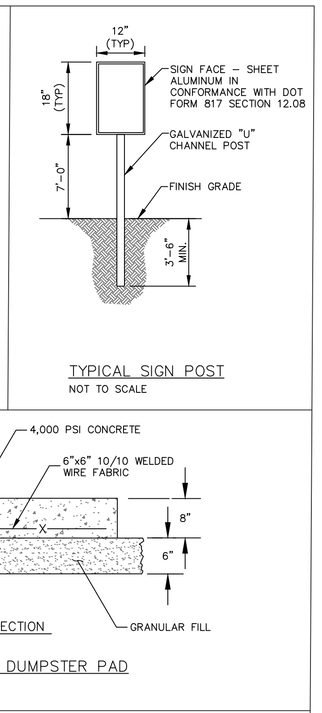




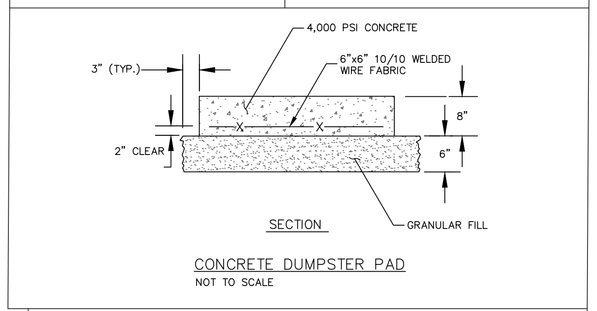
ACCESSIBLE PARKING SPACES
NOT TO SCALE



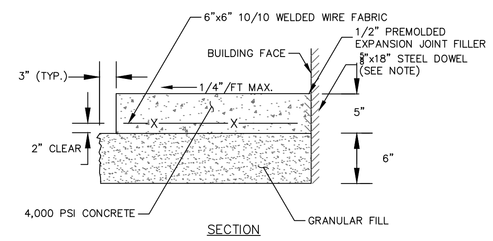
TYPICAL PARKING SPACE
NOT TO SCALE



TYPICAL SIGN POST
NOT TO SCALE

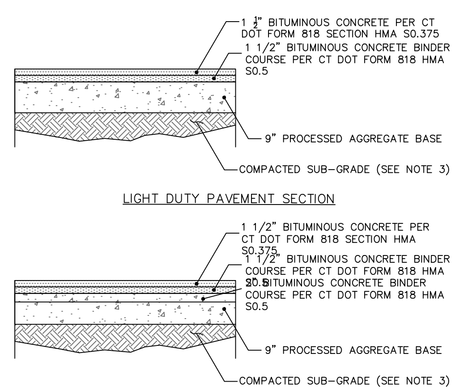


CONCRETE DUMPSTER PAD
NOT TO SCALE



NOTES:
1. INSERT DOWEL WHERE NEW CONCRETE DOOR PAD MEETS FOUNDATION WALL AT EXTERIOR DOORWAY OPENINGS. DOWELS SHALL BE EQUALLY SPACED – 2 PER 5' SECTION AND 1 PER 4' SECTION.

CONCRETE PAD
NOT TO SCALE

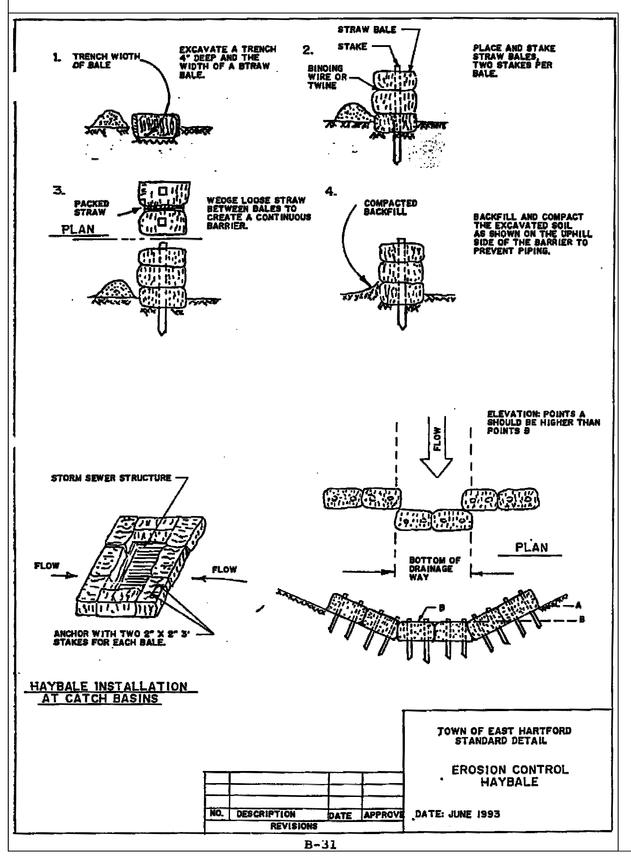


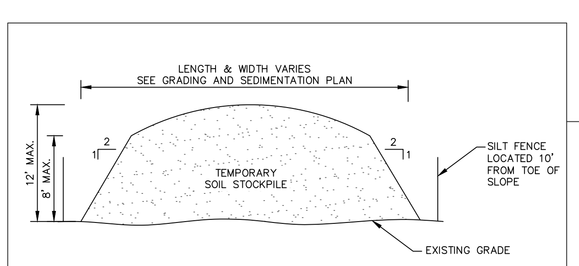
LIGHT DUTY PAVEMENT SECTION

HEAVY DUTY PAVEMENT SECTION

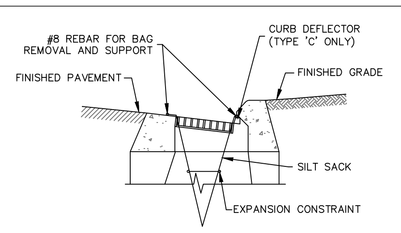
NOTES:
1. BITUMINOUS CONCRETE PAVEMENT AND PERMANENT PAVEMENT REPAIR SHALL MEET THE REQUIREMENTS OF THE TOWN OF EAST HARTFORD.
2. PAVEMENT SUBGRADE SHALL BE FREE OF TOPSOIL, ASPHALT, AND LOOSE SOILS PRIOR TO PLACING PROCESSED AGGREGATE BASE. MATERIAL SHALL BE PLACED AS SOON AS POSSIBLE AFTER EXCAVATION SO THAT DISTURBANCE OF BEARING MATERIALS DOES NOT OCCUR.
3. PROOF ROLL SUBGRADE PRIOR TO LIFT PLACEMENT WITH 12-TON VIBRATORY ROLLER.

BITUMINOUS CONCRETE PAVEMENT SECTIONS
NOT TO SCALE



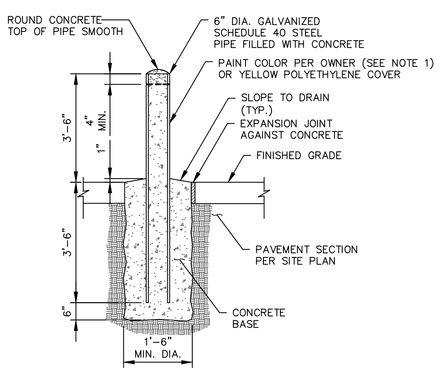


TEMPORARY SOIL STOCKPILE
NOT TO SCALE



NOTES:
1. SILT SACKS MAY BE USED IN OTHER TYPES OF STORM DRAINAGE INLETS. TYPE 'C' CATCH BASIN SHOWN FOR CLARITY.

SEDIMENT CONTROL AT CATCH BASIN – SILT SACK
NOT TO SCALE



NOTES:
1. PAINT WITH ONE COAT RED OXIDE PRIMER AND TWO FINISH COATS.

BOLLARD
NOT TO SCALE

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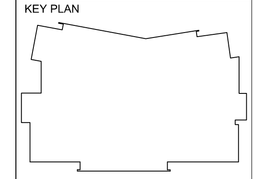
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN



DRAWING TITLE

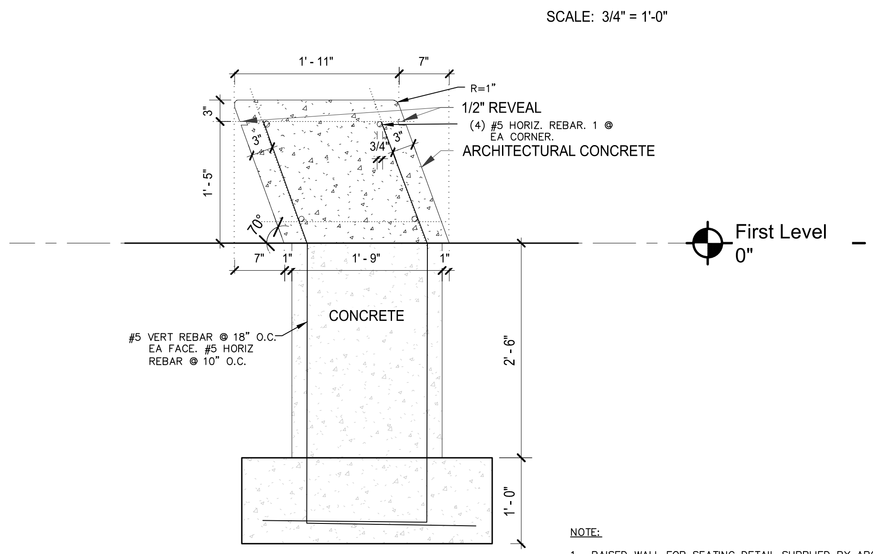
CIVIL DETAILS

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	
DATE:	05/01/2025
DRAWN BY:	GBS
CHECKED BY:	JAS

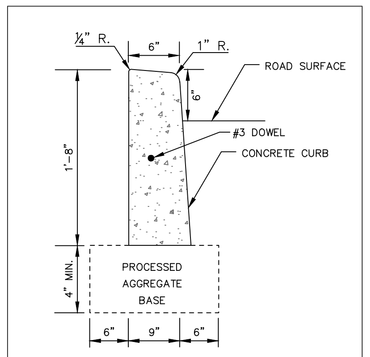
ISSUE DATES

NO.	DATE	PURPOSE

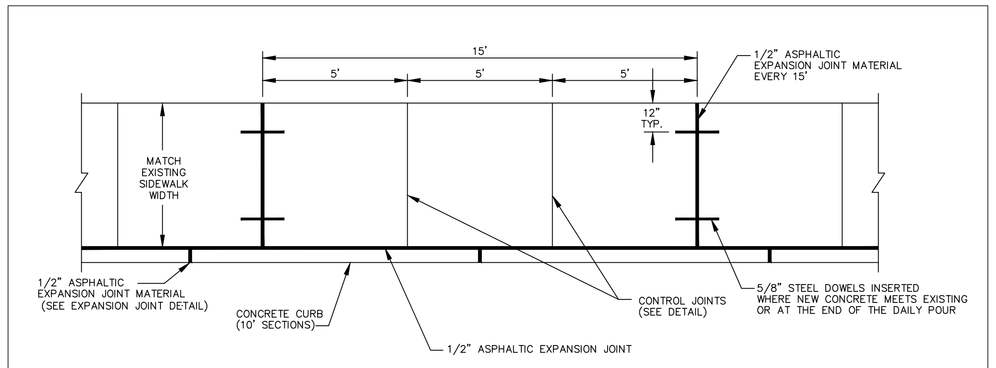
C.6



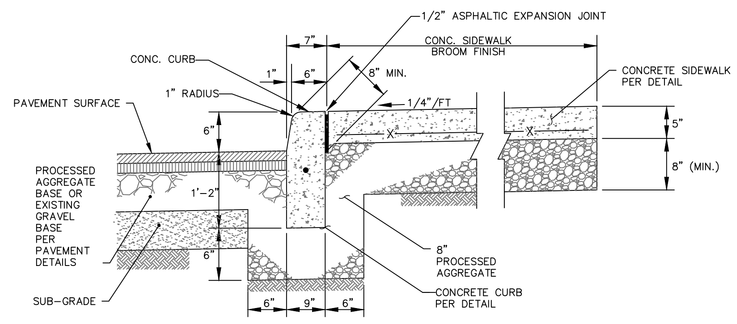
RAISED WALL FOR SEATING DETAIL
NOT TO SCALE



CONCRETE CURB
NOT TO SCALE



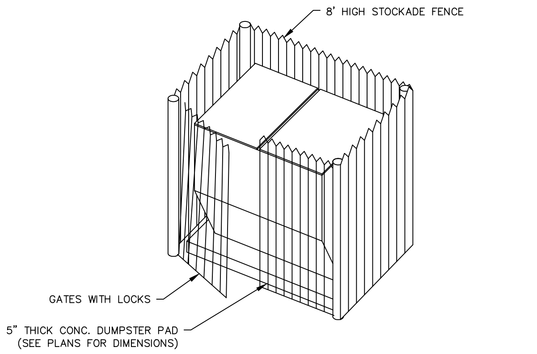
SIDEWALK PLAN VIEW



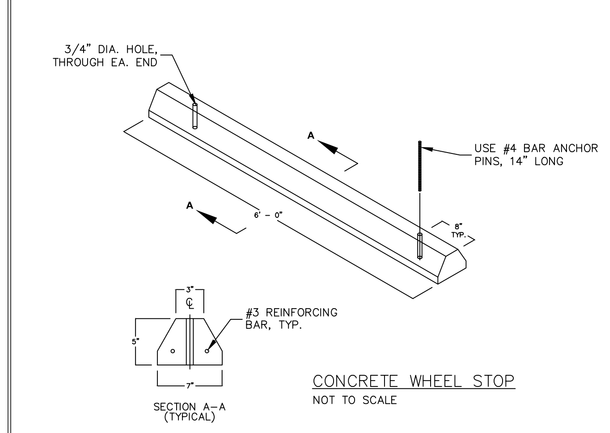
SIDEWALK SECTION

NOTES:
1. REMOVE CONCRETE WALKS TO THE NEAREST EXPANSION JOINT AT THE LOCATIONS NOTED ON THE PLANS.
2. AT LOCATIONS WHERE NEW CONCRETE WALKS ARE TO BE INSTALLED ADJACENT TO EXISTING CONCRETE WALKS, MATCH SIDEWALK WIDTH AND PROVIDE FLUSH TRANSITION BETWEEN EXISTING AND NEW WALK.

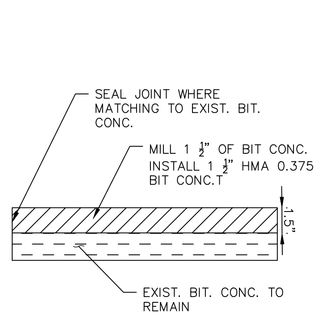
CONCRETE SIDEWALK AND CURB
NOT TO SCALE



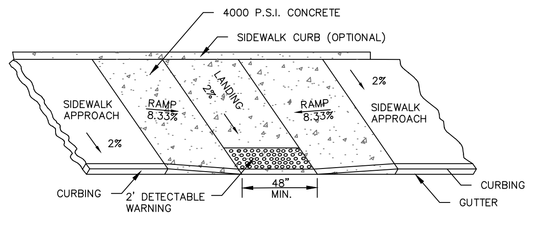
DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



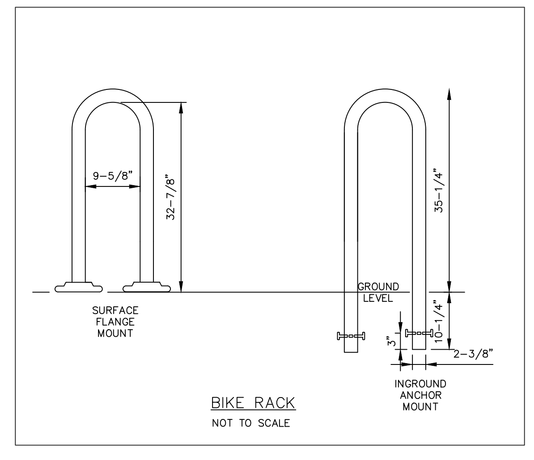
CONCRETE WHEEL STOP
NOT TO SCALE



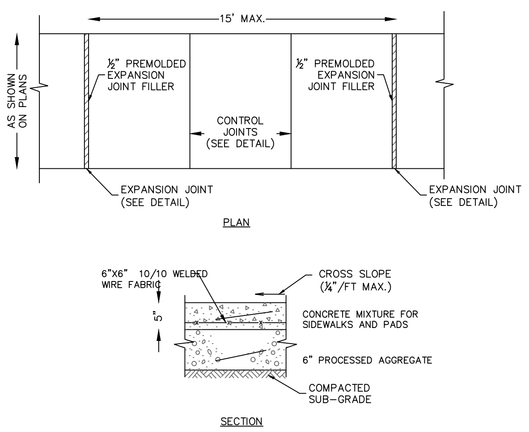
BIT. CONC. PAVEMENT OVERLAY DETAIL
NOT TO SCALE



PARALLEL SIDEWALK RAMP (TYPE 1)
NOT TO SCALE

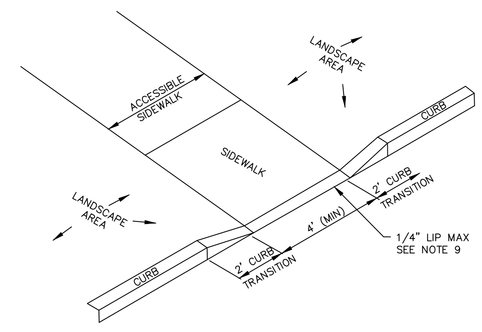


BIKE RACK
NOT TO SCALE



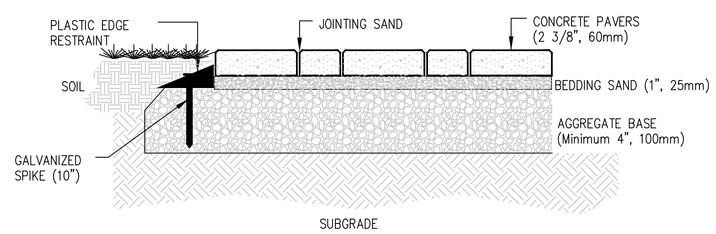
NOTES:
1. INCREASE SLAB THICKNESS TO 8" FOR SIDEWALKS CROSSING DRIVEWAYS AND OTHER VEHICULAR TRAFFIC LOADED AREAS.
2. REMOVE CONCRETE WALKS TO THE NEAREST EXPANSION JOINT AT THE LOCATIONS NOTED ON THE PLANS.
3. MATCH WIDTH AND PROVIDE FLUSH TRANSITION BETWEEN NEW AND EXISTING CONCRETE SIDEWALK.

CONCRETE SIDEWALK
NOT TO SCALE

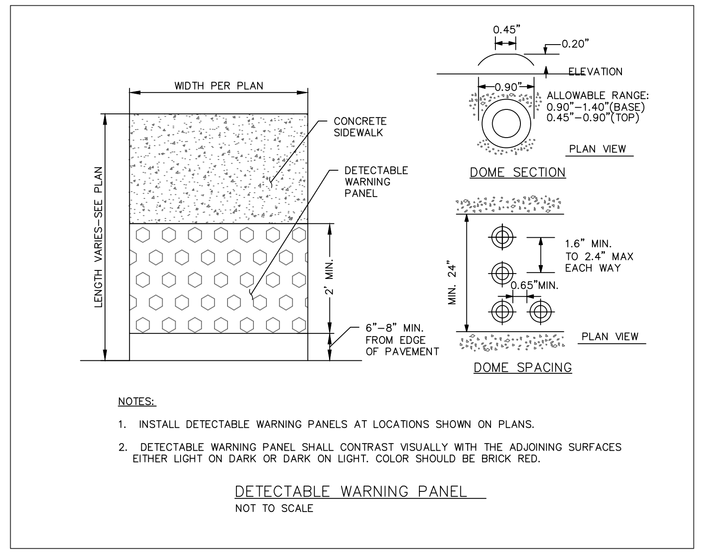


NOTES:
1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. RAMP, CURB, AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. TYPICAL SIDEWALK SECTION FOR RAMP SECTION CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' X 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.

ACCESSIBLE CURB RAMP (ACR) TYPE 'M'
NOT TO SCALE



PERMEABLE PAVERS
NOT TO SCALE



NOTES:
1. INSTALL DETECTABLE WARNING PANELS AT LOCATIONS SHOWN ON PLANS.
2. DETECTABLE WARNING PANEL SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES EITHER LIGHT ON DARK OR DARK ON LIGHT. COLOR SHOULD BE BRICK RED.

DETECTABLE WARNING PANEL
NOT TO SCALE

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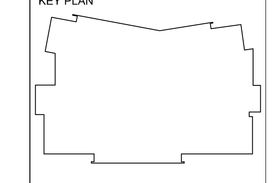
SIGN AND STAMP

GOODWIN INDUSTRY 5.0 HIGH SCHOOL
4 PENT ROAD EAST HARTFORD, CT

PROJECT NORTH

CONFORMANCE SET

KEY PLAN



DRAWING TITLE

CIVIL DETAILS

STATE PROJ NO.	542-0007 MAG/N
PROJECT NO.	230502
SCALE	
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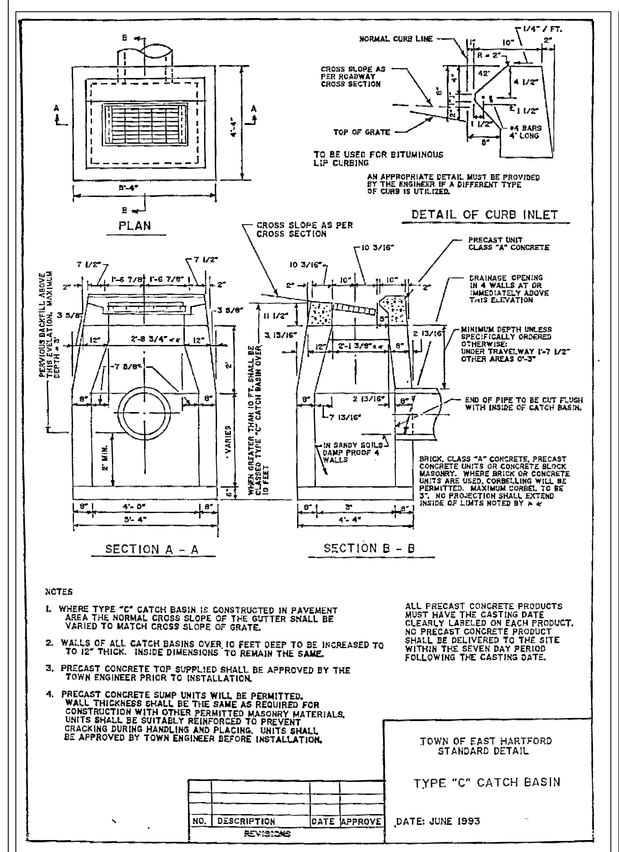
DRAWN BY:	GBS
CHECKED BY:	JAS

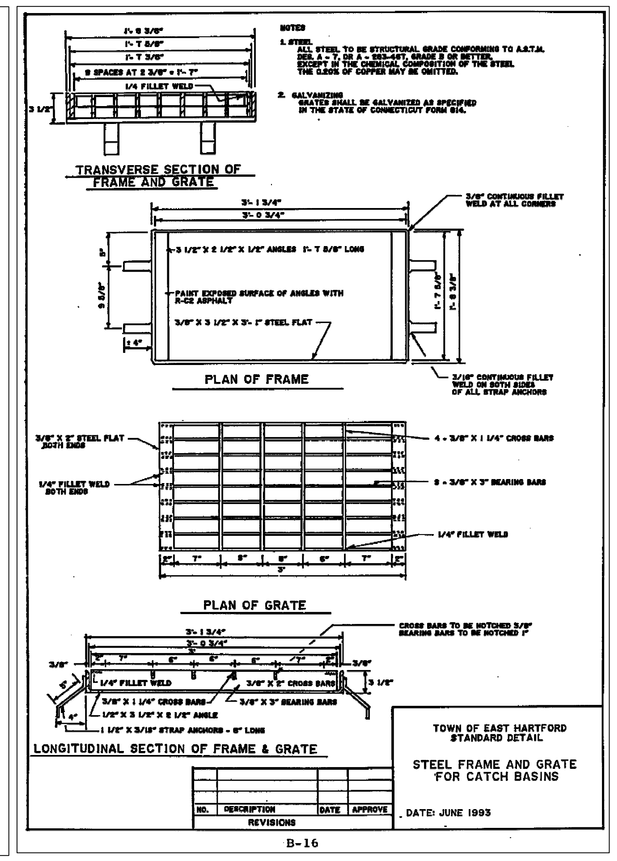
ISSUE DATES

NO.	DATE	PURPOSE

C.7



B-16



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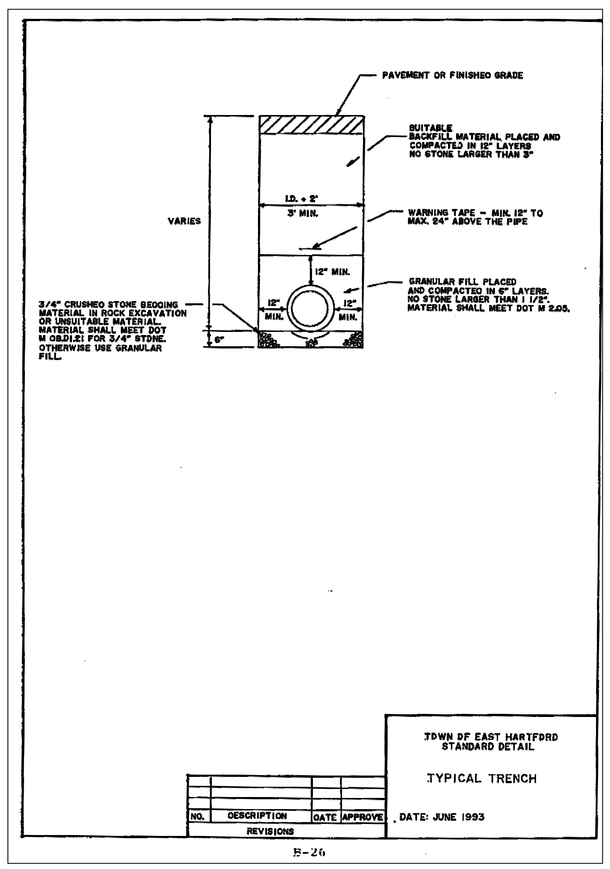

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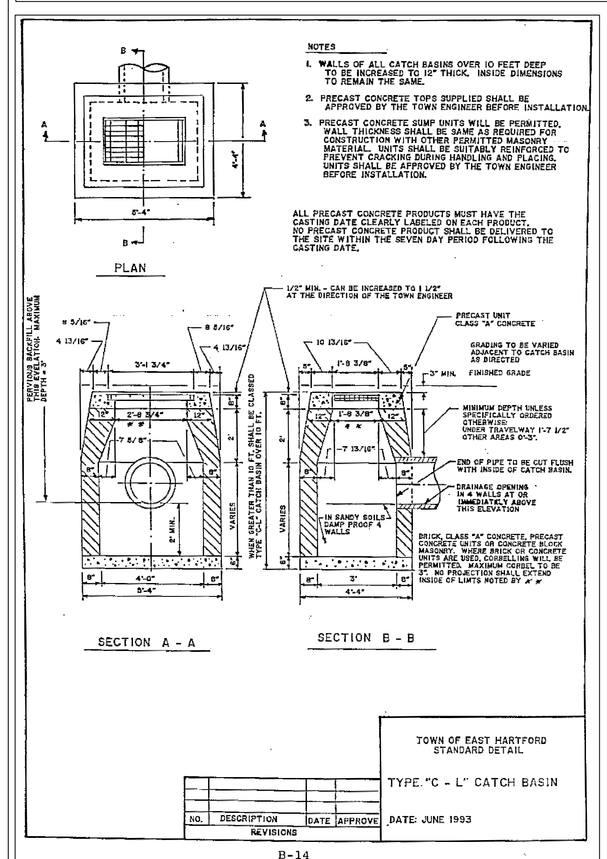

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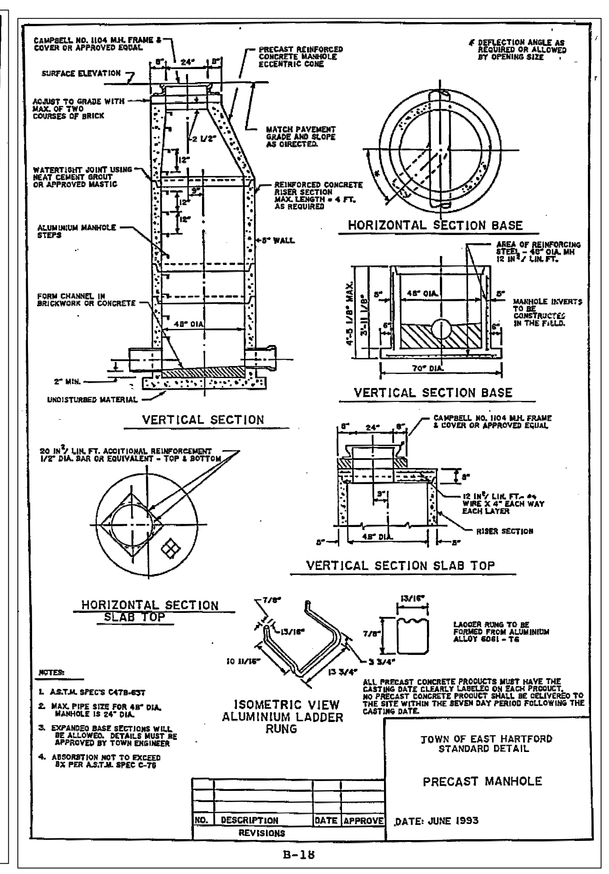

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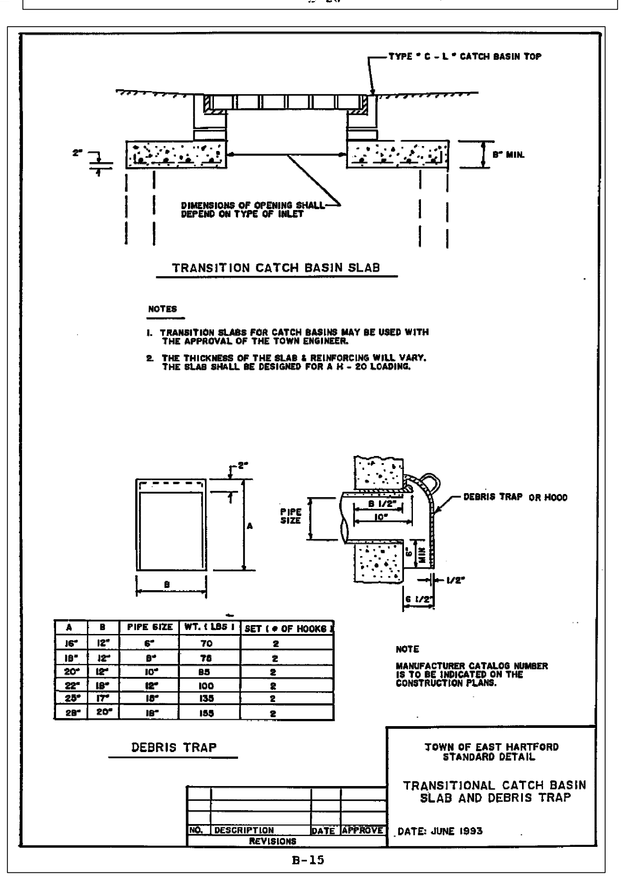

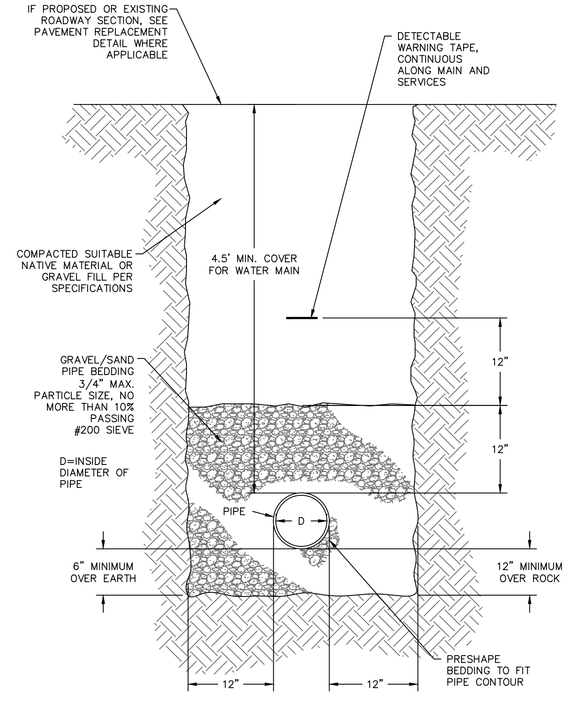

WATER MAIN TRENCH
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PROJECT NORTH

CONFORMANCE SET

KEY PLAN

DRAWING TITLE

CIVIL DETAILS

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CHECKED BY:	JAS

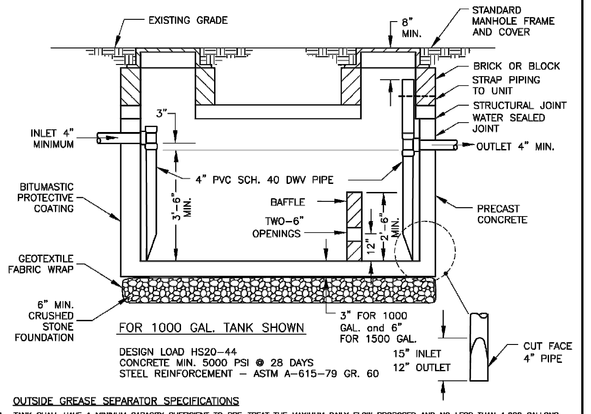
ISSUE DATES

NO.	DATE	PURPOSE

C.8

THE METROPOLITAN DISTRICT
SEWER STANDARD DETAILS

MDC



DESIGN LOAD HS20-44
CONCRETE MIN. 5000 PSI @ 28 DAYS
STEEL REINFORCEMENT – ASTM A-615-79 GR. 60

OUTSIDE GREASE SEPARATOR SPECIFICATIONS

1. TANK SHALL HAVE A MINIMUM CAPACITY SUFFICIENT TO PRE-TREAT THE MAXIMUM DAILY FLOW PROPOSED AND NO LESS THAN 1,000 GALLONS. TANK SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
2. EXTERIOR OF THE TANK AND EXTENSION GRADE MANHOLES SHALL BE COATED WITH A WATERPROOF FOUNDATION SEALANT. THIS INCLUDES THE TANK EXTERIORS TOP AND BOTTOM.
3. STRUCTURAL SEAM OF THE TANK SHALL BE FILLED IN WITH NON-SHRINKING GROUT OR WATER PLUG AND COATED WITH A WATERPROOF SEALANT.
4. VOIDS BETWEEN INLET AND OUTLET PIPING OF THE TANK SHALL BE FILLED WITH NON-SHRINKING GROUT AND COATED WITH A WATERPROOF SEALANT.
5. THE TANK SHALL HAVE EXTENSIONS TO GRADE ABOVE THE INLET AND OUTLET PIPING. THE EXTENSION SHALL HAVE FRAMES AND MANHOLE COVERS.
6. THE OUTLET PIPING SHALL UTILIZE A TEE-PIPE ON THE INTERIOR OF THE TANK. THE TEE-PIPE SHALL BE EQUIPPED WITH A STAND PIPE INSIDE EXTENDING UP THE EXTENSION TO GRADE BUT NO CLOSER THAN EIGHT (8) INCHES FROM THE MANHOLE COVER. THE TEE-PIPE SHALL EXTEND SIX (6) TO TWELVE (12) INCHES FROM THE BOTTOM OF THE TANK.
7. THE HORIZONTAL STRUCTURAL SEAM OF THE TANK SHALL BE LOCATED ABOVE THE STATIC LIQUID LEVEL OF THE TANK.
8. THE INCOMING PIPE SHALL NOT INCLUDE ANY SOURCES OF DOMESTIC WASTEWATER OR STORMWATER. THE OUTLET PIPE SHALL BE CONNECTED TO THE SANITARY SEWER. THE OUTLET PIPE SHALL BE AT LEAST THE SIZE OF THE INLET PIPE OR GREATER AND AT A MINIMUM SHOULD BE 4.0 INCHES IN DIAMETER.
9. IF HEAVY PIPING, SUCH AS CAST IRON IS USED, ALL PIPING MUST BE STRUCTURALLY SECURED.

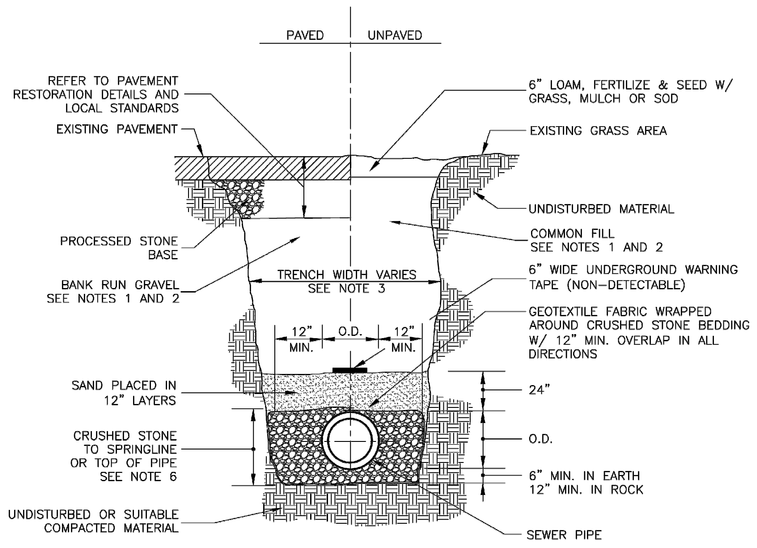
OUTSIDE GREASE SEPARATOR FOR KITCHEN WASTE LINES

DETAIL S 47

NTS

THE METROPOLITAN DISTRICT
SEWER STANDARD DETAILS

MDC



NOTES:

1. ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED.
2. BACKFILL MATERIAL SHALL BE APPROVED BANK RUN GRAVEL IN PAVED AREAS (INCLUDING DRIVEWAYS AND SIDEWALKS) OR COMMON FILL IN UNPAVED AREAS.
3. TRENCH WIDTH VARIES BASED ON PIPE SIZE AND DEPTH.
4. TRENCHES LOCATED IN THE ROAD SHOULDER SHALL BE TREATED THE SAME AS TRENCHES IN THE PAVED ROADWAY EXCEPT FOR PAVEMENT AND SURFACE RESTORATION WORK.
5. PROVIDE IMPERVIOUS TRENCH DAM(S) IN STONE BEDDING AS DIRECTED BY THE ENGINEER. SEE PIPE TRENCH DAM DETAIL.
6. CRUSHED STONE SHALL BE INSTALLED TO TOP OF PIPE FOR PVC AND DI PIPE AND TO SPRINGLINE FOR RC PIPE.

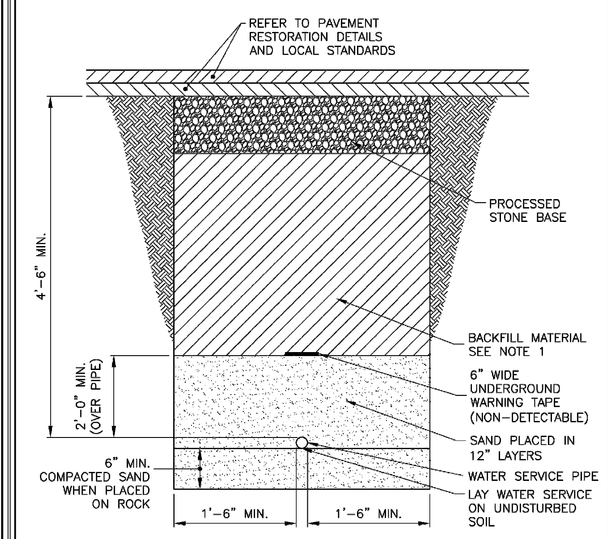
SEWER TRENCH

DETAIL S 2

NTS

THE METROPOLITAN DISTRICT
WATER STANDARD DETAILS

MDC



NOTE:

1. BACKFILL MATERIAL SHALL BE BANK-RUN GRAVEL IN PAVED AREAS (INCLUDING SIDEWALKS AND DRIVEWAYS) OR COMMON FILL IN NON-PAVED AREAS.

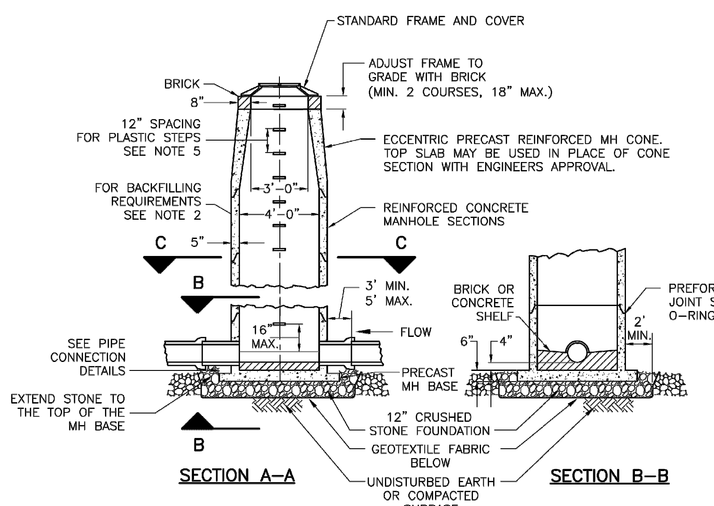
WATER SERVICE TRENCH

DETAIL W 4

NTS

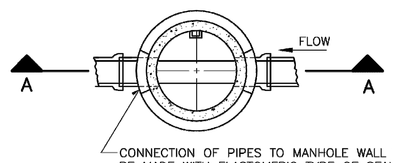
THE METROPOLITAN DISTRICT
SEWER STANDARD DETAILS

MDC



SECTION A–A

SECTION B–B



SECTION C–C

NOTES:

1. MAXIMUM PIPE SIZE TO BE INSTALLED IN 48" MANHOLE BASE SHALL BE 18".
2. REFER TO SEWER TRENCH DETAIL FOR BACKFILLING AND COMPACTION REQUIREMENTS AROUND SEWER MANHOLES.
3. INVERT THROUGH THE MANHOLE SHALL HAVE A UNIFORM GRADE OF MINIMUM 0.10 FEET BETWEEN THE INVERTS OF THE INLET AND OUTLET PIPES. INVERTS SHALL BE FIELD FORMED AND NOT FORMED IN SHOP/YARD.
4. MAXIMUM DIFFERENCE IN ELEVATION BETWEEN THE INVERT OF THE TRIBUTARY INLET AND THE MANHOLE INVERT SHALL BE 18 INCHES. ELEVATION DIFFERENCES GREATER THAN 18 INCHES WILL REQUIRE A DROP CONNECTION.
5. DISTANCE FROM TOP OF MANHOLE COVER TO FIRST PLASTIC STEP SHALL BE BETWEEN 12" AND 16".

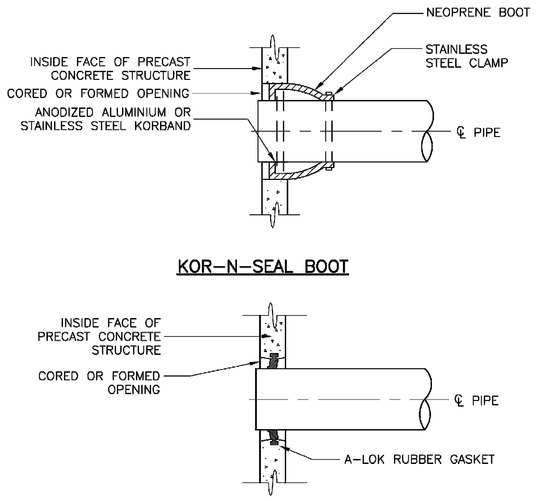
TYPE II PRECAST CONCRETE MANHOLE

DETAIL S 18

NTS

THE METROPOLITAN DISTRICT
SEWER STANDARD DETAILS

MDC



KOR-N-SEAL BOOT

A-LOK SYSTEM

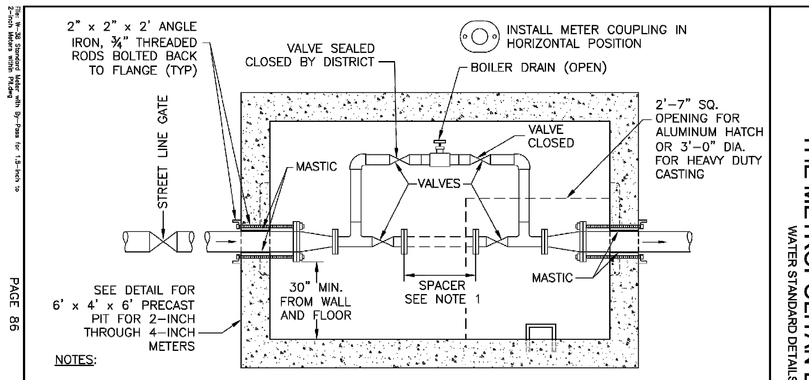
NOTE:

1. PACK NON-SHRINK GROUT AROUND ANNULAR AREA OF PIPE ON OUTSIDE OF STRUCTURE PRIOR TO BACKFILLING.

PIPE CONNECTIONS TO PRECAST CONCRETE STRUCTURES

DETAIL S 38

NTS



NOTES:

1. SPACER FURNISHED BY THE DISTRICT. SPACER FOR 1½" METER SHALL BE 13". SPACER FOR 2" METER SHALL BE 17". BYPASS SHOULD BE SAME SIZE AS METER.
2. VALVES CAN BE EITHER GATE OR BALL VALVE TYPE. GATE VALVES SHALL HAVE NON-RISING STEMS.
3. BYPASS IS ONLY ALLOWED UNDER CERTAIN CIRCUMSTANCES. CONTACT DISTRICT TO DETERMINE IF A BYPASS IS NECESSARY. BYPASS SHOULD BE SAME SIZE AS METER.

STANDARD METER INSTALLATION WITH BYPASS FOR 1½-INCH AND 2-INCH METERS WITHIN PIT

DETAIL W 38

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THE METROPOLITAN DISTRICT
WATER STANDARD DETAILS

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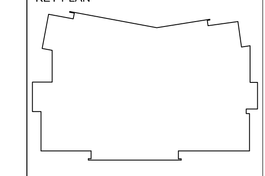
PROJECT NORTH

CONFORMANCE SET

KEY PLAN



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CHECKED BY:	JAS

ISSUE DATES

NO.	DATE	PURPOSE

C.9

Attachment 3

Geotechnical Investigation Information Report

WELTI GEOTECHNICAL, P.C.

227 Williams Street · P.O. Box 397
Glastonbury, CT 06033-0397

(860) 633-4623 / FAX (860) 657-2514

March 11, 2024

Mr. Michael C. Scott, AIA
Senior Associate
TSKP Studio
146 Williams Street, Bldg L-203
Hartford, CT 06106

Re: Geotechnical Study for Proposed Goodwin Industry 5.0 High School, Pent Road, East Hartford, CT

Dear Michael:

1.0 Herewith are boring data pertaining to the above. Eight borings were drilled to a maximum depth of 52 feet. Borings taken by our firm as part of a 2011 study for the nearby Pathways to Technology Magnet School were drilled to as deep as 112 feet. *The borings were drilled by Clarence Welti Associates and soil sampling was conducted by this firm solely to obtain indications of subsurface conditions as part of a geotechnical exploration program. No services were performed by Welti Geotechnical P. C. to evaluate subsurface environmental conditions.* n

1.1 Laboratory Grain Size Gradation and Water Content Tests were performed on six representative soil samples. The reports for those tests are included with the boring logs in the Appendix.

2.0 The **Subject Project** will include the construction of a new school building with a footprint of about 35,000 sf. The school will have a slab on grade and three floors above that level. The site of the school is in a parking lot at the end of Pent Road in East Hartford. The existing topography within the building footprint is at about Elev. 34. The final site layout and grading plan was not available for this study, but the preliminary layout plan indicates the ground floor will be at Elev.36. The column loading is estimated to be between 400 and 800 kips.

3.0 The **Geologic Origin** of the natural soils at the site and environs is from glacial lake deposits. The major stratum is the deep varved silt and clay, which extends from about Elev.+10 to as deep as Elev.-120. There are stratified sands to the atop of the varved silt and clay. The varved silt and clay would be susceptible to consolidation under superimposed areal loading. It is estimated that the subject structure with 2± feet of fill would have an average areal loading (fill soils + building dead loading) of about 500 psf.

3.1 The **Soil/Rock Cross Section** from the borings is generally as follows:

Bituminous Concrete to 4"

FILL; fine to medium SAND, trace to little Silt, Gravel with Pieces of Asphalt to 2 to 5 feet, medium compact

Fine to coarse or fine to medium SAND, trace Silt to 20 to 26 feet below grade, medium compact to loose

Varved SILT and CLAY to 112+ feet below grade, soft to medium stiff

3.2 The **Water Table** at boring completion was at 7 to 9 feet below the existing grades at the completion of the borings (Elev. 25 to 27±).

4.0 The performance criteria for the foundation support systems are assumed as follows:

1. The maximum settlement should not exceed 1" and the differential settlement should not exceed ½" in 50 feet.

2.The foundation and the structural frame should meet the building code seismic requirements.

3. The slab on grade should not move more than ½" of the structural frame.

The above criteria have been assumed by the writer in developing the recommendations, included herein. More stringent criteria than the above may require supplemental geotechnical input. It should be noted that the above criteria may be violated (as regards total settlement) by areal consolidation of the deep varved silt and clay stratum. The estimated settlements due to clay consolation would not violate the differential settlement criteria.

4.1 Regarding item 2 above the Seismic Site Soil Profile Classification is D. This class is based on shear velocity testing performed in 2011 at the adjacent Magnet School, where the measured shear velocity exceeded the threshold value of 600 feet/second to be in Class D. The mapped MCE spectral response accelerations values for the Town of East Hartford are as follows: **For one second periods. S_1 = 0.055 and for short periods S_s = 0.191.**

5.0 The **foundations for the structure** can be on spread footings. The bottom of the footings are presumed to be at about Elev. 31 for exterior walls and elevators and at about Elev. 33 for interior footings. A substantial part of the proposed building footprint has existing fills below the floor and footing levels. The existing fills should be removed and be replaced with controlled fill conforming to that in section 6.0 below. The lateral extent of the fill should be a distance outside structure footprint equal to the depth of fill beneath the footings plus 5 feet. There should be a minimum 6" layer of 3/8"crushed stone atop a geotextile placed beneath foundations and as initial layer beneath controlled fills which are atop a wet subgrade. The excavation to the bottom of footings should be

with a smooth bucket to avoid disturbance of the soils. The bottom should be compacted with at least 5 passes of vibratory compactor with static weight of at least 2000 pounds.

5.0.1 Although the seismic site soil profile class is D (which would normally not require tying footings), the somewhat loose soils may be subject to partial soil liquefaction during earthquakes. The loose soils should be compacted with vibro-compaction to about 20 feet below grade, sufficiently to avoid the potential for liquefaction and to permit normal spread footings.

5.1 The **allowable bearing pressure** for spread footings with the above preparation can be 4,000 psf. This value can be increased by 1/3 for wind and seismic loading. Regarding retaining walls, the allowable bearing pressure pertains to the average pressure. The toe pressure can be 50% above the average pressure.

5.2 Regarding the impact on superimposed loading on the varved clay and silt. This stratum in East Hartford and environs has been over-consolidated above the existing stress on the clay. To duplicate this condition in consolidation tests the loading is carried to pre-consolidation loading and then released to the existing stress level. The sample is then reloaded. The recompression index (C_R) is determined from slope of reloaded curve. The settlements are estimated by the equation:

$$S = (C_R \div 1+e_O)\, H * Log\, ((P_o + \Delta P) \div P_o)$$

where the value ($C_R \div 1+e_O$) is the recompression ratio (R_R), (H) is the thickness of the clay stratum, (P_o) is the initial stress in the clay stratum and (ΔP) is the proposed stress imparted by the new building at midpoint of the clay stratum.

To determine an appropriate value of (R_R) and the coefficient of consolidation (C_V) we referred to "Field Consolidation of Varved Clay"[1] a report by Richard P. Long. Assoc. Prof, Kent A. Healy, Prof. and Peter J. Carey Graduate Assistant. That report provides values of (R_R) and coefficient of consolidation (C_V) based on measured settlements which have occurred beneath highway embankments in the East Hartford/Hartford area. Based on the consolidation tests we performed for the PWA headquarters building in 2014 and the above reference report we used an (R_R) of 0.040 to estimate the settlements from clay consolidation and a (C_V) of 4.0 ft^2/day to estimate the rate of consolidation. To estimate the total settlement from consolidation of clay stratum, the stratum was divided into 20-foot layers and the imparted building stress at each the midpoint of each layer was used to calculate the settlement for that layer. The estimated total settlement using this method was 1.57". The maximum settlements, would be close to the center of the building.

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[1]Final Report "Field Consolidation of Varved Clay by Richard P. Long. Assoc. Prof, Kent A. Healy, Prof. and Peter J. Carey Graduate Assistant. The research was sponsored by the Joint Highway Research Board Advisory Council of the University of Connecticut and Department of Transportation. April 1978

The settlement at the edges of the loaded area would be about 65% of those at the center or about 1" and the settlements at the corners of the loaded area would be about 40% of those at the center or about 0.6". With column spacing at 45 feet x 30 feet, differential settlements would be between less than 1/4" between columns. 50% of the settlement from clay consolidation would occur within 2 to 3 years.

5.2.1 Apart from settlements due to silt/clay consolidation, there would be elastic settlements due to the foundation loading atop the loose to medium compact sand deposit which extend to about 25 feet below the existing grades. The estimated settlements with a 12' x 12' footing, 850 Kip loading and soil modulus (E) of 200 Tsf would be up to 3/4". To mitigate these settlements there should be some densification (ground improvement) of the loose sand deposits beneath the site. The densification would also address potential non liquefaction settlements which could occur during an earthquake, as cited in section 5.0.1 above. The densification/ground improvement of the loose sand deposits below water table could be with vibro-compaction or other approved methods. The ground improvement should be by a design build contractor specializing in this type of work. To provide a proposal the contractors would require a copy of the geotechnical report, the site grading and building layout plan, the foundation plans and the foundation and floor loading.

5.3 Lateral loading on retaining walls which support building loading, should be based on at-rest pressure as defined below.

5.3.1 Seismic lateral loading for retaining walls that are part of the building should be with a total lateral force (seismic plus static at-rest pressure) equal to $24H^2$ lb/ft located at ½H above the bottom. The above value is based on the Mononobe-Okabe solution for the case with level backfill, no wall friction and no hydrostatic pressure. The requirements for the seismic analyses of earth retention structures as part of the building should be determined from the Connecticut Building Code (IBC) or the ASCE-7.

5.4 The required **frost protection depth** is 3.5 feet below the finished grades.

5.5 The following is a summary of the design parameters:

Parameter	Value
Soil Weight (Backfill) *	125 pcf
At Rest Coefficient	0.45
Passive Coefficient	4.0

Active Coefficient	0.28
Allowable Bearing Pressure	2.0 Tons/sf
Frost Protection Depth	3.5 feet
Sliding Coefficient	0.6
Seismic Site Soil Profile Classification	“D”
Mapped MCE Spectral Response Acceleration for Short Periods, Ss	0.191
Mapped MCE Spectral Response Acceleration for One Second Period, S_1	0.55

* This weight is based on the soil gradation in section 6.0 below

6.0 Regarding Controlled Fill, Backfill for Footings and Walls the material should conform to the following or be 3/8" crushed stone:

Percent Passing	Sieve Size
100	3.5"
50 - 100	3/4"
25 - 75	No.4

The fraction, passing the No.4 sieve should have less than 15%, passing the No. 200 sieve.

All controlled fill and backfill must be compacted to at least 95% of modified optimum density in accordance with ASTM D-1557. A vapor retardant is required below slabs on grade.

6.1 The 6" layer of material immediately beneath the floor should be compacted 3/4" minus processed stone conforming to the following:

Percent Passing	Grain Size
100	1.25"

90 - 100	1"
75 - 100	3/4"
25 - 60	1/4"
10 - 35	No. 40
3 - 12	No. 100
0 - 5	No. 200

6.1.1 The processed stone should be compacted to at least 95% of modified optimum density to achieve a sub-grade modulus of 250 pci.

7.0 Regarding Earthwork, excavations will generally be in materials defined as **OSHA Type C**. Excavations, which are un-shored and exceed 5 feet in height must be cut back to slopes less than 34° from the horizontal (1.5H:1V).

7.1 Regarding pavement sections outside the building it is presumed that these will be atop the existing soil cross section, which is compact and non-frost susceptible. The pavement sections should be as follows:

For passenger parking - 3.0" of Bituminous concrete on 9" of Processed Crushed Stone Base

For Bus Access - 5" of Bituminous concrete on 9" of Processed Crushed Stone Base

For Concrete Pavements: Buses - 7" of Concrete on 8" Processed Stone Base; and Cars - 5" of Concrete on 8" of Processed Stone Base

For Concrete Aprons at Handicapped Entries place at least 12" of Processed Stone Base

7.2 Backfill of utility excavations should be with sand and gravel, conforming to the gradation in section 6.0 above.

8.0 This report has been prepared for specific application to the subject project in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made. In the event that any changes in the nature, design and location of structures are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

The analyses and recommendations submitted in this report are based in part upon data obtained from referenced explorations. The extent of variations between explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

Welti Geotechnical, P.C., should perform a general review of the final design and specifications in order that geotechnical design recommendations may be properly interpreted and implemented as they were intended.

If you have any questions please call me.

Very truly yours,

Max Welti

Max Welti, P. E.
President, Welti Geotechnical, P.C.

Clarence Welti

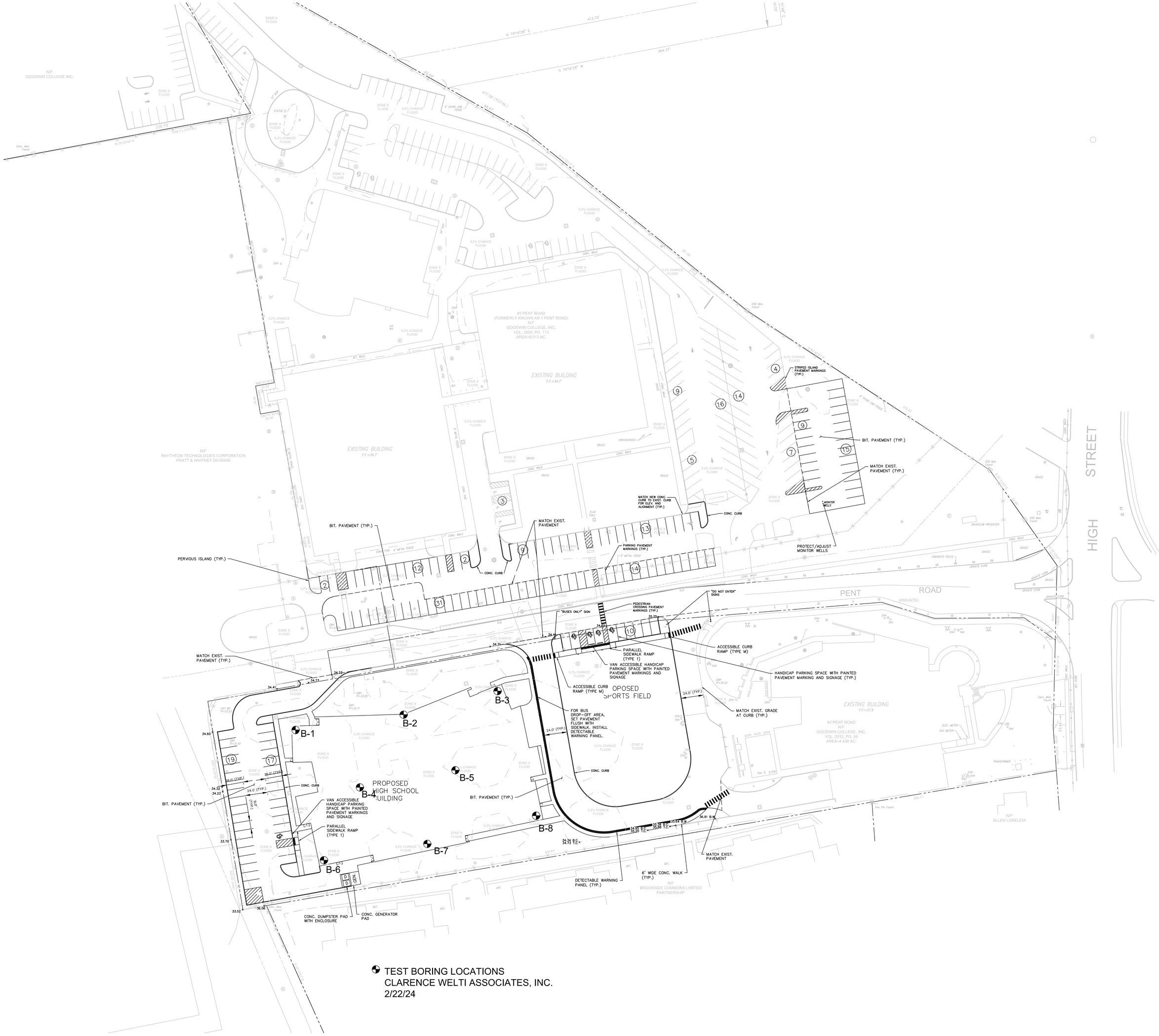
Clarence Welti, PhD, P. E
Vice Pres. Welti Geotechnical, P. C

APPENDIX

TEST BORING LOCATION PLAN

TEST BORING DATA

LABORATORY TEST DATA



TEST BORING LOCATIONS
CLARENCE WELTI ASSOCIATES, INC.
2/22/24

tskpstudio.com

TSKP STUDIO
One Hartford Square West
146 Wyllys Street, Bldg 1-203
Hartford, CT 06106
860.547.1970
ARCHITECTURE | PLANNING | INTERIORS

GOODWIN INDUSTRY 5.0 HIGH SCHOOL

PENT ROAD EAST HARTFORD, CONNECTICUT

SD PRICING

KEY PLAN

PROJECT NORTH

DRAWING TITLE

SITE LAYOUT PLAN

STATE PROJ. NO.	542-TBD MAG/A
PROJ. NO.	230502
SCALE	As indicated
DATE	01DEC2023
DRAWN BY	Author
APPROVED BY	Approver

ISSUE DATES

NO.	DATE	PURPOSE

EAST-WEST ENGINEERING
91 South Main Street
West Hartford, CT 06107
860-729-9326
EAST-WESTENGINEERING.COM

C.2

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-1

GROUND WATER OBSERVATIONS
AT 9.0 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/21/24
FINISH DATE 2/21/24

DEPTH	SAMPLE NO.	BLOWS/6"	DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0	1	14-30-60	0.5'-1.6'		ASPHALT 0.40	
					GREY/BR.FINE-CRS.SAND, SOME GRAVEL, TRACE SILT - FILL	
	2	23-17-10-13	2.0'-4.0'		3.0	
					BR.FINE-MED.SAND, TRACE SILT	30
5	3	10-10-12-13	4.0'-6.0'			
						25
10	4	9-10-5	10.0'-11.5'		12.0	
					BR.FINE-CRS.SAND, TRACE SILT	20
15	5	7-8-5	15.0'-16.5'			
						15
20	6	4-3-5	20.0'-21.5'		20.0	
					GREY SILT, TRACE TO LITTLE CLAY	10
25	7	3-2-3	25.0'-26.5'			
					26.5	
					BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: K. CHRISTIANA
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-1**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-2

GROUND WATER OBSERVATIONS
AT 9.0 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/21/24
FINISH DATE 2/21/24

DEPTH	SAMPLE NO.	BLOWS/6"	SAMPLE DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0	1	26-15-18	0.5'-2.0'		ASPHALT 0.40	
					DARK BR.FINE-CRS.SAND, LITTLE SILT & GRAVEL - FILL	
	2	7-7-7-7	2.0'-4.0'		2.0 BR.FINE-MED.SAND, TRACE TO LITTLE SILT	
	3	8-7-7-7	4.0'-6.0'			30
5						
					8.0 BR.FINE-CRS.SAND, TRACE SILT	25
10	4	3-2-2	10.0'-11.5'			
						20
15	5	3-1-5	15.0'-16.5'			
						15
20	6	4-3-6	20.0'-21.5'			
						10
25	7	2-3-3	25.0'-26.5'		25.0 GREY SILT, LITTLE CLAY	
					26.5 BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: K. CHRISTIANA
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-2**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-3

GROUND WATER OBSERVATIONS
AT 7.5 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/21/24
FINISH DATE 2/21/24

DEPTH	SAMPLE NO.	BLOWS/6"	SAMPLE DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0					ASPHALT 0.30	
	1	10-7-4-3	1.0'-3.0'		BR.FINE SAND, SOME SILT - FILL	
					2.0	
	2	5-2-7-7	3.0'-5.0'		BR.FINE-MED.SAND, TRACE TO LITTLE SILT	30
5						
	3	4-3-4-4	5.0'-7.0'			
					8.0	
					BR.FINE-CRS.SAND, TRACE SILT	25
10	4	4-3-3	10.0'-11.5'			
						20
15	5	5-5-6	15.0'-16.5'			
						15
20	6	3-3-3	20.0'-21.5'			
					21.0	
					GREY/BR.SILT, TRACE FINE SAND & CLAY	
					24.0	10
					GREY SILT, LITTLE CLAY	
25	7	3-3-3	25.0'-26.5'			
					26.5	
					BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: J. BREWER
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-3**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-4

GROUND WATER OBSERVATIONS
AT 7.0 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/20/24
FINISH DATE 2/20/24

DEPTH	SAMPLE NO.	BLOWS/6"	DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0					ASPHALT 0.33	
					BR.FINE-CRS.SAND, LITTLE SILT & GRAVEL - FILL 0.83	
	1	10-18-16-17	1.0'-3.0'		DARK BR.FINE-MED.SAND, LITTLE SILT, TRACE GRAVEL & ASPHALT - FILL	
	2	11-10-10-12	3.0'-5.0'			
					BR.FINE-MED.SAND, TRACE TO LITTLE SILT 4.0	30
5	3	9-10-12-12	5.0'-7.0'			
						25
10	4	5-3-4	10.0'-11.5'		BR.FINE-CRS.SAND, TRACE SILT 10.0	
						20
15	5	3-3-3	15.0'-16.5'			
						15
20	6	4-3-4	20.0'-21.5'		GREY SILT, TRACE CLAY 20.5	
						10
25	7	2-2-3	25.0'-26.5'			
					GREY SILT, SOME CLAY 26.0	5
30	UP#1		30.0'-32.0'		GREY VARVED SILT AND CLAY 30.0	
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: T. CZMYR
INSPECTOR:

SHEET 1 OF 2 | HOLE NO. **B-4**

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033	CLIENT TSKP ARCHITECTS	PROJECT NAME GOODWIN INDUSTRY 5.0 HIGH SCHOOL LOCATION PENT ROAD, EAST HARTFORD, CT

DEPTH	SAMPLE NO.	SAMPLE BLOWS/6"	SAMPLE DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
	8	2-2-2	35.0'-36.5'			
40	UP#2		40.0'-42.0'			-5
45	9	2-2-3	45.0'-46.5'			-10
50	UP#3		50.0'-52.0'			-15
					BOTTOM OF BORING @ 52.0'	52.0
55						-20
60						-25
65						-30
70						-35
75						-40

LEGEND: COL. A:

SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON

PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: T. CZMYR
INSPECTOR:

SHEET 2 OF 2 | HOLE NO. **B-4**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-5

GROUND WATER OBSERVATIONS
AT 8.2 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/21/24
FINISH DATE 2/21/24

DEPTH	SAMPLE NO.	BLOWS/6"	DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0					ASPHALT 0.25	
	1	10-7-4-3	1.0'-3.0'		BR.FINE-MED.SAND, SOME GRAVEL, LITTLE SILT, TRACE ASPHALT - FILL	
					2.5	
	2	5-2-7-7	3.0'-5.0'		BR.FINE-MED.SAND, LITTLE SILT, TRACE GRAVEL - FILL	30
5					5.0	
	3	4-3-4-4	5.0'-7.0'		BR.FINE-MED.SAND, TRACE TO LITTLE SILT	
						25
10	4	4-3-3	10.0'-11.5'			
						20
15	5	5-5-6	15.0'-16.5'			
						15
20	6	3-3-3	20.0'-21.5'			
					22.0	
					GREY SILT, LITTLE CLAY	10
25	7	2-3-3	25.0'-26.5'			
					26.5	
					BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: J. BREWER
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-5**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-6

GROUND WATER OBSERVATIONS
AT 7.0 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/19/24
FINISH DATE 2/19/24

DEPTH	SAMPLE NO.	BLOWS/6"	DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0					ASPHALT 0.33	
	1	10-18-16-17	1.0'-3.0'		BR.FINE-CRS.SAND, LITTLE SILT & GRAVEL - FILL	
					2.0	
	2	11-10-10-12	3.0'-5.0'		DARK BR.FINE-MED.SAND, LITTLE SILT, TRACE ASPHALT - FILL	30
5	3	9-10-12-12	5.0'-7.0'		5.0 BR.FINE-MED.SAND, TRACE TO LITTLE SILT	
						25
10	4	5-3-4	10.0'-11.5'		10.0 BR.FINE-CRS.SAND, TRACE SILT	
						20
15	5	3-3-3	15.0'-16.5'			
						15
20	6	4-3-4	20.0'-21.5'			
						10
25	7	2-2-3	25.0'-26.5'		26.0 GREY SILT, SOME CLAY	
					26.5 BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: T. CZMYR
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-6**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-7

GROUND WATER OBSERVATIONS
AT 7.0 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/19/24
FINISH DATE 2/19/24

DEPTH	SAMPLE NO.	SAMPLE BLOWS/6"	SAMPLE DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0					ASPHALT 0.33	
					BR.FINE-CRS.SAND, SOME GRAVEL, TRACE SILT - FILL 0.66	
	1	12-23-15-14	1.0'-3.0'		DARK BR.FINE-MED.SAND, LITTLE SILT, TRACE GRAVEL & ASPHALT - FILL	
					3.0	
	2	10-9-10-10	3.0'-5.0'		BR.FINE-MED.SAND, TRACE TO LITTLE SILT	30
5						
	3	10-8-7-9	5.0'-7.0'			
						25
10						
	4	5-6-6	10.0'-11.5'			
						20
15						
	5	6-5-7	15.0'-16.5'			
						15
20						
	6	4-4-4	20.0'-21.5'		21.0	
					GREY/BR.SILT, TRACE FINE SAND & CLAY	10
25						
	7	4-4-5	25.0'-26.5'		25.0	
					GREY SILT, SOME CLAY	
					26.5	
					BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: T. CZMYR
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-7**

CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN 06033

CLIENT
TSKP ARCHITECTS

PROJECT NAME
GOODWIN INDUSTRY 5.0 HIGH SCHOOL
LOCATION
PENT ROAD, EAST HARTFORD, CT

	AUGER	CASING	SAMPLER	CORE BAR.
TYPE	HSA		SS	
SIZE I.D.	3.75"		1.375"	
HAMMER WT.			140lbs	
HAMMER FALL			30"	

OFFSET
LINE & STA.
N. COORDINATE
E. COORDINATE

SURFACE ELEV. 34
HOLE NO. B-8

GROUND WATER OBSERVATIONS
AT 7.0 FT. AFTER 0 HOURS
AT FT. AFTER HOURS

START DATE 2/19/24
FINISH DATE 2/19/24

DEPTH	SAMPLE NO.	BLOWS/6"	DEPTH	A	STRATUM DESCRIPTION + REMARKS	ELEV.
0	1	1-3-7-4	0.0'-2.0'		TOPSOIL 0.50	
					BR.FINE-CRS.SAND, LITTLE SILT & GRAVEL, TRACE ROOTS - FILL	
	2	12-11-11-10	2.0'-4.0'		2.0 BR.FINE-MED.SAND, TRACE TO LITTLE SILT	
	3	14-14-14-17	4.0'-6.0'			30
5						
						25
10	4	6-5-7	10.0'-11.5'			
						20
15	5	6-7-8	15.0'-16.5'			
						15
20	6	4-5-9	20.0'-21.5'			
					23.5 GREY SILT, TRACE TO LITTLE CLAY	10
25	7	4-5-5	25.0'-26.5'			
					26.5 BOTTOM OF BORING @ 21.5'	5
30						
						0
35						

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: T. CZMYR
INSPECTOR:

SHEET 1 OF 1 | HOLE NO. **B-8**

Particle Size Distribution Report

ASTM D422

	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	14.0	81.5	4.5	
□	0.0	0.0	0.0	0.0	16.1	81.4	2.5	
△	0.0	0.0	0.0	0.0	14.1	82.7	3.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4159	0.2829	0.2490	0.1909	0.1447	0.1197	1.08	2.36
□			0.4354	0.3046	0.2728	0.2182	0.1773	0.1598	0.98	1.91
△			0.4171	0.3034	0.2742	0.2233	0.1847	0.1687	0.97	1.80

Material Description	Test Date	USCS	NM
○ water content = 7.1%			
□ water content = 5.3%			
△ water content = 22.6%			

Project No. **Client:** TSKP ARCHITECTS

Project: GOODWIN INDUSTRY 5.0 HIGH SCHOOL

○ **Source of Sample:** B-1 **Depth:** 2.0 **Sample Number:** 2

□ **Source of Sample:** B-3 **Depth:** 3.0 **Sample Number:** 2

△ **Source of Sample:** B-4 **Depth:** 5.0 **Sample Number:** 3

Remarks:

CLARENCE WELTI ASSOCIATES, INC.

Figure

Particle Size Distribution Report

ASTM D422

	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○				0.5	38.8	56.9	3.5	
□				6.0	62.9	27.5	0.4	
△	0.0	0.0	0.0	0.4	56.6	40.0	3.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6733	0.4214	0.3464	0.2389	0.1721	0.1476	0.92	2.86
□			1.0622	0.6495	0.5772	0.4421	0.3136	0.2685	1.12	2.42
△			0.9051	0.5693	0.4850	0.3179	0.2141	0.1791	0.99	3.18

Material Description	Test Date	USCS	NM
○ water content = 23.5%			
□ water content = 24.0%			
△ water content = 19.7%			

Project No. **Client:** TSKP ARCHITECTS

Project: GOODWIN INDUSTRY 5.0 HIGH SCHOOL

○ **Source of Sample:** B-5 **Depth:** 10.0 **Sample Number:** 4

□ **Source of Sample:** B-6 **Depth:** 15.0 **Sample Number:** 5

△ **Source of Sample:** B-7 **Depth:** 5.0 **Sample Number:** 3

Remarks:

CLARENCE WELTI ASSOCIATES, INC.

Figure

Goodwin Industry 5.0 High School
2 25 24

Estimated Settlements due to consolidation of the Varved Clay stratum from the new building foundation and floor loading

Layer #	Top of layer ρ_e (psf)	Bottom of layer - ρ_e (psf)	Avg. effective stress for layer ρ_e (psf) = Po	ΔP	ΔP + Po/Po	Log ΔP + Po/Po	RR	Layer Height (ft) starting at 30 feet below grade	ΔH (ft)	ΔH (in)
1	1520	2620	2070	357	1.172463768	0.069099431	0.04	20	0.05528	
2	2620	3720	3170	300	1.094637224	0.039270213	0.04	20	0.031416	
3	3720	4820	4270	255	1.05971897	0.025190709	0.04	20	0.020153	
4	4820	5920	5370	217	1.040409683	0.017204386	0.04	20	0.013764	
5	5920	6020	5970	187	1.031323283	0.013394822	0.04	20	0.010716	
			0							
Estimated total settlement from consolidation of Varved Clay stratum									0.131328	1.575932

Note: The top of the varved Clay stratum is at about 20 feet below the existing grades. The bottom of the Varved Clay stratum is estimated to be at about 170 feet based on USGS mapping.

ΔP=estimated increase in effective stress at midpoint of 20 foot layer due to 500 psf surcharge across building footprint
RR= Recompression Ratio

Attachment 4

Threatened and Endangered Species NDDB Determination

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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

Generated by eNDDB on:
4/29/2024

Galen Semprebon
SEMPREBO, P.E., LEED AP
12 North Main Street
West Hartford, CT 06107
galen@east-westengineering.com

Subject: Goodwin Industry Five High School
Filing # 110923
NDDB – New Determination Number: 202406050
2 Pent Road
East Hartford

Expiration Date: 4/29/2026

Current data maintained by the Natural Diversity Database (NDDB) and housed in the DEEP ezFile portal, indicates that populations of the following State Endangered, Threatened, or Special Concern species (RCA Sec. 26-306) have been documented within the project area or in close proximity to the proposed Building and Infrastructure Development (including stormwater discharge associate with construction)/New Commercial, Industrial, Governmental, Goodwin Industry Five High School.

Bald eagle (*Haliaeetus leucocephalus*)

In accordance with the project information provided in your request submittal, implementation of the following Best Management Practices will avoid negative impacts to listed species.

Common Name	Bald eagle
Scientific Name	*Haliaeetus leucocephalus*
Taxa	bird
Status[1]	T
General Ecology	It is illegal pursuant to section 26-93 of the Connecticut General Statutes to disturb Bald eagles. This law prohibits disturbing the birds while they are roosting, feeding, or nesting. The wildlife division recommends a 660' setback with no public access from a bald eagle nest or critical roosting site. The critical time for nesting eagles is February 1- August 1. The critical time period for winter roosts is December 31- March 1. To determine if nest or roost in your area is active this year contact the DEEP Wildlife Biologist coordinating eagle monitoring (Brian.hess@ct.gov).
Best Management Practice	**1. Work activities and staging areas are prohibited within 330 feet (approximately 100 meters) of active nests/roosts that are out of line of sight, or within 660 feet (approximately 200 meters) from nests/roosts that are in the line of sight during periods of eagle use, unless surveys demonstrate that the nest or roost is not being used. Critical nesting time is between February 1- August 1.**

	2. Minimize cutting of large trees. No known bald eagle nest trees, perch trees, or roost trees will be felled or modified. **3. No blasting, pile driving and other intermittent activities that produce loud noises within 1/2 mile of active nests. This recommendation applies to the use of fireworks classified by the Federal Department of Transportation as Class B explosives, which includes the larger fireworks that are intended for licensed public display.** **4. Eagles scavenge. Do not leave exposed food, trash or hazardous materials. Promptly remove any incidental carcasses that may appear on work site (road kill, euthanized or poisoned pest animals)** **5. Do not use helicopters for support.** **Do not intentionally feed bald eagles. Artificially feeding bald eagles can disrupt their essential behavioral patterns and put them at increased risk from powerlines, collision with windows and cars, and other mortality factors.** **Protect and preserve potential roost and nest sites.** **Where nests are blown from trees during storms or other elements, continue to protect the site in the absence of the nest for up to three complete breeding seasons. Many eagles will rebuild the nest and reoccupy the site.** **Monitor and minimize dispersal of contaminants into waterways from waste sites, pesticide applications, and runoff from agricultural areas.** **Non-motorized recreation and human entry (e.g., hiking, camping,** **fishing, hunting, birdwatching, kayaking, canoeing): No buffer is necessary around nest sites outside the breeding season. If the activity will be visible or highly audible from the nest, maintain a 330-foot buffer during the breeding season, particularly where eagles are unaccustomed to such activity.** **Fireworks: Avoid blasting and other activities that produce extremely loud noises within 1/2 mile of active nests.** **Off-road vehicle use (including snowmobiles): No buffer is necessary around nest sites outside the breeding season. During the breeding season, do not operate off-road vehicles within 330 feet of the nest. In open areas, where there is increased visibility and exposure to noise, this distance should be extended to 660 feet.** **Motorized Watercraft use (including jet skis/personal watercraft): No buffer is necessary around nest sites outside the breeding season.** **During the breeding season, within 330 feet of the nest,** **(1) do not operate jet skis (personal watercraft)** **(2) avoid concentrations of noisy vessels (e.g., commercial fishing boats and tour boats), except where eagles have demonstrated tolerance for such activity.** **Other motorized boat traffic passing within 330 feet of the nest should attempt to minimize trips and avoid stopping in the area where feasible, particularly where eagles are unaccustomed to boat traffic.** **If not adding to an existing site, site new locations as far from active nests as possible.**

	Where bald eagles are likely to nest in human-made structures and such use could impede operation or maintenance of the structures (i.e. you would have no access for maintenance during breeding season), equip the structures with either 1. Devices engineered to discourage bald eagles from building nests, or 2. Nesting platforms that will safely accommodate bald eagle nests without interfering with structure performance. **Avoid creating collision hazards for Birds and Bats. Glass collisions including residential windows indiscriminately kill 1 billion birds a year. Develop or renovate your building façade and site design strategy to make the building and site structures visible barriers to birds. Bat collisions are less well understood, but smooth vertical surfaces affect bats' abilities to avoid collisions.** **Limit interior and exterior night lighting. Lighting, temporary or permanent should not be directed towards suitable bat habitats. Security lighting should always be down-shielded to keep light within the boundaries of the site.** **Take steps necessary to assure that construction is designed, built, and operated in accordance with the standards and requirements of the LEED Green Building Rating System Pilot Credit #55. The USGBC releases revised versions of the LEED Building Rating System on a regular basis, and you should refer to the most current version when beginning a new building or construction project or renovation.** **Visit American Bird Conservancy website for more guidance: https://abcbirds.org/program/glass-collisions/** **Our mapped records indicate your project boundary is within 1/2mile, but farther than 660ft of this sensitive resource.** **Apply best practices as outlined in USFWS Guidelines for Communications Towers: www.fws.gov/midwest/endangered/section7/telecomguidance.html**

[1]E = State Endangered, T = State Threatened, SC = State Special Concern, FE = Federally Endangered, FT = Federally Threatened, NA = Not applicable.

Your submission information indicates that your project requires a state permit, license, registration, or authorization, or utilizes state funding or involves state agency action. This NDDB – New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations.

Please be aware of the following limitations and conditions:
Natural Diversity Database information includes all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as enhance existing data. Such new information is incorporated into the Database and accessed through the ezFile portal as it becomes available. New information may result in additional review, and new or modified restrictions or conditions may be necessary to remain in compliance with certain state permits.

- Each state agency is required to conserve endangered and threatened species and their essential habitats, and ensure that any action authorized, funded or performed by such agency does not threaten the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat designated as essential to such species (CGS

26-310). Therefore, the restrictions and conditions outlined above for Endangered and Threatened species **MUST** be implemented and abided by in order to utilize this NDDB – New Determination in securing any state permit, license, authorization, or registration or for any actions performed or funded by state agencies.

- During your work listed species may be encountered on site. A report must be submitted by the observer to the Natural Diversity Database promptly and additional review and restrictions or conditions may be necessary to remain in compliance with certain state permits. Please fill out the appropriate survey form and follow the instructions for submittal.
- Your project involves the state permit application process or other state involvement, including state funding or state agency actions; please note that consultations with your permit analyst or the agency may result in additional requirements. In this situation, additional evaluation of the proposal by the DEEP Wildlife Division may be necessary and additional information, including but not limited to species-specific site surveys, may be required. Any additional review may result in specific restrictions or conditions relating to listed species that may be found at or in the vicinity of the site.
- If your project involves preparing an Environmental Impact Assessment, this NDDB consultation and determination should not be substituted for conducting biological field surveys assessing on-site habitat and species presence.
- This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 4/29/2026.
- If biological surveys have been conducted in accordance with Best Management Practices provided, please forward a copy of the results to the address listed at the end of this letter. Include the Project Name and Determination Number on all correspondence.

The NDDB – New determination for the Goodwin Industry Five High School at 2 Pent Road, East Hartford, as described in the submitted information and summarized at the end of this document is valid until 4/29/2026.This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 4/29/2026.

This letter is computer generated and carries no signature. If however, any clarification is needed, or, if you have further questions, please contact the following:

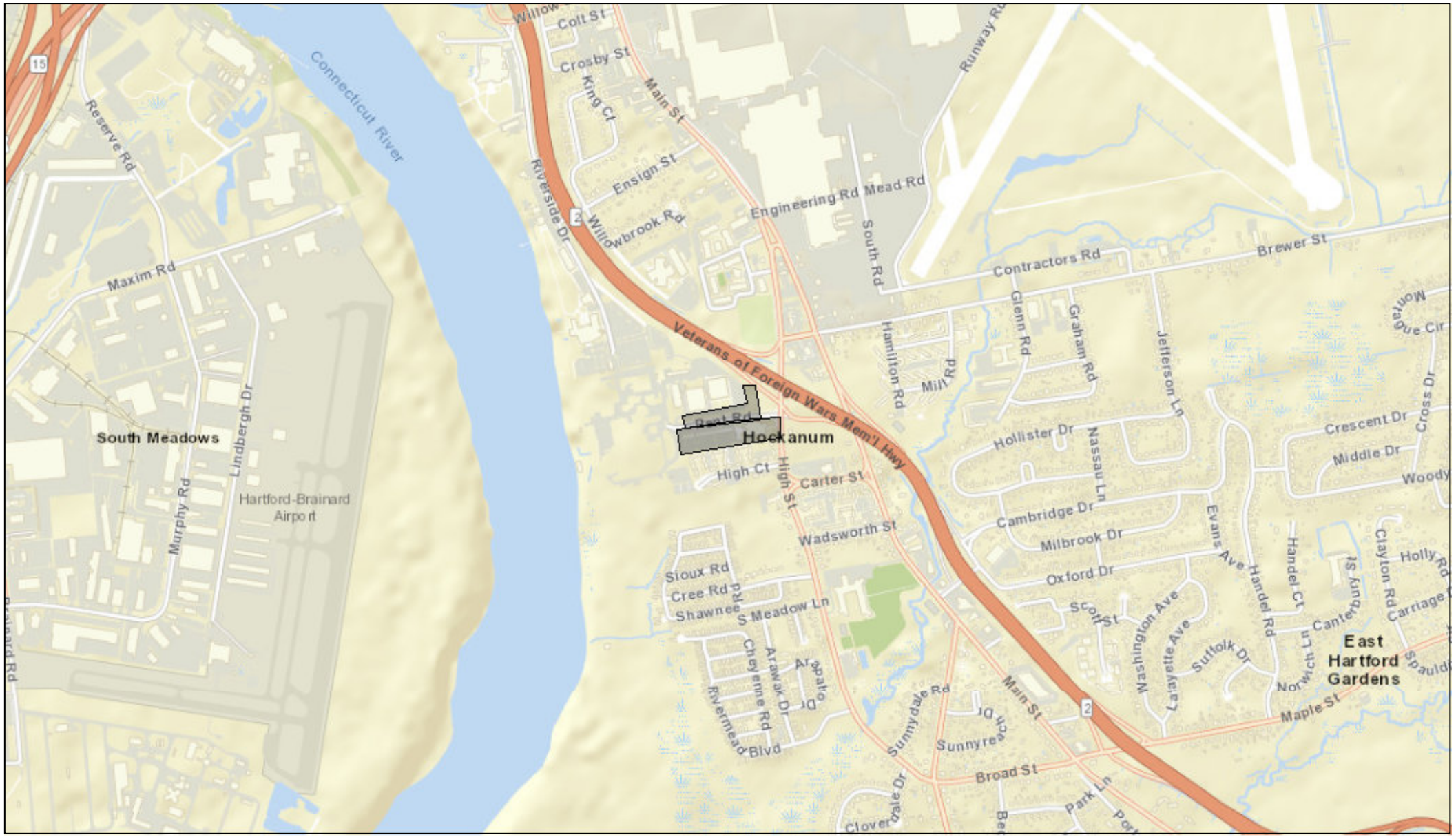
CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database
79 Elm Street, 6th floor
Hartford, CT 06106-5127
(860) 424-3011
deep.nddbrequest@ct.gov

Please reference the NDDB – New number provided in this letter when you e-mail or write. Thank you for submitting your project through DEEP's ezFile portal for Natural Diversity Database reviews.

Application Details:

Project involves federal funds or federal permit:	No
Project involves state funds, state agency action, or relates to CEPA request:	Yes
Project requires state permit, license, registration, or authorization:	Yes
DEEP enforcement action related to project:	
Project Type:	Building and Infrastructure Development (including stormwater discharge associate with construction)
Project Sub-type:	New Commercial, Industrial, Governmental
Project Name:	Goodwin Industry Five High School
Project Description:	

Goodwin Industry Five High School Map



April 29, 2024

1:19,195

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Filing #110923 ezFile NDDB System

Attachment 5

Phasing and Construction Schedule

Construction Schedule / Milestones Overview

20 Month Overall June 2025 – February 2027

- **Mobilization** — **June 2025**
- **Permitting** — **Jan – June 2025**
- **Site Excavations** — **June – August 2025**
- **MEPFP Coordination** — **June – Nov 2025**
- **Foundations** — **June -August 2025**
- **Steel Erection** — **Sept– Dec 2025**
- **Under-slab MEPs** — **July – Dec. 2025**
- **SOD / SOG** — **Oct 2025 – March 2026**
- **Exterior / Shell Construction** — **Dec 2025 – July 2026**
- **Interior Rough Construction** — **Jan 2025 – June 2026**
- **Interiors / Finishes Construction** — **June – Dec 2026**
- **Testing / Inspect. / Cx / P-List** — **Jan – Feb. 2027**
- **Substantial Completion** — **Early Feb 2027**

Phase 1 - June - October 2025
Phase 2 - October 2025 - February 2027

Phase 2 Sitework: June - August 2026
- North Parking Lot Demolition: June 2026
- Pent Road Utilities: June - July 2026
- North Lot Expansion: June - July 2026
- Walks & Curb: July - August 2026
- Mill & Pave: August 2026
- Fine Grading, Landscape & Seed/Sod: September - October 2026

Goodwin University

FIP CONSTRUCTION

Attachment 6

Inspection Logs