



**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION**



**2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546**

Phone: 860-594-3129

April 4, 2014

Subject: Project No. 301-092

F.T.A. Nos. CT-05-0107 & CT 90-X510

Rehabilitation of Metro-North Railroad Bridge No.03948R over Sound Beach Ave. and
Bridge No. 03955R over Tomac Ave..

NOTICE TO CONTRACTORS:

This is to notify all concerned and especially the prospective bidders that the bid opening for the subject project is still scheduled for April 9, 2014 at 2:00 P.M. in the Conference Room of the Department of Transportation Administration Building, 2800 Berlin Turnpike, Newington, Connecticut.

Addendum No. 3 is attached and can also be obtained on the Statewide Contracting Portal at http://www.biznet.ct.gov/scp_search/BidResults.aspx?groupid=64

This Addendum is required to add Environmental Permit Application, add a new special provision, add a new contract item, revise a contract item, delete contract items and revise plan sheets.

Bid Proposal Forms (0301-0092.EBS file and amendment file 0301-0092.00# if applicable) are available for those bidders that have received approval from the Department to bid on the subject project.

To retrieve the official Bid Proposal Forms, please download the electronic bid proposal file and amendment files, if applicable at <https://www.bidx.com>.

Pre-Bid Questions and Answers: Questions pertaining to DOT advertised construction projects must be presented through the CTDOT Pre-Bid Q and A Website. The Department cannot guarantee that all questions will be answered prior to the bid date. **PLEASE NOTE - at 12:01 am, the day before the bid, the subject project(s) being bid will be removed from the Q and A Website, Projects Advertised Section, at which time questions can no longer be submitted through the Q and A Website. At this time, the Q and A for those projects will be considered final, unless otherwise stated and/or the bid is postponed to a future date and time to allow for further questions and answers to be posted.**

H. J. Emond

For: Gregory D. Straka
Contracts Manager
Division of Contracts Administration

APRIL 4, 2014

REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R OVER
SOUND BEACH AVENUE AND BRIDGE NO. 03955R OVER TOMAC AVENUE

FEDERAL AID PROJECT NO'S. CT-05-0107 AND CT-90-X510
STATE PROJECT NO. 301-092

TOWN OF GREENWICH

ADDENDUM NO. 3

This Addendum addresses the following questions and answers contained on the "CT DOT QUESTIONS AND ANSWERS WEBSITE FOR ADVERTISED CONSTRUCTION PROJECTS":

Question and Answer No's. 67, 68, 93 and 104

ENVIRONMENTAL PERMIT APPLICATION

The following Environmental Permit Application is hereby added to the Contract:

- STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES

SPECIAL PROVISION

NEW SPECIAL PROVISION

The following Special Provision is hereby added to the Contract:

- ITEM NO. 1131002A – REMOTE CONTROLLED CHANGEABLE MESSAGE SIGN

CONTRACT ITEMS

NEW CONTRACT ITEM

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>
1131002A	REMOTE CONTROLLED CHANGEABLE MESSAGE SIGN	DAY	2,000

REVISED CONTRACT ITEM

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ORIGINAL QUANTITY</u>	<u>REVISED QUANTITY</u>
0651004	CRUSHED STONE BEDDING MATERIAL	265 CY	465 CY

DELETED CONTRACT ITEMS

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ORIGINAL QUANTITY</u>	<u>REVISED QUANTITY</u>
1020910	REMOVAL OF EXISTING EQUIPMENT	LS	0
1050111	PORTABLE VARIABLE MESSAGE SIGN	2 EA	0

PLANS

REVISED PLANS

The following Plan Sheets are hereby deleted and replaced with the like-numbered Plan Sheets:

- 02.01.A3
- 05.31.A3
- 05.32.A3
- 06.04.A3
- 06.05.A3
- 11.12.A3
- 11.13.A3

The Detailed Estimate Sheets do not reflect these changes.

The Bid Proposal Form has been revised to reflect these changes.

There will be no change in the number of calendar days due to this Addendum.

The foregoing is hereby made a part of the contract.

ITEM #1131002A - REMOTE CONTROLLED CHANGEABLE MESSAGE SIGN

Description: Work under this item shall include furnishing and maintaining a trailer-mounted, “Changeable Message Sign”, “Remote Controlled Changeable Message Sign”, “Changeable Message Sign with Radar”, or “Remote Controlled Changeable Message Sign with Radar” whichever is applicable, at the locations indicated on the plans or as directed by the Engineer.

Materials: The full matrix, internally illuminated variable message sign shall consist of a LED, fiber optic, lamp matrix, or hybrid magnetically operated matrix – LED message board; and a computer operated interface, all mounted on a towable, heavy duty trailer.

The sign shall have a minimum horizontal dimension of 115 inches and rotate a complete 360 degrees atop the lift mechanism.

In the raised position, the bottom of the sign shall be at least 7 feet above the roadway. The messages displayed shall be visible from a distance of 1/2 mile and be clearly legible from a distance of 900 feet during both the day and night.

The lighting system shall be controlled both manually and by a photocell for automatic sign dimming during nighttime use.

The sign shall be capable of storing a minimum of 100 preprogrammed messages and be able to display any one of those messages upon call from the trailer mounted terminal and/or through the cellular telephone hookup for the remote controlled sign.

The sign shall be a full matrix sign that is able to display messages composed of any combination of alphanumeric text, punctuation symbols, and graphic images (notwithstanding NTCIP limitations). The display shall be capable of producing arrow functions. Full- matrix displays shall allow the use of graphics, traffic safety symbols and various character heights.

Standard messages shall be displayed in a three-line message format with 8 characters per line. The letter height shall not be less than 18 inches.

The sign shall utilize yellow green for the display with a black background. Each matrix shall have a minimum size of 6 x 9 pixels. Each pixel shall utilize a minimum of four high output yellow green LEDs or equivalent light source. The LEDs or light source shall have a minimum 1.4 candela luminance intensity, 22 degrees viewing angle, and wavelength of 590 (+/- 3) nanometers.

For hybrid magnetically operated matrix – LED matrix, each pixel shall have one single shutter faced with yellow green retro-reflective sheeting with a minimum of four high output yellow green LEDs or equivalent light source. The hybrid magnetically operated matrix – LED matrix sign shall be capable of operating in three display modes; shutter only, LED only, and both LED and shutter. These modes shall be automatically controlled by a photocell for day and night conditions and also capable of being manually controlled through the software.

The sign shall be controlled by an on-board computer. The sign shall automatically change to a preselected default message upon failure. That default message shall remain on display until the problem is corrected.

The sign shall include all necessary controls, including, but not limited to, personal computer, keyboard or alphanumeric hand-held keyboard, and software. The sign shall interface with PCs, cellular phones, and radar speed detection devices as required.

Controls shall be furnished for raising and lowering the message board, aligning the message board and, for solar powered units, a read-out of the battery bank charge.

Power shall be provided by a self-contained solar maintained power source or a diesel engine driven generator. Hardware for connection to a 110-volt power source shall also be provided.

Solar powered signs shall display programmed messages with the solar panel disconnected, in full night conditions, for a minimum of 30 consecutive days.

Remote Controlled Changeable Message Signs shall include one (1) industrial-grade cellular telephone and be equipped with a modem to control the sign and a security system to prevent unauthorized access. The security system shall allow access only through use of a code or password unique to that sign. If the proper code or password is not entered within 60 seconds of initial telephone contact, the call will be terminated. Remote control for the Remote Controlled Changeable Message Sign shall be by cellular telephone and touch tone modem decoder.

The radar equipped signs shall include a high-speed electronic control module (ECM-X), Radar SI transceiver, signal processing board and radar logging software.

The radar software will operate the sign in four modes:

- 1) The sign will display words "YOUR SPEED" followed by the speed (2 digits). The display will repeat the message as long as vehicles are detected. The sign will blank when no vehicles are present.
- 2) The sign will display a series of up to six messages (programmed by the user) when a preset speed (programmed by the user) is exceeded. The sign will blank when no vehicles are present.
- 3) Will perform like mode #2 with the addition of displaying the actual speed with it.
- 4) The sign will work as a standard Changeable Message Sign or Remote Controlled Changeable Message Sign with no radar.

Construction Methods: The Contractor shall furnish, place, operate, maintain and relocate the sign as required. When the sign is no longer required, it shall be removed and become the property of the Contractor. The cellular telephone required for the Remote Controlled Changeable Message Sign shall be provided to the Engineer for his use, and subsequently returned to the Contractor.

When the sign is not in use, it shall either be turned off with a blank display or turned from view.

Any signs that are missing, damaged, defaced or improperly functioning so that they are not effective, as determined by the Engineer and in accordance with the ATSSA guidelines contained in "Quality Standards for Work Zone Traffic Control Devices," shall be replaced by the Contractor at no cost to the State.

Method of Measurement: This work will be measured for payment for each "Changeable Message Sign", "Remote Controlled Changeable Message Sign", "Changeable Message Sign with Radar", or "Remote Controlled Changeable Message Sign with Radar", whichever applies, furnished and installed, for the number of calendar days that the sign is in place and in operation, measured to the nearest day. When a sign is in operation for less than a day, such a period of time shall be considered to be a full day regardless of actual time in operation.

Basis of Payment: This work will be paid for at the Contract unit price per day for each "Changeable Message Sign", "Remote Controlled Changeable Message Sign", "Changeable Message Sign with Radar", or "Remote Controlled Changeable Message Sign with Radar" which price shall include placing, maintaining, relocating and removing the sign and its appurtenances and all material, labor, tools and equipment incidental thereto. Additionally, for the "Remote Controlled Changeable Message Sign", or "Remote Controlled Changeable Message Sign with Radar", the cellular telephone service and telephone charges shall be included.

<u>Pay Item</u>	<u>Pay Unit</u>
Remote Controlled Changeable Message Sign	Day



General Permit Registration Form for the Discharge of Stormwater and Dewatering

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

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

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

Part I: Registration Type

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

Registration Type		Registration Timeline	
<input type="checkbox"/>	Re-registration Existing Permit No. GSN _____	On or before February 1, 2014* *Note: Failure to renew a permit by this date will require submission of new registration. Re-registrants must only complete Parts I, II, III (except Question 8), IV - Question 1, VII and submit Attachment A.	
<input checked="" type="checkbox"/>	New Registration (Refer to Section 2 of the permit for definitions of Locally Exempt and Locally Approvable Projects)	<input type="checkbox"/> Locally Approvable Projects Size of soil disturbance:	New registration - Sixty (60) days prior to the initiation of the construction activity for: Sites with a total soil disturbance area of 5 or more acres
		<input checked="" type="checkbox"/> Locally Exempt Projects Size of soil disturbance: 1.44 acres	<input checked="" type="checkbox"/> New registration - Sixty (60) days prior to the initiation of the construction activity for: Sites with a total disturbance area of one (1) to twenty (20) acres except those with discharges to impaired waters or tidal wetlands
			<input type="checkbox"/> New registration - Ninety (90) days prior to the initiation of the construction activity for: (i) Sites with a total soil disturbance area greater than twenty (20) acres, or (ii) Sites discharging to a tidal wetland (that is not fresh-tidal and is located within 500 feet), or (iii) Sites discharging to an impaired water listed in the "Impaired Waters Table for Construction Stormwater Discharges"

Part II: Fee Information

1. New Registrations
 - a. Locally approvable projects (registration only):
 - \$625 [#1855]
 - b. Locally exempt projects (registration and Plan):
 - \$3,000 total soil disturbance area \geq one (1) and < twenty (20) acres. [#1856]
 - \$4,000 total soil disturbance \geq twenty (20) acres and < fifty (50) acres. [#1857]
 - \$5,000 total soil disturbance \geq fifty (50) acres. [#1858]
2. Re-Registrations
 - \$625 (sites previously registered prior to September 1, 2012) [#1853]
 - \$0 (sites previously registered between September 1, 2012 and the issuance date of this permit) [#1854]

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

Part III: Registrant Information

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

1. Registrant /Client Name: Department of Transportation

State Agency ↓

Secretary of the State business ID #: ██████████

Mailing Address: 140 Pond Lily Avenue

City/Town: New Haven State: CT Zip Code: 06525

Business Phone: 203-389-3100 ext.:

Example:(xxx) xxx-xxxx

Contact Person: Mark D. Rolfe, PE Title: District Eng

E-Mail: mark.rolfe@ct.gov

Additional Phone Number (if applicable): ext.

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

Name:

Mailing Address:

City/Town: State: Zip Code:

Business Phone: ext.:

Contact Person: Title:

Part III: Registrant Information (continued)

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

Name:
Mailing Address:
City/Town: State: Zip Code:
Business Phone: ext.:
Site Phone: Emergency Phone:
Contact Person: Title:
Association (e.g. developer, general or site contractor, etc.):

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

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

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

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

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

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

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

Name: Jay Young
Mailing Address: 2800 Berlin Turnpike P.O. Box 317546
City/Town: Newington State: CT Zip Code: 06131-7546
Business Phone: (860) 591-2885 ext.:
Contact Person: Jay Young Title: Transportation Engineer 3
Service Provided: **Preparation of Stormwater Pollution Control Plan**

8. List Reviewing Qualified Professional (for locally approvable projects only):

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

Part IV: Site Information

1. Site Name: Project 301-092 Rehabilitation of Metro-North Railroad Bridge No. 03948R and Bridge No. 03955R
Street Address or Description of Location: Old Greenwich Railroad Station Parking Lot and Rehabilitation of Bridge No. 03948R over Sound Beach Ave. and Bridge No. 03955R over Tomac Ave.
City/Town: Greenwich State: CT Zip Code: 06870
Brief Description of construction activity: This project will be rehabilitating Bridge No. 03948R over Sound Beach Ave. and Bridge No. 03955R over Tomac Avenue in the Town of Greenwich. The rehabilitation of these bridges will encompass the complete removal of the superstructures and the bridge seats will be rebuilt to accept new bearings in order to support the new structures.

Station improvements will consist of extending the existing 6 car platform on both sides to a 10 car length with additional staircases added to the extensions. The station will received all new electrical power and the lighting will also be upgraded. The southern parking lot is to be reworked to increase the amount of parking space at the completion of this 4 ½ year project.

Project Start Date: 06 / 2014 Anticipated Completion Date: 08 / 2019
(month/ yr) (month/ yr)

Normal working hours: 7:00 am to 3:00 pm

2. MINING: Is the activity on the site in question part of mining operations (i.e. sand and gravel)? Yes No
If yes, mining is not authorized by this general permit. You must submit the Registration Form for the General Permit for the Discharge of Stormwater Associated with Industrial Activity.

3. COMBINED OR SANITARY SEWER: Does all of the stormwater from the proposed activity discharge to a combined or sanitary sewer (i.e. a sewage treatment plant)? Yes No
If yes, this activity is not regulated by this permit. Contact the Water Permitting & Enforcement Division at 860-424-3018.

4. INDIAN LANDS: Is or will the facility be located on federally recognized Indian lands Yes No

5. COASTAL BOUNDARY: Is the activity which is the subject of this registration located within the coastal boundary as delineated on DEEP approved coastal boundary maps Yes No

The coastal boundaries fall within the following towns: Branford, Bridgeport, Chester, Clinton, Darien, Deep River, East Haven, East Lyme, Essex, Fairfield, Greenwich, Groton (City and Town), Old Lyme, Guilford, Hamden, Ledyard, Lyme, Madison, Milford, Montville, New London, New Haven, North Haven, Norwalk, Norwich, Old Saybrook, Orange, Preston, Shelton, Stamford, Stonington (Borough and Town), Stratford, Waterford, West Haven, Westbrook and Westport.

If “yes”, and this registration is for a new authorization or a modification of an existing authorization where the physical footprint of the subject activity is modified, you must provide documentation the DEEP Office of Long Island Sound Programs or the local governing authority has issued a coastal site plan approval or determined the project is exempt from coastal site plan review. Provide this documentation with your registration as Attachment B. See guidance in Appendix D of the general permit. Information on the coastal boundary is available at the local town hall or at www.cteco.uconn.edu/map_catalog.asp. Additional DEEP Maps and Publications are available by contacting DEEP staff at 860-424-3555.

Part IV: Site Information (continued)

6. ENDANGERED OR THREATENED SPECIES:

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

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

- a. Provide the date the NDDDB maps were reviewed: December 2013 (Print a copy of the NDDDB map you viewed since it must be submitted with this registration as part of Attachment C.)
- b. For a registrant using a limited one-year determination or safe harbor determination to register for this General Permit, provide the Department's Wildlife Division NDDDB identification number for any such determination: _____ (The number is on the determination issued by the Department's Wildlife Division).
- c. verify that I have completed Attachment C to this Registration Form. Yes

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

7. WILD AND SCENIC RIVERS: Is the proposed project within the watershed of a designated Wild and Scenic River? (See Appendix H for guidance) Yes No

8. AQUIFER PROTECTION AREAS: Is the site located within a mapped aquifer protection area www.ct.gov/deep/aquiferprotection as defined in section 22a-354h of the CT General Statutes? (For additional guidance, please refer to Appendix C of the General Permit) Yes No

9. CT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL: Is the activity in accordance with CT Guidelines for Erosion and Sediment Control and local erosion & sediment control ordinances, where applicable? Yes No

10. HISTORIC AND/OR ARCHAEOLOGICAL RESOURCES:
Has the site of the proposed activity been reviewed (using the process outlined in Appendix G of this permit) for historic and/or archaeological resources? Yes No

- a. The review indicates the proposed site does not have the potential for historic/ archaeological resources, OR Yes No

- b. The review indicated historic and/ or archaeological resource potential exists and the proposed activity is being or has been reviewed by the Offices of Culture and Tourism, OR Yes No

- c. The proposed activity has been reviewed and authorized under an Army Corps of Engineers Section 404 wetland permit. Yes No

11. CONSERVATION OR PRESERVATION RESTRICTION:
Is the property subject to a conservation or preservation restriction? Yes No

If Yes, proof of written notice of this registration to the holder of such restriction or a letter from the holder of such restriction verifying that this registration is in compliance with the terms of the restriction, must be submitted as Attachment D.

Part V: Stormwater Discharge Information

Table 1						
Outfall #	a) Type	b) Pipe Material	c) Pipe Size	d) Note: To find lat/long, go to: CT ECO . A decimal format is required here. Directions on how to use CT ECO to find lat./long. and conversions can be found in Part V, Section d of the DEEP-WPED-INST-015 .		e) What method was used to obtain your latitude/longitude information?
				Longitude	Latitude	
1	pipe	concrete	18"	-7 3.5 6 8 2 1	4 1.0 3 2 5 4	Select One:
2	pipe	concrete	12"	-7 3.5 6 7 9 4	4 1.0 3 2 0 4	Select One:
	Select One:	Select One:	Select One:	-		Select One:
	Select One:	Select One:	Select One:	-		Select One:
	Select One:	Select One:	Select One:	-		Select One:

Table 2						
Outfall #	a) For temporary and permanent outfalls, provide a start date. For temporary discharges, also provide a date the discharge will cease.	b) For the drainage area associated with each outfall: Effective Impervious Area Before Construction	c) For the drainage area associated with each outfall: Effective Impervious Area After Construction	d) To what system or receiving water does your stormwater runoff discharge? either "storm sewer" or "wetlands/waterbody" (If you select "storm sewer" proceed to Part VI of the form. If you select "wetlands/waterbody" proceed to next question)	e) For each outfall, does it discharge to any of the following towns: <i>Branford, Kent, Manchester, Meriden, North Branford, Norwalk, or Wilton?</i> (If no, proceed to Part VI of the form. If yes, proceed to next question.)	f) For each outfall, does it discharge to a "freshwater" or "salt water"? (If you select "freshwater" proceed to Table 3. If you selected "salt water", proceed to Part VI of the form.)
1	06/16-mm/dd-mm/dd	92,391 sq feet	114,083 sq feet	storm sewer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Select one:
2	06/16-mm/dd-mm/dd	13,504 sq feet	13,242 sq feet	storm sewer	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Select one:
	-mm/dd-mm/dd	sq feet	sq feet	Select one:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Select one:
	-mm/dd-mm/dd	sq feet	sq feet	Select one:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Select one:
	-mm/dd-mm/dd	sq feet	sq feet	Select one:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Select one:
		105,895 total sq feet	127,325 total sq feet			

Part V: Stormwater Discharge Information (continued)

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

Part V: Stormwater Discharge Information (continued)

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

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

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

OR

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

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

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

AND

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

AND

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

OR

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

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

- I am registering a Locally Exempt project and submitting the required electronic Plan (in Adobe™ PDF or similar publically available format) pursuant to Section 3(c)(2)(E) of this permit.
- Plan is attached to this registration form
- Plan is available at the following Internet Address (URL):
- I am registering a Locally Approvable project and have chosen not to submit the Plan with this registration pursuant to Section 3(c)(1) of this permit.
- I am registering a Locally Approvable project and have chosen to make my Plan electronically available pursuant to Section 4(c)(2)(N) of this permit.
- Plan is attached to this registration form
- Plan is available at the following Internet Address (URL):
- I am registering a Locally Exempt project and do not have the capability to submit the Plan electronically. Therefore, I am submitting a paper copy with this registration as Attachment E.

Part VII: Registrant Certification

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

For New Registrants:

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

submitted to the commissioner by Mark Rolfe, P.E. for

[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

an activity located at Old Greenwich Railroad Station Parking Lot and Rehabilitation of Bridge No. 03948R over So and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b)(8)(B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Connecticut General Statutes. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

For Re-registrants:

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

by _____ for an activity located at

[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

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

Signature of Registrant	Date
Mark Rolfe, P.E.	District Engineer
Name of Registrant (print or type)	Title (if applicable)
Signature of Preparer (if different than above)	Date
Jay Young	Transportation Engineer III
Name of Preparer (print or type)	Title (if applicable)

**Part VIII: Professional Engineer (or Landscape Architect, where appropriate) Design Certification
(for publically approvable and exempt projects)**

The following certification must be signed by a Professional Engineer or Landscape Architect where appropriate.

<p>"I hereby certify that I am a <input type="text"/> choose qualification licensed in the State of Connecticut. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by <input type="text"/> [INSERT NAME OF REGISTRANT BELOW]</p> <p><input type="text"/> for an activity located at <input type="text"/> [INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]</p> <p><input type="text"/> Old Greenwich Railroad Station Parking Lot and Rehabilitation of Bridge No. 03948R over Sound Beach A.</p> <p>I certify that I have thoroughly and completely reviewed the Stormwater Pollution Control Plan for the project or activity covered by this certification. I further certify, based on such review and on the standard of care for such projects, that the Stormwater Pollution Control Plan has been prepared in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, the Stormwater Quality Manual, as amended, and the conditions of the general permit, and that the controls required for such Plan are appropriate for the site. I further certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate, and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement in this certification may subject me to sanction by the Department and/or be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."</p>	
Signature of Design Professional	Date
<input type="text"/>	<input type="text"/>
Name of Professional (print or type)	Title
<input type="text"/>	<input type="text"/>
Mailing Address	City/Town
<input type="text"/>	<input type="text"/>
State	Business Phone
<input type="text"/>	<input type="text"/>
	License #
Affix P.E./L.A Stamp Here	<input type="text"/>

Part IX: Reviewing Qualified Professional Certification

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

Review certification by Conservation District:

1.) District: list of districts

Date of Affirmative Determination:

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

[INSERT NAME OF REGISTRANT BELOW]

by

[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

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

Signature of District Professional and Date

Name of District Professional and License Number (if applicable)

Or

Review certification by Qualified Professional

Company: _____

Name: _____

License # : _____

Level of independency of professional:

Required for all projects disturbing over 1 acre:

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

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

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

Part IX: Reviewing Qualified Professional Certification (continued)

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

[INSERT NAME OF REGISTRANT BELOW]

submitted to the commissioner by

[INSERT ADDRESS OF PROJECT OR ACTIVITY BELOW]

for an activity located at

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

Signature of Reviewing Qualified Professional

Date: _____

Name of Reviewing Qualified Professional

License No.: _____

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

Part X: Supporting Documents

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

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

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

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

ATTACHMENT C: THREATENED AND ENDANGERED SPECIES

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

- Self Assessment using the NDDDB maps – Select this only if:
- a. The site of the construction activity is not entirely, partially or within a ¼ mile of a shaded area depicted on the Department’s Natural Diversity Database maps and this determination was made not more than six months before the date of submitting this registration;
- AND
- b. The entity registering for this General Permit has no reasonably available verifiable scientific, or other credible information that the construction activity could reasonably be expected to have an adverse impact upon a federal or state species listed as threatened or endangered.

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

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

- Limited One-Year Determination – Select this only if:
- a. The entity registering for this General Permit has obtained a limited one-year determination from the Department’s Wildlife Division regarding threatened and endangered species: i) within a year of the date of submitting this registration; or ii) more than 1 year before submitting this registration, but such determination has been extended by the Department within one year of the date of submitting this registration;
- AND
- b. The Registrant has provided to the Department’s Wildlife Division any reasonably available verifiable scientific, or other credible information that the construction activity could reasonably be expected to have an adverse impact upon a federal or state species listed as threatened or endangered.

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

or

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

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

ATTACHMENT C: THREATENED AND ENDANGERED SPECIES (continued)

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

Provide the date the Mitigation Plan was approved: _____

Governmental Entity Approving the Plan: _____

As of the date this Registration is submitted,

Has the Mitigation Plan been fully implemented? Yes No

Date commenced: _____ Date completed: _____

Is the Mitigation Plan partially implemented? Yes No

If yes, what actions have been taken? _____

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

Is the Mitigation Plan yet to be implemented? Yes No

If yes, specify the timeframe for implementation: _____ to _____

And summarize actions to be implemented: _____

- Safe Harbor Determination - Select this only if:

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

AND

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

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

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

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

ATTACHMENT C: THREATENED AND ENDANGERED SPECIES (continued)

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

Provide the date the Mitigation Plan was approved: _____

Governmental Entity Approving the Plan: _____

As of the date this Registration is submitted,

Has the Mitigation Plan been fully implemented? Yes No

Date commenced: _____ Date completed: _____

Is the Mitigation Plan partially implemented? Yes No

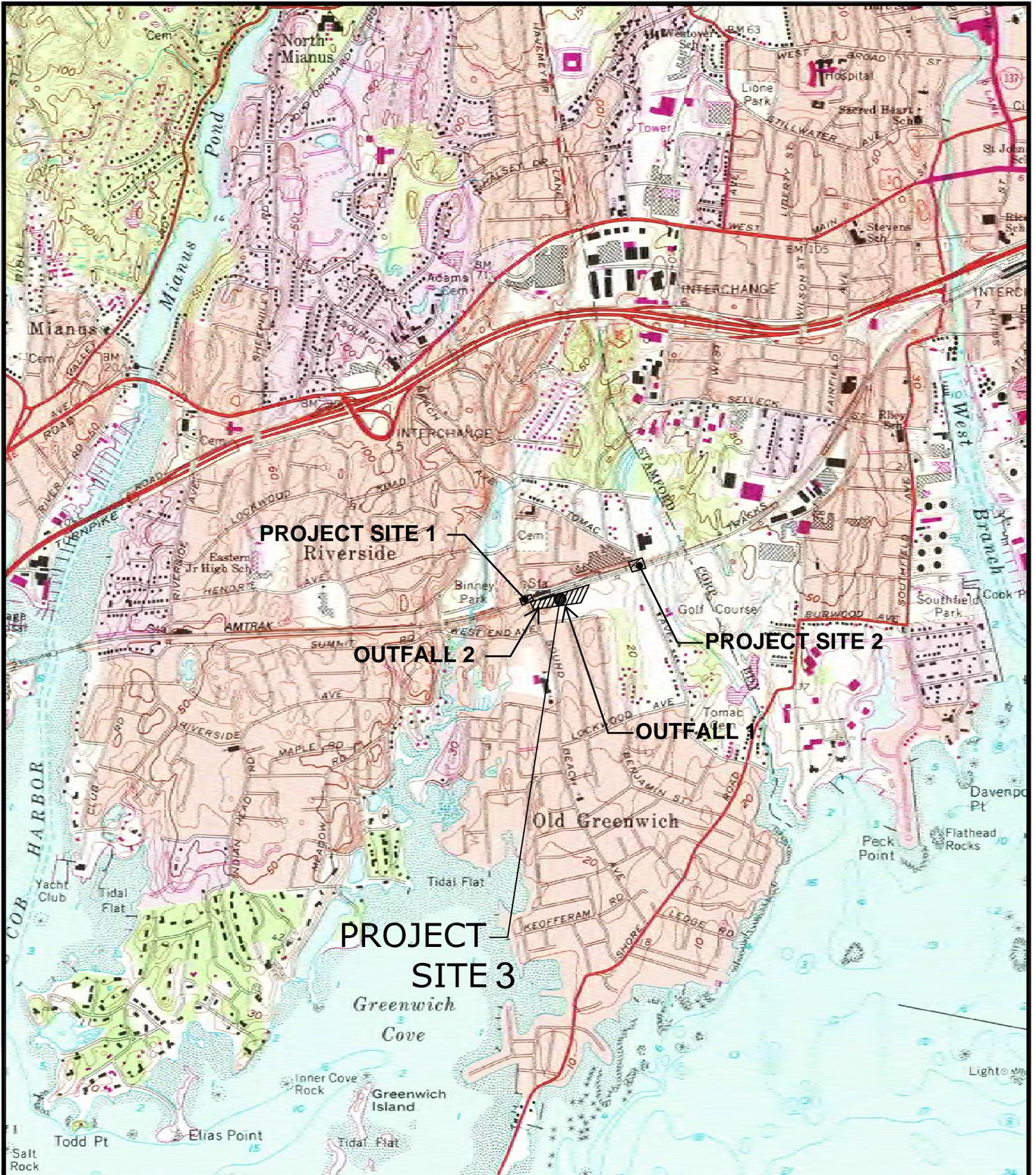
If yes, what actions have been taken? _____

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

Is the Mitigation Plan yet to be implemented? Yes No

If yes, specify the timeframe for implementation: _____ to _____

And summarize actions to be implemented: _____



Old Greenwich Railroad Station Parking Lot and Rehabilitation of Bridge No. 03948R over Sound
 Beach Ave. and Bridge No. 03955R over Tomac Ave.

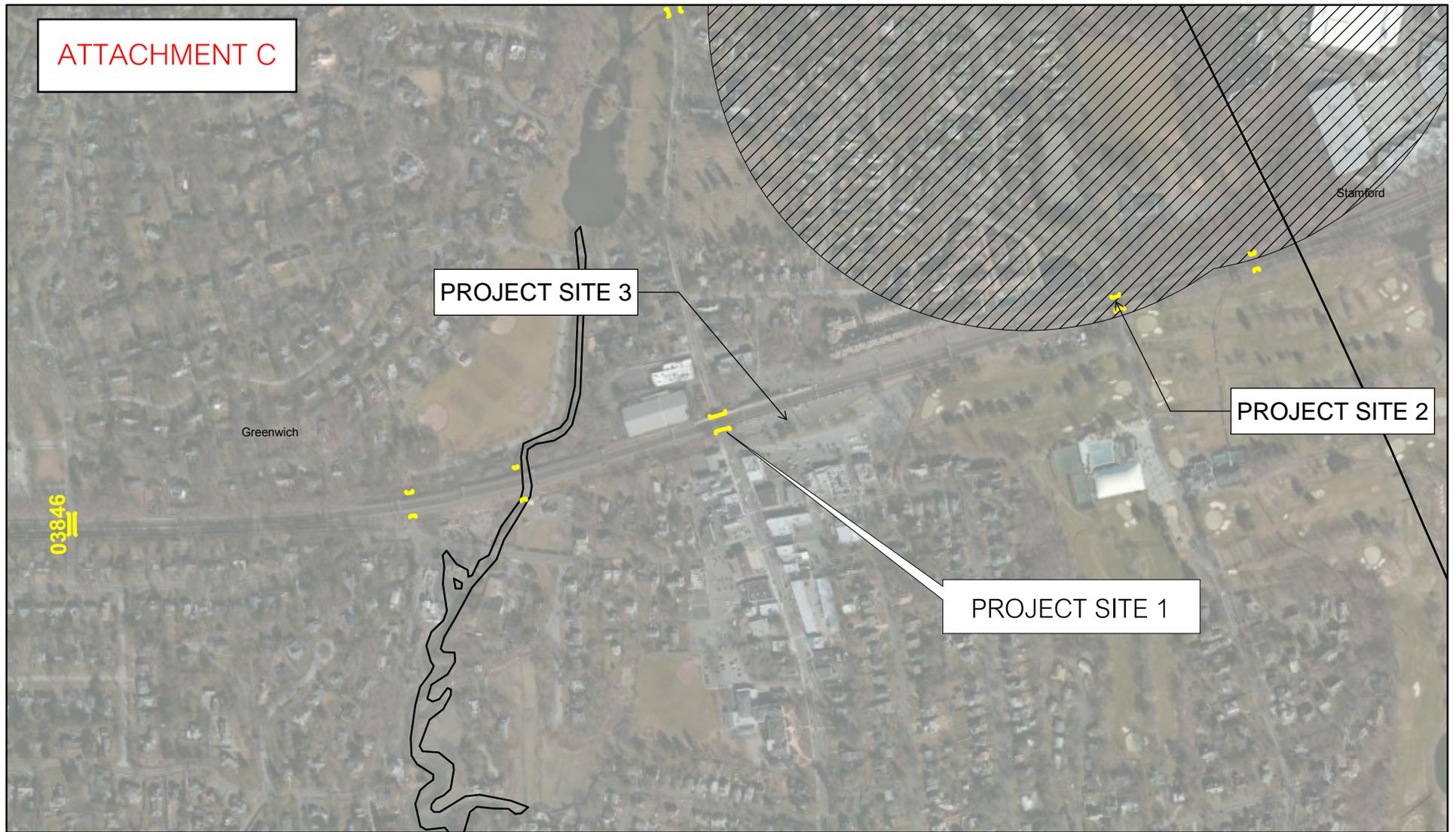
Greenwich, Connecticut

NORTH 
 Scale = 1:24,000

USGS MAP
 Stamford Quadrangle

ATTACHMENT A

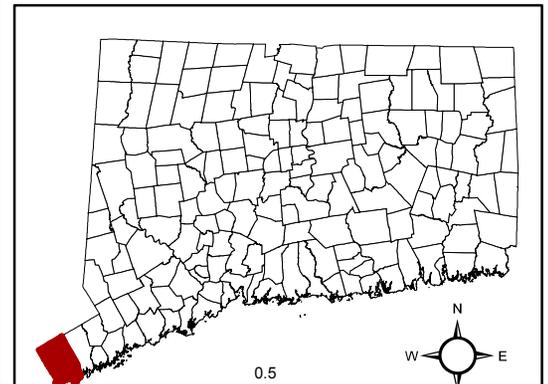
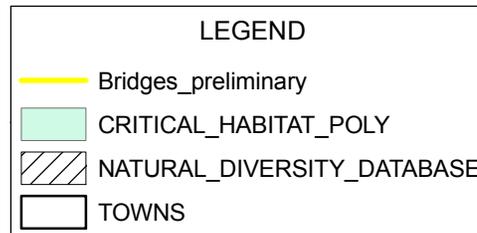
ATTACHMENT C



Map data maintained by the Connecticut Departments of Environmental Protection and Public Health. Map printed by the Connecticut Department of Transportation. NDDB layer revised Dec. 2013

Environmental Resources: Scale 1:7,195

Town of Greenwich



0.5

0

0.5

STORMWATER POLLUTION CONTROL PLAN

**Old Greenwich Railroad Station Parking Lot and Rehabilitation of Bridge No. 03948R
over Sound Beach Ave. and Bridge No. 03955R over Tomac Ave.
Greenwich, CT**

State Project No.: 301-092

Connecticut Department of Transportation

February 2014

This Stormwater Pollution Control Plan (SPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges (GPSD) from Construction Activities. Also to be considered part of the SPCP are the proposed construction plans, special provisions, and the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 816) including supplements thereto and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

Table of Contents
 Stormwater Pollution Control Plan
 Connecticut Department of Transportation

1 Site Description5

 1.1 Site Description.....6

 1.2 Total Areas.....6

 1.3 Estimated Runoff Coefficient6

 1.4 Receiving Waters8

 1.5 Extent of Wetlands.....8

2 Construction Sequencing 9

3 Runoff Reduction and Low Impact Development..... 9

4 Control Measures 10

 4.1 Temporary Stabilization Practices.....11

 4.2 Permanent Stabilization Practices 11

 4.3 Structural Measures 11

 4.4 General Note12

5 Dewatering Wastewaters 12

 5.1 Dewatering Guidelines 12

6 Post-Construction Stormwater Management 13

 6.1 Post-Construction Guidelines 13

 6.2 Post-Construction Performance Standards..... 13

7 Other Controls 13

 7.1 Waste Disposal 13

 7.2 Washout Areas.....13

7.3 Anti-tracking Pads and Dust Control	14
7.4 Post-Construction	14
8 Inspections	14
8.1 Inspection Guidelines	14
9 Keeping Plans Current	15
10 Monitoring Requirements	16
11 Contractors	16
Contractor/Subcontractor Agreement.....	17

List of Appendices

Appendix A - Figures

FEMA FIRM Map -	Figure 1
Pre-Construction Watershed Boundary/Drainage Area -	Figure 2
Post-Construction Watershed Boundary/Drainage Area -	Figure 3

Appendix B – Soil Report

Appendix C – Proposed Storm Drainage Analysis

Appendix D – Proposed Detention System HydroCAD Calculations

Appendix E – Plan Sheets

Site Plan/Disturbed Area -	C-04
Grading Plan -	C-05
Drainage and Utility Plan -	C-06
Sedimentation and Erosion Control Plan -	C-10
Details -	C-13
Phase 1 Plans (Site Improvements)	RWL-4
Phase 2 Plans (Site Improvements)	RWL-5
Phase 3 Plans (Site Improvements)	RWL-6
Phase 4 Plans (Site Improvements)	RWL-7
Landscape Design Plan -	LDS-02

Appendix F – SHPO Determination Letter

Appendix G – Miscellaneous Forms

1 Site Description

1.1 Site Description

This project will be made of three different sites. Site 1 consists of rehabilitating Bridge No. 03948R over Sound Beach Ave and Site 2 consists of rehabilitation of Bridge No. 03955R over Tomac Avenue in the Town of Greenwich. The rehabilitation of these bridges will encompass the complete removal of the superstructures and the bridge seats will be rebuilt to accept new bearings in order to support the new structures.

Excavation will take place at Site 1 and 2 behind the abutment backwalls. The excavation will occur with an area of environmental concern and excavated materials will be loaded and transported to off-site disposal/recycling facility.

The drainage for sites 1 and 2 overland flows off these sites into the existing Town's storm drainage system.

Site 3 consists of the expansion of the existing CTDOT commuter parking lot on the south side of the station from 99 spaces to approximately 220 spaces and reconstruction of the Town of Greenwich owned parking lot to the south. The Project area is bounded to the west by Sound Beach Avenue, to the south by Arcadia Road; to the east by Innis Arden Golf Club and to the north by the Metro North Railroad tracks. (see USGS Map in Attachment A, and the FEMA FIRM Figure 1 of Appendix A).

The proposed parking lot expansion creates an increase in impervious area and stormwater runoff. A stormwater underground detention and infiltration system has been designed to reduce the peak stormwater runoff rate to the existing peak runoff rate. Based on the review of existing conditions and the proposed development drainage analyses for the project area, the Town owned drainage systems in the southern parking lot and Arcadia Road will not be adversely affected by the proposed Project.

Site 3 project area primarily consists of a bituminous concrete parking lot and associated driveways. The slope from the CTDOT lot down to the Town lot is lawn in fair condition with sparse trees.

In general the site is sloped from the north to the south. The CTDOT parking lot is gently sloping, interrupted by a steep (2H:1V) slope down to the Town parking lot.

The proposed drainage from the CTDOT upper parking lot discharges to the south through a 15" Reinforced Concrete Pipe (RCP) culvert southerly to the Town parking lot. This culvert combines with other culverts serving the lower Town lot at a catch basin on the south side of the Town lot designated as "Outfall 1", which discharges into the Town's storm drainage system.

An existing catch basin designated as “Outfall 2” is located in the driveway to the Town parking lot and collects runoff from western portions of the CTDOT and Town lots. This catch basin is connected to a separate storm sewer system per Town of Greenwich GIS information.

1.2 Total Areas

1.2.1 **Total Area of Site 1** - The total ‘construction limits’ area for the rehabilitation of Bridge 03948R is 0.33 acres.

Total Area of Site 2 - The total ‘construction limits’ area for the rehabilitation of Bridge 03955R is 0.13 acres.

Total Area of Site 3 - The total ‘construction limits’ area for this parking lot improvement is 3.3 acres. (see C-04 of appendix E).

1.2.2 **Total Site 1 Disturbed Areas** – The total maximum disturbed area for this site is 0.03 acres.

Total Site 2 Disturbed Areas – The total maximum disturbed area for this project is 0.02 acres

Total Site 3 Disturbed Areas – The total maximum disturbed area for this project is 1.44 acres (see C-04 of appendix E).

1.3 Estimated Runoff Coefficient

Site 1

The runoff coefficient assumed for pavement is 0.9 and for pervious areas, a coefficient of 0.3 was assumed.

$$\text{Pre-construction Runoff Coefficient} = \frac{(0.03 \text{ ac.} \times 0.3) + (0.30 \text{ ac.} \times 0.9)}{0.03 \text{ ac.} + 0.30 \text{ ac.}} = 0.84$$

$$\text{Post-construction Runoff Coefficient} = \frac{(0.03 \text{ ac.} \times 0.3) + (0.30 \text{ ac.} \times 0.9)}{0.03 \text{ ac.} + 0.30 \text{ ac.}} = 0.84$$

Site 2

The runoff coefficient assumed for pavement is 0.9 and for pervious areas, a coefficient of 0.3 was assumed.

$$\text{Pre-construction Runoff Coefficient} = \frac{(0.02 \text{ ac.} \times 0.3) + (0.11 \text{ ac.} \times 0.9)}{0.02 \text{ ac.} + 0.11 \text{ ac.}} = 0.81$$

$$\text{Post-construction Runoff Coefficient} = \frac{(0.02 \text{ ac.} \times 0.3) + (0.11 \text{ ac.} \times 0.9)}{0.02 \text{ ac.} + 0.11 \text{ ac.}} = 0.8$$

Site 3

Pre-construction

Location	Cover Type	Area, ac (A)	Coefficient (C)	Total (A x C)
ECB-01	Pavement	0.189	0.9	0.1701
ECB-02	Pavement	0.286	0.9	0.2574
ECB-03	Pavement	0.404	0.9	0.3636
	Landscaped and Lawns	0.026	0.3	0.0078
ECB-04	Pavement	0.370	0.9	0.3330
	Landscaped and Lawns	0.053	0.3	0.0159
ECB-05	Pavement	0.686	0.9	0.6174
	Landscaped and Lawns	0.072	0.3	0.0216
ESW-01	Pavement	0.310	0.9	0.2790
	Landscaped and Lawns	0.470	0.3	0.1410
ESW-02	Pavement	0.246	0.9	0.2214
	Landscaped and Lawns	0.179	0.3	0.0537

Total (A) = 3.291

Total (A x C) = 2.4819

$$\text{Pre-construction Runoff Coefficient} = \frac{\sum(A \times C)}{\sum A} = 0.7541$$

Post-construction

Location	Cover Type	Area, ac (A)	Coefficient (C)	Total (A x C)
CB-01	Pavement	0.166	0.9	0.1494
CB-02	Pavement	0.277	0.9	0.2493
CB-03	Pavement	0.215	0.9	0.1935
CB-04	Pavement	0.231	0.9	0.2079
CB-05	Pavement	0.215	0.9	0.1935
CB-06	Pavement	0.206	0.9	0.1854
	Landscaped and Lawns	0.028	0.3	0.0084
CB-07	Pavement	0.254	0.9	0.2286
	Landscaped and Lawns	0.097	0.3	0.0291
CB-08	Pavement	0.122	0.9	0.1098
	Landscaped and Lawns	0.006	0.3	0.0018
CB-09	Pavement	0.186	0.9	0.1674
CB-10	Pavement	0.561	0.9	0.5049
	Landscaped and Lawns	0.047	0.3	0.0141
SW-01	Pavement	0.186	0.9	0.1674
	Landscaped and Lawns	0.175	0.3	0.0525
ECB-04	Pavement	0.304	0.9	0.2736
	Landscaped and lawns	0.060	0.3	0.0180

Total (A) = 3.336

Total (A x C) = 2.7546

$$\text{Post-construction Runoff Coefficient} = \frac{\sum(A \times C)}{\sum A} = 0.8257$$

The estimated runoff coefficients, with the corresponding contributing areas, are shown in Appendix A, Figures 2 and 3.

1.4 Receiving Waters

The drainage from the sites 1, 2 and 3 drain into the Town’s drainage system and ultimately flows into the Greenwich Cove.

1.5 Extent of Wetlands

There are no wetlands located within the construction limits of this project.

2 Construction Sequencing

The contractor will be given approximately 4 years for the construction phase of the project. All erosion and sedimentation control measures will be installed prior to any soil disturbance and maintained during construction in order to minimize adverse impacts from construction activities

The suggested sequence of construction is as follows:

1. Conduct a preconstruction meeting with CDOT, design engineer, site engineer, contractor to establish the limits of construction, construction procedures and material stockpile areas.
2. Field stake the limits of construction.
3. Install all applicable soil and erosion control measures around the perimeter of the site to the extent possible. This will include siltation fence around the project as shown on the plans.
4. Install construction entrance in the areas shown on the plans. All construction access shall be into the site through the construction entrance.
5. Establish temporary staging area.
6. Construct driveways and site retaining walls.
7. Install proposed utilities and relocate utilities as shown on the plans.
8. Install drainage network to the maximum extent practicable. Grade the area around the storm drainage system as necessary. Provide turf establishment if final grade is reached.
9. Install haybale protection around all proposed inlets as shown on the plans.
10. Begin paving of driveways, parking areas, and sidewalks.
11. Fine grade site.
12. Complete landscaping,
13. Complete site punch list items.
14. Remove all temporary sedimentation and erosions control structures and clean all new and existing catch basins and piping on the site. Remove any sediment and dispose of off-site.

3 Runoff Reduction and Low Impact Development

The proposed development will utilize a series of low impact development (LID) measures to improve water quality and reduce the quantity of runoff from the site. These LID measures will

be a part of an overall treatment train of stormwater BMP's designed to mitigate development impacts on the discharge from the site.

Stormwater runoff patterns for the proposed development will follow approximately the same patterns as at present. The proposed parking lot expansion increases the impervious area in the Project area and increases runoff to the Town drainage system. The use of pervious pavement was explored as a possible LID measure but was determined to be an unsuitable measure. Reconstruction of the parking lot would require new fill behind the new retaining wall and would lead to uneven settlement of the parking lot and retaining. It was determined that the use of lightweight fill would limit the long term settlement of the retaining wall. This would require stormwater to be drained away from the proposed retaining wall.

In order to reduce the peak runoff, a 36-inch HDPE underground detention and infiltration system will be installed in the upper parking lot. As illustrated in Table 3 attached hereto, the peak flow to the Town drainage system at Outfall 1 will be reduced as a result of the proposed development drainage system.

Location		Exceedence Interval, (Years)		
		2	10	25
Analysis Outfall 1 - CB in Town Lot (CFS)	Existing	6.26	8.97	10.4
	Proposed	5.3	7.52	8.68
Reduction in Flow		15%	16%	17%

In order to maintain the underground detention and infiltration system in proper operational condition the Town of Greenwich will inspect and repair the system annually or as needed. Sediment will be removed when it interferes with the detention capacity of the basin.

4 Control Measures

CT DOT will have construction inspection personnel assigned to the project in order to oversee the Contractor's operations to ensure compliance with the provisions of the Standard Specifications and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

Further CT DOT oversight is provided by the District 3 Environmental Coordinator and the Office of Environmental Planning.

The following stabilization strategies will be followed for the proposed construction activities:

- If construction activities are complete or have been temporarily halted for more than seven (7) days, stabilization activities will be implemented within three (3) days.
- When final grades are completed in any part of the site, stabilization activities will be implemented within 3 days.
- All disturbed areas exposed for more the 30 days will be protected with a temporary vegetative cover. These areas will be seeded with perennial ryegrass at the rate of 40 lbs. per acre. Soil amendments and mulch will be applied as required to establish a uniform stand of vegetation over all disturbed areas.
- Areas that will be disturbed past the planting season will be covered with a long-term, non-vegetative stabilization method that will provide protection through the winter, if applicable

4.1 Temporary Stabilization Practices:

- Haybale ring
- Silt fence
- Anti-tracking pad
- Temporary Seeding

4.2 Permanent Stabilization Practices:

- All new embankments disturbed by construction and unpaved areas that are graded or disturbed by construction will receive topsoil and turf establishment.

4.3 Structural Measures

The following is a summary of the stormwater management practices implemented for this project:

Catch Basins with Deep Sumps – Collect sediment and prevent discharge into the storm drainage system.

Hydrodynamic Separator – Removes grit, contaminated sediment, metals, hydrocarbon and other floatables from surface runoff.

Detention System – Attenuate runoff to reduce peak flows, reduces impacts of thermal pollution, and collects sediment.

4.4 Maintenance

All construction activities and related activities shall conform to the requirements of Section 1.10 "Environmental Compliance" of ConnDOT's Standard Specifications, Form 816. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourses, waterbody, and conduit carrying stormwater. The Contractor shall limit, in so far as possible, the surface area of earthen materials exposed by construction activity and immediately provide temporary and permanent pollution control to prevent soil erosion and contamination on the site. Water pollution control provisions and best management practices per section 1.10.03 of the Standard Specifications shall be administered during construction and are to be inspected and maintained in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

5 Dewatering Wastewaters

5.1 Dewatering Guidelines

When dewatering is necessary, pumps used shall not be allowed to discharge directly into a wetland or watercourse. Prior to any dewatering, the Contractor must submit to the Engineer a written proposal for specific methods and devices to be used, and must obtain the Engineer's written approval of such methods and devices, including, but not limited to, the pumping of water into a temporary sedimentation basin, providing surge protection at the inlet or outlet of pumps, floating the intake of a pump, or any other method for minimizing and retaining the suspended solids. If the Engineer determines that a pumping operation is causing turbidity problems, the Contractor shall halt said operation until a means of controlling the turbidity is submitted by the Contractor in writing to the Engineer, approved in writing by the Engineer and implemented by the Contractor. If required, all activities are to be performed in compliance with ConnDOT Form 816.

6 Post-Construction Stormwater Management

6.1 Post-construction Guidelines

After the project is complete, the Town of Greenwich will perform the following maintenance and restorative measures:

- Litter/debris will be removed from the site regularly.
- Mowing and maintenance of the turf areas and vegetated areas will occur as needed.

- The underground detention and infiltration system will be inspected and repaired annually or as needed.
- Sediment will be removed when it interferes with the detention capacity of the underground detention and infiltration system.

6.2 Post Construction Performance Standard

Redevelopment- the site's detention basin has been redesigned to handle the water quality volume per the 2004 Connecticut Stormwater Quality Manual.

Runoff Reduction Measures employed with the goal of capturing suspended solids and floatables and velocity dissipation:

Catch Basins with Deep Sumps – Collect sediment and prevent discharge into the storm drainage system.

Hydrodynamic Separator – Removes grit, contaminated sediment, metals, hydrocarbon and other floatables from surface runoff.

Detention System – Attenuate runoff to reduce peak flows, reduces impacts of thermal pollution, and collects sediment.

7 Other Controls

7.1 Waste Disposal

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

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

7.2 Washout Areas

- No surface discharge of washout wastewaters from area.
- All wash water to be directed into a container or pit such that no overflows can occur.
- Washout shall be conducted:

1. Outside of any buffers & at least 50 ft. from any stream, wetland or other sensitive resources.
2. In an entirely self-contained washout system.
 - Washout areas to be designated & flagged off.
 - Implement BMPs to remove & dispose of hardened concrete waste to minimize the discharge to waters of the State.
 - Inspect containers or pits at least once a week to ensure structural integrity, adequate holding capacity & check for leaks or overflows – if structurally deficient repair prior to future use.
 - Remove hardened concrete waste when it accumulates to a height of ½ of the container or pit or prior to a rain event.

7.3 Anti-tracking Pads and Dust Control

Temporary anti-tracking pads from the active work site to the existing maintenance facility pavement will be installed and maintained at the locations shown on the plans. Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces. Provide periodic top dressing with additional stone or additional length as conditions demand. Repair any measures used to trap sediment as needed. Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces. Roads adjacent to a construction site shall be left clean at the end of each day. If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then either (1) increase the length of the construction entrance, (2) modify the construction access road surface, or (3) install washing racks and associated settling area or similar devices before the vehicle enters a paved surface. Construction site dust will be controlled by sprinkling the ground surface with water until it is moist on an as-needed basis.

7.4 Post-Construction

All post-construction stormwater structures, including the underground detention and infiltration system, shall be cleaned of construction sediment and any remaining silt fence shall be removed prior to acceptance of the project by the DOT.

8 Inspections

8.1 Inspection Guidelines

All areas disturbed by construction activity that have not been stabilized need to employ E & S control measures and structural control measures. A rain gauge must be maintained on site at all times. 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 are equal or exceed 0.1 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 finally stabilized, such inspection shall be conducted at least once every month for three months. The site shall be inspected at least once and no more than three times

during the first 90 days to confirm compliance with the general permit and proper initial implementation of all control measures. The following items shall be inspected as described below:

Item	Procedure
Silt Fence	Silt fence shall be inspected to ensure that the fence line is intact with no breaks or tears. The fence shall be firmly anchored to the ground. Areas where the fence is excessively sagging or where support posts are broken or uprooted shall be noted. Depth of sediment behind the fence shall be noted.
Catch Basin Protection	Protective measures shall be inspected to insure that sediment is not entering the catch basins. Catch basin sumps shall be monitored for sediment deposition. Hay bales shall be inspected to insure they have not clogged.
Vehicle Entrances/Exits	Locations where vehicles enter or exit the site shall be inspected for evidence of off-site tracking.
General	Construction areas and the perimeter of the site shall be inspected for any evidence of debris that may blow or wash off site or that has blown or washed off site. Construction areas shall be inspected for any spills or unsafe storage of materials that could pollute off site waters.

9 Keeping Plans Current

Revisions to Stormwater Pollution Control Plans:

If the results of the inspections require modifications to the Stormwater Pollution Control Plan, the plans shall be revised within three calendar days after the inspection. Such modifications shall provide for a timely implementation of any changes to the site within 24 hours and implementation of any changes to the plan within three calendar days following the inspection.

Record Keeping: A written report summarizing the scope of the inspection, the name(s) and qualifications of inspection personnel, the date and time of the inspection, major observations relative to the implementation of the Pollution Control Plan, and actions taken shall be completed within 24 hours of the inspection. This report shall be retained as part of the Stormwater Pollution Control Plan for at least three years after the date of the inspection.

10 Monitoring Requirements

The sampling shall be conducted in conformance with the permit at least once every month, when there is a discharge of stormwater from the site while construction is ongoing, until final stabilization of the drainage area associated with each outfall is achieved.

Stormwater Monitoring Reports

Within 30 days following the end of each month, the stormwater sampling results shall be submitted on the SMR and submitted in accordance with Net DMR to the following address:

Bureau of Materials Management and Compliance Assurance
Water Permitting and Enforcement Division (Attn: DMR Processing)
Connecticut Department of Energy and Environmental Protection
79 Elm Street Hartford, CT 0
6106-5127

11 Contractor

1. General

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

2. Certification Statement

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

State Project No. 301-092
Old Greenwich Railroad Station Parking Lot and Rehabilitation of Bridge No. 03948R over Sound Beach
Ave. and Bridge No. 03955R over Tomac Ave.
Greenwich, CT

“I certify under penalty of law that I have read and understand the terms and conditions of the general permit for the discharge of stormwater associated with construction activity. I understand that as Contractor on the project, I am covered by this general permit, and must comply with the terms and conditions of this permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for this project.”

GENERAL CONTRACTOR

Signed: _____

Date: _____

Title: _____

Firm: _____

Telephone: _____

Address: _____

SUBCONTRACTOR

Signed: _____

Date: _____

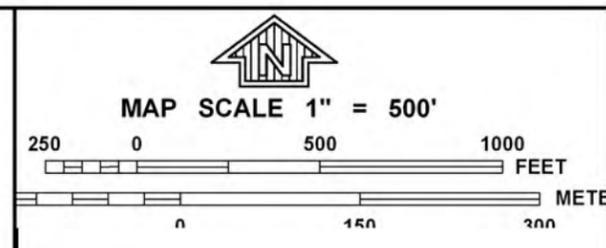
Title: _____

Firm: _____

Telephone: _____

Address: _____

APPENDIX A



PANEL 0512F

FIRM
FLOOD INSURANCE RATE MAP

**FAIRFIELD COUNTY,
CONNECTICUT**
(ALL JURISDICTIONS)

PANEL 512 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
GREENWICH, TOWN OF	090008	0512	F
STAMFORD, CITY OF	090015	0512	F

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



MAP NUMBER
09001C0512F

EFFECTIVE DATE
JUNE 18, 2010

Federal Emergency Management Agency

FIGURE 1

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

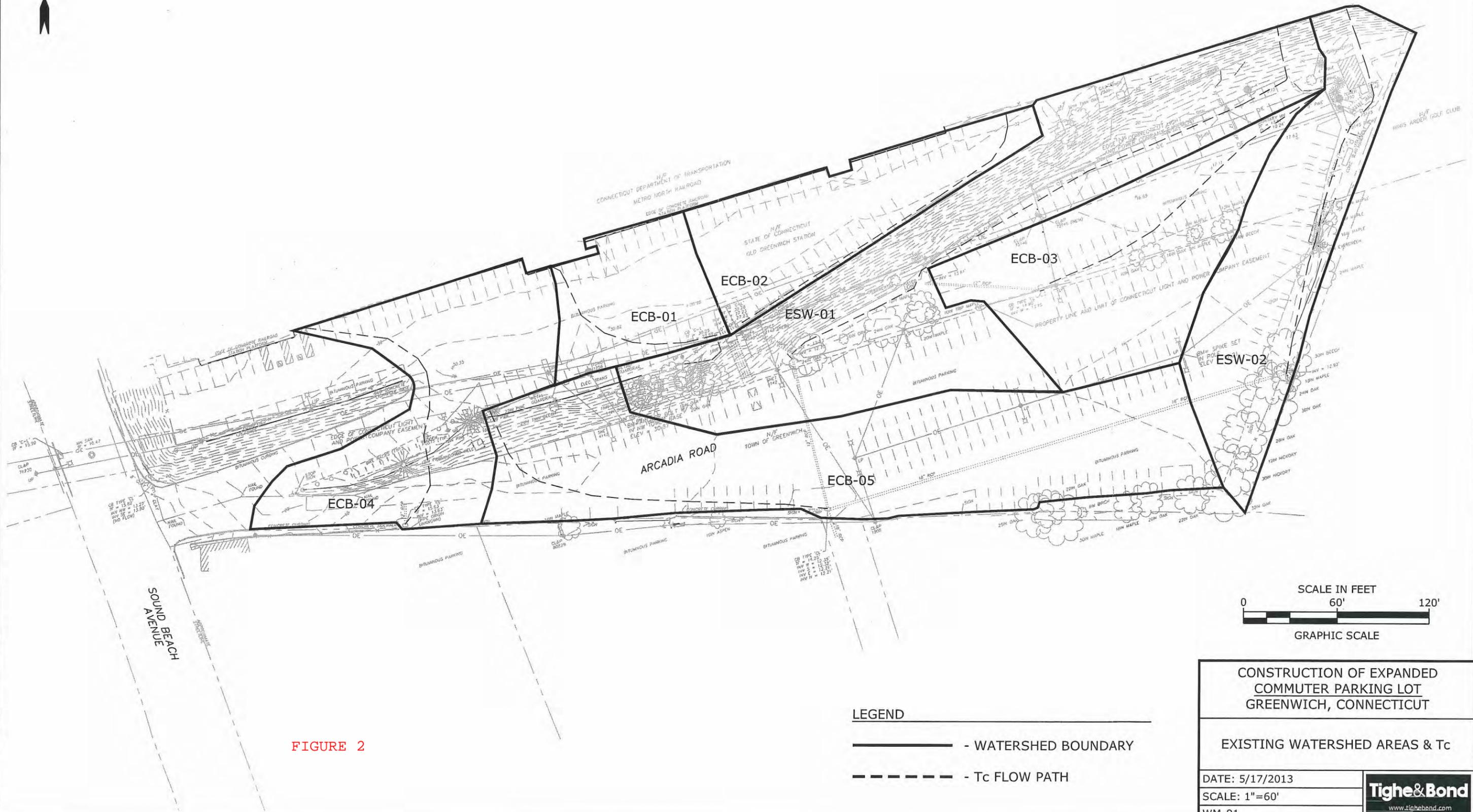
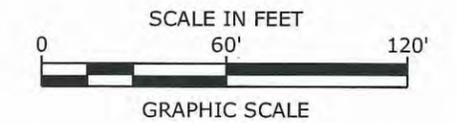


FIGURE 2

LEGEND

- WATERSHED BOUNDARY
- Tc FLOW PATH



CONSTRUCTION OF EXPANDED
COMMUTER PARKING LOT
GREENWICH, CONNECTICUT

EXISTING WATERSHED AREAS & Tc

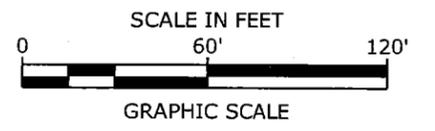
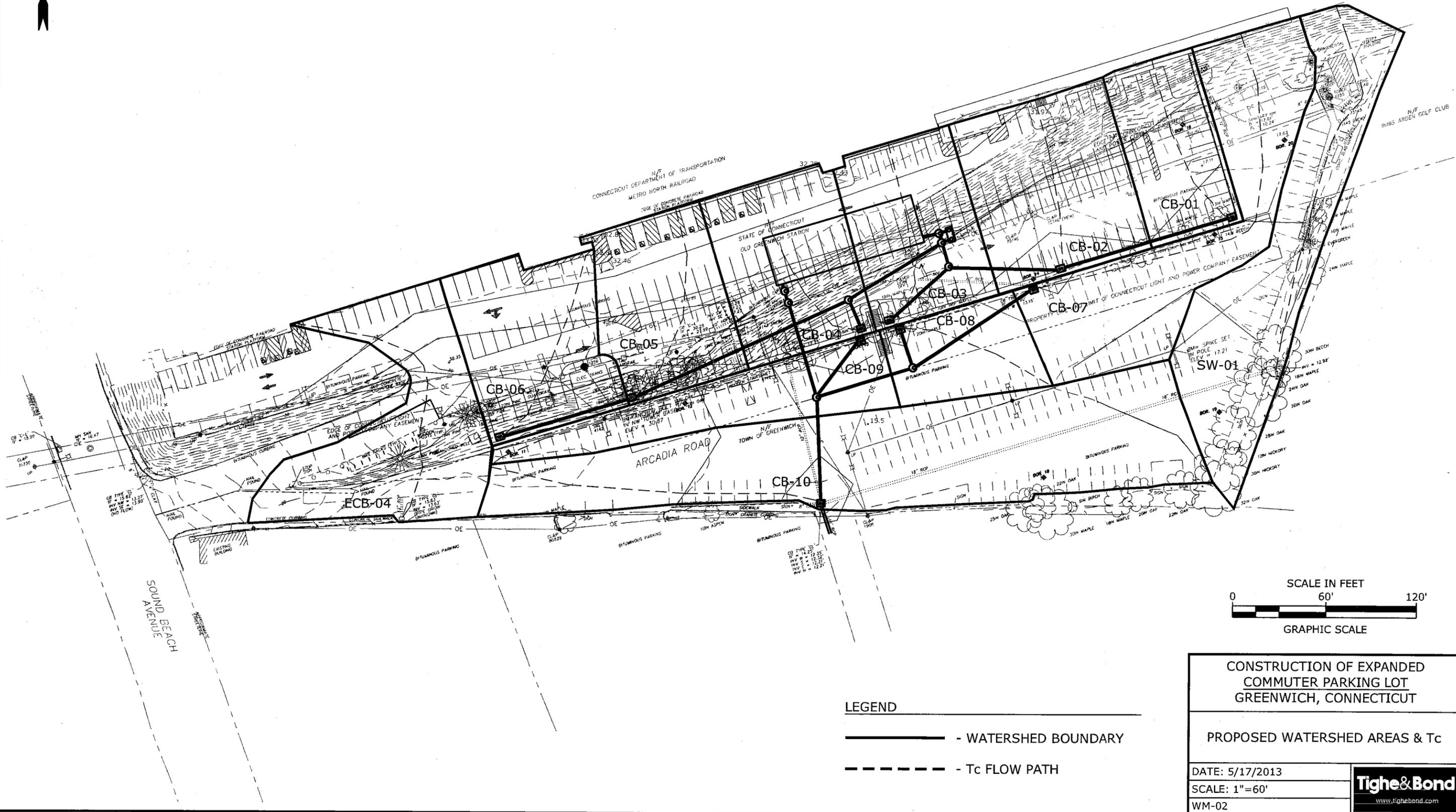
DATE: 5/17/2013

SCALE: 1"=60'

WM-01

Tighe & Bond
www.tighebond.com

FIGURE 3



- LEGEND**
- - WATERSHED BOUNDARY
 - - - - - Tc FLOW PATH

CONSTRUCTION OF EXPANDED COMMUTER PARKING LOT GREENWICH, CONNECTICUT	
PROPOSED WATERSHED AREAS & Tc	
DATE: 5/17/2013	Tighe & Bond www.tighebond.com
SCALE: 1"=60'	
WM-02	

May 16, 2013 5:22pm Plotted By: las
 Tighe & Bond, Inc. J:\A0992\Calculations\Civil\Drainage\WM-02.dwg

APPENDIX B

REPORT ON
GEOTECHNICAL INVESTIGATION
SOUTH PARKING LOT RECONSTRUCTION
SOUND BEACH AVENUE
GREENWICH, CONNECTICUT
(PROJECT NO. 301-092)

REPORT
TO
A. DICESARE ASSOCIATES, P.C.
690 CLINTON AVENUE
BRIDGEPORT, CONNECTICUT 06604

BY
APPLIED EARTH TECHNOLOGIES
MERIDEN, CONNECTICUT 06450

AUGUST 2013



Information obtained from the soil test borings indicated that the fine sand with variable amounts of silt below water table has a potential for liquefaction resulting from the vibrations from a regional earthquakes of magnitude VI or above. Therefore, it is recommended that liquefaction of fine sand layer be assumed for seismic conditions, unless remedial measures are implemented.

A.3 DRAINAGE AND GROUNDWATER

In general, the site is well drained at street level. Surface run-off from site and that from the surrounding area should drain directly or through man-made drainage into the Greenwich Cove. Based upon the topography and area drainage patterns, shallow groundwater from this area should flow south into the Greenwich Cove.

At the time of our investigation, groundwater in the study area was at about five feet below existing ground surface.

B. DETAILED SUBSURFACE CONDITIONS

Soil test borings performed at this site indicated that four to seven inches of asphalt pavement is underlain by an artificial fill. Artificial fill in this area consisted of medium dense to dense, gray brown fine coarse SAND, and fine coarse gravel, little silt, occasional cobbles, ash, cinders and miscellaneous material. Thickness of this fill beneath the pavement in the investigation area varies between $2.5 \pm$ feet and $7.7 \pm$ feet with average about 4.3 feet. Typical unit weight (moist) of fill layer should be on the order of 125 pcf. Shear strength parameters, $\phi=32^\circ$, $C=0$ may be used for design purpose for this fill layer.

Artificial fill in this area is underlain by very dense, gray brown fine coarse SAND and fine coarse gravel, trace silt, occasional cobbles. Thickness of this sand and gravel layer varies between 2.0 and 6.0 feet with average about 4.5 feet. Typical unit weight (moist) of sand-gravel layer should be on the order of 125 pcf. Shear strength parameters, $\phi=35^\circ$, $C=0$ may be used for design purpose for this layer.

Except in the area surrounding SB-11, SB-12 and SB-13, this sand and gravel layer is underlain by gray brown to gray, very loose to loose, fine SAND with variable amount of silt. Typical unit weight (moist) of fine sand layer should be vary between 95 and 100 pcf. Shear strength parameters, $\phi=28.5 \pm 1.5^\circ$, $C=0$ may be used for design purpose for this layer. In the area surrounding SB-11, SB-12 and SB-13, a gray brown, loose fine coarse SAND, little silt layer is sandwiched between sand and gravel, and fine sand and silt strata. Thickness of this fine coarse sand layer varies between 3.0 and 20.0 feet. Typical unit weight (moist) of sand layer should be on the order of 100 pcf. Shear strength parameters, $\phi=30^\circ$, $C=0$ may be used for design purpose for this layer.



VI FOUNDATIONS DESIGN RECOMMENDATIONS

A.1 SETTLEMENT

Proposed South Parking Lot Reconstruction should require 15 plus feet of new fill behind proposed retaining wall. Indices properties of the foundation soils layers were used to estimate consolidation (compression) related geotechnical parameters. Hough's $C' = \{(1+e_0)/C_c\} = 35$ for fine sand silt layer and 92 for sand gravel layer was used for our analyses. Coefficient of Consolidation $C_v = 1.65-2.76 \text{ cm}^2/\text{sec}$ for fine-silt was used for our analyses. This is comparable with the actual experimental values reported in literature for this kind of material.

Long term settlement of the parking lot area influenced by this fill should be on the order of 6.4 inches. But near the retaining wall (at the edge of fill area), settlement would be more than 4.2 inches. Therefore we recommend that the light weight fill (with unit weight less than 65 pcf) should be used as a backfill just behind the retaining wall. Minimum limits of this light weight fill behind retaining wall should extend 10 feet at the bottom and 25 feet at the top from the back face of the wall. The longitudinal limits of this light weight fill are shown in Plate No. 3. This light weight fill should limit the long term settlement of foundation soil near retaining wall to 2.4 inches. Some of the settlement would be over during construction. It is our opinion that Proposed Double Wall type retaining structure should absorb remaining settlement without any structural damage.

Alternate to the light weight fill would be to use 15 feet high surcharge to minimize post construction settlement. Surcharge should be kept on the site for at least one year.

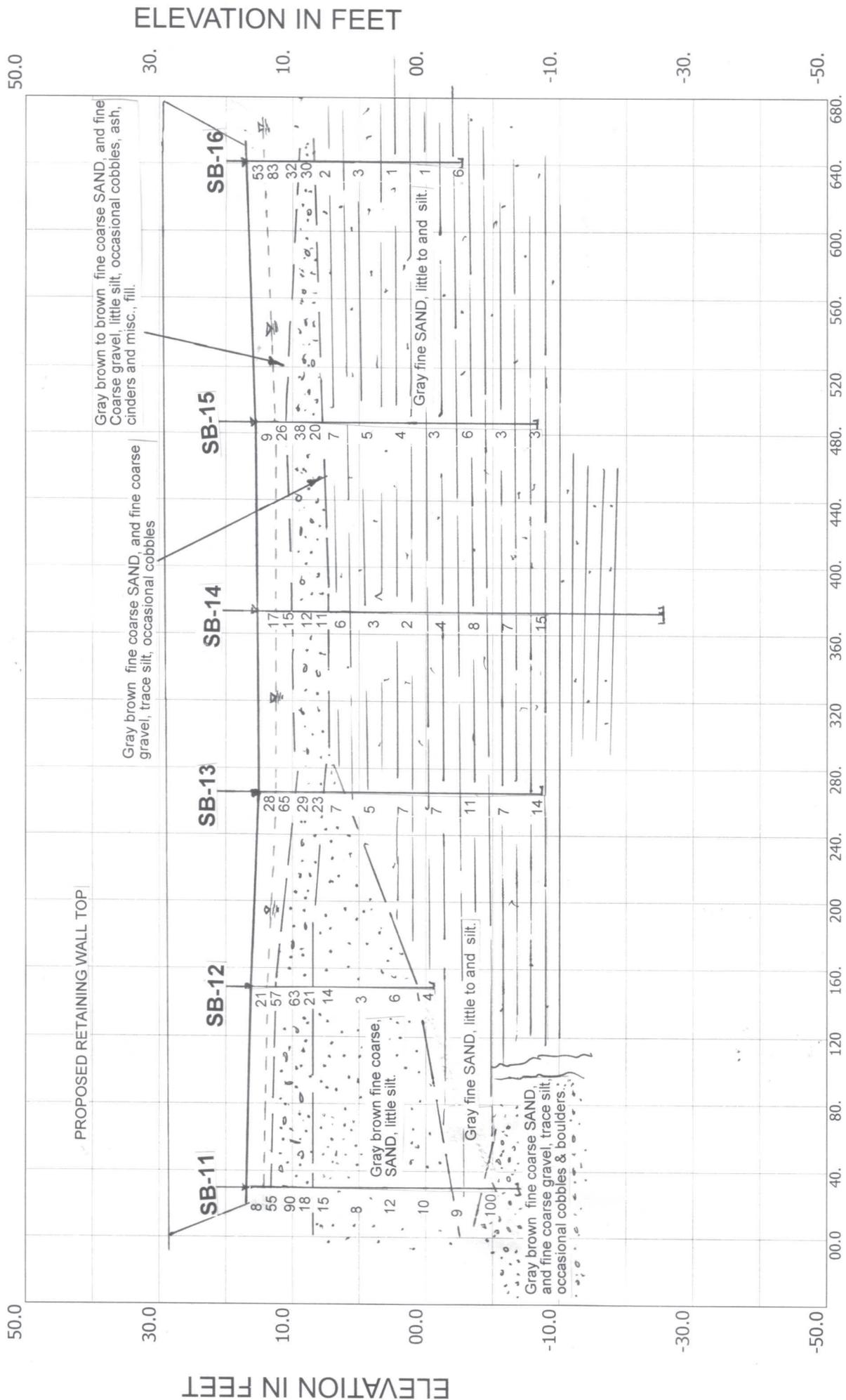
A.2 SHALLOW FOUNDATION

Maximum height of the proposed retaining walls in this area is believe to be about $15 \pm$ feet above existing ground surface. Retaining wall foundation should be located on (natural soil) dense to very dense, gray brown fine coarse sand, and fine coarse gravel, trace silt over loose sand layer. In the areas where existing fill is exposed beneath the proposed retaining wall foundation, it should be replaced with structural fill. Structural fill should be place in accordance CDOT Form 816. The allowable net bearing capacity (service load) of foundation soil below proposed retaining wall should be of the order of 2000 psf. Long term settlement of foundations designed for the above referenced contact pressure, would be on the order of two inches. Proposed retaining wall foundation should be flexible enough to resist this settlement. For LRFD design purpose ultimate bearing capacity of 6000 psf and resistance factor ϕ of 0.35 should be used at this site.

A.3 SLIDING AND OVERTURN

The coefficient of lateral earth pressure for active conditions for area soil should be of the order of 0.27 (0.45 for rest condition). Moist unit weight of the fill retained by wall should be about 125 pcf (65 pcf for light weight). Coefficient of friction at the base of retaining structure should be on the order of 0.6.





DISTANCE IN FEET

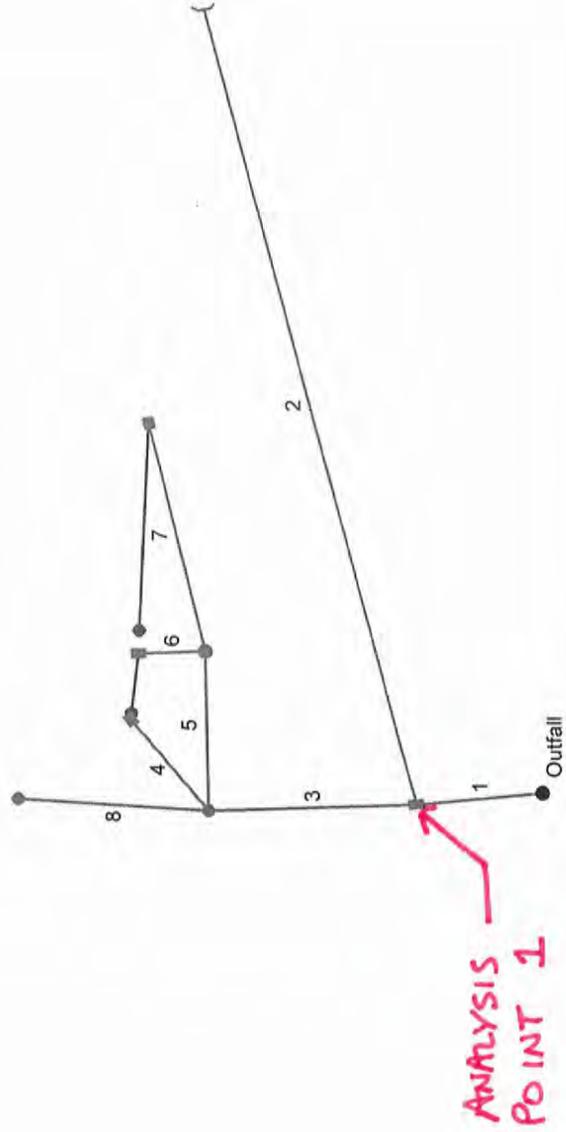
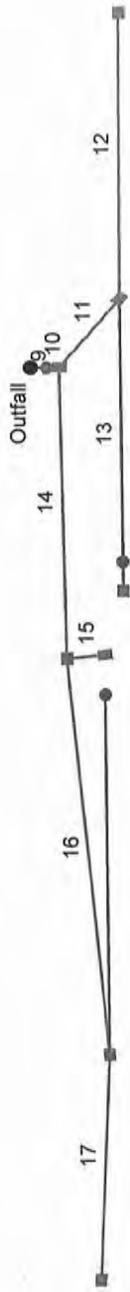
SOIL PROFILE PROPOSED RETAINING WALL (A-----A PLATE NO. 3)

AET FILE SOUNDADA 91301	SCALE 1"=20' V/80'H	DRAWN BY RKB	PLATE NO 4
	REVISION	DESCRIPTION BY	DATE

APPLIED EARTH TECHNOLOGIES GEOTECHNICAL INVESTIGATION
SOUTH PARKING LOT RECONSTRUCTION, SOUND BEACH AVE.

APPENDIX C

Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2011 Plan



ANALYSIS
POINT 1

Storm Sewer Tabulation

Station Line To Line	Len (ft)	Drng Area (ac)		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
		Incr	Total		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)		
1	End	40,000	0.61	1.64	0.85	0.52	1.27	5.0	19.2	3.6	6.94	10.50	4.28	18	1.00	11.81	12.21	13.31	13.40	14.00	14.25	CB-10
2	1	307,000	0.36	0.36	0.60	0.22	0.22	10.4	10.4	4.7	1.02	5.05	1.12	18	0.23	12.21	12.92	13.40	13.52	14.25	16.50	SW-01
3	1	65,000	0.00	0.67	0.00	0.00	0.54	0.0	7.0	5.5	5.32	0.00	3.83	15	0.51	12.21	12.54	13.42	13.55	14.25	15.40	DMH-08
4	3	42,000	0.19	0.19	0.90	0.17	0.17	5.0	5.0	6.0	1.02	0.00	1.39	12	0.50	12.54	12.75	13.55	13.58	15.40	14.90	CB-09
5	3	60,000	0.00	0.48	0.00	0.00	0.37	0.0	6.6	5.5	2.05	0.00	2.61	12	0.30	12.54	12.72	13.55	13.72	15.40	15.40	DMH-07
6	5	21,000	0.13	0.13	0.87	0.11	0.11	5.0	5.0	6.0	0.68	0.00	0.87	12	0.29	12.72	12.78	13.72	13.72	15.40	14.90	CB-08
7	5	88,000	0.35	0.35	0.73	0.26	0.26	5.8	5.8	5.8	1.47	0.00	1.95	12	0.30	12.72	12.98	13.72	13.85	15.40	14.90	CB-07
8	3	60,000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	2.38	0.00	3.09	15	2.00	12.54	13.74	13.55	14.36	15.40	30.60	DMH-06
9	End	5,000	0.00	1.35	0.00	0.00	1.20	0.0	7.3	5.4	6.45	0.00	8.25	12	2.00	24.10	24.20	25.07	25.20	31.00	30.90	INTO DET-01
10	9	4,000	0.00	1.35	0.00	0.00	1.20	0.0	7.3	5.4	6.45	0.00	8.21	12	2.00	24.20	24.28	25.20	25.33	30.90	30.50	DMH-02
11	10	32,000	0.28	0.67	0.90	0.25	0.60	5.0	6.5	5.6	3.35	0.00	4.41	12	1.00	24.28	24.60	25.33	25.60	30.50	29.40	CB-02
12	11	108,000	0.17	0.17	0.90	0.15	0.15	5.0	5.0	6.0	0.92	0.00	2.11	12	1.00	24.52	25.60	25.60	26.01	29.40	29.40	CB-01
13	11	110,000	0.22	0.22	0.90	0.20	0.20	5.0	5.0	6.0	1.19	0.00	2.43	12	1.00	24.52	25.62	25.60	26.08	29.40	29.40	CB-03
14	10	109,818	0.00	0.68	0.00	0.00	0.60	0.0	6.8	5.5	3.27	0.00	4.16	12	0.49	24.28	24.82	25.33	26.26	30.50	30.30	DMH-03
15	14	12,000	0.23	0.23	0.90	0.21	0.21	5.0	5.0	6.0	1.24	0.00	1.65	12	2.00	25.16	25.40	26.26	26.26	30.30	29.40	CB-04
16	14	150,000	0.22	0.45	0.90	0.20	0.39	5.0	6.0	5.7	2.22	0.00	2.83	12	0.50	24.82	25.57	26.26	26.84	30.30	29.40	CB-05
17	16	85,000	0.23	0.23	0.83	0.19	0.19	5.0	5.0	6.0	1.14	0.00	1.48	12	0.49	25.57	25.99	26.84	26.92	29.40	28.50	CB-06

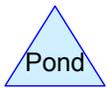
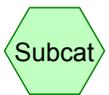
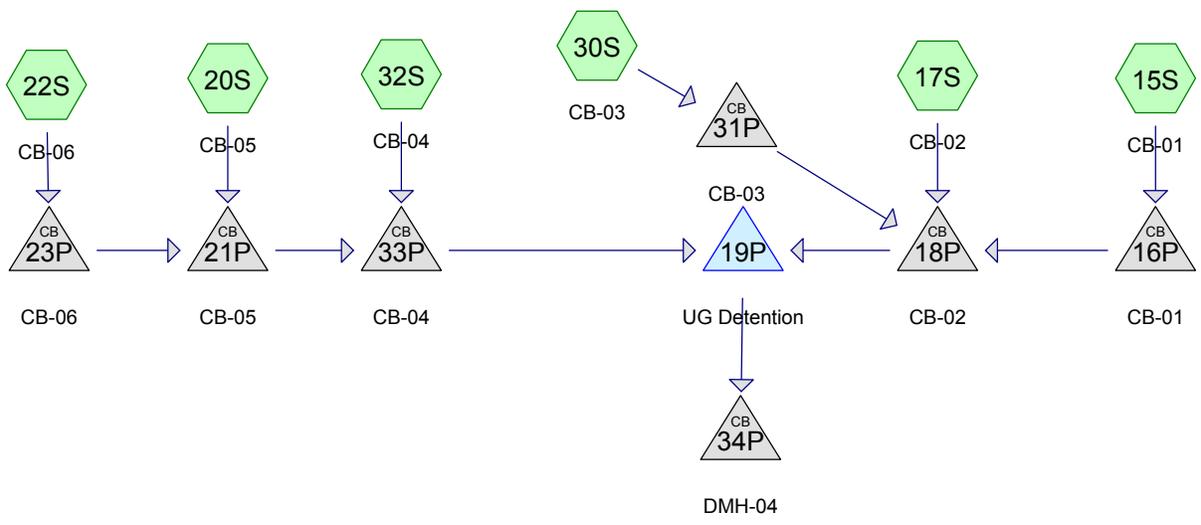
Project File: proposed storm 10 year.stm

Number of lines: 17

Run Date: 10/7/2013

NOTES: Intensity = 54.74 / (Inlet time + 10.80) ^ 0.80; Return period = Yrs. 10 ; c = cir e = ellip b = box

APPENDIX D



Drainage Diagram for Proposed Detention
 Prepared by Tighe & Bond, Inc., Printed 12/3/2013
 HydroCAD® 8.50 s/n 004068 © 2007 HydroCAD Software Solutions LLC

Proposed Detention

Prepared by Tighe & Bond, Inc.

HydroCAD® 8.50 s/n 004068 © 2007 HydroCAD Software Solutions LLC

Printed 12/3/2013

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.028	80	>75% Grass cover, Good, HSG D (22S)
1.310	98	Paved parking & roofs (15S,17S,20S,22S,30S,32S)
1.338		TOTAL AREA

Proposed Detention

Prepared by Tighe & Bond, Inc.

HydroCAD® 8.50 s/n 004068 © 2007 HydroCAD Software Solutions LLC

Type III 24-hr 100 YR Rainfall=7.20" x 2

Printed 12/3/2013

Page 4

Time span=5.00-20.00 hrs, dt=0.01 hrs, 1501 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

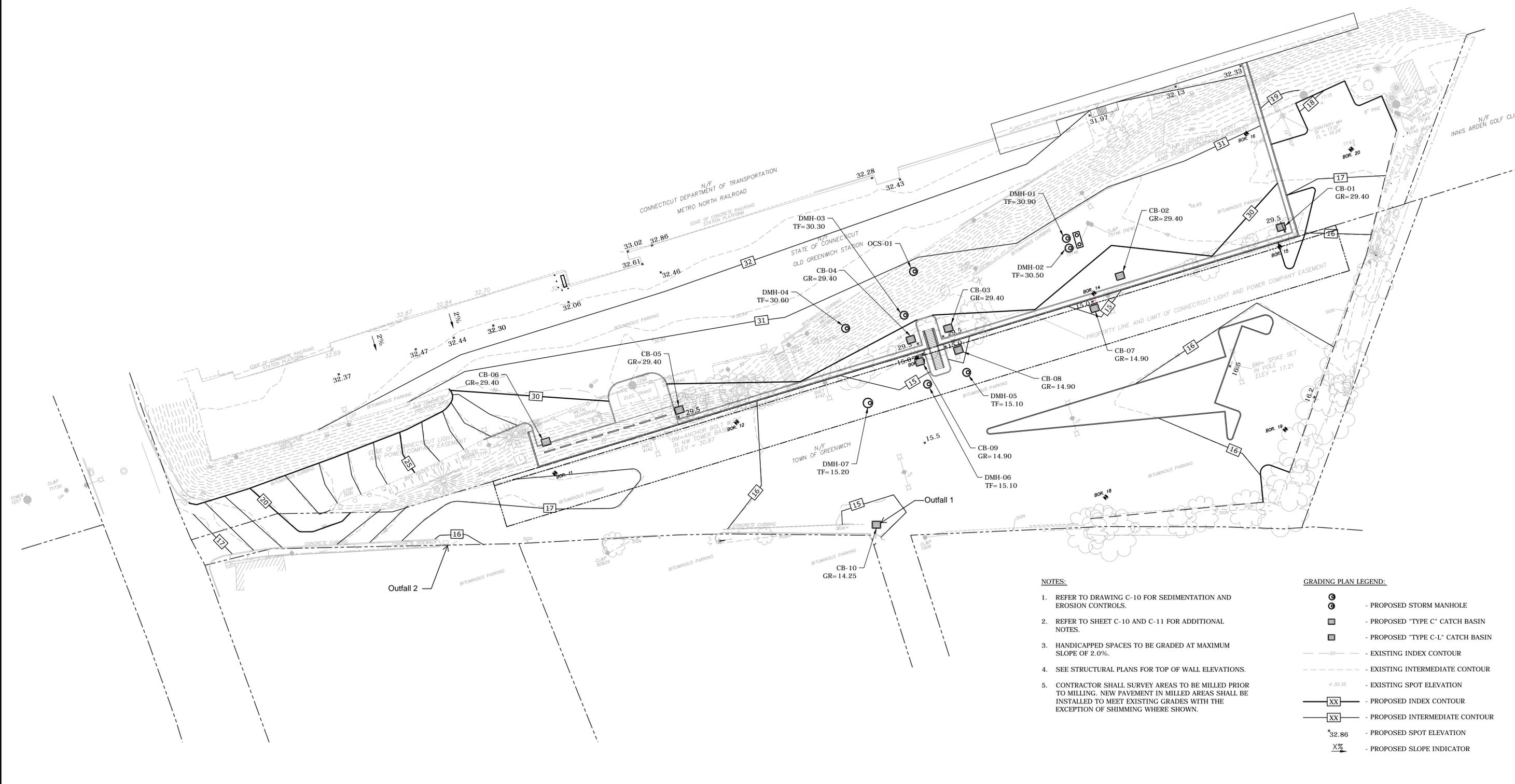
Subcatchment 15S: CB-01	Runoff Area=0.166 ac 100.00% Impervious Runoff Depth>6.42" Tc=5.0 min CN=98 Runoff=1.21 cfs 0.089 af
Subcatchment 17S: CB-02	Runoff Area=0.277 ac 100.00% Impervious Runoff Depth>6.42" Tc=5.0 min CN=98 Runoff=2.03 cfs 0.148 af
Subcatchment 20S: CB-05	Runoff Area=0.215 ac 100.00% Impervious Runoff Depth>6.42" Tc=5.0 min CN=98 Runoff=1.57 cfs 0.115 af
Subcatchment 22S: CB-06	Runoff Area=0.234 ac 88.03% Impervious Runoff Depth>6.27" Tc=5.0 min CN=96 Runoff=1.70 cfs 0.122 af
Subcatchment 30S: CB-03	Runoff Area=0.215 ac 100.00% Impervious Runoff Depth>6.42" Tc=5.0 min CN=98 Runoff=1.57 cfs 0.115 af
Subcatchment 32S: CB-04	Runoff Area=0.231 ac 100.00% Impervious Runoff Depth>6.42" Tc=5.0 min CN=98 Runoff=1.69 cfs 0.123 af
Pond 16P: CB-01	Peak Elev=26.20' Inflow=1.21 cfs 0.089 af 12.0" x 102.0' Culvert Outflow=1.21 cfs 0.089 af
Pond 18P: CB-02	Peak Elev=26.74' Inflow=4.82 cfs 0.352 af 12.0" x 32.0' Culvert Outflow=4.82 cfs 0.352 af
Pond 19P: UG Detention	Peak Elev=25.79' Storage=0.131 af Inflow=9.78 cfs 0.713 af Outflow=9.77 cfs 0.709 af
Pond 21P: CB-05	Peak Elev=27.49' Inflow=3.27 cfs 0.237 af 12.0" x 150.0' Culvert Outflow=3.27 cfs 0.237 af
Pond 23P: CB-06	Peak Elev=26.83' Inflow=1.70 cfs 0.122 af 12.0" x 85.0' Culvert Outflow=1.70 cfs 0.122 af
Pond 31P: CB-03	Peak Elev=26.37' Inflow=1.57 cfs 0.115 af 12.0" x 110.0' Culvert Outflow=1.57 cfs 0.115 af
Pond 33P: CB-04	Peak Elev=28.45' Inflow=4.96 cfs 0.361 af 12.0" x 119.0' Culvert Outflow=4.96 cfs 0.361 af
Pond 34P: DMH-04	Peak Elev=16.35' Inflow=9.77 cfs 0.709 af 15.0" x 52.0' Culvert Outflow=9.77 cfs 0.709 af

Total Runoff Area = 1.338 ac Runoff Volume = 0.713 af Average Runoff Depth = 6.39"
2.09% Pervious = 0.028 ac 97.91% Impervious = 1.310 ac

CONNECTICUT DEPARTMENT OF TRANSPORTATION HYDRODYNAMIC SEPARATOR DESIGN DATA SHEETS (FORM A - DESIGN)							
Project No	301-092	Route No.	N/A	Prepared By:	JAR	Date:	10/1/2013
Town	Greenwich	Location/Station	Upper Lot	Checked By:	JWB	Date:	10/1/2013
HYDROLOGIC DATA				Company:			
Drainage Area (Acres)	1.338						
Percent Impervious Area %	98						
Time of Concentration (min.)	5						
Drainage Design Flow (cfs)	6.45						
Drainage Design Frequency (yr)	10						
Water Quality Flow (cfs)	0.78						
HYDRODYNAMIC SEPARATOR (HS)							
Coordinates:		Datum:					
X:	774,790.50	Horiz.:	State Plane NAD83				
Y:	573,915.70	Vert.:	NGVD-1929				
Head loss coefficient	1.75						
Sediment Storage Capacity (cy):		HGL Elevation:					
Required	1.0	@ WQF	24.83				
		@ Design Q	26.3				
Maximum Flow to HS at Drainage Design Flow (cfs)		2.22					
Comments:							
FLOW DIVERSION STRUCTURE							
Type	4' Diameter Manhole						
Weir and/or Bypass Elev.	24.90						
Weir Length (ft.)	4	Weir Coeff. (C)	3.3				
HGL Elevation:		Flow Split @ Drainage Design Flow					
@ WQF	24.83	To HS	2.22				
@ Design Q	26.56	Bypassing HS	4.23				
Comments:							

Sketch (NTS) - Indicate Pay limits

APPENDIX E



NOTES:

1. REFER TO DRAWING C-10 FOR SEDIMENTATION AND EROSION CONTROLS.
2. REFER TO SHEET C-10 AND C-11 FOR ADDITIONAL NOTES.
3. HANDICAPPED SPACES TO BE GRADED AT MAXIMUM SLOPE OF 2.0%.
4. SEE STRUCTURAL PLANS FOR TOP OF WALL ELEVATIONS.
5. CONTRACTOR SHALL SURVEY AREAS TO BE MILLED PRIOR TO MILLING. NEW PAVEMENT IN MILLED AREAS SHALL BE INSTALLED TO MEET EXISTING GRADES WITH THE EXCEPTION OF SHIMMING WHERE SHOWN.

GRADING PLAN LEGEND:

- PROPOSED STORM MANHOLE
- PROPOSED "TYPE C" CATCH BASIN
- PROPOSED "TYPE C-L" CATCH BASIN
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED SLOPE INDICATOR

Nov 19, 2013 9:17am Plotted By: JAR Tighe & Bond, Inc. \\SRV\Projects\A0992\Drawings\Sheet\GR-A0992-01.dwg

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

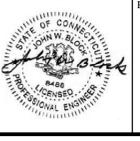
Plotted Date: Nov 19, 2013-9:17am

DESIGNER/DRAFTER: MDS
 CHECKED BY: JAR
 SCALE IN FEET

 SCALE 1"=30'

STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION
 FILENAME: GR-A0992-01.dwg

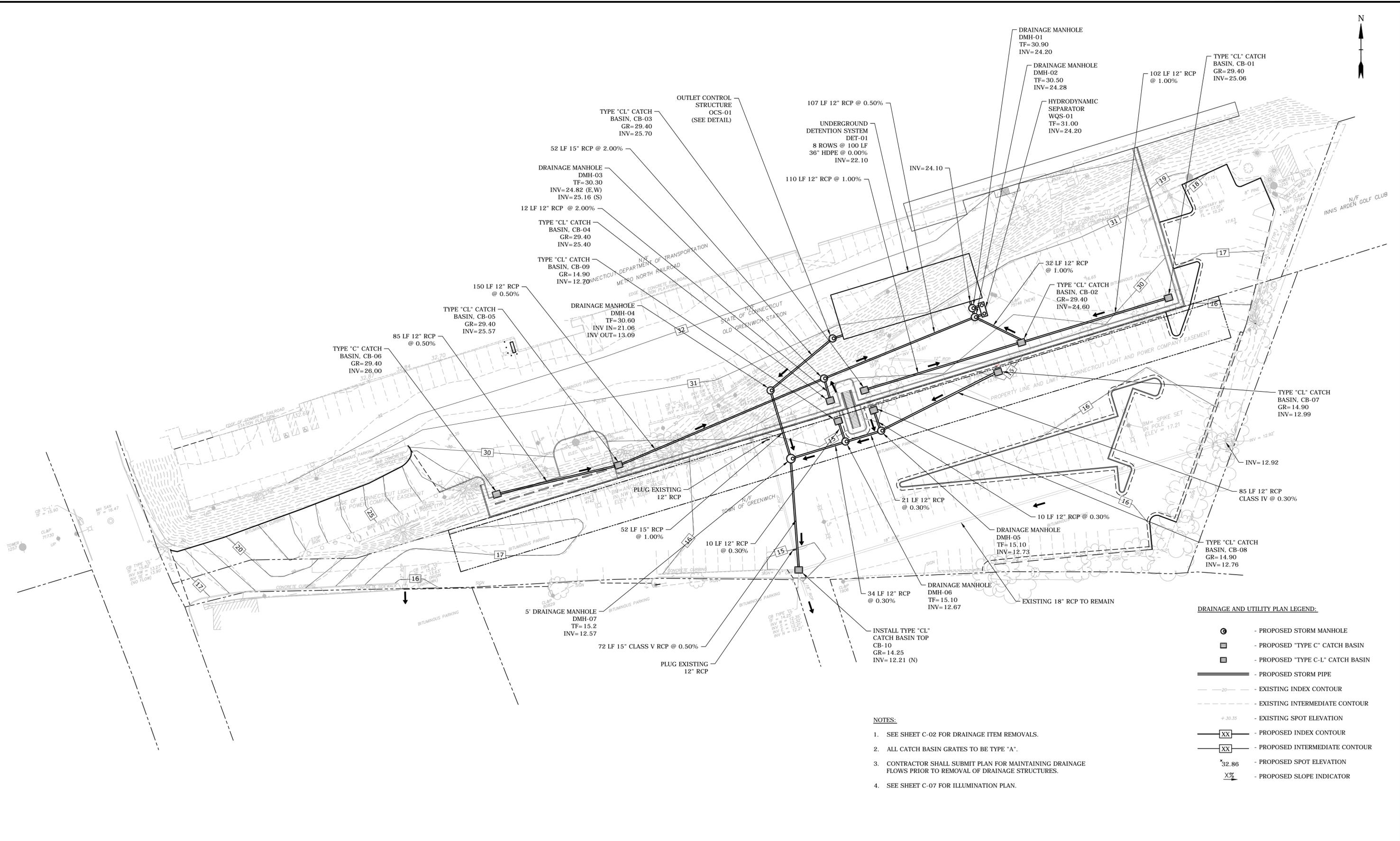
SIGNATURE/BLOCK:
Tighe & Bond
 1000 BRIDGEPORT AVE
 SUITE 320
 SHELTON, CT 06484
 APPROVED BY: J. BLOCK
 DATE: 11/20/2013



PROJECT TITLE:
REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R AND BRIDGE NO. 03955R

TOWN: GREENWICH
 DRAWING TITLE: GRADING PLAN

PROJECT NO. 301-092
 DRAWING NO. C-05
 SHEET NO. **11.06**



DRAINAGE AND UTILITY PLAN LEGEND:

	- PROPOSED STORM MANHOLE
	- PROPOSED "TYPE C" CATCH BASIN
	- PROPOSED "TYPE C-L" CATCH BASIN
	- PROPOSED STORM PIPE
	- EXISTING INDEX CONTOUR
	- EXISTING INTERMEDIATE CONTOUR
	- EXISTING SPOT ELEVATION
	- PROPOSED INDEX CONTOUR
	- PROPOSED INTERMEDIATE CONTOUR
	- PROPOSED SPOT ELEVATION
	- PROPOSED SLOPE INDICATOR

- NOTES:**
- SEE SHEET C-02 FOR DRAINAGE ITEM REMOVALS.
 - ALL CATCH BASIN GRATES TO BE TYPE "A".
 - CONTRACTOR SHALL SUBMIT PLAN FOR MAINTAINING DRAINAGE FLOWS PRIOR TO REMOVAL OF DRAINAGE STRUCTURES.
 - SEE SHEET C-07 FOR ILLUMINATION PLAN.

Nov 19, 2013 9:17am Plotted By: JAR Tighe & Bond, Inc. \\S:\Projects\A\0992\Drawings\Sheet\DR-A0992-01.dwg

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: Nov 19, 2013 9:17am

DESIGNER/DRAFTER: MDS
 CHECKED BY: JAR
 SCALE IN FEET

 SCALE 1"=30'

STATE OF CONNECTICUT
 DEPARTMENT OF TRANSPORTATION

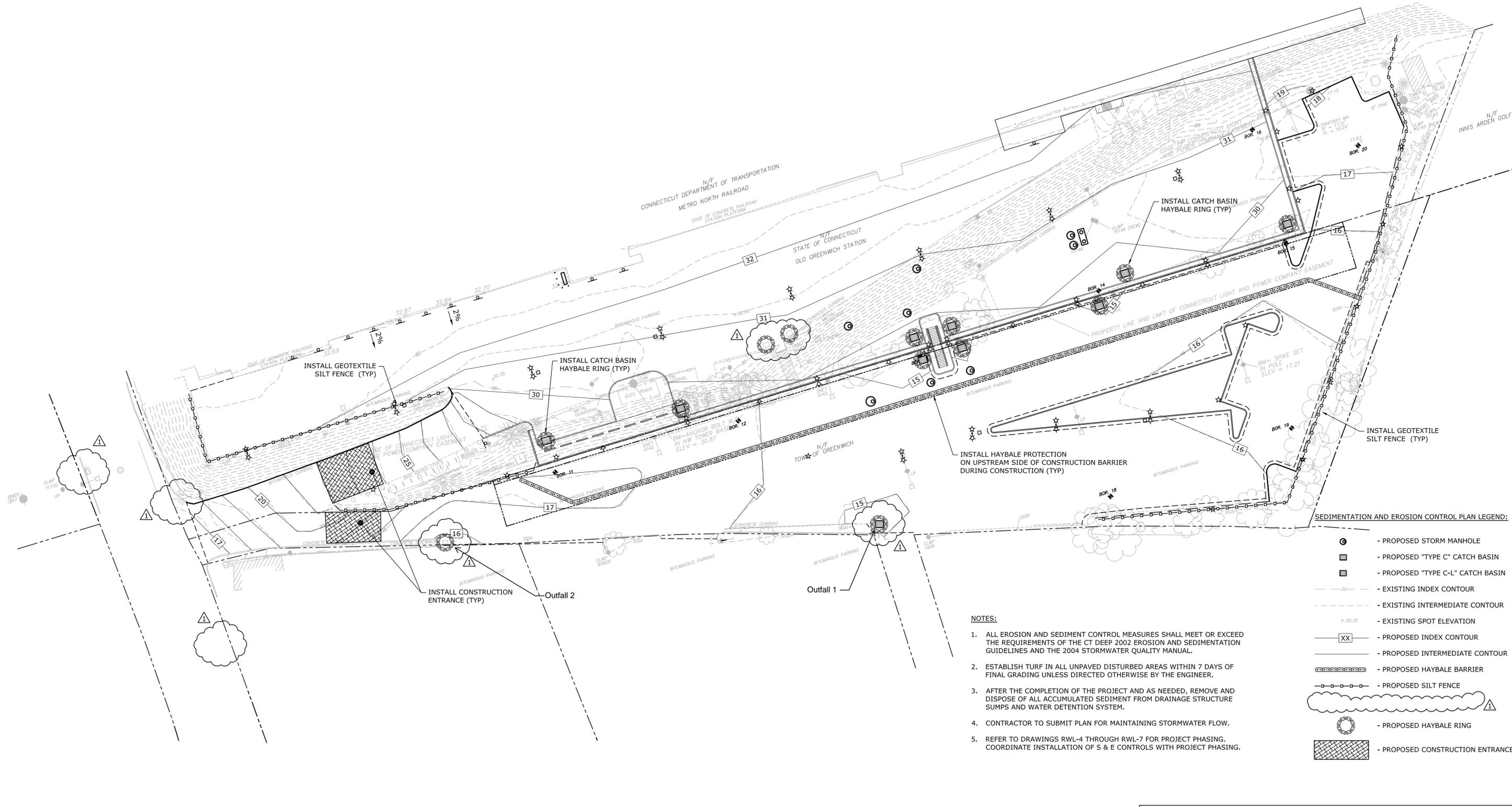
Tighe & Bond
 1000 BRIDGEPORT AVE
 SUITE 320
 SHELTON, CT 06484
 APPROVED BY: J. BLOCK
 DATE: 11/20/2013
 FILENAME: DR-A0992-01.dwg

SIGNATURE/BLOCK:
Tighe & Bond
 1000 BRIDGEPORT AVE
 SUITE 320
 SHELTON, CT 06484
 APPROVED BY: J. BLOCK
 DATE: 11/20/2013

PROJECT TITLE:
REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R AND BRIDGE NO. 03955R

TOWN: **GREENWICH**
 DRAWING TITLE: **DRAINAGE AND UTILITY PLAN**

PROJECT NO. 301-092
 DRAWING NO. C-06
 SHEET NO. **11.07**



SEDIMENTATION AND EROSION CONTROL PLAN LEGEND:

- PROPOSED STORM MANHOLE
- PROPOSED "TYPE C" CATCH BASIN
- PROPOSED "TYPE C-L" CATCH BASIN
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED HAYBALE BARRIER
- PROPOSED SILT FENCE
- PROPOSED SILT FENCE
- PROPOSED HAYBALE RING
- PROPOSED CONSTRUCTION ENTRANCE

NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CT DEEP 2002 EROSION AND SEDIMENTATION GUIDELINES AND THE 2004 STORMWATER QUALITY MANUAL.
2. ESTABLISH TURF IN ALL UNPAVED DISTURBED AREAS WITHIN 7 DAYS OF FINAL GRADING UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. AFTER THE COMPLETION OF THE PROJECT AND AS NEEDED, REMOVE AND DISPOSE OF ALL ACCUMULATED SEDIMENT FROM DRAINAGE STRUCTURE SUMPS AND WATER DETENTION SYSTEM.
4. CONTRACTOR TO SUBMIT PLAN FOR MAINTAINING STORMWATER FLOW.
5. REFER TO DRAWINGS RWL-4 THROUGH RWL-7 FOR PROJECT PHASING. COORDINATE INSTALLATION OF S & E CONTROLS WITH PROJECT PHASING.

ADDENDUM NO. 3

Apr 01, 2014-1:51pm, plotted by: JAR, Tighe & Bond, Inc., \\SRV\Projects\A\A0992\Drawing\Addendum\Addendum 3\Sheets\SE-A0992-01.dwg

DESIGNER/DRAFTER: MDS	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. Plotted Date: Apr 01, 2014-1:51pm
CHECKED BY: JAR	
SCALE IN FEET 0 30 60 SCALE 1"=30'	FILENAME: SE-A0992-01.dwg

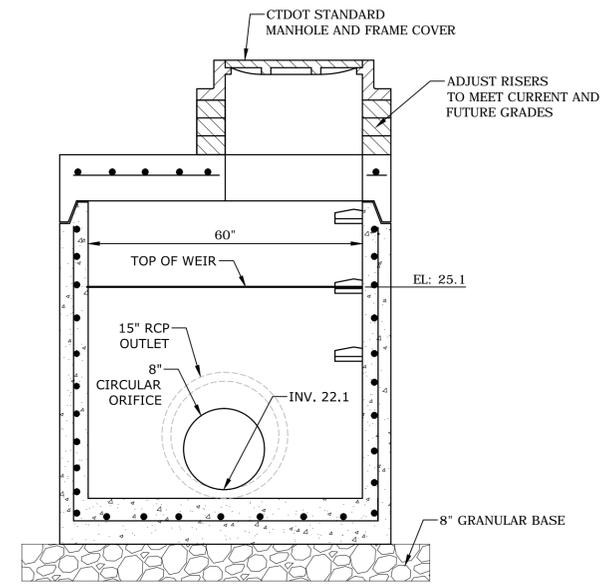
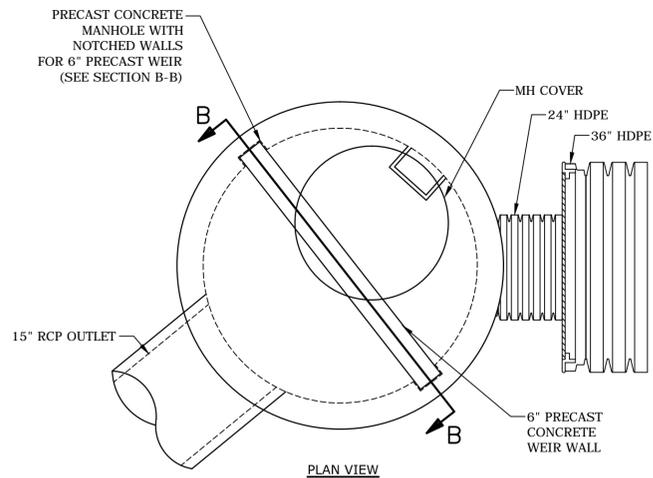
STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

SIGNATURE/BLOCK:
Tighe & Bond
1000 BRIDGEPORT AVE
SUITE 320
SHELTON, CT 06484
APPROVED BY: J. BLOCK DATE: 11/20/2013

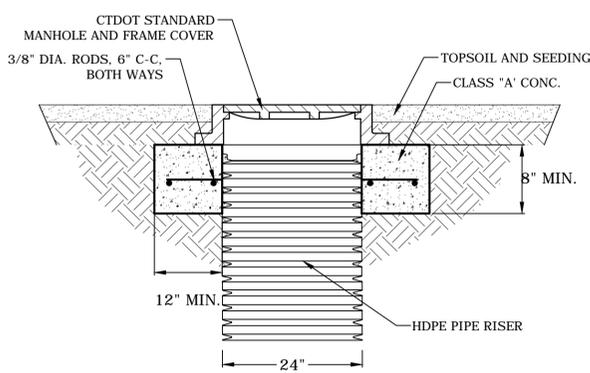
PROJECT TITLE:
REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R AND BRIDGE NO. 03955R

TOWN: GREENWICH	PROJECT NO. 301-092
DRAWING TITLE: SEDIMENTATION AND EROSION CONTROL PLAN	DRAWING NO. C-10
	SHEET NO. 11.12.A3

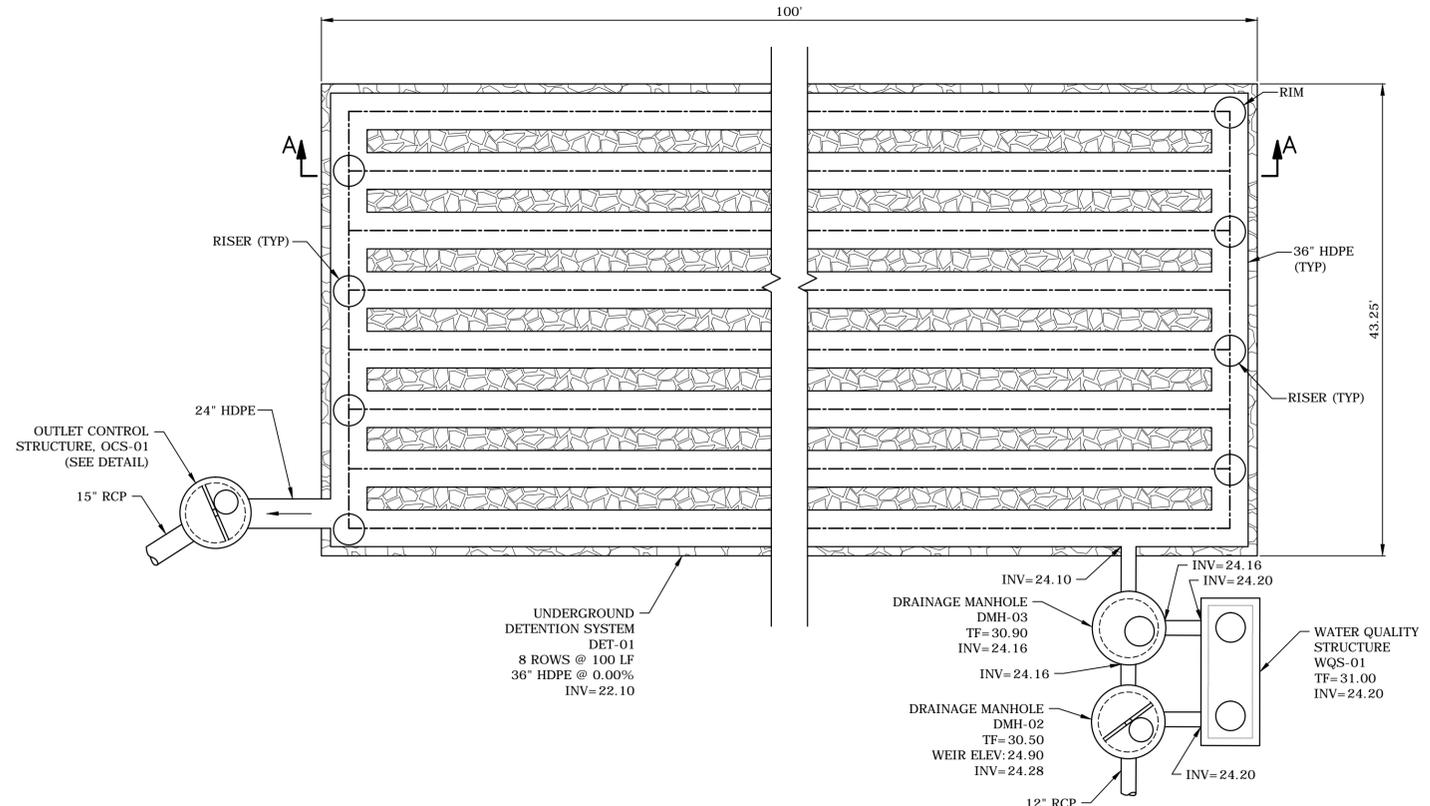
REV.	DATE	REVISION DESCRIPTION
3/18/14		REVISED DRAWING
11.12.A3		SHEET NO.



OUTLET CONTROL STRUCTURE OCS-01
NO SCALE

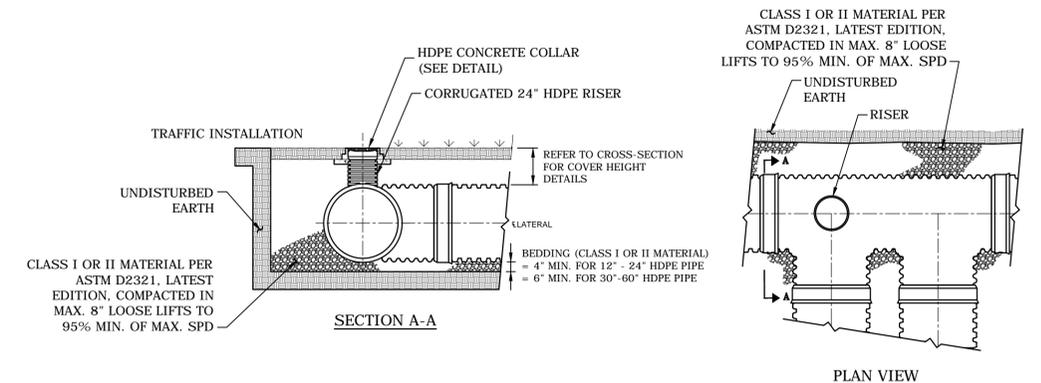
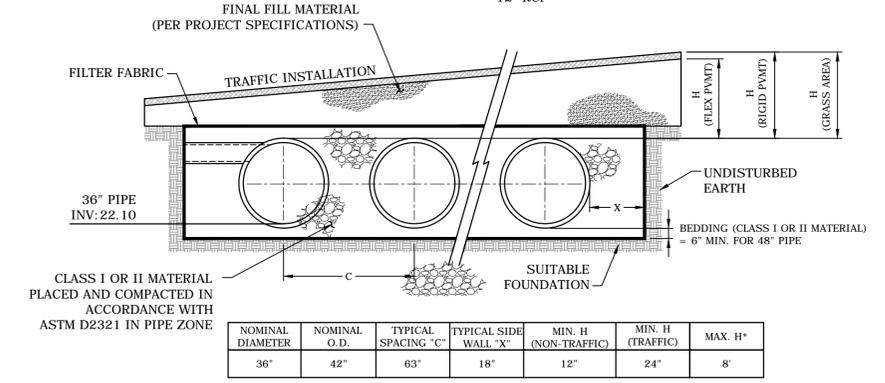


HDPE PIPE CONCRETE COLLAR
NO SCALE



NOTES:

- ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
- ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
- MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
- FILTER FABRIC:** A GEOTEXTILE FABRIC WILL BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
- FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
- BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
- INITIAL BACKFILL:** SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
- COVER:** MINIMUM COVER OVER ALL RETENTION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION.
- FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. MAXIMUM FILL HEIGHT LIMITED TO 8-FT OVER FITTINGS FOR STANDARD INSTALLATIONS.



DETENTION SYSTEM DETAIL
NO SCALE

Nov 19, 2013 9:19am Plotted By: JAR Tighe & Bond, Inc. \\SRA\Projects\A0992\Drawings\Sheet DS-A0992-01.dwg

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

Plotted Date: Nov 19, 2013 9:19am

DESIGNER/DRAFTER: MDS
CHECKED BY: JAR
SCALE IN FEET 0 30 60 SCALE 1"=30'

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

FILENAME: DS-A0992-01.dwg

SIGNATURE/BLOCK:
Tighe & Bond
1000 BRIDGEPORT AVE
SUITE 320
SHELTON, CT 06484
APPROVED BY: J. BLOCK DATE: 11/20/2013



PROJECT TITLE:
**REHABILITATION OF METRO-NORTH
RAILROAD BRIDGE NO. 03948R
AND BRIDGE NO. 03955R**

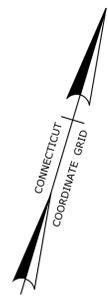
TOWN:
GREENWICH

DRAWING TITLE:
DETAILS

PROJECT NO.
301-092

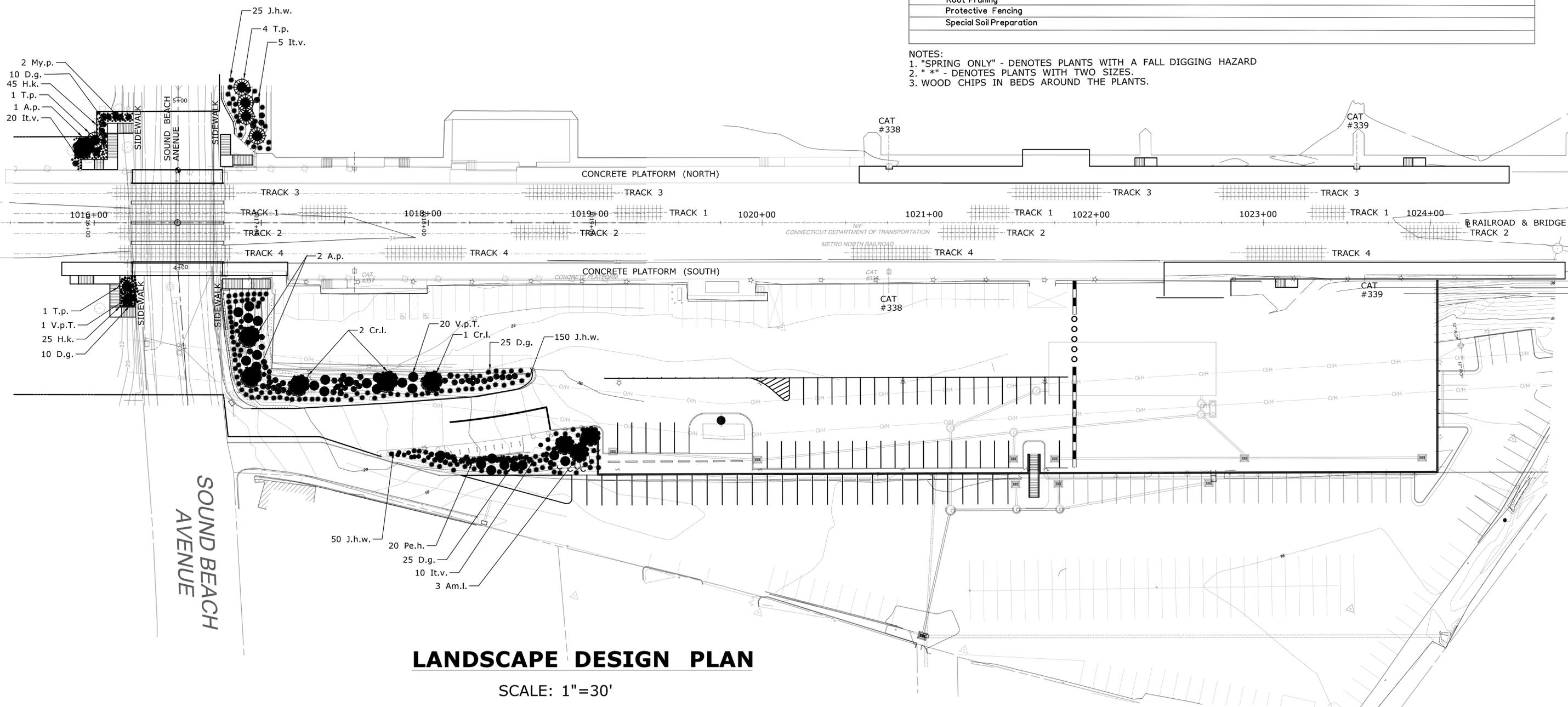
DRAWING NO.
C-13

SHEET NO.
11.15



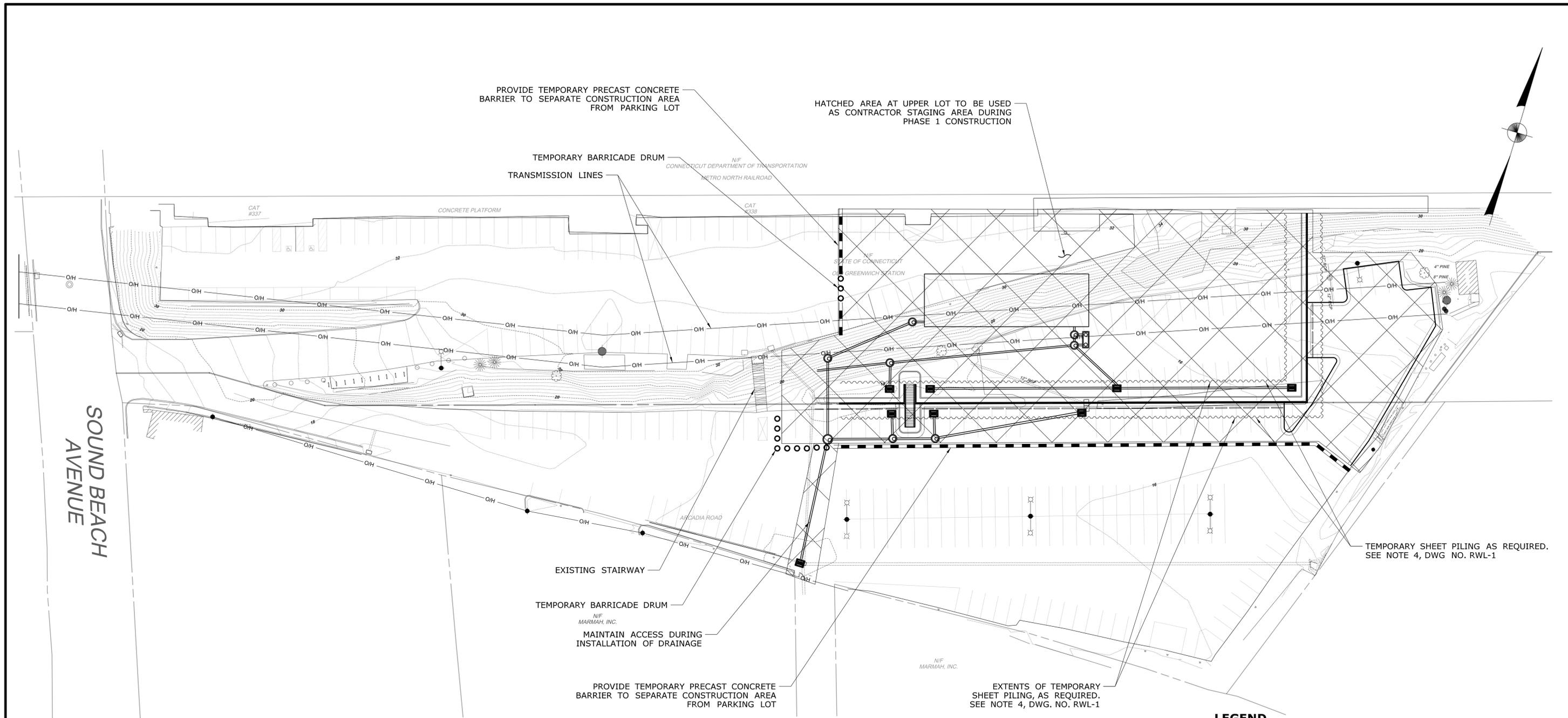
KEY	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	SPACING	COMMENTS
Am.I.	<i>Amelanchier laevis</i>	Allegheny Serviceberry	2"-2 1/2" Cal. B.B.	3	Field Located	
A.p.	<i>Aesculus pavia</i>	Red Buckeye	8"-10" Ht. B.B.	3	Field Located	
Cr.I.	<i>Crateagus laevigata</i>	English Hawthorn	8"-10" Ht. B.B.	3	Field Located	
D.g.	<i>Deutzia Gracilis</i> Spp	Slender Deutzia Species	2'-3' Sprd. B.B.	70	3' On center	
H.k.	<i>Hosta 'Kabinet'</i>	Kabinet Plantain Lily	1 Gallon Container	70	18" On center	
It.v.	<i>Itea Virginica 'Henry's Garnet'</i>	Henry's Garnet Sweetspire	2'-3' Sprd. B.B.	35	18" On center	
J.h.W.	<i>Juniperus horizontalis Wiltonii</i>	Blue Rug Juniper	18"-24" Ht. B.B.	225	18" On center	
My.p.	<i>Myrica pensylvanica</i>	Northern Bayberry	24"-30" Ht. B.B.	2	Field Located	
Pe.H.	<i>Pennisetum 'Hamelin'</i>	Hamelin Fountain Grass	1 Gallon Container	20	18" On center	
T.p.	<i>Thuja plicata</i>	Western Arborvitae	6'-8" Ht. B.B.	6	Field Located	
V.p.T.	<i>Viburnum plicatum tomentosum</i>	Mariesi Doublefile Viburnum	3'-4" Ht. B.B.	21	Field Located	
				TOTAL = 800 S.Y.		
Wood Chip Mulch						
Root Pruning						
Protective Fencing						
Special Soil Preparation						

NOTES:
 1. "SPRING ONLY" - DENOTES PLANTS WITH A FALL DIGGING HAZARD
 2. "*" - DENOTES PLANTS WITH TWO SIZES.
 3. WOOD CHIPS IN BEDS AROUND THE PLANTS.



LANDSCAPE DESIGN PLAN
 SCALE: 1"=30'

	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: D. BARNES CHECKED BY: M.N.C. SCALE AS NOTED	 STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION <small>Filename: ...VHW_MSH_0301_0092_LDS-02.dgn</small>	SIGNATURE/ BLOCK: OFFICE OF ENGINEERING <small>APPROVED BY: [Signature] DATE:</small>	PROJECT TITLE: REHABILITATION OF SOUND BEACH AVE. RAILROAD BRIDGE (MP 31.29) STATE BRIDGE No. 03948R	TOWN: GREENWICH	PROJECT NO. 301-0092 DRAWING NO. LDS-02 SHEET NO. 14.02	
REV. DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 11/26/2013					



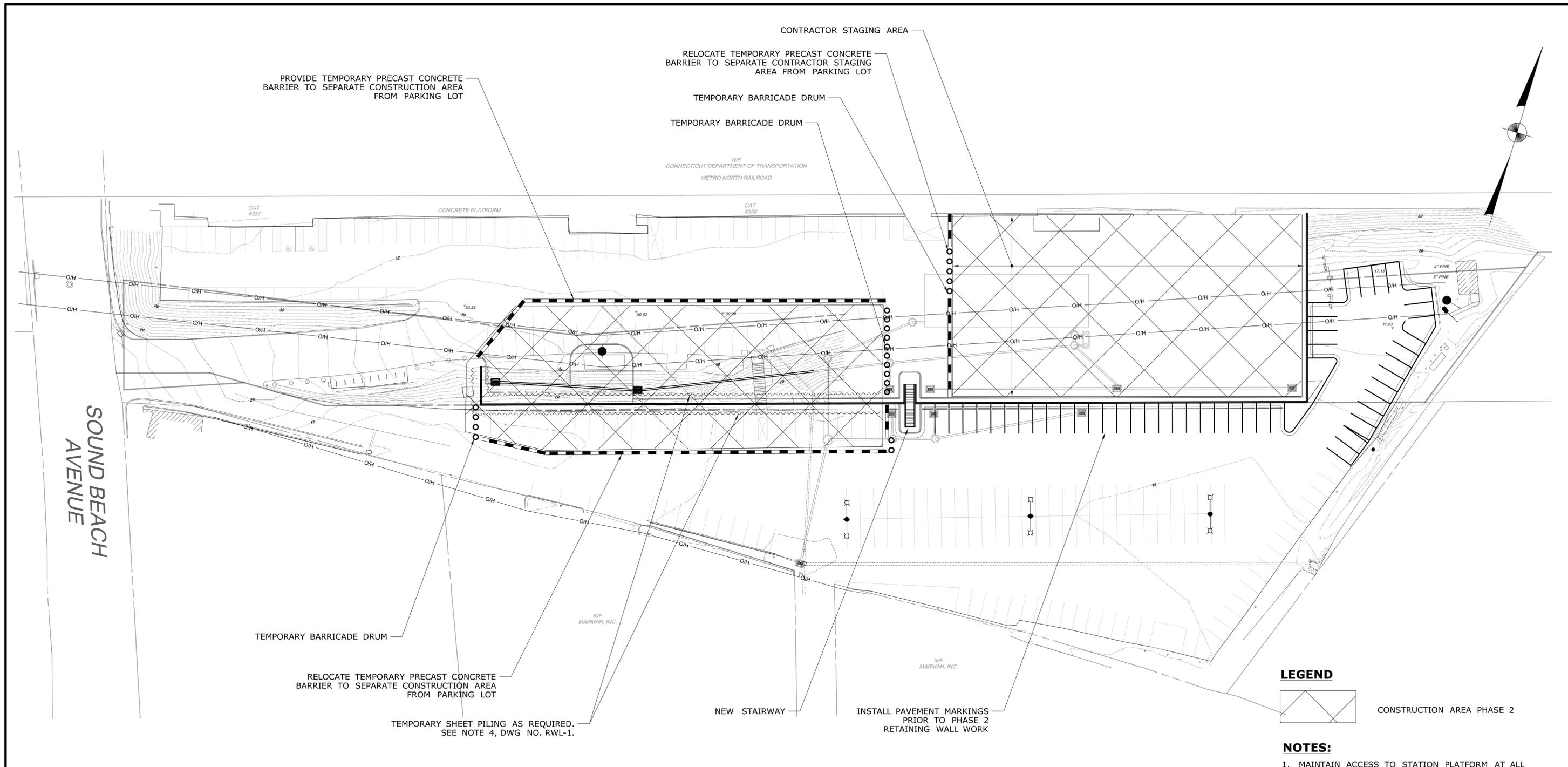
LEGEND

CONSTRUCTION AREA PHASE 1

- NOTES:**
1. MAINTAIN ACCESS TO STATION PLATFORM AT ALL TIMES.
 2. MAINTAIN ACCESS TO EXISTING STAIRWAY FROM LOWER PARKING LOT TO UPPER PARKING LOT.
 3. SITE IMPROVEMENTS INCLUDE RETAINING WALL, DRAINAGE STRUCTURES, AND PARKING LOTS.

AVAILABLE PARKING SPACES (DURING CONSTRUCTION PHASE 1)	
UPPER LOT	76
LOWER LOT	115
TOTAL	191

REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 11/17/2013	DESIGNER/DRAFTER: S.Yarmolinsky, P.E. CHECKED BY: A.DiCesare, P.E.	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SIGNATURE/ BLOCK: A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com	APPROVED BY: A.DiCesare	DATE: 11/27/2013		PROJECT TITLE: REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R AND BRIDGE NO. 03955R	TOWN: GREENWICH	PROJECT NO. 301-092
					SCALE AS NOTED						DRAWING TITLE: PHASE 1 PLAN (SITE IMPROVEMENTS)	DRAWING NO. RWL-4	
												SHEET NO. 10.05	



PHASE 2 PLAN
SCALE: 1"=30'

LEGEND

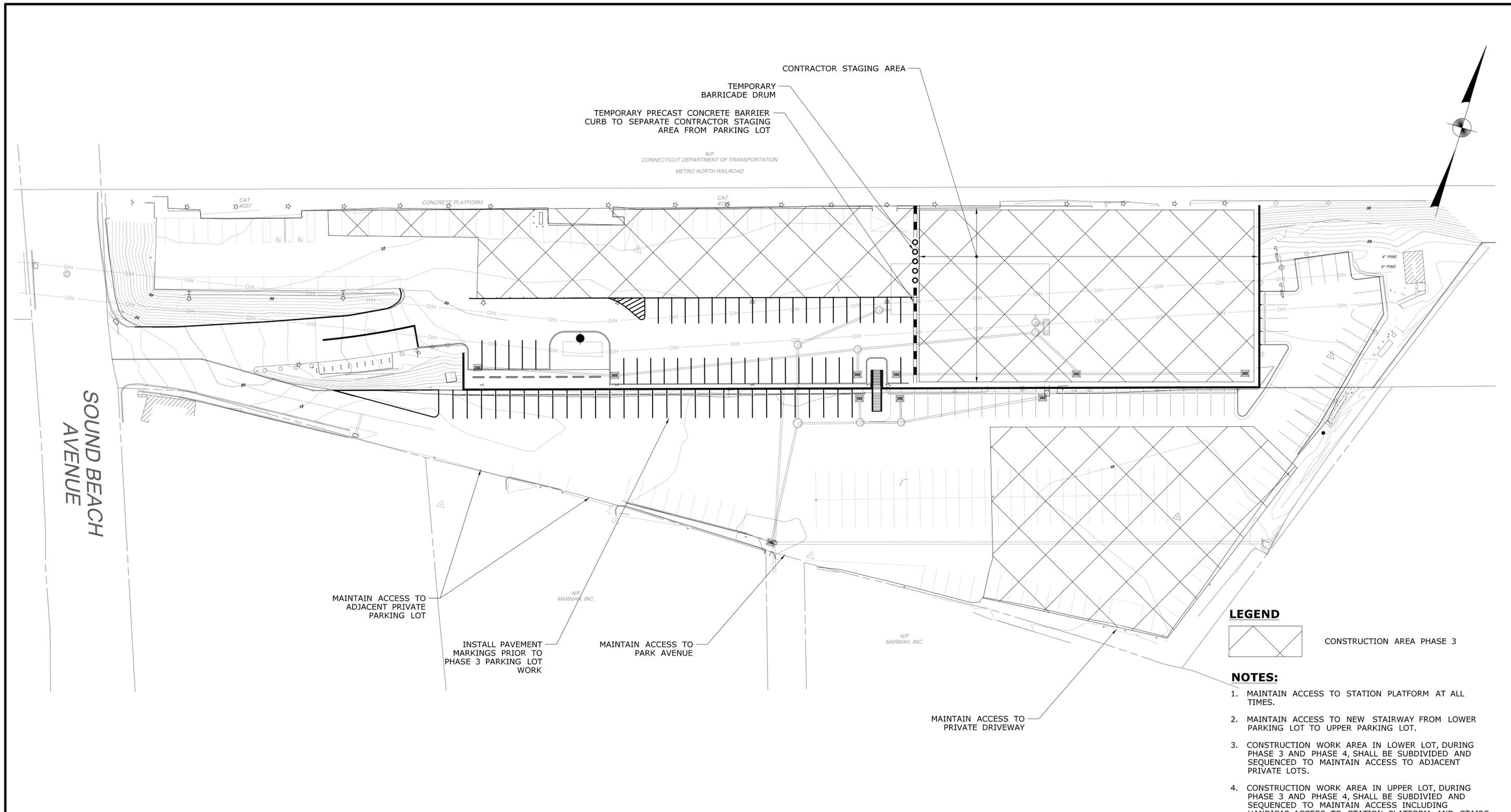


NOTES:

1. MAINTAIN ACCESS TO STATION PLATFORM AT ALL TIMES.
2. MAINTAIN ACCESS TO NEW STAIRWAY FROM LOWER PARKING LOT TO UPPER PARKING LOT AND MAINTAIN A CLEAR WALKING PATH TO STATION PLATFORM STAIRS AS DIRECTED BY THE ENGINEER.
3. SITE IMPROVEMENTS INCLUDE RETAINING WALL, DRAINAGE STRUCTURES, AND PARKING LOT.
4. FINAL PAVEMENT MARKINGS SHALL BE EPOXY RESIN AND SHALL BE INSTALLED AT THE END OF THE PROJECT. TEMPORARY PAVEMENT MARKINGS SHALL BE HOT APPLIED PAINTED PAVEMENT MARKINGS AND SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.

AVAILABLE PARKING SPACES (DURING CONSTRUCTION PHASE 2)	
UPPER LOT	58
LOWER LOT	142
TOTAL	200

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. Plotted Date: 11/17/2013	DESIGNER/DRAFTER: S.Yarmolinsky, P.E. CHECKED BY: A.DiCesare, P.E.	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION SCALE AS NOTED Filename: ...SB_MSH_Br03948_0301_0092_RWL-5.dgn	SIGNATURE/BLOCK: A.DiCesare Associates, P.C. 690 Clinton Avenue Bridgeport, CT 06604 203-696-0444 www.adicesarepc.com APPROVED BY: A.DiCesare DATE: 11/27/2013		PROJECT TITLE: REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R AND BRIDGE NO. 03955R	TOWN: GREENWICH	PROJECT NO. 301-092
REV. DATE REVISION DESCRIPTION SHEET NO.	DRAWING TITLE: PHASE 2 PLAN (SITE IMPROVEMENTS)	DRAWING NO. RWL-5	SHEET NO. 10.06				



CONTRACTOR STAGING AREA
 TEMPORARY BARRICADE DRUM
 TEMPORARY PRECAST CONCRETE BARRIER CURB TO SEPARATE CONTRACTOR STAGING AREA FROM PARKING LOT

N/F
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 METRO NORTH RAILROAD

SOUND BEACH AVENUE

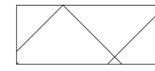
MAINTAIN ACCESS TO ADJACENT PRIVATE PARKING LOT

INSTALL PAVEMENT MARKINGS PRIOR TO PHASE 3 PARKING LOT WORK

MAINTAIN ACCESS TO PARK AVENUE

MAINTAIN ACCESS TO PRIVATE DRIVEWAY

LEGEND



CONSTRUCTION AREA PHASE 3

NOTES:

1. MAINTAIN ACCESS TO STATION PLATFORM AT ALL TIMES.
2. MAINTAIN ACCESS TO NEW STAIRWAY FROM LOWER PARKING LOT TO UPPER PARKING LOT.
3. CONSTRUCTION WORK AREA IN LOWER LOT, DURING PHASE 3 AND PHASE 4, SHALL BE SUBDIVIDED AND SEQUENCED TO MAINTAIN ACCESS TO ADJACENT PRIVATE LOTS.
4. CONSTRUCTION WORK AREA IN UPPER LOT, DURING PHASE 3 AND PHASE 4, SHALL BE SUBDIVIDED AND SEQUENCED TO MAINTAIN ACCESS INCLUDING HANDICAP ACCESS TO STATION PLATFORM AND STAIRS.
5. SITE IMPROVEMENTS INCLUDE RETAINING WALL, DRAINAGE STRUCTURES, AND PARKING LOT.
6. FINAL PAVEMENT MARKINGS SHALL BE EPOXY RESIN AND SHALL BE INSTALLED AT THE END OF THE PROJECT. TEMPORARY PAVEMENT MARKINGS SHALL BE HOT APPLIED PAINTED PAVEMENT MARKINGS AND SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER.

PHASE 3 PLAN

SCALE: 1"=30'

AVAILABLE PARKING SPACES
(DURING CONSTRUCTION PHASE 3)

UPPER LOT	66
LOWER LOT	117
TOTAL	183

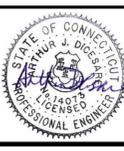
REV.	DATE	REVISION DESCRIPTION	SHEET NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:
S.Yarmolinsky, P.E.
 CHECKED BY:
A.DiCesare, P.E.
 SCALE AS NOTED



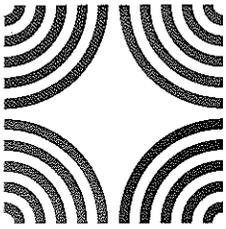
SIGNATURE/BLOCK:
ADA
 A.DiCesare Associates, P.C.
 690 Clinton Avenue
 Bridgeport, CT 06604
 203-696-0444
 www.adicesarepc.com
 APPROVED BY: A.DiCesare
 DATE: 11/27/2013



PROJECT TITLE:
REHABILITATION OF METRO-NORTH RAILROAD BRIDGE NO. 03948R AND BRIDGE NO. 03955R

TOWN: **GREENWICH**
 PROJECT NO.: **301-092**
 DRAWING NO.: **RWL-6**
 SHEET NO.: **10.07**
 DRAWING TITLE: **PHASE 3 PLAN (SITE IMPROVEMENTS)**

APPENDIX F



Connecticut Commission on Culture & Tourism

March 19, 2010

Historic Preservation
and Museum Division

One Constitution Plaza
Second Floor
Hartford, Connecticut
06103

860.256.2800
860.256.2763 (f)

Mr. Mark D. Neri
Bureau of Public Transportation
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131

Subject: State Proj. No. 301-092, Metro-North Rail Bridge No. 03955R,
Tomac Avenue, Greenwich, Connecticut.

Dear Mr. Neri:

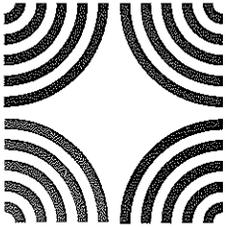
The State Historic Preservation Office has reviewed the documentation study prepared by Historical Perspectives, Inc. (HPI) for the referenced project. ConnDOT proposes the rehabilitation of an open through-girder deck rail bridge over Tomac Avenue in Greenwich. The bridge was constructed in 1895 and subsequently rehabilitated in 1943. SHPO had previously determined that this structure appeared to be eligible for listing in the National Register of Historic Places, and had requested that ConnDOT complete a state-level documentation study prior to the planned start of construction¹.

As established in the HPI study, the Tomac Avenue Bridge is a distinct example of rail bridge engineering and construction from the late nineteenth and early twentieth centuries. This bridge is a surviving structure associated with a massive New Haven Railroad program to eliminate hazardous at-grade crossings in New Haven and Fairfield Counties.

This office finds that the HPI documentation study meets SHPO standards for state-level documentation of historic structures. The report fulfills one of two SHPO conditions established in our April 24, 2007 letter. The second condition of our finding of No Adverse Effect was the preparation of an article for publication in the *Society for Industrial Archeology New England Chapters Newsletter*. We understand that the article draft has been prepared for submission and are respectfully requesting that ConnDOT forward a copy of the article draft to SHPO.

This office appreciates the opportunity to have reviewed and commented upon the proposed undertaking.

¹ Letter from Karen Senich (SHPO) to Mark D. Neri (ConnDOT) dated April 24, 2007.



This comment is provided in accordance with the National Historic Preservation Act and the Connecticut Environmental Policy Act.

For further information, please contact Mr. Daniel Forrest, Staff Archaeologist, at (860) 256-2761 or Daniel.Forrest@ct.gov.

Sincerely,

Karen Senich
State Historic Preservation Officer

cc: Colleen Kissane / ConnDOT

APPENDIX G



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

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

SITE INFORMATION

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

SAMPLING INFORMATION (Submit a separate form for each outfall)

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

MONITORING RESULTS

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

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

Avg = _____

STATEMENT OF ACKNOWLEDGMENT

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

Authorized Official: _____
 Signature: _____ Date: _____

Please send completed form to:

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



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

Notice of Termination Form

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

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

Part I: Registrant Information

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

Part II: Certification

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

Note: Please submit this Notice of Termination Form to:

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