

EXHIBIT "F"

STATE OF CT DEPARTMENT OF ENERGY AND
ENVIRONMENTAL PROTECTION AND U.S. ARMY CORPS OF
ENGINEERS APPROVALS

PERMIT

Permit No: 201301999-KR

Municipality: Middletown

Work Area: Mattabasset River off property located at the crossing of the City of Middletown/Town of Cromwell municipal boundary

Permittee: City of Middletown
245 deKoven Drive
Middletown, CT 06457

Pursuant to sections 22a-359 through 22a-363g of the Connecticut General Statutes (“CGS”) and in accordance with and the Connecticut Water Quality Standards, effective February 25, 2011, a permit is hereby granted by the Commissioner of Energy and Environmental Protection (“Commissioner”) to install a new sanitary sewer force main as is more specifically described below in the SCOPE OF AUTHORIZATION, off property identified as the “work area” above.

*******NOTICE TO PERMITTEES AND CONTRACTORS*******

UPON INITIATION OF ANY WORK AUTHORIZED HEREIN, THE PERMITTEE ACCEPTS AND AGREES TO COMPLY WITH ALL TERMS AND CONDITIONS OF THIS PERMIT. FAILURE TO CONFORM TO THE TERMS AND CONDITIONS OF THIS PERMIT MAY SUBJECT THE PERMITTEE AND ANY CONTRACTOR TO ENFORCEMENT ACTIONS, INCLUDING INJUNCTIONS AS PROVIDED BY LAW AND PENALTIES UP TO \$1,000.00 PER DAY PURSUANT TO THE ADMINISTRATIVE CIVIL PENALTY POLICY DESCRIBED IN SECTIONS 22a-6b-1 THROUGH 22a-6b-15 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES.

SCOPE OF AUTHORIZATION

The Permittee is hereby authorized to conduct the following work as described in application #201301999-KR, including 7 sheets of plans sheets 1-5 dated June 19, 2013, sheet 6 dated April 19, 2013, and sheet 7 dated June 20, 2013, and a Horizontal Directional Drilling Monitoring and Operations Plan, submitted by the Permittee to the Commissioner and attached hereto, as follows:

install 134 linear feet of twin 24” diameter Polyvinyl chloride (“PVC”)

sanitary sewer force mains at a minimum of 40' below the substrate in the Mattabassett River Bottom via horizontal directional drilling ("HDD").

SPECIAL TERMS AND CONDITIONS

1. Not later than two (2) weeks prior to the commencement of any work authorized herein, the Permittee shall submit to the Commissioner, on the form attached hereto as Appendix A, the name(s) and address(es) of all contractor(s) employed to conduct such work and the expected date for commencement and completion of such work, if any.
2. The Permittee shall file Appendix B on the land records of the municipality in which the subject property is located not later than thirty days after permit issuance pursuant to CGS Section 22a-363g. A copy of Appendix B with a stamp or other such proof of filing with the municipality shall be submitted to the Commissioner no later than sixty (60) days after permit issuance.
3. The Permittee shall give a copy of this permit to the contractor(s) who will be carrying out the activities authorized herein prior to the start of construction and shall receive a written receipt for such copy, signed and dated by such contractor(s). The Permittee's contractor(s) shall conduct all operations at the site in full compliance with this permit and, to the extent provided by law, may be held liable for any violation of the terms and conditions of this permit. At the work area the contractor(s) shall, whenever work is being performed, make available for inspection a copy of this permit and the final plans for the work authorized herein.
4. The Permittee shall post the attached Permit Notice in a conspicuous place at the work area while the work authorized herein is undertaken.
5. All work authorized in this permit shall not be conducted within 600' of the railroad bridge over the Connecticut River between March 1st through June 30th in order to protect nesting peregrine falcons.
6. Prior to the commencement of the work authorized herein, the Permittee shall post a performance bond or other financial surety in the amount of \$134,000 in favor of the Commissioner in order to secure the performance of all directional drilling work authorized herein in accordance with the terms and conditions of this permit. Prior to posting such surety, the Permittee shall submit to the Commissioner for her review and written approval the form and terms of surety. Such surety shall only be released upon completion of the work authorized herein and upon written approval of the Commissioner.
7. The attached document entitled "Horizontal Directional Drilling Monitoring and Operations Plan" prepared by the Permittee establishes those actions to be taken in the event of a fluid release during directional drilling operations. This plan was submitted to the Commissioner with the application. The Permittee shall maintain a copy of this plan at the work site at all times and shall ensure that all contractors and subcontractors comply with its terms.

8. In the event of a detectable bentonite release, a bentonite containment system described in the “Horizontal Directional Drilling Monitoring and Operations Plan” referenced above, shall be installed and maintained in optimal operating condition throughout the duration of the work authorized herein and shall not be removed until after construction has been completed, the site has been stabilized, all remediation efforts have been completed, and removal of the containment system has been approved in writing by the Commissioner.
9. In the event of a detectable release of drilling fluid, the Permittee shall conduct monitoring for dissolved oxygen levels in the immediate vicinity of the release as well as within a 50’ off-set both upstream and downstream of the release point. Such data shall be provided to the Commissioner for his review.
10. The Permittee shall install the sanitary sewer force main authorized herein to a depth of at least 40’ below the substrate. In the event that the sewer line authorized herein is not installed to the appropriate depth, the Permittee shall immediately contact the Commissioner with a contingency plan to achieve the required burial depth.
11. Except as specifically authorized by this permit, no equipment or material, including but not limited to, fill, construction materials, excavated material or debris, shall be deposited, placed or stored in any wetland or watercourse on or off-site, nor shall any wetland or watercourse be used as a staging area or access way other than as provided herein.
12. All waste material generated by the performance of the work authorized herein shall be disposed of by the Permittee at an upland site approved for the disposal of such waste material, as applicable.
13. On or before ninety (90) days after completion of the work authorized herein, the Permittee shall submit to the Commissioner “as-built” plans of the work area showing all tidal datums and structures, including any proposed elevation views and cross sections included in the permit. Such plans shall be the original ones and be signed and sealed by an engineer, surveyor or architect, as applicable, who is licensed in the State of Connecticut.

GENERAL TERMS AND CONDITIONS

1. All work authorized by this permit shall be completed within five (5) years from date of issuance of this permit (“work completion date”) in accordance with all conditions of this permit and any other applicable law.
 - a. The Permittee may request a one-year extension of the work completion date. Such request shall be in writing and shall be submitted to the Commissioner at least thirty (30) days prior to said work completion date. Such request shall describe the work done to date, what work still needs to be completed, and the reason for such extension. It shall be the Commissioner’s sole discretion to grant or deny such request.
 - b. Any work authorized herein conducted after said work completion date or any authorized one year extension thereof is a violation of this permit and may subject the Permittee to enforcement action, including penalties, as provided by law.

2. In conducting the work authorized herein, the Permittee shall not deviate from the attached plans, as may be modified by this permit. The Permittee shall not make de minimis changes from said plans without prior written approval of the Commissioner.
3. The Permittee may not conduct work waterward of the coastal jurisdiction line or in tidal wetlands at this permit site other than the work authorized herein, unless otherwise authorized by the Commissioner pursuant to CGS section 22a-359 et. seq. and/or CGS section 22a-32 et. seq.
4. The Permittee shall maintain all structures or other work authorized herein in good condition. Any such maintenance shall be conducted in accordance with applicable law including, but not limited to, CGS sections 22a-28 through 22a-35 and CGS sections 22a-359 through 22a-363g.
5. In undertaking the work authorized hereunder, the Permittee shall not cause or allow pollution of wetlands or watercourses, including pollution resulting from sedimentation and erosion. For purposes of this permit, "pollution" means "pollution" as that term is defined by CGS section 22a-423.
6. Upon completion of any work authorized herein, the Permittee shall restore all areas impacted by construction, or used as a staging area or access way in connection with such work, to their condition prior to the commencement of such work.
7. The work specified in the SCOPE OF AUTHORIZATION is authorized solely for the purpose set out in this permit. No change in the purpose or use of the authorized work or facilities as set forth in this permit may occur without the prior written authorization of the Commissioner. The Permittee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this permit, request authorization from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.
8. The Permittee shall allow any representative of the Commissioner to inspect the work authorized herein at reasonable times to ensure that it is being or has been accomplished in accordance with the terms and conditions of this permit.
9. This permit is not transferable without prior written authorization of the Commissioner. A request to transfer a permit shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Permittee's obligations under this permit shall not be affected by the passage of title to the work area to any other person or municipality until such time as a transfer is authorized by the Commissioner.
10. Any document required to be submitted to the Commissioner under this permit or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

Permit Section
Office of Long Island Sound Programs
Department of Energy and Environmental Protection

79 Elm Street
Hartford, Connecticut 06106-5127
(860) 424-3034
Fax # (860) 424-4054

11. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three (3) days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this permit means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.
12. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit shall be signed by the Permittee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and 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, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."
13. In evaluating the application for this permit the Commissioner has relied on information and data provided by the Permittee and on the Permittee's representations concerning site conditions, design specifications and the proposed work authorized herein, including but not limited to representations concerning the commercial, public or private nature of the work or structures authorized herein, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, this permit may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.
14. In granting this permit, the Commissioner has relied on representations of the Permittee, including information and data provided in support of the Permittee's application. Neither the Permittee's representations nor the issuance of this permit shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.
15. In the event the Permittee becomes aware that they did not or may not comply, or did not or may not comply on time, with any provision of this permit or of any document required hereunder, the Permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the Permittee

Draft

Permit #201301999-KR

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shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the Permittee shall comply with any dates which may be approved in writing by the Commissioner. Notification by the Permittee shall not excuse noncompliance or delay and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically stated by the Commissioner in writing.

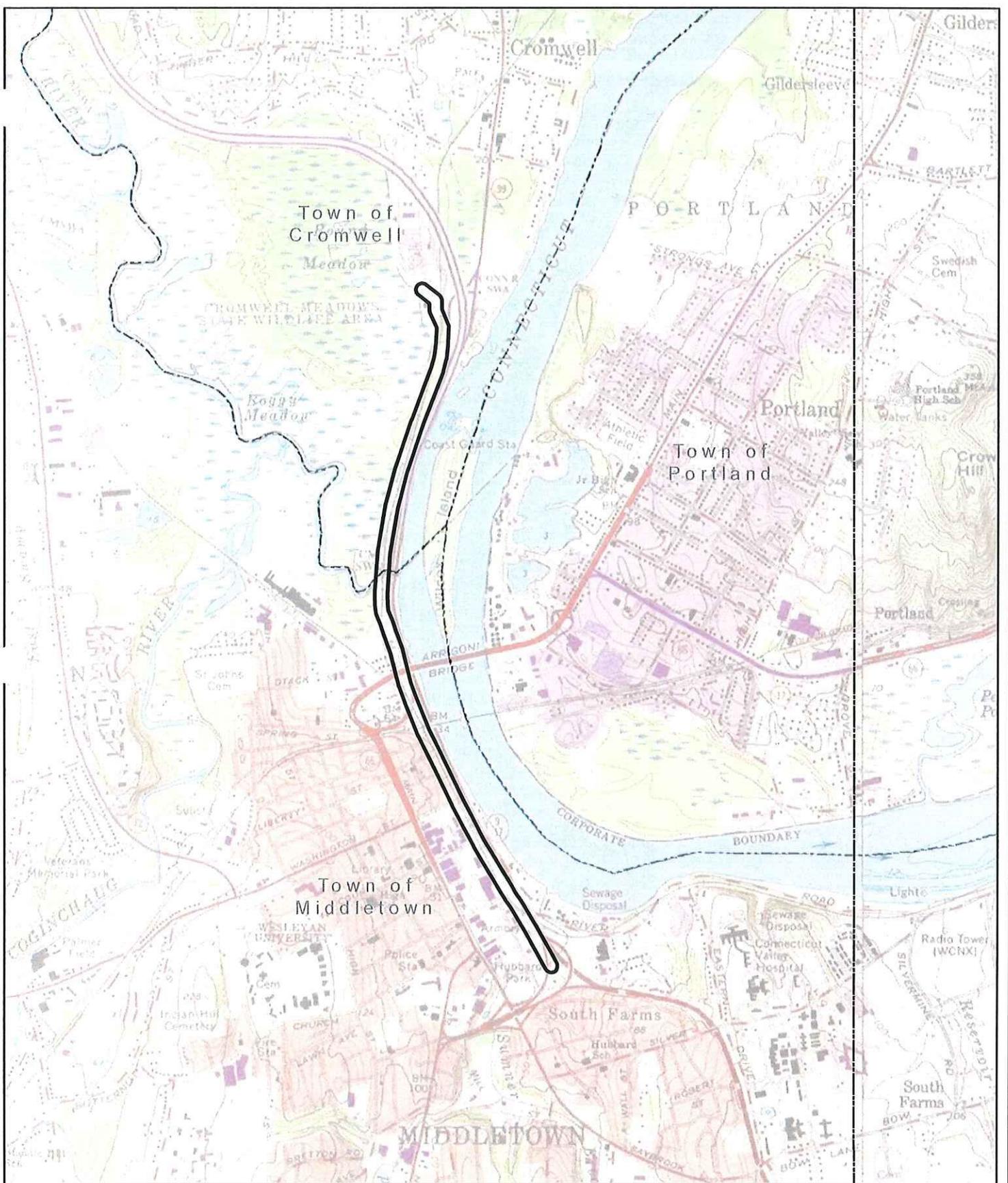
16. This permit may be revoked, suspended, or modified in accordance with applicable law.
17. The issuance of this permit does not relieve the Permittee of their obligations to obtain any other approvals required by applicable federal, state and local law.
18. This permit is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.

Issued on _____, 2013

STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

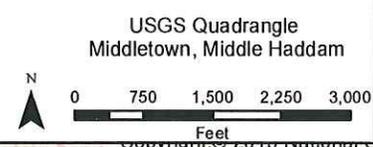
Macky McCleary
Deputy Commissioner

Permit #201301999-KR
City of Middletown

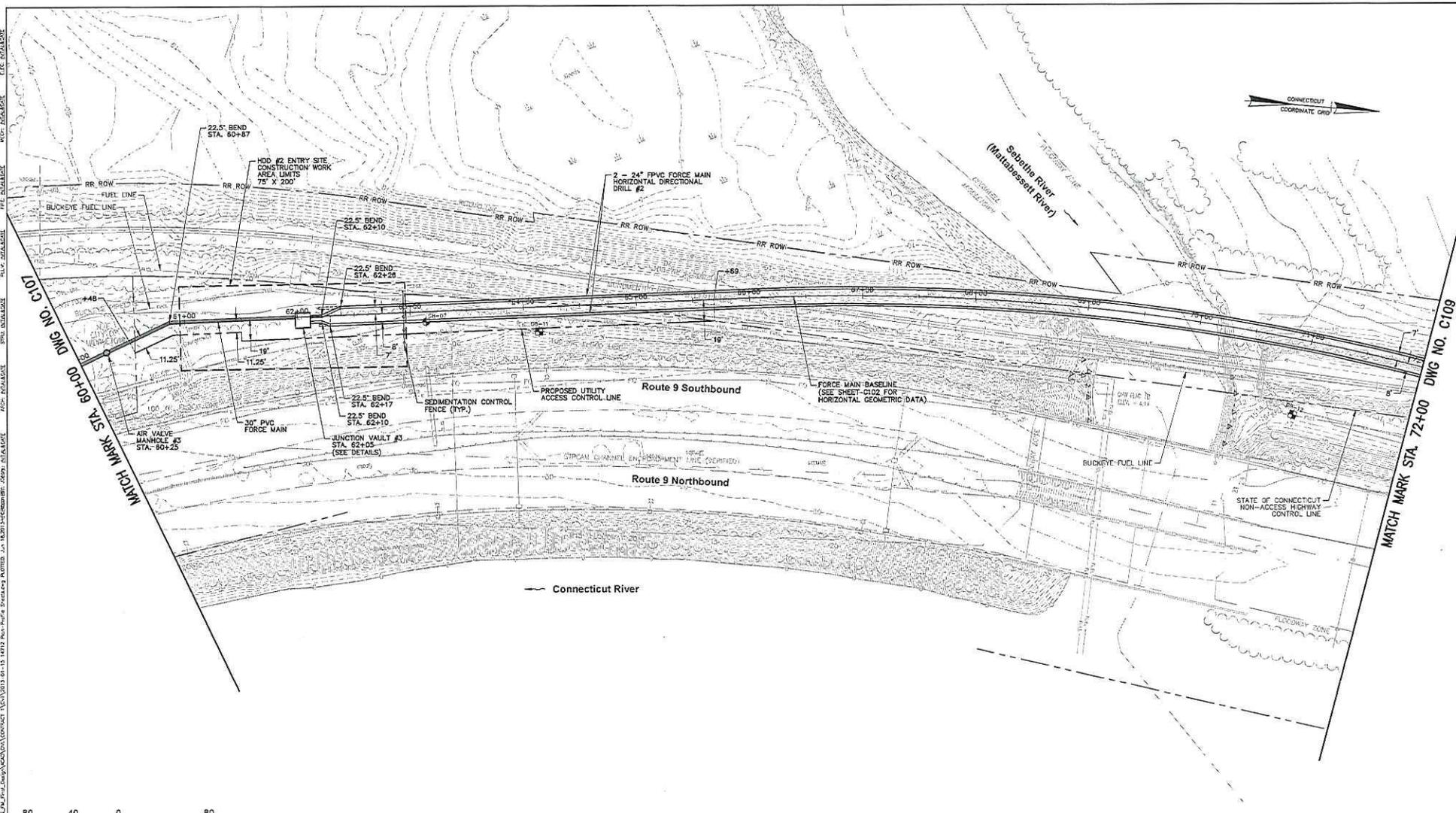


**Mattabassett Regionalization
Project -
Middletown Sewage
Pumping Station,
Force Main and WPCF
Abandonment**

-  USGS Quadrangle Boundary
-  Project Area Boundary
-  Municipal Boundary

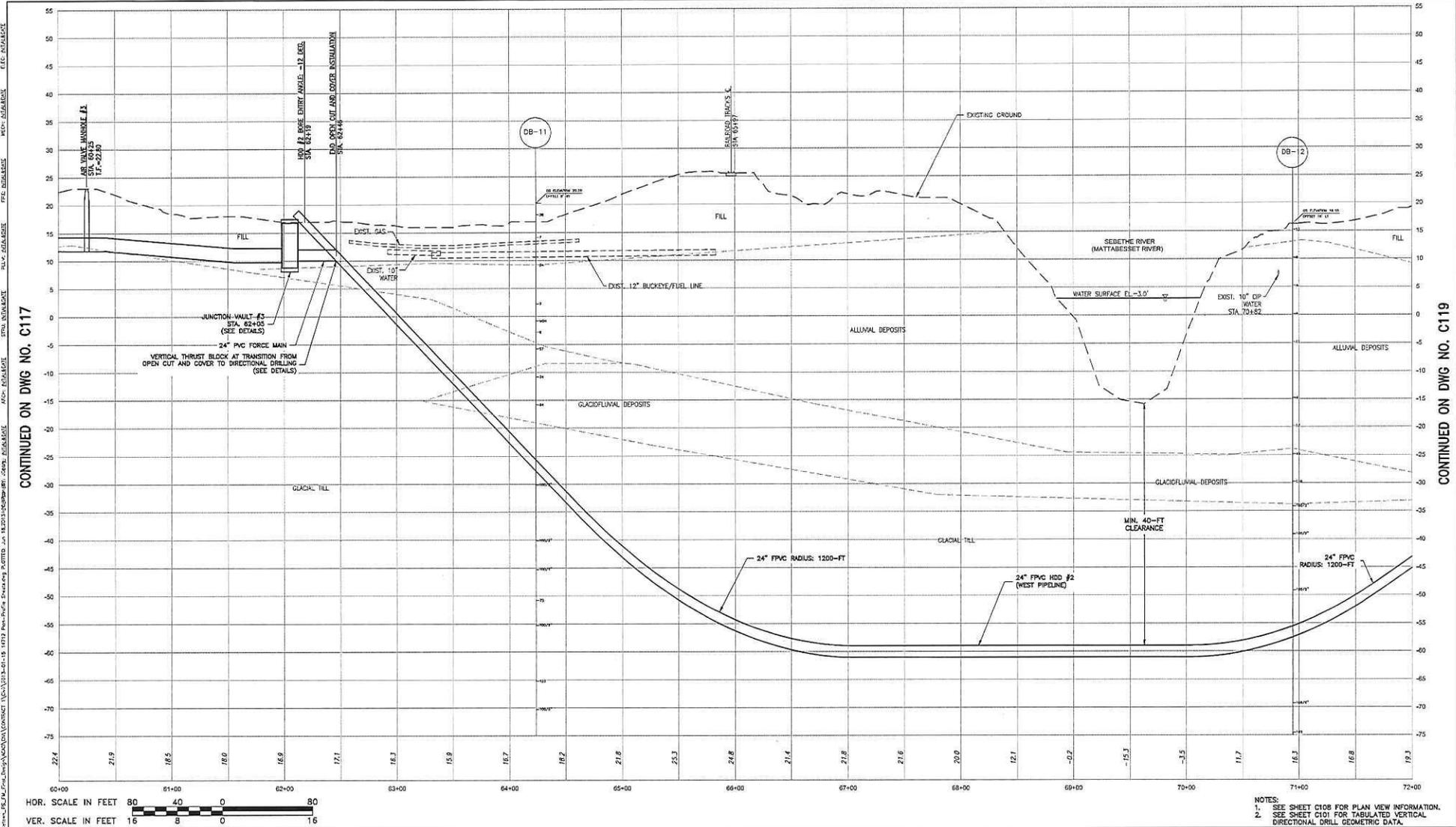


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**Figure 1
USGS Project
Location**
I & T



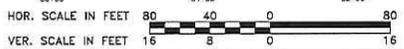
NOTE: SEE SHEET C118 FOR PROFILE VIEW INFORMATION.

<p>THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING</p>	<p>BRIERLEY ASSOCIATES Creating Space Underground 167 S. River Rd., #8 Bedford, NH 02110</p>		<p>2080 Silas Deane Highway Rocky Hill, Connecticut 06067</p>	<p>0 4/25/13 ISSUED FOR DEEP APPROVAL JIG CCC PROJECT NO.: 14712.02</p>	<p>DESIGNED BY: CCC</p>	<p>DRAWING NO. 14712.02</p>	<p>SEWAGE FORCE MAIN MIDDLETOWN, CONNECTICUT</p>	<p>DRAWING NO.</p>	
				<p>1 6/19/13 ISSUED FOR BID JIG CCC</p>					<p>DESIGNED BY: JIG</p>
<p>MARK DATE DESCRIPTION BY APP'D</p>									



CONTINUED ON DWG NO. C117

CONTINUED ON DWG NO. C119



NOTES:
 1. SEE SHEET C108 FOR PLAN VIEW INFORMATION.
 2. SEE SHEET C101 FOR TABULATED VERTICAL DIRECTIONAL DRILL GEOMETRIC DATA.

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING



BRIERLEY ASSOCIATES
 Creating Space Underground
 167 S. River Rd., 4th
 Bedford, NH 02110



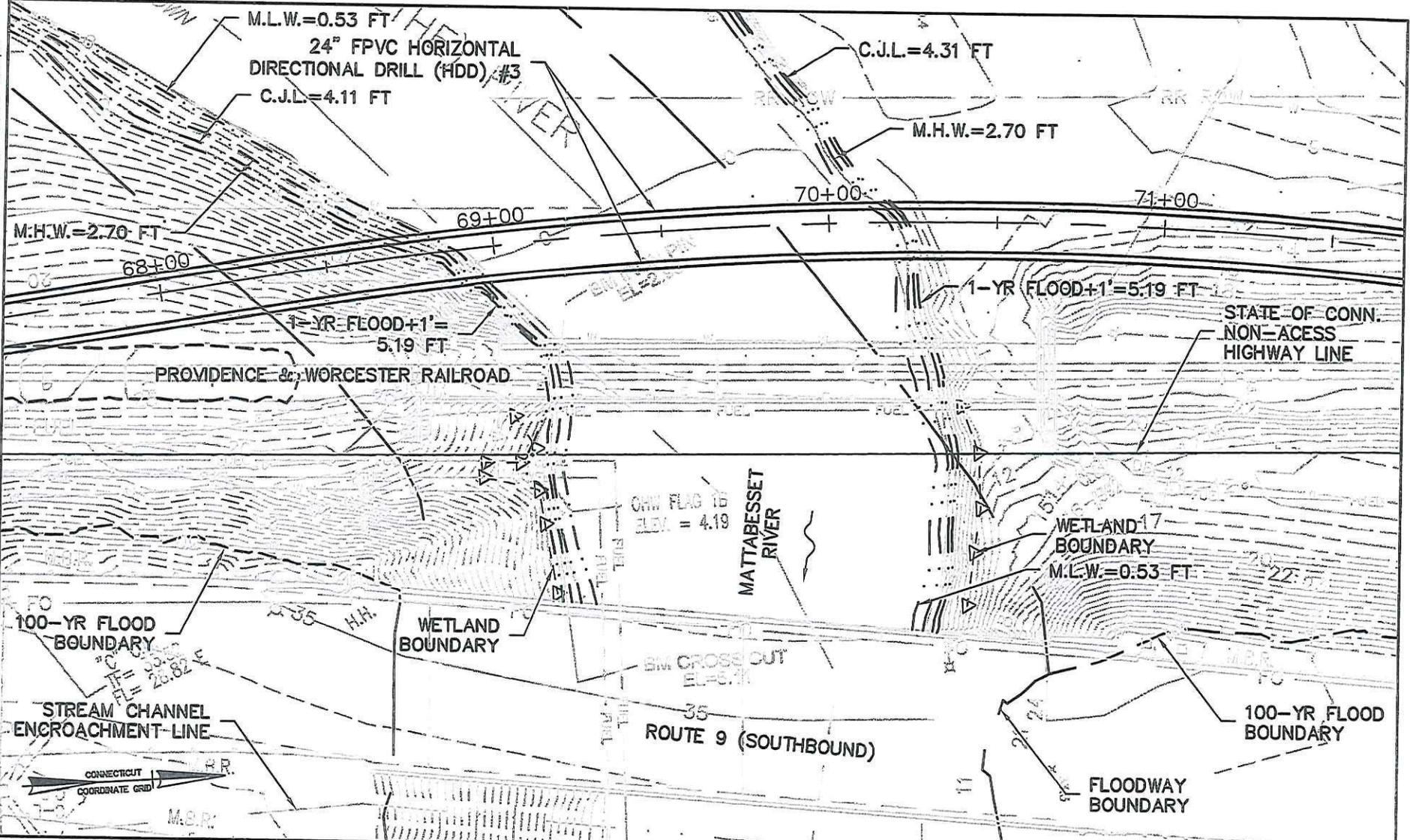
CDR MAGUIRE
 2090 Sitou Deane Highway
 Rocky Hill, Connecticut 06067

0	4/25/13	ISSUED FOR DEEP APPROVAL	JIG	CCC	PROJECT NO.:	14712.02
1	6/19/13	ISSUED FOR BID	JIS	CCC	DESIGNED BY:	CCC
					DRAWN BY:	JJC
					CHK'D BY:	CCC/HJK
					DATE:	06/19/13
					SCALE:	AS NOTED

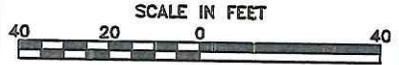
SEWAGE FORCE MAIN
 MIDDLETOWN, CONNECTICUT
 FORCE MAIN BASELINE PROFILE
 STA 60+00 - STA 72+00

DRAWING NO.
C118
 4 of 7
 SHEET 20 OF 61

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\2013-01-15 14712 Plan-Profile Sheets - Permit.dwg Plot Date: Apr 17, 2013-12:52pm



CDR | MAGUIRE
 Architects / Engineers / Planners
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067



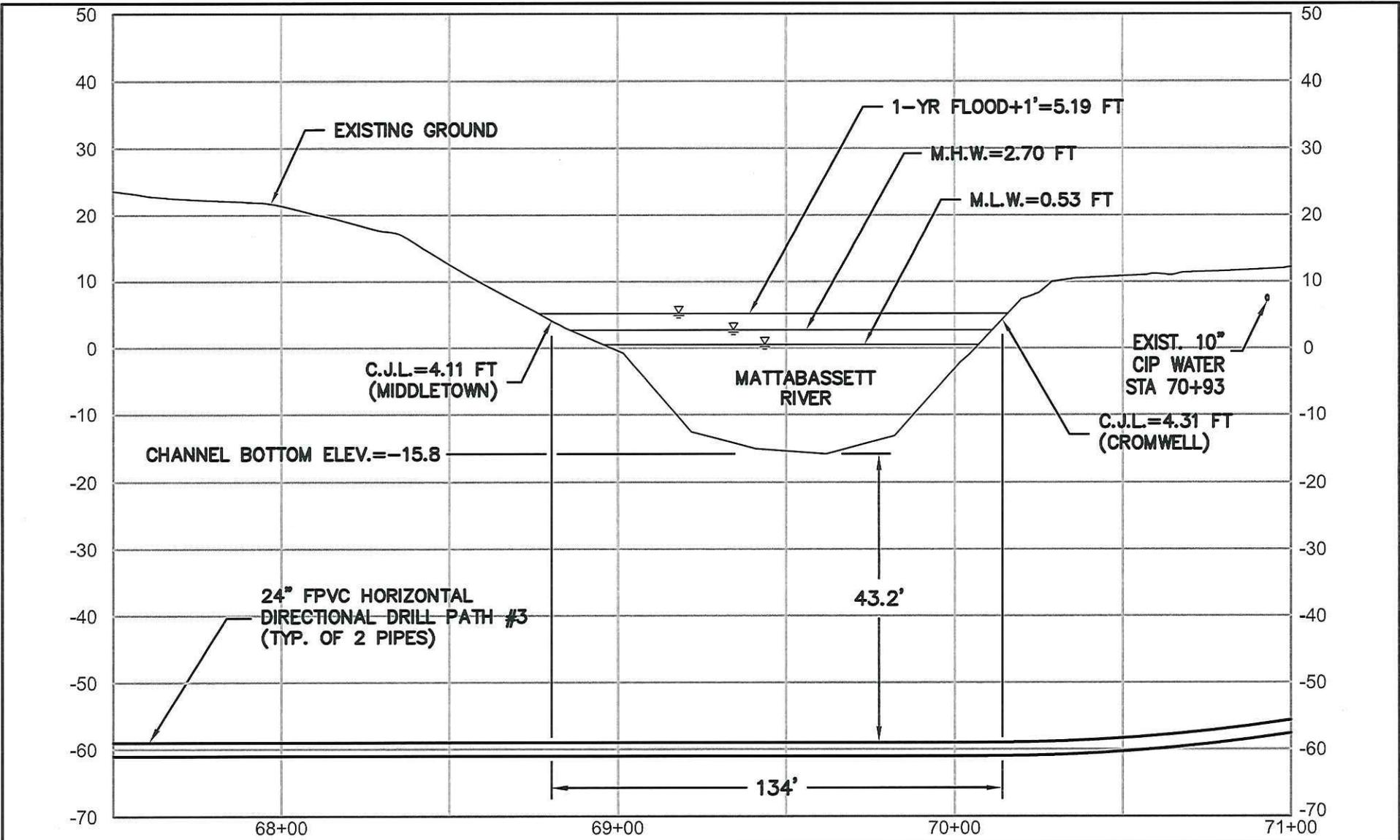
WATER AND SEWER DEPARTMENT,
 CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN

SHEET TITLE: PLATE 3

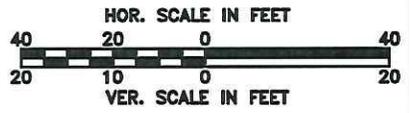
PROJECT NO.: 14712.02
 DRAWN BY: JG
 CHK'D BY: MK
 DATE: 04/19/13

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CDR MAGUIRE
 Architects / Engineers / Planners
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067



WATER AND SEWER DEPARTMENT,
 CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN

SHEET TITLE: PLATE 4

PROJECT NO.: 14712.02
 DRAWN BY: JIG
 CHK'D BY: MJK
 DATE: 06/20/13

7 5 7

Applicant: City of Middletown

**Mattabassett Regionalization Project
Middletown Sewage Pumping Station, Force Main and WPCF Abandonment
Contract 1: Force Main**

**ATTACHMENT M-2
HORIZONTAL DIRECTIONAL DRILLING
MONITORING AND OPERATIONS PLAN**

City of Middletown (Applicant) – OLISP Structures & Dredging Permit

Mattabassett Regionalization Project- Middletown Sewage Pumping Station, Force Main and WPCF Abandonment

Contract 1: Force Main

Mattabassett (Sebethe) River And Sumner's Creek

HORIZONTAL DIRECTIONAL DRILLING MONITORING AND OPERATIONS PLAN

PROJECT OVERVIEW

The project involves horizontal directionally drilling (HDD) approximately two thousand seven hundred (2,700) feet of 24-inch SDR 21 Fusible PVC (FPVC) sanitary force main (pipe) beneath the Mattabassett (a.k.a. Sebethe) River, at the north end of the project; and, approximately three thousand five hundred twenty-six (3,526) feet of 24 inch SDR 21 FPVC sanitary force main pipe beneath Sumner's Creek at the south end of the project. The physical length of these pipes *actually beneath the creek and the river* is less than the full length of the proposed drill path as shown on the Plates and Plan sheets contained in Attachment I. In fact the plates for the OLISP Structures and Dredging Permit only show those portions of sanitary force main underlying the OLISP regulated area which is tidal and navigable waters. For each HDD, the majority of the alignment is located outside OLISP regulated boundaries for the Structures and Dredging permit.

There is a third (middle) HDD area located in downtown Middletown between DeKoven Drive and Route 9. However, whereas the Sebethe River and Sumner Creek are delegated as environmentally sensitive areas, the downtown area is not so delegated. Nevertheless, the same degree of care, precautions and planning discussed in this plan will be exercised for all three (3) horizontal directionally drilled areas under this project. The downtown area HDD is not further

discussed in this Monitoring and Operations Plan, other than to say that it is the preferred method of construction because it avoids having to open cut around or beneath an active pedestrian tunnel, beneath the Providence and Worcester railroad yard and beneath Hartford Avenue. There is also insufficient available corridor space to install the force main within the City's DeKoven Drive right-of-way. The Engineer has determined it will require two twin 24 inch sanitary force mains in the HDD areas to meet the design conditions for average flow and peak flow and to allay long term operational concerns.

Horizontal directional drilling (HDD) is the preferred method of construction for the Sebeth River and Sumner's Creek pipe sections. The CTDOT and Providence and Worcester Railroad Company Inc. have been consulted, and neither entity was receptive to allowing the sanitary sewer force main pipe to be suspended from their respective bridges spanning the mouth of the Sebeth River. Therefore, in both instances the FPVC pipe will be connected to "open cut and cover" 30 inch PVC pipe that will connect to the HDD portions of the project. In addition to the piping the plans indicate buried junction chambers. Their purpose is to facilitate the transition between the two 24-inch sanitary force main pipes and the single 30 inch sanitary force main pipe that will be installed by open cut and cover. The junction chambers also contain isolation valves that would allow either of the twin sections of the HDD installed pipe to be isolated. The isolation chambers are completely buried and accessed through a hatchway. They are located outside of the OLISP regulated areas but within the 100 year flood plain.

The aspects of the project relevant to the Horizontal Directional Drilling (HDD) and to this Operations and Monitoring Plan involve crossing two environmentally sensitive areas, Sumner's Creek and Sebeth River, as previously stated. This Horizontal Directional Drilling and Monitoring and Operations Plan is therefore restricted to discussion of these two project areas. A USGS-based Project Locus is provided in Figure 1 in Attachment I of the OLISP Structures and Dredging Permit application and Attachment G of the Flood Management Certification application. Plan and profile sheets and/or plates, showing construction within these two areas is included in these permit applications.

SPECIAL DESIGN CONSIDERATIONS

Though unlikely, there are environmental concerns associated with a potential release of drill fluid to the ground or river bottom during the HDD process. Special design and construction considerations have been incorporated into the HDD construction documents and the Monitoring and Operations Plan to mitigate the concerns for environmental impacts due to an uncontrolled release. For this discussion, hydraulic fracturing is defined where the borehole pressure exceeds the soil stress (pressure) around the HDD bore hole, resulting in a "tearing" crack developing in the soil as the soil is put into tension. The crack propagates away from the bore in a pattern that is dependent on the ground stress and geology in the immediate vicinity of the borehole. The crack is typically located in the immediate vicinity of the drill bit and occurs with some frequency in the entry and exit portions of a bore in soil because of shallow soil cover. If the crack reaches the

ground surface or river bottom, drill fluid is released into the environment as an “uncontrolled release”. The following summarizes project design and construction mitigation considerations for an uncontrolled release.

Drill Path Design – Mitigation for a soil hydraulic fracturing and uncontrolled release includes an assessment of soil stress (depth of soil cover and soil properties over the bore path), followed by a bore path that is designed to provide an adequate factor of safety against hydraulic fracturing and uncontrolled release. The bore path shown on the PERMIT APPLICATION appended plan and profile sheets for Sumner’s Creek and Sebeth River have been developed as the shallowest depth of the bore for a reasonable factor of safety against hydraulic fracturing, and an uncontrolled release, and assume certain controls on the drill fluid density and pressures in the bore.

The bore ends are the most vulnerable as the bore path must pass through these shallow zones to the design depth. Overburden casing will be used in these situations as the bore ends will be passing beneath environmentally sensitive areas. At this time, the design indicates placing approximately 50 feet of protective steel casing at each end of the bore which should result in a minimum depth of cover over the bore as shown on the contract plan and profile sheets.

Sumner’s Creek - The proposed drill path is located a conservative depth below the stream bottom. The depth of the bore is driven by the pilings supporting a box culvert constructed by the Connecticut Department of Transportation (CTDOT) in the 1950s which carries Sumner Creek under Route 9. Subsurface investigations indicated that rock is relatively shallow at the south end of the project. The depth of the bedrock precludes the placement of the bore in soil. Partial placement in rock increases the risk of an uncontrolled release on land or into the river because of the extended time required to start a reliable hole into the rock. The proposed drill path crossing the creek and the clearance between the proposed bore path and the creek bottom are indicated on the profile section. The drill path is greater than forty (40) feet below the existing channel bottom which was determined from CTDOT record drawings for the construction of the 24 x 24 box culvert extension.

Sebeth River - The proposed drill path is located a conservative depth below the river bottom. The alignment of the bore is driven by the need to avoid the battered steel piles supporting the Route. 9 southbound and northbound bridge. Extensive geotechnical field investigation preceded the design phase of this project. These subsurface investigations indicated that rock is deep at this north end of project allowing the bore to be completely within the well defined subsurface soils. This decreases the risk of an uncontrolled release on land or into the river because of the relatively shorter time required to start a reliable hole into soil versus rock, especially with the proposed protective steel casing at the entry and exit bores. The proposed drill path crossing beneath the river and the clearance between the proposed bore path and the river bottom are indicated on the profile section. The drill path is greater than forty (40) feet below the existing

channel bottom which was identified from an independent bathymetric study by United International Corporation working for CDR Maguire.

Overburden Casing - There is a transition zone between the deep portion of these two bores and the exit points at the entry and exit site areas on both sides of Sumner's Creek and the Mattabassett River. This transition zone is in an area where a relatively low excess (relative to the geotechnical calculations) annulus pressure in the bore can result in hydraulic fracturing and an uncontrolled release. To minimize the risk of hydraulic fracturing and an uncontrolled release in this area, the contract documents will require that protective steel casing be placed to a depth of approximately 50 feet along the bore path, which will result in approximately 100 feet of casing for each of the two bores. The steel casing will be driven prior to the pilot bore process and is an effective method for containing drill fluids in the more shallow entry and exit zones.

In-situ Monitoring - As discussed earlier, the proposed drill path passes under two environmentally sensitive areas that are regulated by OLISP. The Mattabassett River is a navigable waterway with a potential for private traffic. Historical methods for monitoring for potential hydraulic fracturing in the river include employing a vessel with side scan radar, or other methods such as rhodamine dye tracer. These methods are reactive, however, and only provide indications after an uncontrolled release has occurred. Instead, this project proposes a pro-active approach; a drilling Monitoring and Operations Plan utilizing drill fluid properties and pressures to identify and mitigate drill fluid pressure during drilling operations. This method provides early indicators of a potential hydraulic fracturing and uncontrolled release so it can be prevented before it can occur.

Hydraulic fracturing can not occur unless drill fluid pressure exceeds the confining pressure provided by the soil envelope surrounding the bore hole. In nearly all cases, the highest pressure in the drill fluid is in the immediate proximity of the drill bit. This soil confining pressure at any location can be relatively accurately predicted. Drill fluid applies pressure to the borehole inner wall by a combination of density and depth and dynamic pressure required to transport the drill fluid with cuttings out of the bore hole where it is collected and reconditioned (so it can be reused). The drill fluid monitoring program involves measuring the drill fluid pressure close to the drill bit and adjusting the drill fluid properties to maintain the pressure below that predicted to cause hydraulic fracturing of the soil. In order to implement the Fluid Monitoring Program, a basic fluid composition program that matches the bored soil conditions is constructed. Soil conditions are evaluated using data obtained through the project specific, extensive geotechnical soils investigative phase of work previously completed and further gathered during construction. Geotechnical soil properties have already been evaluated from a composite of blow counts, visual inspection, and laboratory testing of soil properties. From a base composition, the critical properties of the fluid are defined along with a range of acceptable property variance to allow for fluctuations. Also defined at this point is the expected Annular Pressure Curves along with its' acceptable range of variance. As drilling is commenced, the next phase of the program is to

monitor, in real-time, the changes in fluid composition and the drilling pressures being applied to the annulus of the bore hole.

The ability of the drilling operation to maintain the expected pressure curve can now be used as a monitoring and operational control tool to establish drilling efficiency, as well as formation reaction to the drilling process. Fluctuations in annular pressure measurements are used to establish trends. Sharp, spiking pressure conditions or slower, more gradual, changes can provide indications as to the nature of a developing trend. Fluctuations caused by bore hole instability or insufficient bore hole cleaning will tend to be more dynamic and amplified. Fluctuations as a result of systematic developments (such as changing fluid properties) may be more gradual with less amplitude.

Also incorporated into the Fluid Monitoring Program is a rig function monitor and recorder. This system, called Electronic Drilling Recorders (EDR), will allow for several critical measurements involving the drilling rig and fluid circulating system to be continually captured and recorded. Total drilling fluid volumes are monitored by this system including warning alarms if unacceptable fluctuations are encountered. Maximizing the effectiveness of the Fluid Monitoring Program, will be a guideline of established Safe Drilling Practices tailored around the projects specific soil and operating conditions. This Plan will be prepared by the successful Contractor and submitted for Engineering review. The final plan which incorporates the Engineer's comments can be sent to CTDEEP if requested.

Quality Assurance - The contractor shall be required to conduct operations in general accordance with "*Horizontal Directional Drilling Good Practices Guidelines*" published by the HDD Consortium, dated May 2001 and as modified for specific conditions related to this project. This is a copy righted document and so is not included in the application. The contractor shall also be required to have a Drill Fluid Specialist on-site during drilling operations to monitor drill fluid pressure in the borehole in the vicinity of the drill bit, drill fluid properties going down the hole and returning from the hole, and be responsible to adjust the drill fluid properties should pressure measurements indicate that problems carrying unacceptable risk may occur during drilling operations. This procedure will be further specified in the Contract Bid Documents.

Drilling Fluid has many properties designed to successfully advance the boring. For this project, the drill fluid will provide the following functions:

- Suspend and transport the drill cuttings from the boring and then release the cuttings at the mouth of the bore hole or during the drill fluid reprocessing operations.
- Clean and remove drill cuttings from the drill bit
- Cool the tracking electronics in the drill head
- Provide power to drive the mud motor, if used (we do not anticipate the need for a mud motor on this project)
- Provide drill fluid jet assist to supplement the soil cutting capability of the drill bit

- Provide a structural “mud cake” for supporting the bore hole wall
- Provide a barrier to reduce infiltration of external groundwater into the bore
- Provide a barrier to keep the drill fluid in the bore hole
- Provide lubrication for the drilling equipment and product pipe pull
- Provide a low permeability seal along the bore annulus to prevent long-term migration of other fluids along the bore path.
- Provide a fill for the bore annulus between the soil and the installed product pipe.

The Drill Fluid Specialist will develop a drill fluid mix and determine the properties of the mix to maintain optimal functional performance. Drill fluid properties include the density, viscosity, bentonite content and pH. The drill fluid mix and properties and pressure in the bore will be recorded for comparison against engineering predicted maximum pressures that may be tolerated to prevent hydraulic fracturing and uncontrolled release. Materials Safety Data Sheets (MSDS) and product data sheets for all additive materials used in the drill fluid shall be maintained on site and made available to the permitting agent as requested. The Contractor will be limited to additives which are NSF 61 and approved for potable well drilling practice. The drill fluid specialist may need to adjust the mix as conditions warrant maintaining the functional qualities of the drill fluid.

Drill fluid design requires an understanding of the drill fluid properties that permit the fluid to do the designed tasks while addressing potential issues associated with hydraulic-fracturing and a resulting uncontrolled release. The Drill Fluid Specialist will be required to know how to design the properties of the fluid for the specific drill system to result in just enough pressure remaining at the drill bit in the bore annulus to move the drill fluid and cuttings up the bore hole without resulting in excess pressure that would fracture the bore hole wall. The Drill Fluid Specialist in unison with the Owners' Representative shall determine appropriate bore hole annulus maximum pressures to prevent hydro-fracturing.

Similar pro-active drill fluid management programs have been successfully implemented on other environmentally sensitive projects. The intent is to obtain early data that is relevant to hydraulic fracturing and to use the data to timely adjust the drilling method to mitigate a potential uncontrolled release from occurring. The program shall consist of drill fluid properties monitoring and drill fluid pressure monitoring in the bore annulus in the vicinity of the drill bit. Pressure increases can result from several sources, including: increased drill fluid density resulting from poor drill fluid design or poor fluid “cleaning” (re-circulated fluid) methods; loss of drill fluid suspension properties by drill fluid chemistry changes, resulting in the inability to clean the drill cuttings from the bore; failure to break the thixotropic (solid forming) condition of drill fluid that has stopped moving for a period of time; and/or insufficient pump capacity to maintain sufficient up hole velocity for removing the drill cuttings. These parameters and pressures will be monitored continuously and changed to mitigate the potential for uncontrolled release during the drilling process. An envelope of maximum and minimum pressures will therefore be predetermined for each specific borehole pathway.

Construction specifications will state that the contractor stay within this envelope of pressure or pressures modified during the construction by the Drill Fluid Specialist and the bore designer. This ability to monitor and change drilling and drill fluid conditions is proactive, identifying and eliminating the conditions from occurring that could lead to hydraulic fracturing and uncontrolled release.

Inadvertent drilling fluid returns have become an increasingly significant issue for a well conceived and planned HDD operation because of environmental concerns. Inadvertent returns of drilling fluid into environmentally sensitive areas can negatively impact fish and wildlife habitats. However, drilling fluid is comprised primarily of water and approximately 1 to 3% bentonite, a naturally occurring clay mineral, so it is, in most circumstances, a non-toxic, benign fluid. Often, inadvertent fluid returns are more akin to an eyesore than an environmental catastrophe. Regardless, they can be detrimental, and therefore the risk of inadvertent fluid returns should be reduced through competent design and good drilling practices such as are being discussed. Inadvertent fluid returns are often referred to as hydro fractures. However, not all of these instances are actually caused by hydro fracture. Other sources of inadvertent fluid returns include existing fissures in the soil, preferential seepage paths along piers, piles, or other structures, and open-graded, loose gravel or rocks above the bore. Hydraulic fracturing is a specific occurrence in cohesive soils when the pressure of the drilling fluid exceeds the tensile strength and confining stress of the surrounding soils and the excess pressure fractures the soil around the bore, allowing the drilling fluids to escape the annulus. Plastic yielding can occur in cohesive and non-cohesive soils, and represents the condition where fluid pressures exceed the shear strength and confining stress of the soil. Plastic yielding results in fluid losses to the surrounding formation. The phenomenon can be accurately modeled with the cavity expansion model.

Monitoring and Operations Plan - Based on the special design considerations described, the following Monitoring and Operations (M&O) plan has been developed to identify parameters that precede a hydraulic fracturing; design and implement construction procedures to mitigate those parameters; and, a plan to contain and cleanup a potential release. The Monitoring and Operations Plan has been divided into five drilling conditions that are described in the following paragraphs.

Condition 1 – Normal Directional Drilling Conditions

- Normal Drilling – no uncontrolled release
- Entrance/Exit pit drill fluid removal and reconditioning
- Routine drilling data collection
- Routine monitoring for bentonite release

The contractor shall be required to maintain full drill fluid circulation within the bore to the best degree possible to properly perform the drill fluid functions. The following information shall be recorded and made available to the regulatory agency and site owner and the engineering inspector on site during the drilling operations.

The Driller shall maintain a drilling log with the following minimum recorded information:

- Monitor and record periodically the approximate drill fluid pump rate and pressure and relative return percentage during drilling of each rod.
- Start/Stop times and dates for each rod
- Approximate thrust and rotation hydraulic pressures for the drill rod
- Approximate location of the drill head
- Drill string configuration and attached equipment
- Equipment breakdowns and time duration of breakdown

The Drill Fluid Specialists shall be required to monitor and record the drill fluid properties of both down hole and return fluid such as density and viscosity and possibly chemistry and the pressure of the drill fluid in the bore annulus in the immediate vicinity of the drill bit. These values shall be compared to the design parameters as determined by the Drill Fluid Specialists for compliance with design parameters.

The HDD Contractor shall be required to provide a person to monitor ground surface conditions along the bore path on land and on the river bottom where it is visible using a motor boat and sight tube. This will work up to about ten feet of water if there is not a lot of turbidity from a storm or from boating traffic. There will be a motor boat in the river during drilling. Full time access to a boat will be necessary for the contractor though the boat may only be used intermittently and possibly for ferrying personnel across the river. There obviously will not be a

need for a boat for the Sumner's Creek crossing as it is anticipated that the water depth will be negligible.

If there is a loss of circulation of more than 50% for 30 minutes then proceed to Condition 2.

Condition 2 – Loss of Circulation

- No returns to the entrance/exit pits or less than 50% returns for a period of 30 minutes.
- Stop drilling and pumping drill fluids
- Assess monitoring data from Condition 1 for indications of hydro-fracturing
- Visually inspect the ground surface or river bottom along the drill path between the drill rig to a distance of 100 feet past the drill head or to a water depth of approximately 10 feet using a sight tube and boat for signs of drill fluid release. It is anticipated there will be a team of SCUBA divers or boat with sight tube ready to go
- Implement procedures to restore circulation based on the information available at the time
- Restart drilling and attempt to restore drill fluid circulation using the developed procedures. If drill fluid circulation is re-established and no drill fluid release is visibly detected return to Condition 1. If drill fluid loss is determined to be a geological function or the result of a cavity, then assess conditions with the Owner, Engineer and the regulatory agency and determine if drilling may continue.

There could be many causes for the loss of drilling fluid including but not limited to: encountering a void such as a pipe, drill fluid density increasing to an extent that it can not be pumped from the hole and has started to hydro-frac the bore hole, or bore hole annulus blockage preventing circulation.

Should a loss of circulation occur, the Contractor shall be required to notify the Engineer and/or the designated Owner's representative of the situation and review the Condition 1 monitoring data. The Engineer shall notify the regulatory agency if an uncontrolled release is located. If the cause can not be determined and no uncontrolled release location can be observed, then implement drilling steps to restore circulation. These steps may include opening the hole mechanically, removal of drill tools without drill fluid circulation and re-drilling with drill fluid circulation, and adjusting the drill fluid properties. The contractor may also elect to pump a hole sealant into the hole to stop a leak from voids or fissures in the ground. If circulation is re-established then the driller can return to Condition 1. The thixotropic drill fluid is expected to begin to gel as soon as it stops moving. The gel strengthens quickly depending on the mix and can reach several psig of strength within a few hours and 5 to 8 psi after a weekend. We envision 6 working days per week during the HDD drilling operation.

Condition 3 – Drill Fluid Pressure and/or Properties Not Within Design Parameters

- Drill fluid returns but annulus monitoring pressure and/or properties are not within the design parameters for the drill fluid
- Assess the deviation history of the drill fluid properties and increase frequency of annulus monitoring pressure
 - Situation 1. The drill fluid monitoring demonstrates slow changing to out of design parameter values. Stop drilling, adjust drill fluid to design parameters and continue drilling.
 - Situation 2. Rapid change in drill fluid parameters or annulus monitoring pressure. Stop drilling immediately. Clean hole and adjust drill fluid parameters until drill fluid fully returns to drill entry/exit pit and drill fluid properties are restored.
- Once the drill fluid parameters are within design limits and the drill fluids are again returning, return to Condition 1.

There are many possible causes of the monitoring data exceeding design limits. The two possible trends are: 1) slow change in parameters and pressure, and, 2) rapid change in pressure. Slow changes indicate a gradual change in the drill fluid properties or a gradual restriction of the bore annulus. Once the pressure reaches a critical value then the pressurized drill fluid will hydraulically fracture the bore hole. Causes of this type of failure include incorrect drill fluid chemistry for the ground, poor cleaning system performance, insufficient capacity of the drill fluid pumping system, ground/groundwater contamination that changes the drill fluid chemistry, and inappropriate drill method. Rapid changes are typically caused by rapid restrictions in the bore annulus such as a collapse or sudden inflow of material when the drill encounters an unstable soil such as sand with an artesian groundwater head or the mud cake has insufficient strength to maintain a stable bore hole wall. These restrictions build rapidly, sometimes within seconds and if uncorrected will lead to hydraulic fracturing of the bore hole.

The proposed monitoring system and program provides early data and data trends that allow timely modification of drilling methods and drill fluid parameters, thus preventing hydraulic fracturing or an uncontrolled release prior to excessive pressures being developed in the bore annulus. Should the monitoring system detect a change in one of the monitoring parameters then the drilling should be stopped and the situation assessed to determine the cause of the change and an appropriate level of mitigation applied. Once the mitigation has been completed to the satisfaction of the Engineer, then drilling can commence under Condition 1 monitoring.

Condition 4 – Drilling Fluid Release and Remediation

If a drilling fluid uncontrolled release has been detected, and circulation can not be restored, or the loss explained and remediated, then the Contractor will implement the following sequence of operations:

1. Shut down the drilling operations. It can take from minutes to an hour for the drilling fluid to stop flowing. The time will depend on the length of time that the circulation loss has been lost. If caught early then it can stop flowing in a matter of minutes. If it has continued and the ground has developed a reservoir, then it may be 10 to 30 minutes depending on stresses in the ground and the volume of fluid pumped. This is not expected to happen with this program. We would anticipate minutes rather than an hour. Place containment around the uncontrolled release area. Land release containment would be straw bales and possibly excavating a hole at the uncontrolled release location to facilitate pumping the fluid out for restoration. River bottom containment would likely involve using a silt curtain in tranquil water or a metal open top and bottom box that would be dropped over the release area for containing the flocculated drill fluid so it could be removed by pumping into a tank truck for disposal. The contractor, Drill Fluid Specialist, and drill bore designer shall assess the conditions and select a procedure previously discussed with the Engineer for proceeding and remediation.
2. Two drilling procedure alternatives are available:
 - a. Drill past the problem area for some distance without the use of drill fluid then attempt to restore circulation without further fluid loss. If this alternative (drilling past the problem area) restores circulation and does not result in additional hydraulic fracturing/fluid loss then proceed with drilling under Condition 1 - Monitoring.
 - b. Place a commercially available bore hole sealer in the hole in accordance with the manufacturer's recommendations and reassess drilling procedures. Proceed to Step 3.
3. Shut down drilling operations and place bore sealing materials in accordance with the manufacturer's recommendations. Pull the drill head away from the bottom of the hole or remove from the hole. Let the bore sit until the bore seal has activated in accordance with the manufacturer's recommendations.
4. Following the shutdown, turn the rod rotation on without pumping any drill fluid. Rotate the drill rods and move the drill rods up and down the bore to breakdown the drill fluid thixotropic (solid forming) condition. Do this for a minimum of 5 minutes before turning on the drill fluid pump.

5. Turn on the drill fluid pump and set to low pressure and volume while the drill rods are being rotated. If circulation is restored and the hydraulic fracturing or uncontrolled release has stopped, then drilling may continue under Condition 1 monitoring.
6. During any shutdown, the driller may rotate the drill to prevent elevated gel strengths from developing in the drill fluid from lack of movement. Drill fluid can only be circulated if the shutdown was for reasons other than drill fluid loss.
7. The contractor may attempt to seal a hydraulic fracture up to six times prior to making a decision to continue drilling under approved modified procedures or to reroute the drill. Alternatively, the contractor may grout the bore hole to seal the crack then drill through the grout to continue the bore.
8. If the decision is made to reroute the drill head because an acceptable solution can not be achieved, then the plans and procedures shall be discussed between the Owner, Contractor, Engineer, DEEP and the USACE.

Rerouting is defined as complete abandonment of the bore path and relocating the bore path in the problem area. The abandoned borehole will be grouted with cement and bentonite mixture or an approved bentonite based environmental hole seal to seal a potential pathway for the rerouted drill fluid. Approvals for rerouting shall be obtained from both the DEEP and the USACE.

Condition 5 – Drill Fluid release but drill fluid loss not detected

If a drill fluid release has been detected but circulation has been restored or was never lost, then the contractor shall implement the following sequence of operations.

1. If the contractor is able to contain and control the release with the containment, collection system and removal equipment placed into operation at the site subsequent to the release, then drilling may continue with the approval of the DEEP. However, if at any time, the amount of material being released exceeds the rate of removal being achieved by the containment, collection and removal system, then the drilling operations shall be suspended until the release can be brought back under control by the Contractor.

Fluid Release Action Plan: The Contractor shall be required to implement the following action plan in the event that a drilling fluid release is detected.

1. Notify the Owner or the Engineer about the release. The Owner or Engineer will be responsible for notifying the following:
 - a. DEEP
 - b. Owner (CTDOT) if applicable (e.g., ground surface release within the highway non access control line)
2. Locate and mark the origin of the release using GPS and shore stakes for a river release.

3. Monitor the release area and the remaining drill path and determine the boundaries of the release area. Use divers if necessary.
4. Investigate down-current areas to assess potential impacts
5. A dive team shall be assigned to the release area to monitor the status and extent of the uncontrolled release. The area will be confined to minimize the area of impact and facilitate the removal of deposited material. The dive team shall take measurements of the horizontal limits and depth of deposition of the drilling fluid. These measurements shall be made at slack tide. The dive team shall be monitoring the release point when bore hole sealing material is pumped into the borehole and during startup periods following shutdown of drilling operations for signs of renewed hydraulic fracturing.
6. The Contractor shall maintain on-site, and have ready at all times, at least 200 feet of bentonite containment fencing with straw bail backup and one underwater containment boom such as a trench box. This fencing, straw bails, and underwater containment box shall be assembled and ready for immediate deployment when a release, failure, or breach is detected. As warranted by site conditions, the fence shall be installed within the first eight hours of a detected release. The determination of deployment will depend upon the location of the release. For example, it may not be practical to install fencing in the river should a release occur in those locations.
7. The contractor shall maintain spare pumps and hoses on-site at all times to initiate cleanup and removal of a release as soon as practical, or until additional equipment can be mobilized to the site. Additionally, the contractor shall maintain a 20,000-gallon sedimentation tank on-site, along with a supply of straw bales, sand bags, and 100 feet of silt fencing to facilitate the removal of release material prior to additional equipment arriving on-site.
8. Following detection of a release, the Contractor shall be required to shutdown drilling operations and mobilize the necessary removal equipment to the project site within 24 to 48 hours. This equipment may include vacuum trucks, additional sedimentation tanks, pumps and hosing, barges and boats, and crane or backhoe with a smooth clam-shell or hoe bucket to dredge the river bottom and to remove and dispose of released material as required. However, the removal method and type of equipment to be used will depend on the location of the release within the river. For example, if a release occurs on dry land, the contractor should be able to cleanup the release material using a combination of vacuum trucks and sedimentation tanks. Conversely, if a release occurs within the navigable river channel, a small barge mounted operation may be required to remove the release material. The contractor will have to make this determination in the field based on actual site conditions and in consultation with the Owner, Engineer, City and the DEEP. Under no circumstance shall the contractor employ the use of a dredging operation until all other methods of collection and removal have been exhausted with little or no success. Contract Documents will also require the contractor to prepare and submit to the Owner an "Uncontrolled Drilling Fluid Return Contingency Plan" prior to the start of drilling operations. This plan shall describe the means and methods the contractor will employ to address uncontrolled surface returns in compliance with all local,

state, and federal regulations and permits and name the contractor that will be on call to complete such an operation. A copy of this plan will be provided to DEEP (The selected low bidder's entire bid package will be provided to DEEP for review prior to award).

9. The contractor shall be required to mobilize additional equipment as needed, or as directed by the Owner, Engineer or DEEP, to facilitate the cleanup and removal of release material in a timely manner.
10. In the event that a release occurs on land, the contractor will immediately contain the release with straw bales and silt fencing. The drilling fluid shall be transferred either manually or by pump into a sedimentation tank, flocculated and decanted or otherwise treated for disposal as necessary, and removed from the site to an approved area. It will be the HDD Contractor's responsibility to determine this area in advance with the land Owner and DEEP.
11. The contractor shall maintain records of the quantity of release material removed from either the river bottom or land surface, transfer of the material to other containment, and daily status of cleanup operations. The contractor shall be responsible for disposing the release material in accordance with all local, state, and federal regulations. Records or manifests of the disposal material shall be furnished to the owner and the DEEP upon completion of the work.

OFFICE OF LONG ISLAND SOUND PROGRAMS

APPENDIX A

**TO: Permit Section
Department of Energy and Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, CT 06106-5127**

PERMITTEE: City of Middletown
245 deKoven Drive
Middletown, CT 06457

Permit No: 201301999-KR, Middletown

CONTRACTOR 1: _____

Address: _____

Telephone #: _____

CONTRACTOR 2: _____

Address: _____

Telephone #: _____

CONTRACTOR 3: _____

Address: _____

Telephone #: _____

EXPECTED DATE OF COMMENCEMENT OF WORK: _____

EXPECTED DATE OF COMPLETION OF WORK: _____

PERMITTEE: _____
(signature) (date)



OFFICE OF LONG ISLAND SOUND PROGRAMS

APPENDIX B

NOTICE OF PERMIT ISSUANCE
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

To: Middletown City Clerk

**Signature and
Date:**

Subject: Mattabassett River off property located at the crossing of the City of
Middletown/Town of Cromwell municipal boundary

Coastal Permit #201301999-KR

Pursuant to Section 22a-363g and Section 22a-361 of the Connecticut General Statutes, the Commissioner of Energy and Environmental Protection gives notice that a permit has been issued to City of Middletown, 245 deKoven Drive, Middletown, CT 06457 to:

Install 134 linear feet of twin 24" diameter Polyvinyl chloride ("PVC") sanitary sewer force mains at a minimum of 40' below the substrate in the Mattabassett River Bottom via horizontal directional drilling ("HDD").

If you have any questions pertaining to this matter, please contact the Office of Long Island Sound Programs at 860-424-3034.



PERMIT NOTICE

This Certifies that Authorization to perform work below the Coastal Jurisdiction Line and/or within Tidal Wetlands of coastal, tidal, or navigable waters of Connecticut

Has been issued to: **City of Middletown**

At this location: **Crossing of the Mattabassett River at the City of Middletown/Town of Cromwell municipal boundary, Middletown**

To conduct the following: **Install twin sanitary sewer force mains below the Mattabassett River.**

Permit #: 201301999-KR

Issued on: **August 1, 2013**

This Authorization expires on: **August 1, 2018**

Department of Energy and Environmental Protection

Office of Long Island Sound Programs

79 Elm Street • Hartford, CT 06106-5127

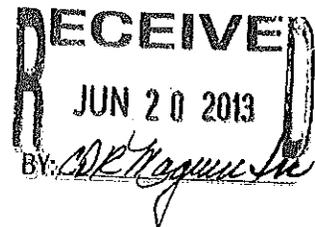
Phone: (860) 424-3034 Fax: (860) 424-4054

www.ct.gov/deep

This Notice must be posted in a conspicuous place on the job during the entire project.

FLOODPLAIN MANAGEMENT

Connecticut Department of Energy and Environmental Protection
Water Protection and Land Re-Use, Planning and Standards Division
79 Elm Street
Hartford, CT 06106



Attn: Denise Ruzicka, Director
Planning and Standards Division

Re: **Approval of Certification**
201302054-FM
Mattabasset Regionalization Project
Middletown / Cromwell, CT

Dear Ms. Ruzicka:

The Inland Water Resources Division of the Department of Energy & Environmental Protection has reviewed the flood management certification application prepared by Mark Kopchak, P.E. of Maguire Group, Inc., and signed by Denise Ruzicka of the CT Department of Energy and Environmental Protection, Bureau of Water Protection and Land Re-Use, Planning and Standards Division.

The certification document dated April 26, 2013 and submitted April 26, 2013 states that the proposed activity has been designed in compliance with the requirements of Section 25-68d(b) of the Connecticut General Statutes (CGS) and Section 25-68h-1 through 25-68h-3 of the Regulations of Connecticut State Agencies (RCSA).

The project consists of installation of 11,500 linear feet of new sanitary sewer force main which will convey all sewage flows from a new pumping station in the City of Middletown north to the Mattabasset Water Pollution Control Facility in the Town of Cromwell, as shown on plans entitled, "*Mattabasset Regionalization Project, Middletown Sewage Force Main*", signed by Charles C. Chiu, P.E., dated June 5, 2013, last revised May 31, 2013. The project is located within the Special Flood Hazard Area of Sumner Creek and Mattabasset River.

This authorization is subject to and does not derogate any present or future property rights or other rights or powers of the State of Connecticut, conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity

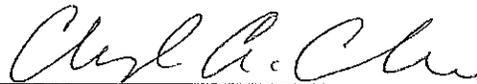
affected thereby. No revisions or alterations to the approved plans are allowed without first obtaining written approval from this Division of such alterations.

If there are any questions, contact Jeffrey Caiola of the Inland Water Resources Division at 860-424-4162.

Sincerely,

June 18, 2013

Date



Cheryl A. Chase, Director
Inland Water Resources Division

CAC/JPC

cc: Guy Russo – City of Middletown
Mark Kopchak – CDR Maguire



DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

August 8, 2013

Regulatory Division
CENAE-R-PEB
Corps Permit Number: NAE-2012-571
CT DEEP File Number: 201301999-KR

City of Middletown
Mayor Daniel Drew
245 deKoven Drive
Middletown, CT 06457

Dear Mayor Drew:

We have reviewed your application to install a force main sewer pipeline from a pump station in Middletown to the existing Mattabasset District Water Pollution Control Facility (WPCF) in Cromwell. This project will consist of the following work: 1) approximately 1,350 linear feet of a 24 inch force main will be Horizontal Directionally Drilled (HDD) 40 feet below the Mattabasset River at the City of Middletown/Town of Cromwell municipal boundary, 2) approximately 0.15 acres of federally regulated wetlands, located north of the Mattabasset River along Route 9, will be permanently filled as a result of an open cut and cover of the force main and subsequent construction of a gravel access road on top of the installed pipe, 3) ~~approximately 1,420 square feet (0.033 acres) of forested wetland will be temporarily impacted as a result of two cut and cover sub aqueous crossings of Sumner Creek at deKoven Drive and River Road in the City of Middletown.~~ The work is shown on the attached plans, entitled "City of Middletown Connecticut, Water and Sewer Department, Mattabasset Regionalization Project, Middletown Sewage Force Main," in 41 sheets and dated "7/16/13."

Does not
apply to
Bid No.
2013-008

Based on the information you have provided, we have determined that the proposed activity, which includes a discharge of dredged or fill material into waters or wetlands, will have only minimal individual or cumulative impacts on waters of the United States, including wetlands. Therefore, this work is authorized under the attached Federal permit known as the Connecticut General Permit (GP). This work must be performed in accordance with the terms and conditions of the GP and also in compliance with the following special conditions:

- ~~1. No unconfined in water work shall occur from March 15 through June 30 of any year to minimize impacts to migrating and spawning anadromous fish.~~
- ~~2. The forested wetland areas impacted as a result of the open and out and cover activities along Sumner Creek shall be restored to pre construction elevations and replanted with wetland plants corresponding to the scrub shrub vegetation in the surrounding area.~~

Does not
apply to Bid
No. 2013-008

3. The area directly adjacent to the impacted wetlands along Route 9, depicted as "Proposed Wetland Mitigation Area" on Plate 39 of the attached plans, shall be vegetated as shown on Plate 40 and described in the Wetland Planting Plan.

You are responsible for complying with all of the GP's requirements. Please review the attached GP carefully, in particular the GP conditions. You should ensure that whoever does the work fully understands the requirements and that a copy of the permit document and this authorization letter are at the project site throughout the time the work is underway.

~~The Corps of Engineers has consulted with the National Marine Fisheries Service (NMFS) regarding the effects of your project on Essential Fish Habitat (EFH) as designated under the Magnuson-Stevens Fishery Conservation and Management Act. The NMFS provided EFH conservation recommendations, which we included in special conditions # 1 and # 2, listed above. These conditions are intended to protect fisheries resources at the project site.~~

Does not
apply to Bid
No. 2013-008

This authorization expires on July 15, 2016, unless the GP is modified, suspended, or revoked before then. You must commence or be under contract to commence the work authorized herein by this expiration date and complete the work within one year of this expiration date or you must contact this office to determine the need for further authorization before beginning or continuing the activity. We recommend you contact us *before* this GP expires to discuss permit reissuance.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

This authorization requires you to complete and return the attached **Work Start Notification Form** to this office at least two weeks before the anticipated starting date. You must also complete and return the enclosed **Compliance Certification Form** within one month following the completion of the authorized work.

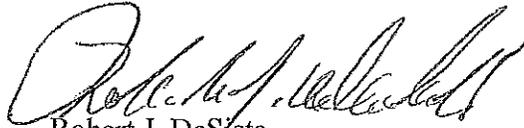
This determination becomes valid only after the Connecticut Department of Energy & Environmental Protection (DEEP) issues or waives the following applicable State permits: Certificate of Permission (COP); General Permit (LIS-GP); Tidal Wetlands Permit; Structures and Dredging and Filling Permit; Water Quality Certification (WQC) as required under Section 401 of the Clean Water Act; and/or a Section 307 Coastal Zone Management Act consistency determination. In the event the DEEP denies any of these permits, this determination becomes null and void. The address of the DEEP office for your area is provided in the attached GP.

This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law, as listed in Section 2 of this GP. Performing work not specifically authorized by this determination or failing to comply with any special condition(s) provided above or all the terms and conditions of the GP may subject you to the enforcement provisions of our regulations.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at <http://per2.nwp.usace.army.mil/survey.html>.

Please contact Lindsay Flieger, of my staff, at (978) 318-8656 if you have any questions.

Sincerely,



Robert J. DeSista
Chief, Permits & Enforcement Branch
Regulatory Division

Attachments

Copy Furnished:

CT DEEP, OLISP- via email

Paul Stanton
Fitzgerald and Halliday, Inc.
72 Cedar Street
Hartford, CT 06106

✓ Mark Kopchak
CDR Maguire
2080 Silas Deane Highway
Rocky Hill, CT 06067

CITY OF MIDDLETOWN CONNECTICUT WATER & SEWER DEPARTMENT



UNITED STATES ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2 APPLICATION

MATTABASSETT REGIONALIZATION PROJECT
MIDDLETOWN SEWAGE FORCE MAIN

JULY 16, 2013



CDR | MAGUIRE
Architects/Engineers/Planners
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

GENERAL NOTES

- 1) ALL ELEVATIONS ARE NATIONAL GEODETIC VERTICAL DATUM (NGVD) 1929.
- 2) CONTRACTOR SHALL BE LIMITED TO WORKING WITHIN THE WORK AREA AS INDICATED ON THE PLANS. IF THE CONTRACTOR SHOULD REQUIRE ADDITIONAL WORK AREA THEN HE SHALL SEEK APPROVAL FROM THE CITY OF MIDDLETOWN. ALL AFFECTED SEDIMENTATION CONTROLS SHALL BE RELOCATED AND RESET IN KIND.
- 3) BEST MANAGEMENT PRACTICES WILL BE UTILIZED DURING ANY ONSITE DEWATERING ACTIVITIES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE A DEWATERING BASIN, INLET PROTECTION AND/OR SEDIMENTATION CONTROL SYSTEMS.
- 4) MEAN HIGH WATER (MHW) ELEVATION BASED ON DATUM OBSERVED AT MIDDLETOWN TIDAL BENCH MARK LOCATED AT HARBOR PARK.
- 5) HIGH TIDE LINE BASED ON REPORTED CTDEEP COASTAL JURISDICTION LINE (CJL) 1929 DATUM.
- 6) ORDINARY HIGH WATER (OHW) LINE DETERMINED BY CERTIFIED SOILS SCIENTIST.
- 7) ALL IMPACT QUANTITIES CALCULATED FROM HIGH TIDE LINE TO MAXIMUM DEPTH OF CONSTRUCTION (PIPE INVERT MINUS 0.5 FT).
- 8) ALL WETLAND IMPACT AREAS CALCULATED FROM UPLAND BOUNDARY TO OHW LINE.
- 9) ALL EXCAVATED STREAMBED MATERIAL TO BE TEMPORARILY STOCKPILED WITHIN COFFERDAM.
- 10) WHERE TEMPORARY WETLAND IMPACT AREAS EXIST, STREAMBANK SHALL BE STABILIZED, GRADED, AND RE-SEEDED WITH AN APPROVED WETLAND SEED MIX AND WITH NATIVE WETLAND SHRUB SPECIES SO AS TO RESTORE THE TEMPORARILY IMPACTED WETLAND AREA.

Drafting file: G:\JOBS\14712.02-Middletown_PS_Final_Design\ACAD\CAD\CONTRACT\1\CIVIL\Highway\Summer USACE Plotes.dwg Plot Date: Jul 16, 2013 - 10:21am



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

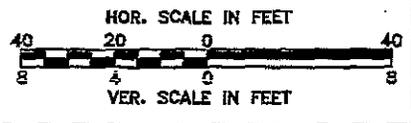


PLATE 1

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

GENERAL NOTES

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

SHEET INDEX

GENERAL NOTES	PLATE 1	WETLAND D	
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PHASE 2 CONSTRUCTION PLAN	PLATE 4	IMPACT AREA PLAN	PLATE 25
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STA 77+00	PLATE 22		

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Rocky Hill, Connecticut 06067

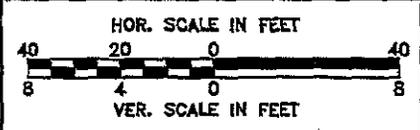


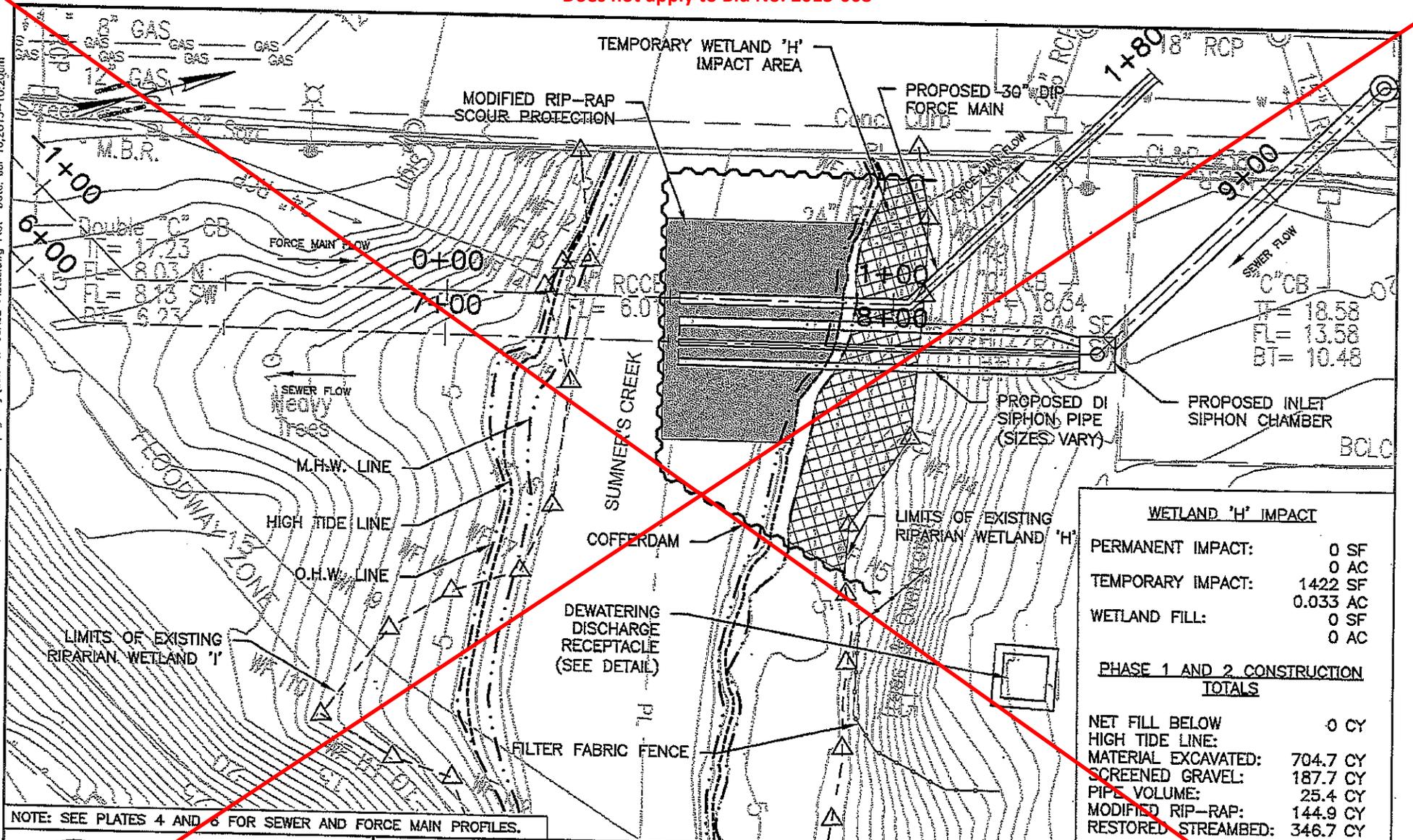
PLATE 2

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
GENERAL NOTES AND SHEET INDEX

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008

Drawing file: G:\JOBS\14712.02 - Middletown_PS_FM_Final_Design\ACAD\CIVIL\Highway\Summer USACE Plates.dwg Plot Date: Jul 16, 2013 - 10:20am



WETLAND 'H' IMPACT	
PERMANENT IMPACT:	0 SF 0 AC
TEMPORARY IMPACT:	1422 SF 0.033 AC
WETLAND FILL:	0 SF 0 AC
PHASE 1 AND 2 CONSTRUCTION TOTALS	
NET FILL BELOW	0 CY
HIGH TIDE LINE:	
MATERIAL EXCAVATED:	704.7 CY
SCREENED GRAVEL:	187.7 CY
PIPE VOLUME:	25.4 CY
MODIFIED RIP-RAP:	144.9 CY
RESTORED STREAMBED:	346.7 CY

NOTE: SEE PLATES 4 AND 6 FOR SEWER AND FORCE MAIN PROFILES.



CDR MAGUIRE
2080 Siles Deane Highway
Rocky Hill, Connecticut 06067

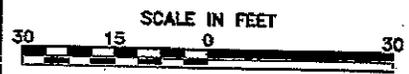
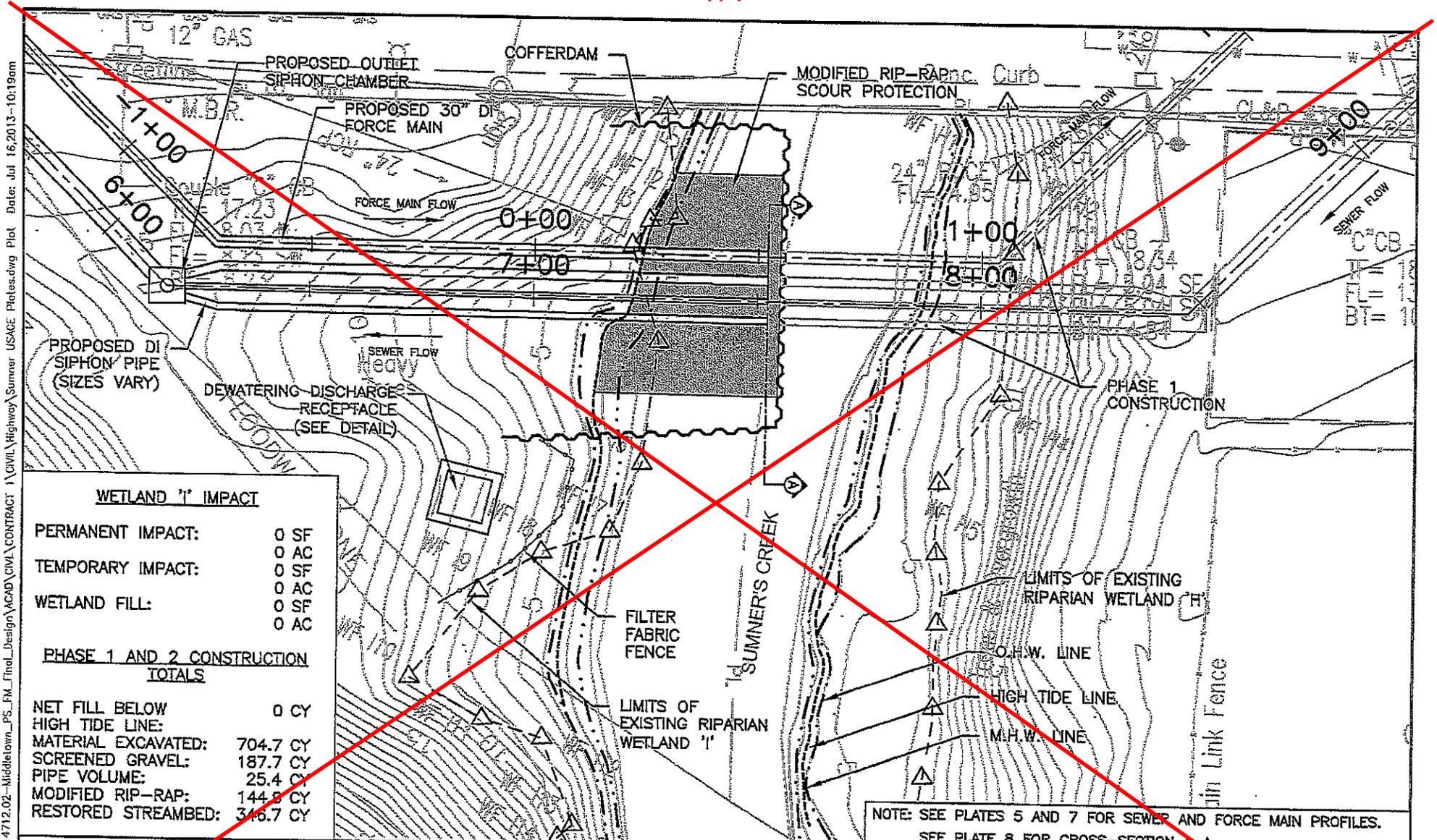


PLATE 3

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
DEKOVEN DRIVE - PHASE 1 CONSTRUCTION PLAN

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008



WETLAND '1' IMPACT

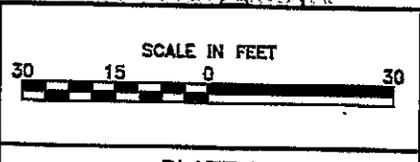
PERMANENT IMPACT:	0 SF
	0 AC
TEMPORARY IMPACT:	0 SF
	0 AC
WETLAND FILL:	0 SF
	0 AC
PHASE 1 AND 2 CONSTRUCTION TOTALS	
NET FILL BELOW HIGH TIDE LINE:	0 CY
MATERIAL EXCAVATED:	704.7 CY
SCREENED GRAVEL:	187.7 CY
PIPE VOLUME:	25.4 CY
MODIFIED RIP-RAP:	144.8 CY
RESTORED STREAMBED:	346.7 CY

NOTE: SEE PLATES 5 AND 7 FOR SEWER AND FORCE MAIN PROFILES.
SEE PLATE 8 FOR CROSS-SECTION A-A.

Drawing file: C:\VOB\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Summer_USACE_Plates.dwg Plot Date: Jul 16, 2013 - 10:19am



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Rocky Hill, Connecticut 06067

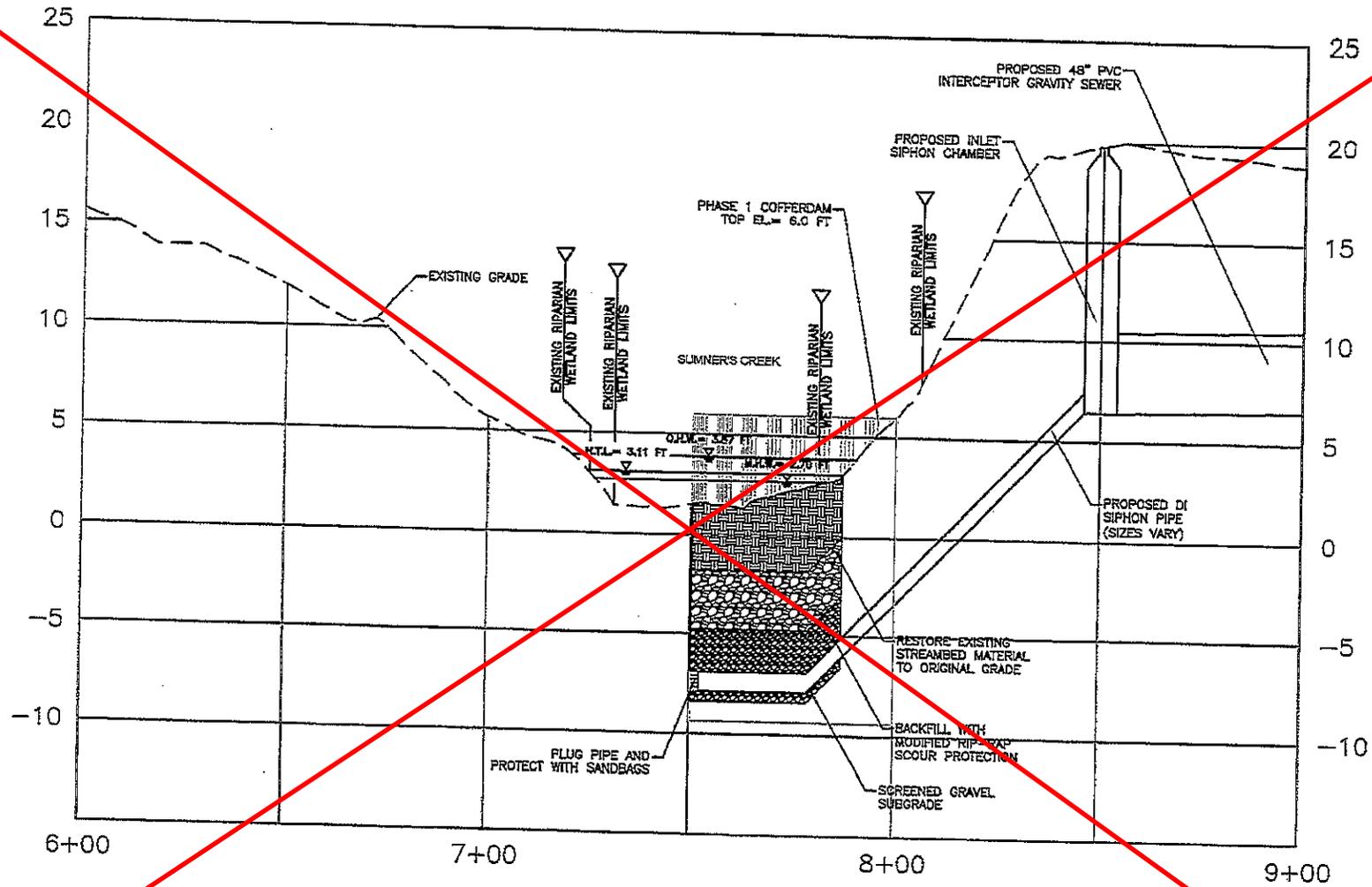


US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
DEKOVEN DRIVE - PHASE 2 CONSTRUCTION PLAN

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008

Drawing file: C:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Summer_USACE_Plotarea.dwg Plot Date: Jul 16, 2013 - 10:38am



CDR MAGUIRE
 2680 Silas Deane Highway
 Rocky Hill, Connecticut 06067

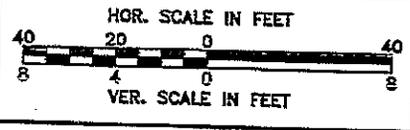
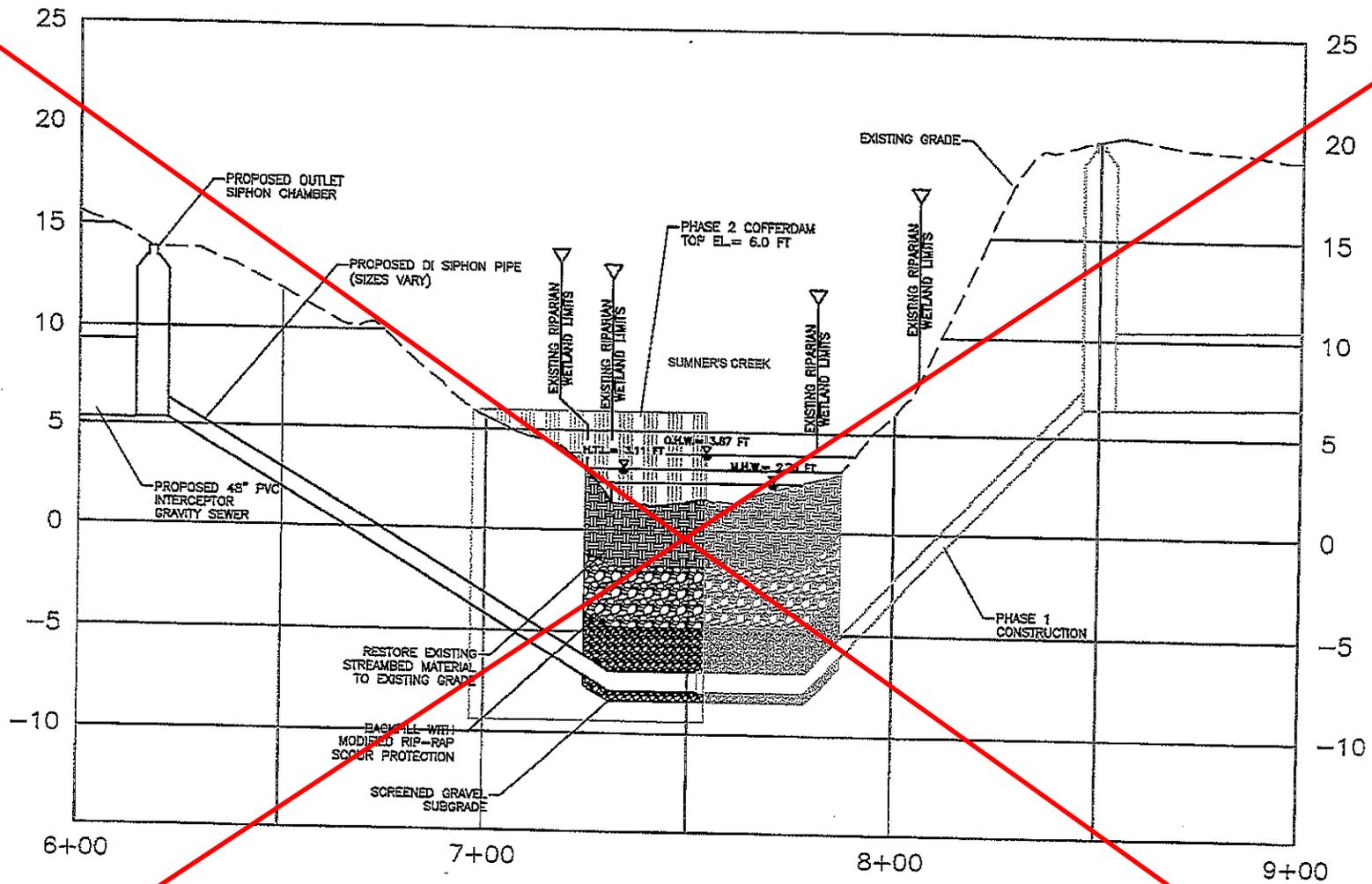


PLATE 5

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 DEKOVEN DRIVE - PHASE 1 SEWER PROFILE

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Does not apply to Bid No. 2013-008



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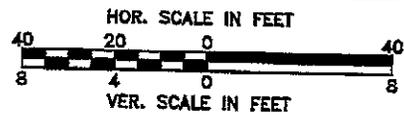


PLATE 6

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
DEKOVEN DRIVE - PHASE 2 SEWER PROFILE

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008

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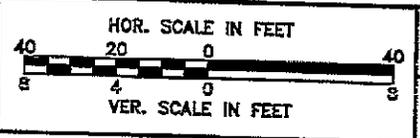
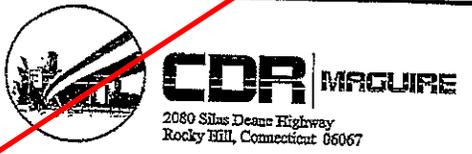
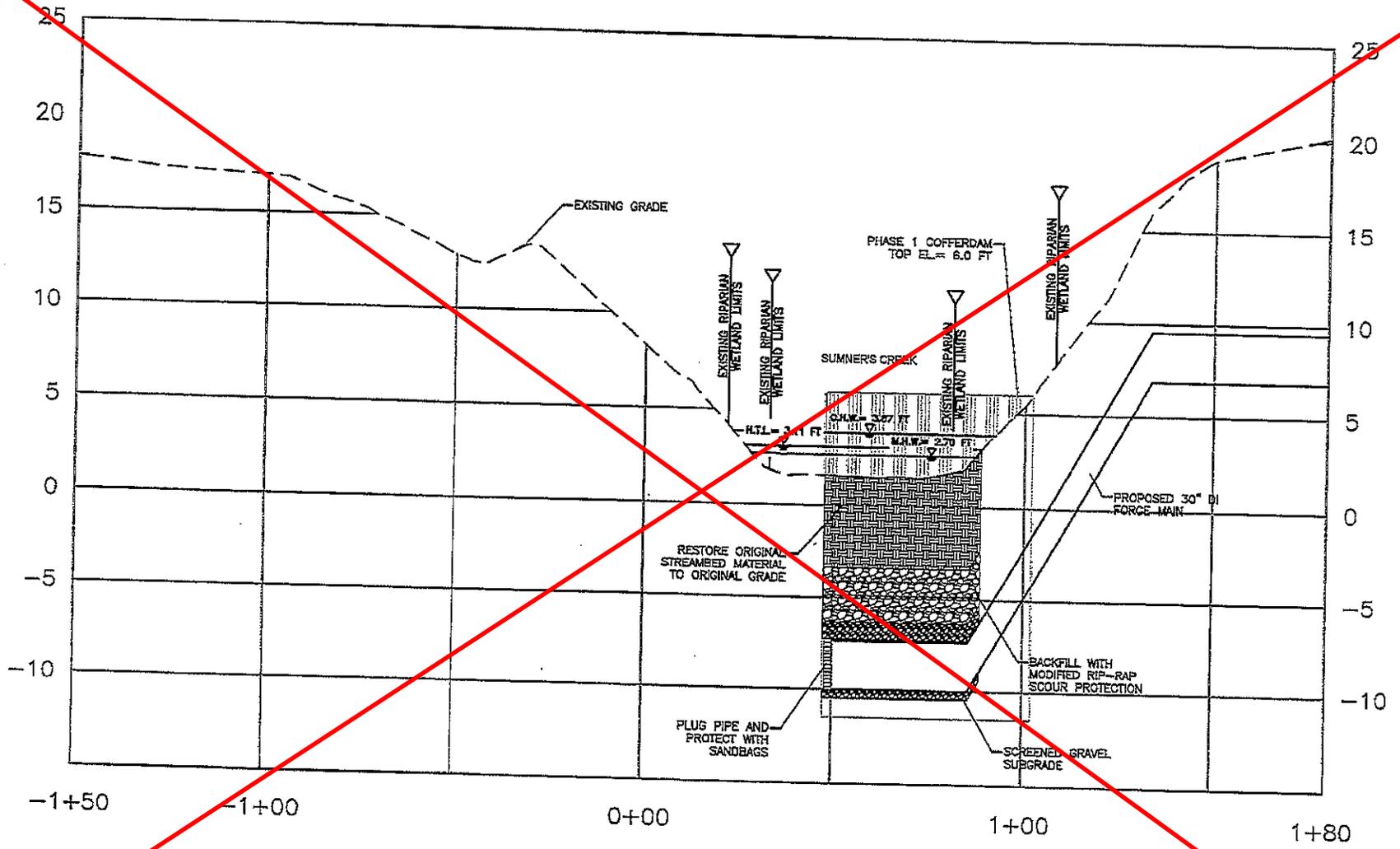


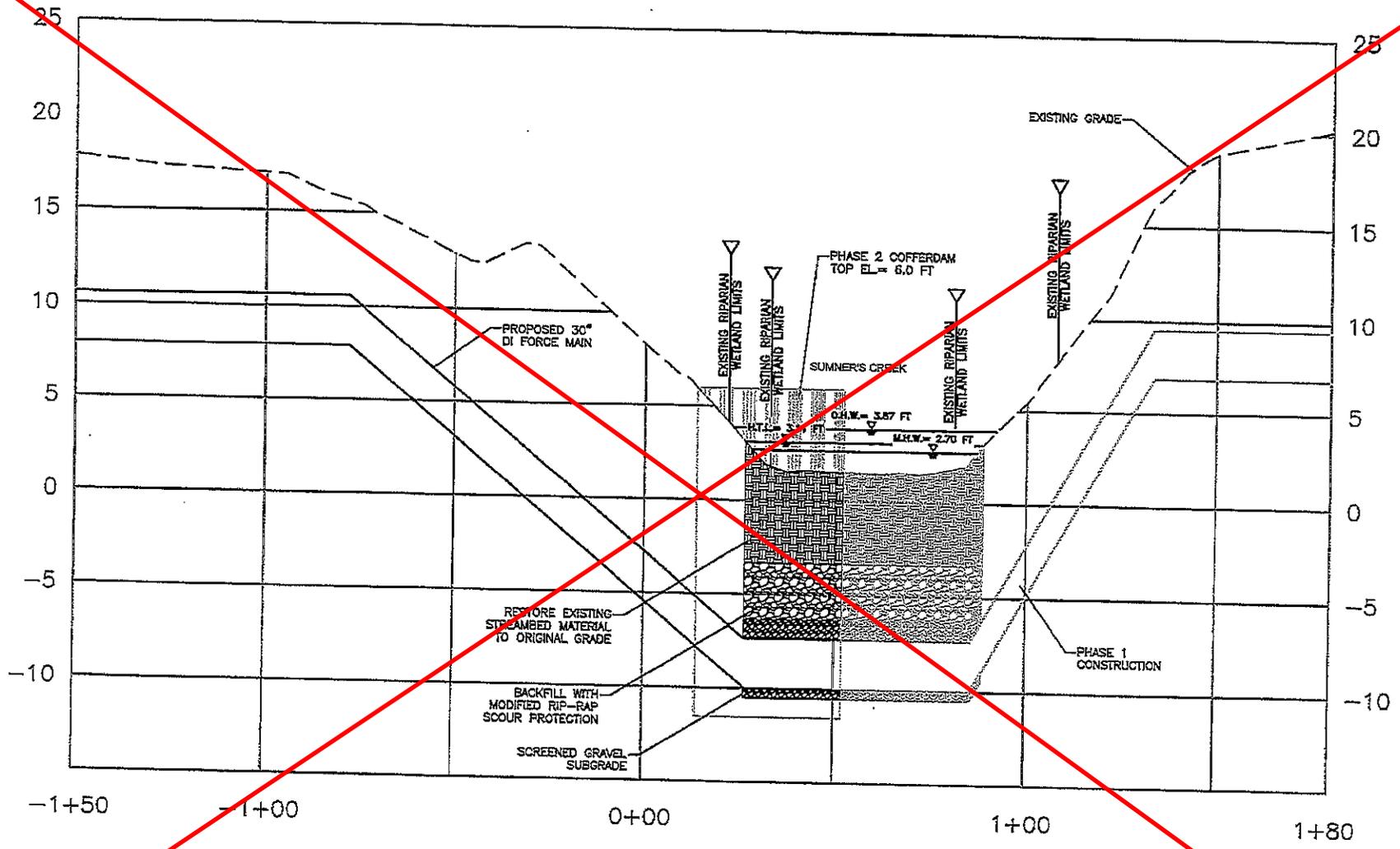
PLATE 7

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 DEKOVEN DRIVE - PHASE 1 FORCE MAIN PROFILE

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Does not apply to Bid No. 2013-008

Drawing file: G:\OBS\14712.02-Middletown_P2_FM_Final_Design\ACAD\CIVIL\CONTRACT 1\CIVIL\Highway\Summer_USACE Plotes.dwg Plot Date: Jul 16, 2013 -- 10:16am



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 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

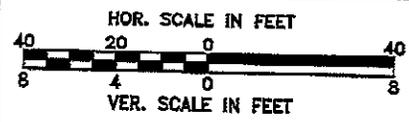


PLATE 8

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 DEKOVEN DRIVE - PHASE 2 FORCE MAIN PROFILE

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Does not apply to Bid No. 2013-008

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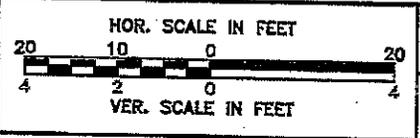
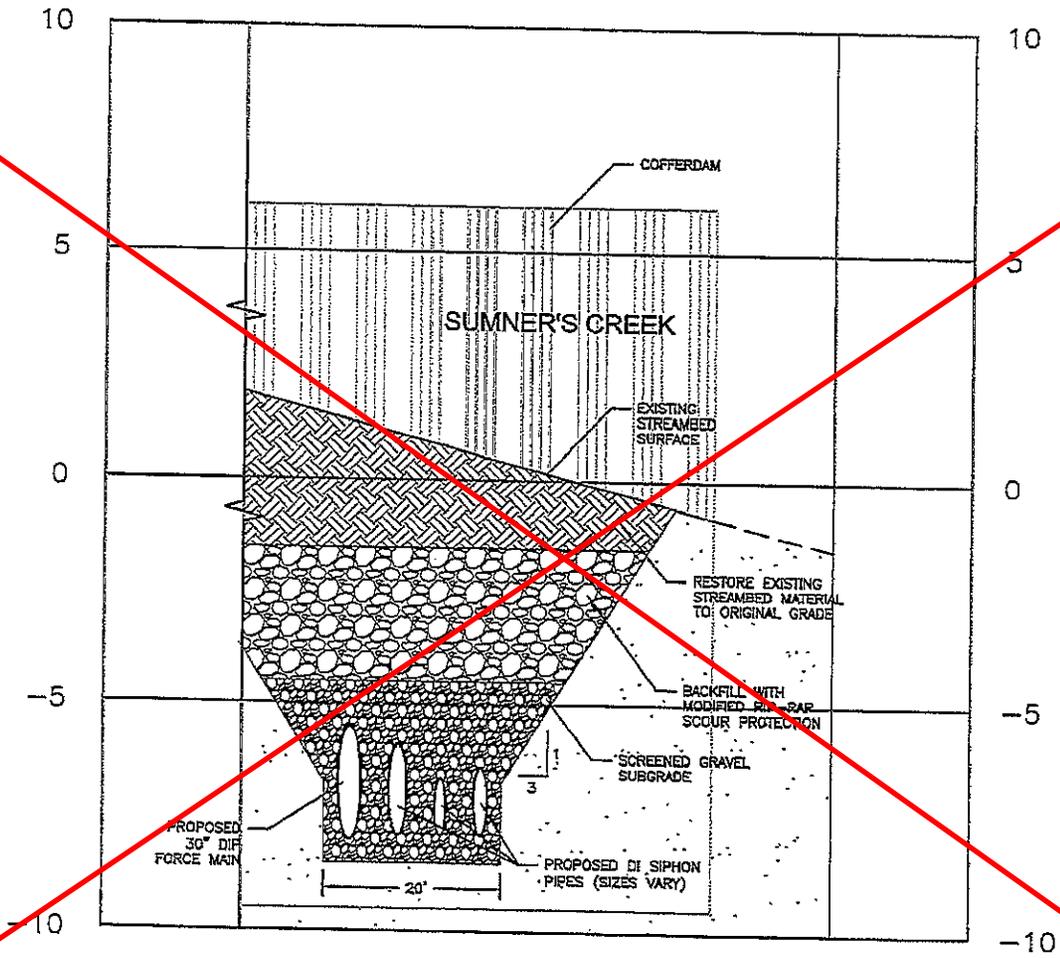
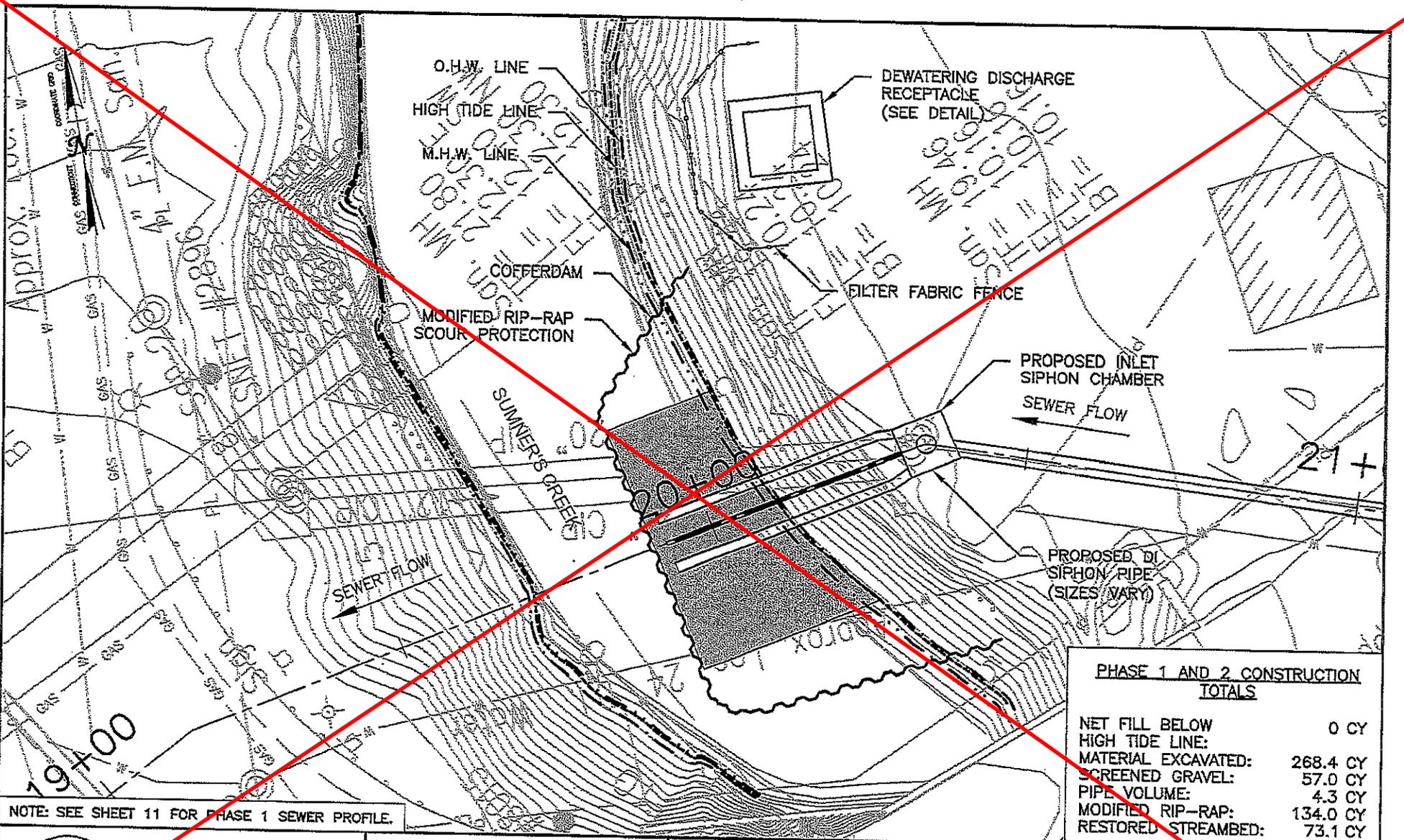


PLATE 9

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 DEKOVEN DRIVE SECTION A-A

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008



PHASE 1 AND 2 CONSTRUCTION TOTALS	
NET FILL BELOW HIGH TIDE LINE:	0 CY
MATERIAL EXCAVATED:	268.4 CY
SCREENED GRAVEL:	57.0 CY
PIPE VOLUME:	4.3 CY
MODIFIED RIP-RAP:	134.0 CY
RESTORED STREAMBED:	73.1 CY

NOTE: SEE SHEET 11 FOR PHASE 1 SEWER PROFILE.



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 Rocky Hill, Connecticut 06067

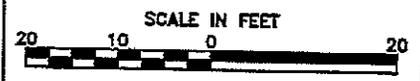


PLATE 10

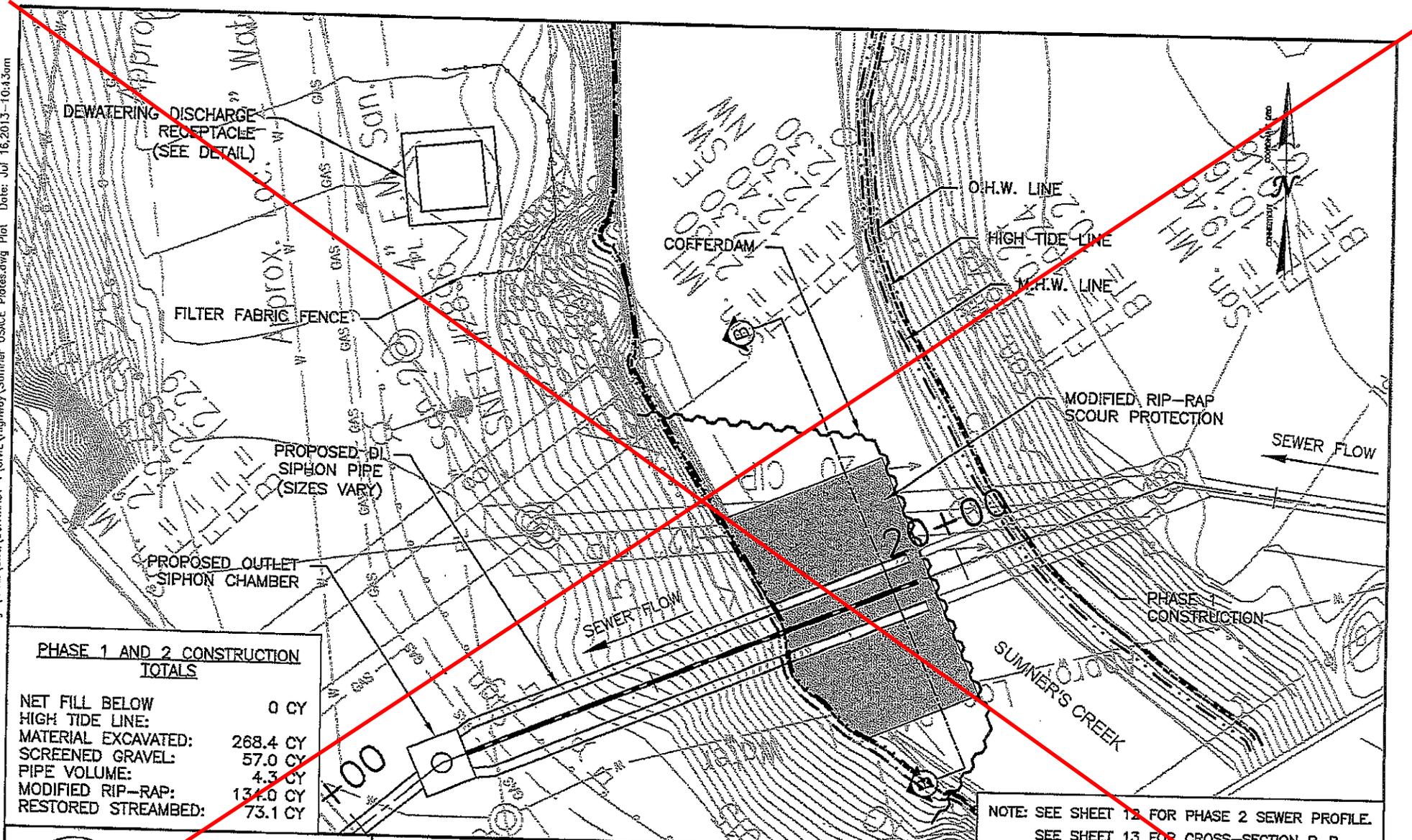
US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 RIVER ROAD - PHASE 1 CONSTRUCTION PLAN

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Drawing file: G:\ODS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Summer_USACE_Plate10.dwg Plot Date: Jul 16, 2013 - 10:15am

Does not apply to Bid No. 2013-008

Drawing file: G:\JOBS\14712.02-Middletown_PFS_FM_Final_Design\ACAD\CIVIL\CONTRACT\1\CIVIL\Highway\Summer_USACE_Plot.dwg Plot Date: Jul 16, 2013 - 10:43am



PHASE 1 AND 2 CONSTRUCTION TOTALS	
NET FILL BELOW HIGH TIDE LINE:	0 CY
MATERIAL EXCAVATED:	268.4 CY
SCREENED GRAVEL:	57.0 CY
PIPE VOLUME:	4.3 CY
MODIFIED RIP-RAP:	137.0 CY
RESTORED STREAMBED:	73.1 CY

NOTE: SEE SHEET 12 FOR PHASE 2 SEWER PROFILE.
SEE SHEET 13 FOR CROSS-SECTION B-B.

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Rocky Hill, Connecticut 06067



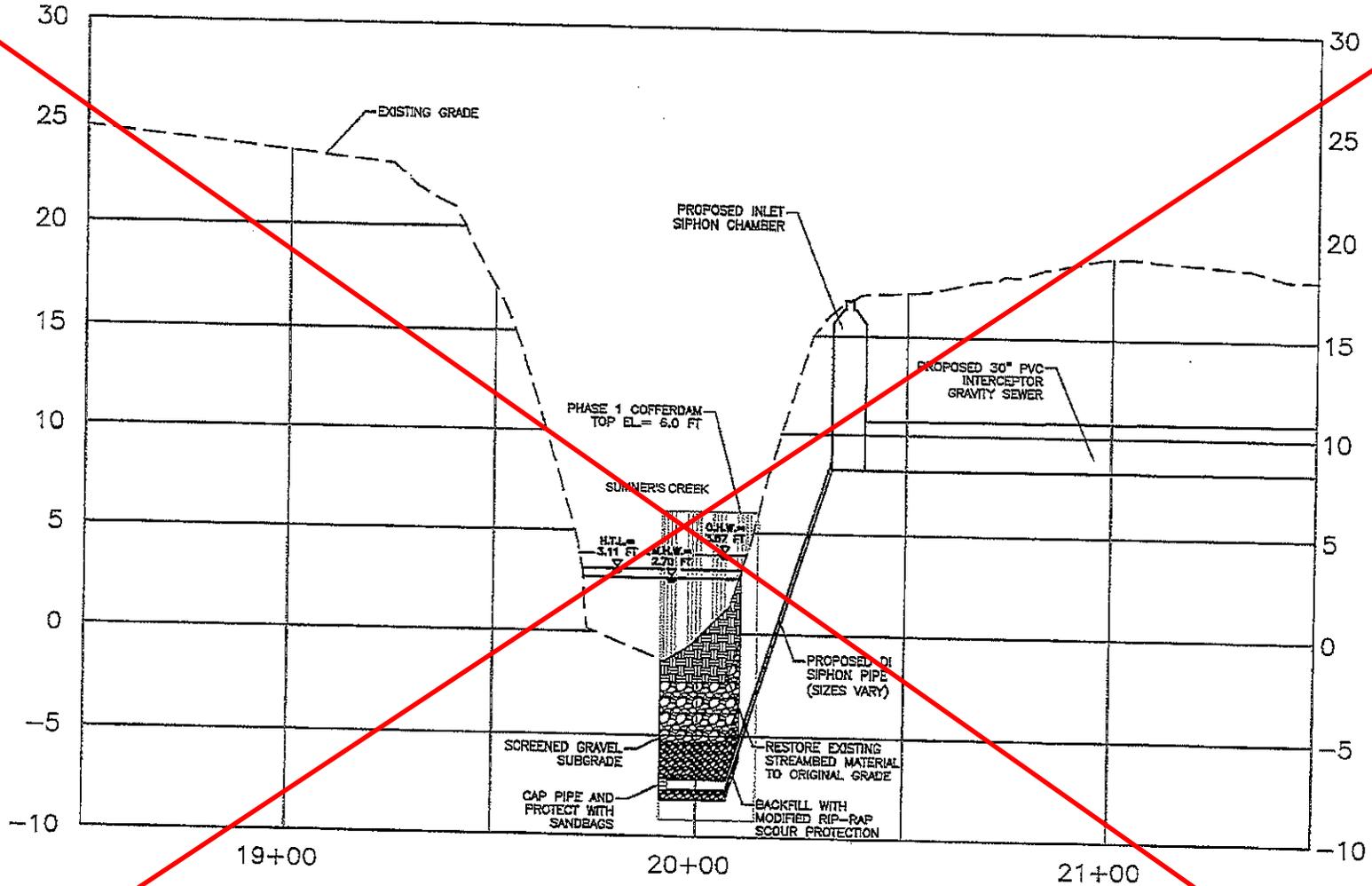
PLATE 11

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
RIVER ROAD - PHASE 2 CONSTRUCTION PLAN

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Does not apply to Bid No. 2013-008

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Summer_USACE_Plates.dwg Plot Date: Jul 16, 2013 - 10:12am



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Rocky Hill, Connecticut 06067

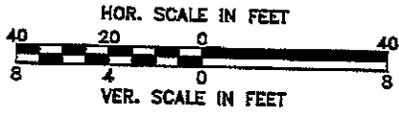


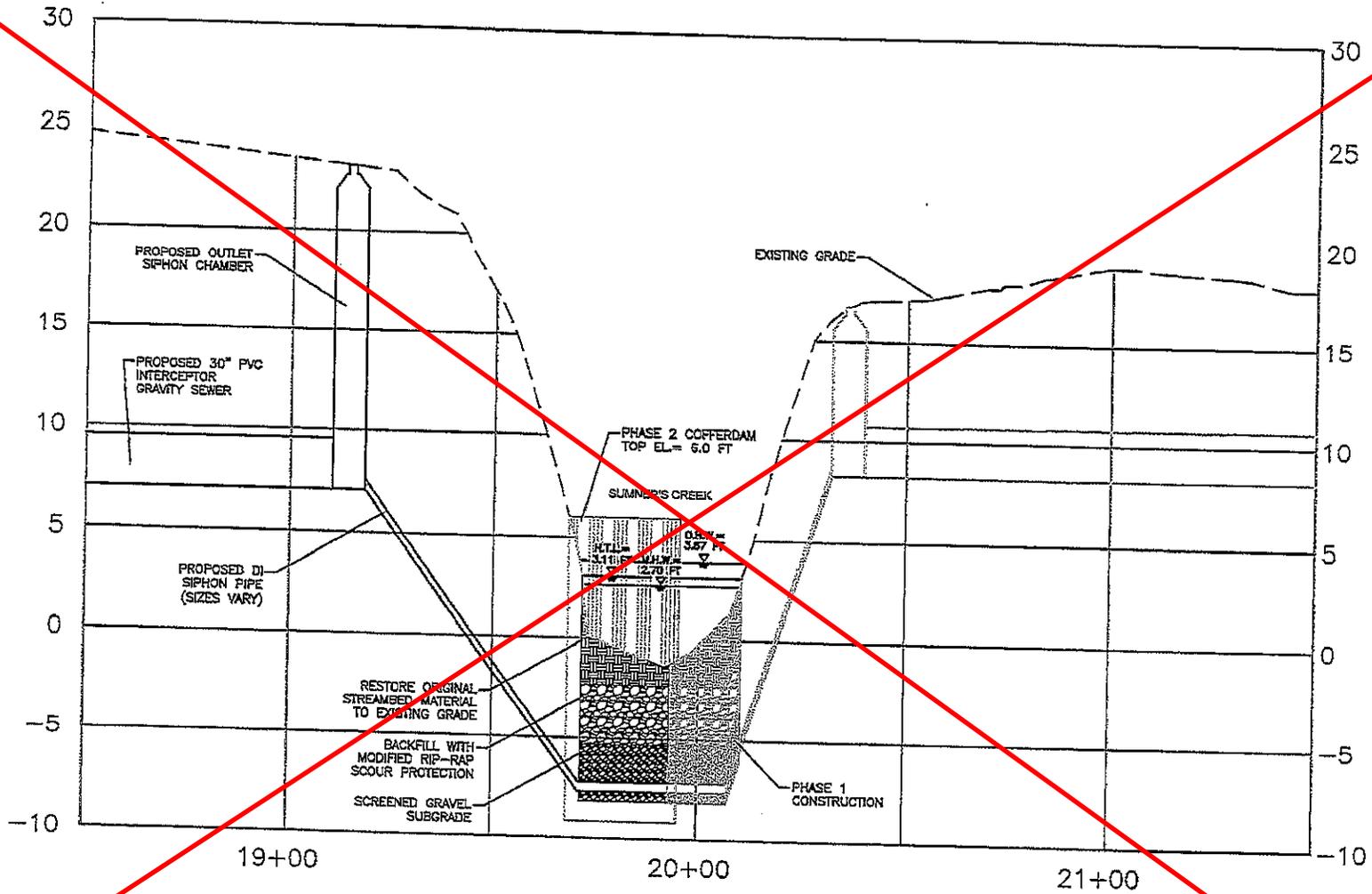
PLATE 12

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
RIVER ROAD - PHASE 1 SEWER PROFILE

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008

Drawing file: G:\JOBS\14712.02 - Middletown_PS_FT\1_inch_Design\ACAD\CIVIL\CONTRACT 1\CIVIL\Highway\Summer USACE Photos.dwg Plot Date: Jul 16, 2013 - 1:35pm



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2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

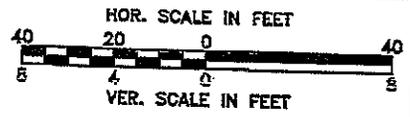


PLATE 13

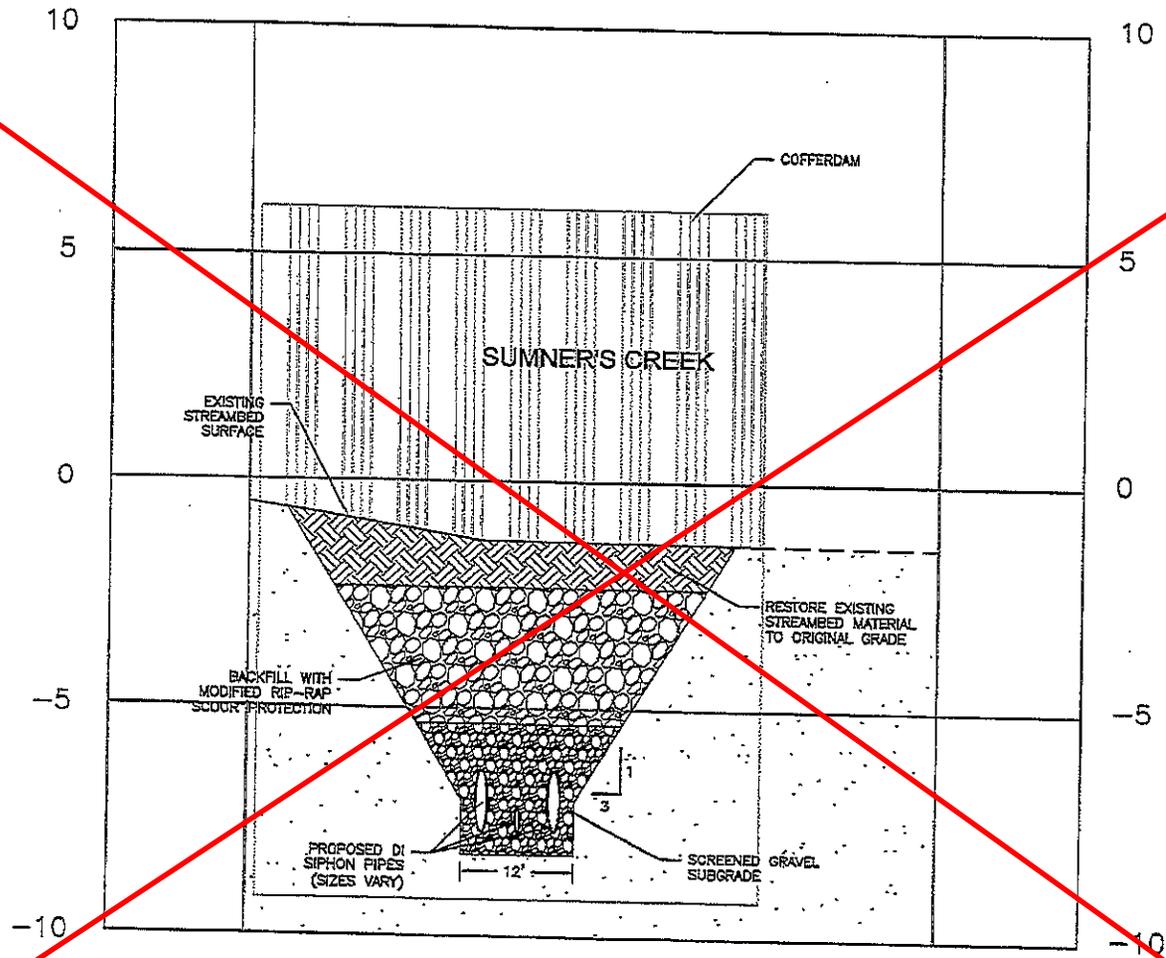
US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

RIVER ROAD - PHASE 2 SEWER PROFILE

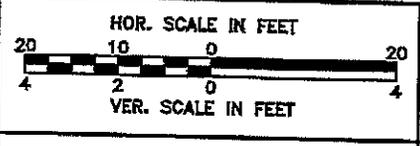
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CHK'D BY:	MJK
DATE:	07/16/13

Does not apply to Bid No. 2013-008

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Rocky Hill, Connecticut 06067



US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

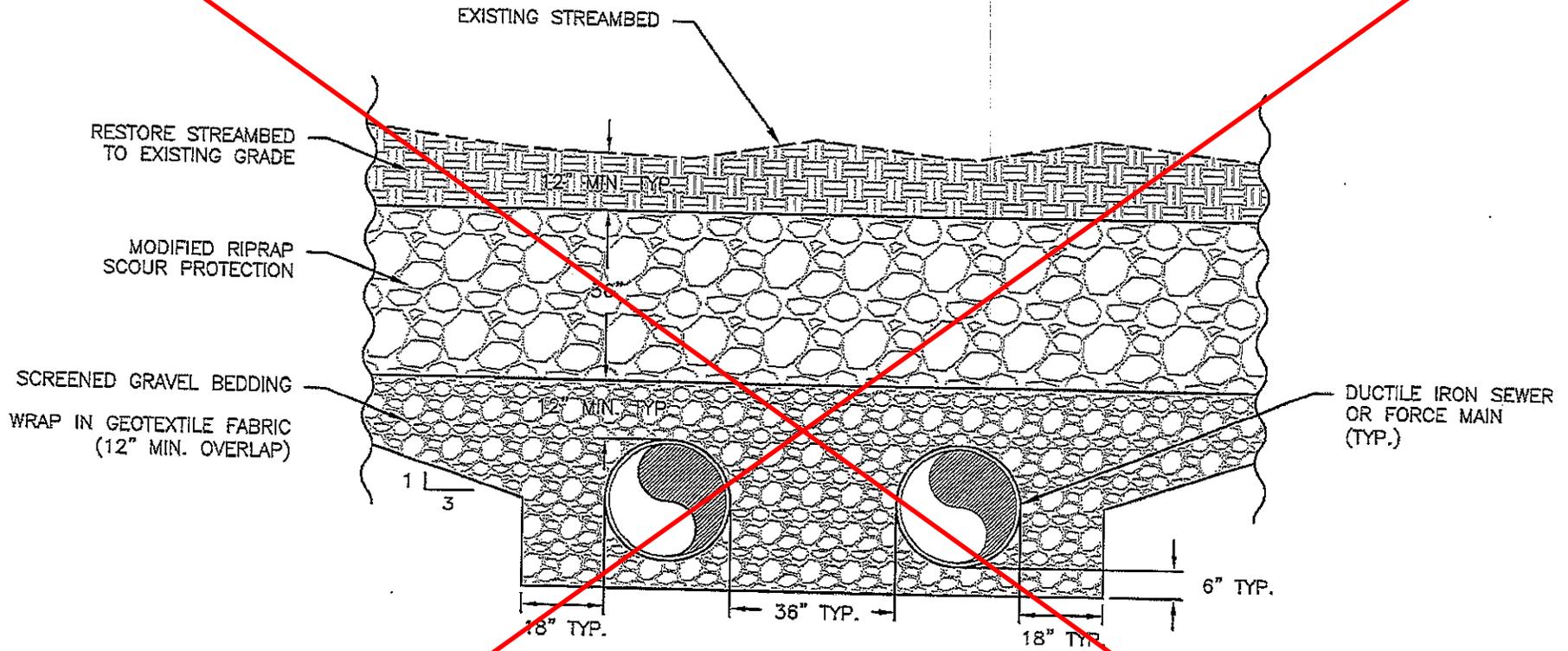
PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

PLATE 14

RIVER ROAD SECTION B-B

Does not apply to Bid No. 2013-008

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT 1\CIVIL\Highway\Summer USACE P1gtes.dwg Plot Date: Jul 16, 2013 - 11:03am




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Rocky Hill, Connecticut 06067

NOT TO SCALE

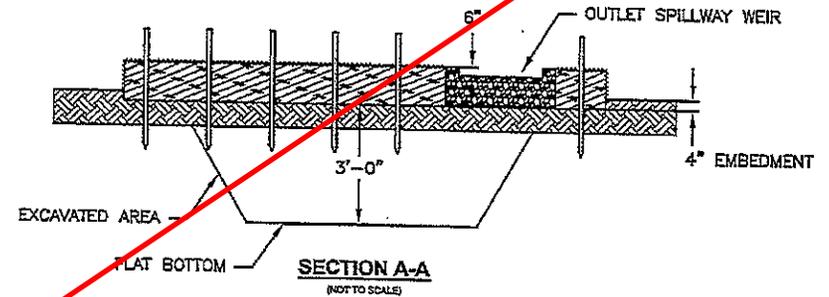
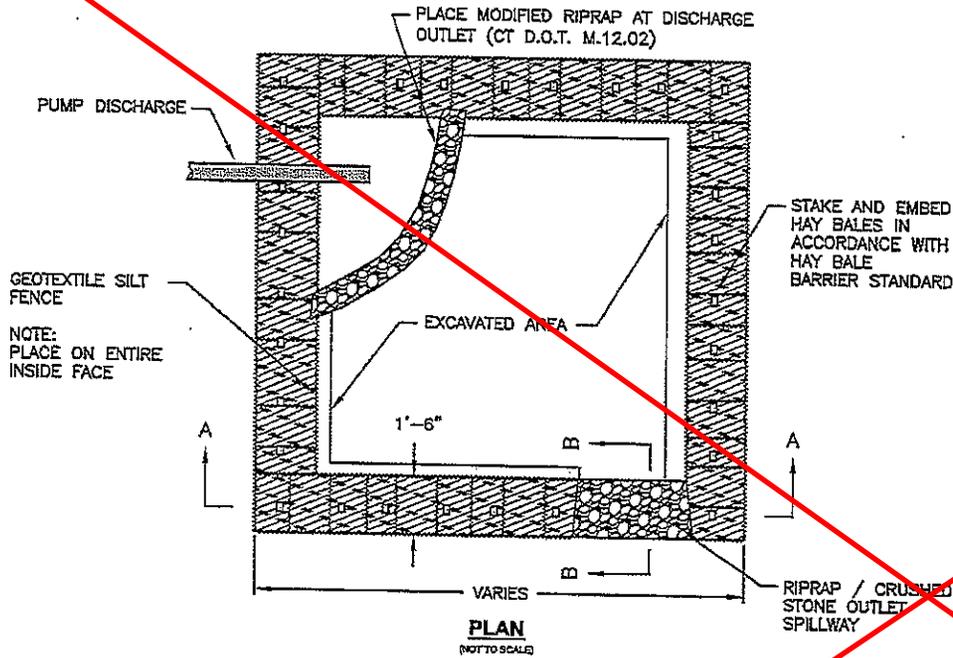
PLATE 15

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
SUB-AQUEOUS CROSSING DETAIL

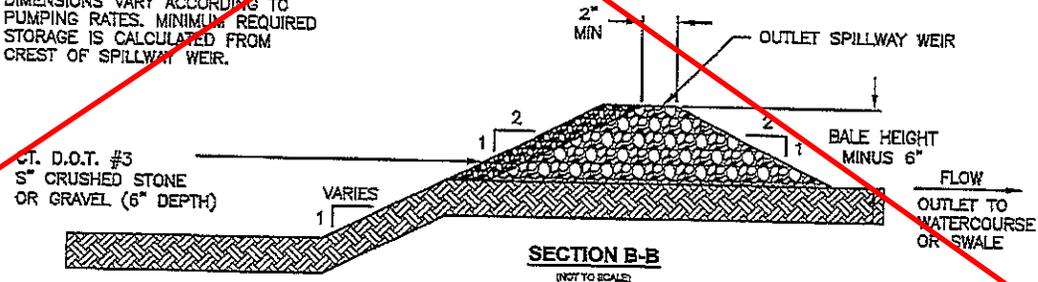
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DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Does not apply to Bid No. 2013-008

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NOTE: DIMENSIONS VARY ACCORDING TO PUMPING RATES. MINIMUM REQUIRED STORAGE IS CALCULATED FROM CREST OF SPILLWAY WEIR.



CDR MAGUIRE

2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

NOT TO SCALE

PLATE 16

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2

CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

DEWATERING RECEPTACLE DETAIL

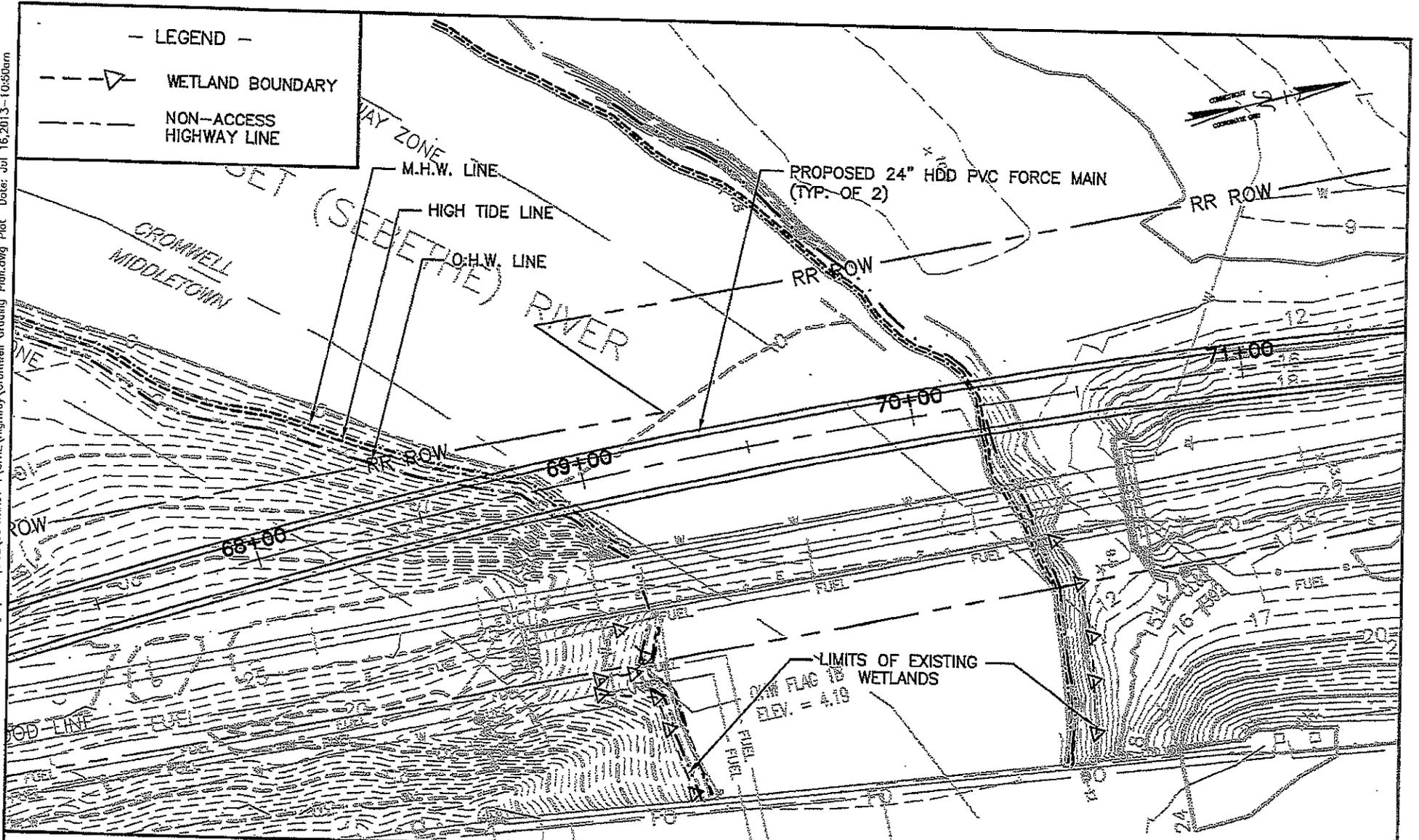
PROJECT NO.: 14712.02

DRAWN BY: TJC

CHK'D BY: MJK

DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell_Grading_Plan.dwg Plot Date: Jul 16, 2013 - 10:50am



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2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

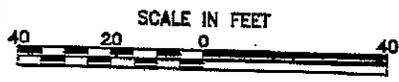


PLATE 17

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

SEBETHE RIVER CROSSING PLAN

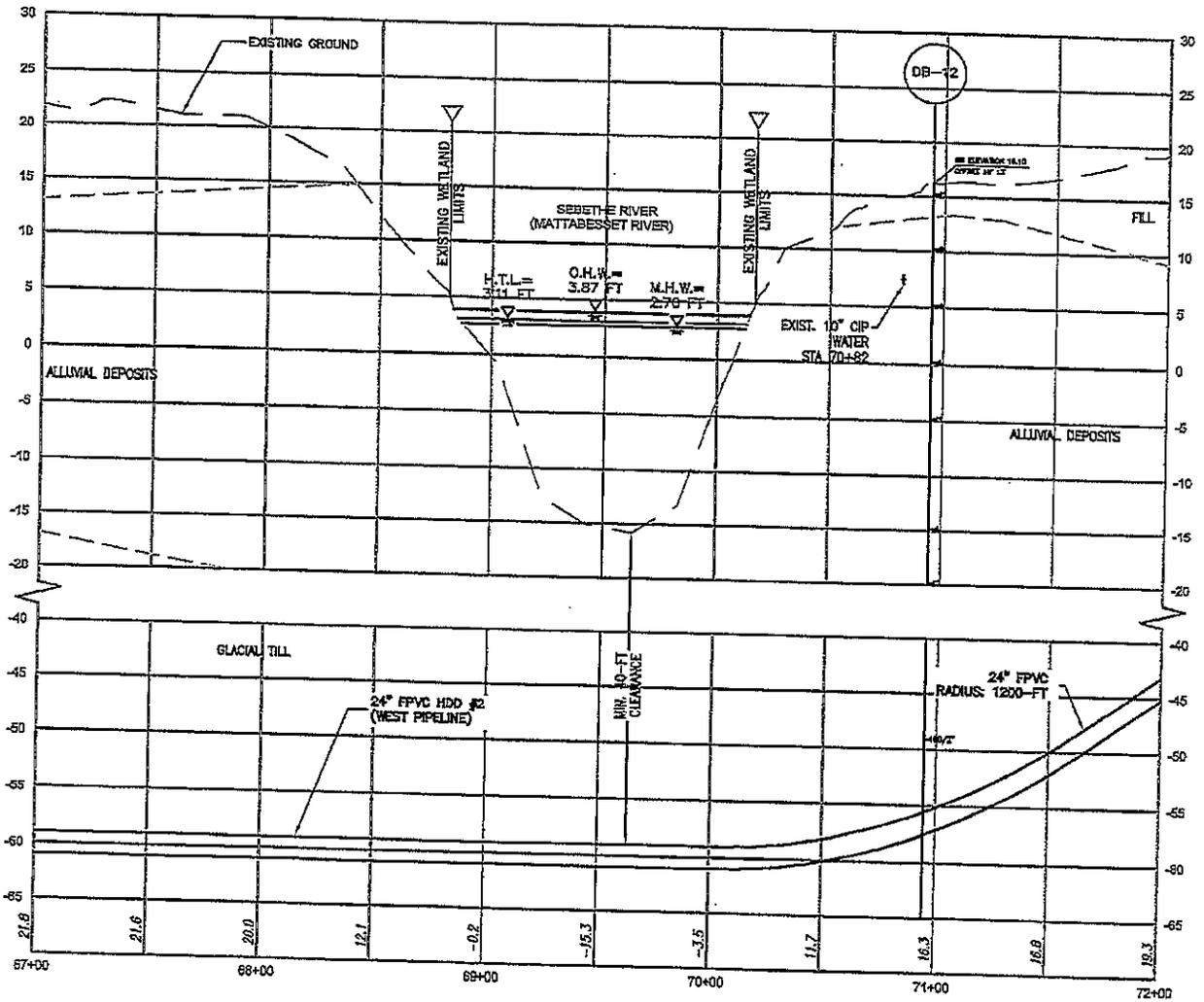
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DRAWN BY: TJC

CHK'D BY: MJK

DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown,PS_FM..Final..Design\ACAD\CIVIL\CONTRACT 1\CIVIL\Highway\Crownwell Grating Plan.dwg Plot Date: Jul 16,2013-10:49am



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 Rocky Hill, Connecticut 06967

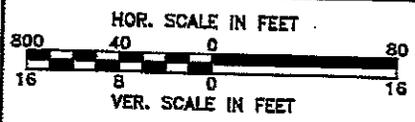
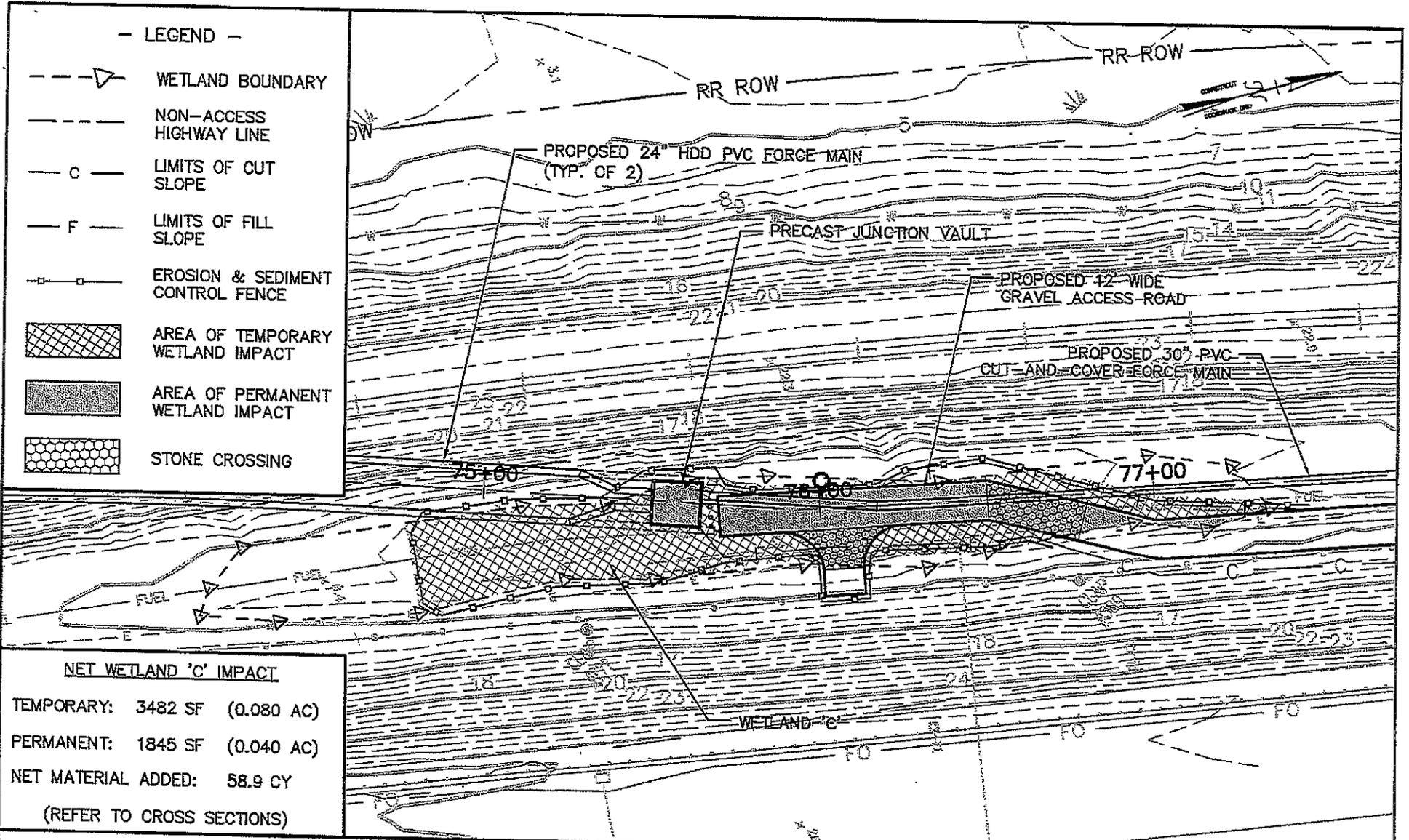


PLATE 18

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 SEBETHE RIVER CROSSING PROFILE

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cranwell_Grading_Plan.dwg Plot Date: Jul 16, 2013 - 10:59am



- LEGEND -

- WETLAND BOUNDARY
- NON-ACCESS HIGHWAY LINE
- LIMITS OF CUT SLOPE
- LIMITS OF FILL SLOPE
- EROSION & SEDIMENT CONTROL FENCE
- AREA OF TEMPORARY WETLAND IMPACT
- AREA OF PERMANENT WETLAND IMPACT
- STONE CROSSING

NET WETLAND 'C' IMPACT

TEMPORARY:	3482 SF	(0.080 AC)
PERMANENT:	1845 SF	(0.040 AC)
NET MATERIAL ADDED:	58.9 CY	

(REFER TO CROSS SECTIONS)

CDR MACQUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

SCALE IN FEET

40 20 0 40

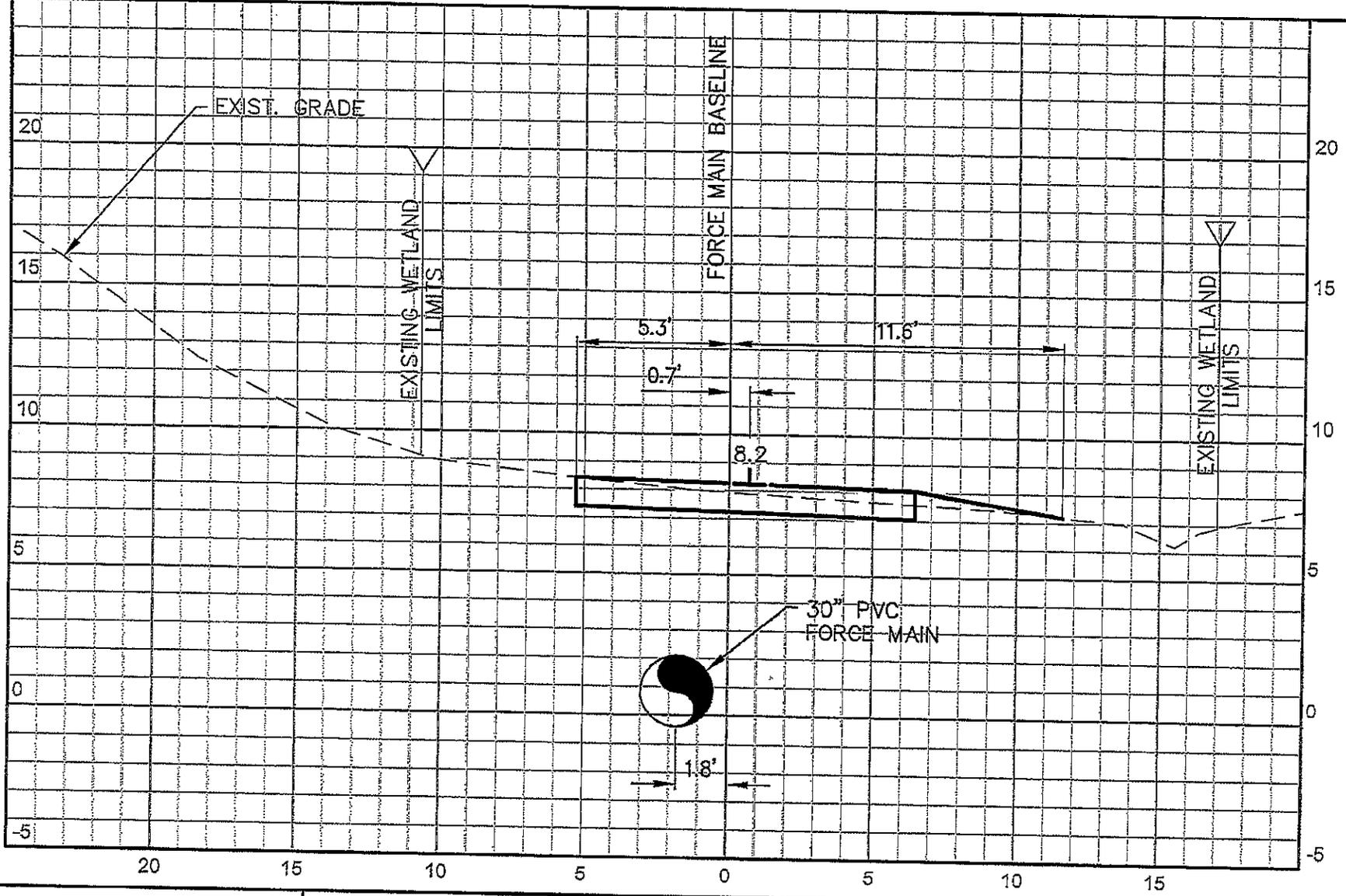
PLATE 19

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

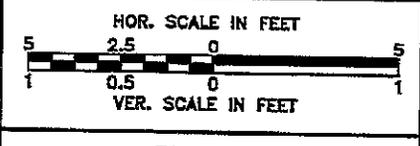
WETLAND C - IMPACT AREA PLAN

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: C:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CONTRACT 1\CIVIL\Highway\Cromwell Grading Plan XSCs.dwg Plot Date: Jul 16, 2013 - 10:56am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

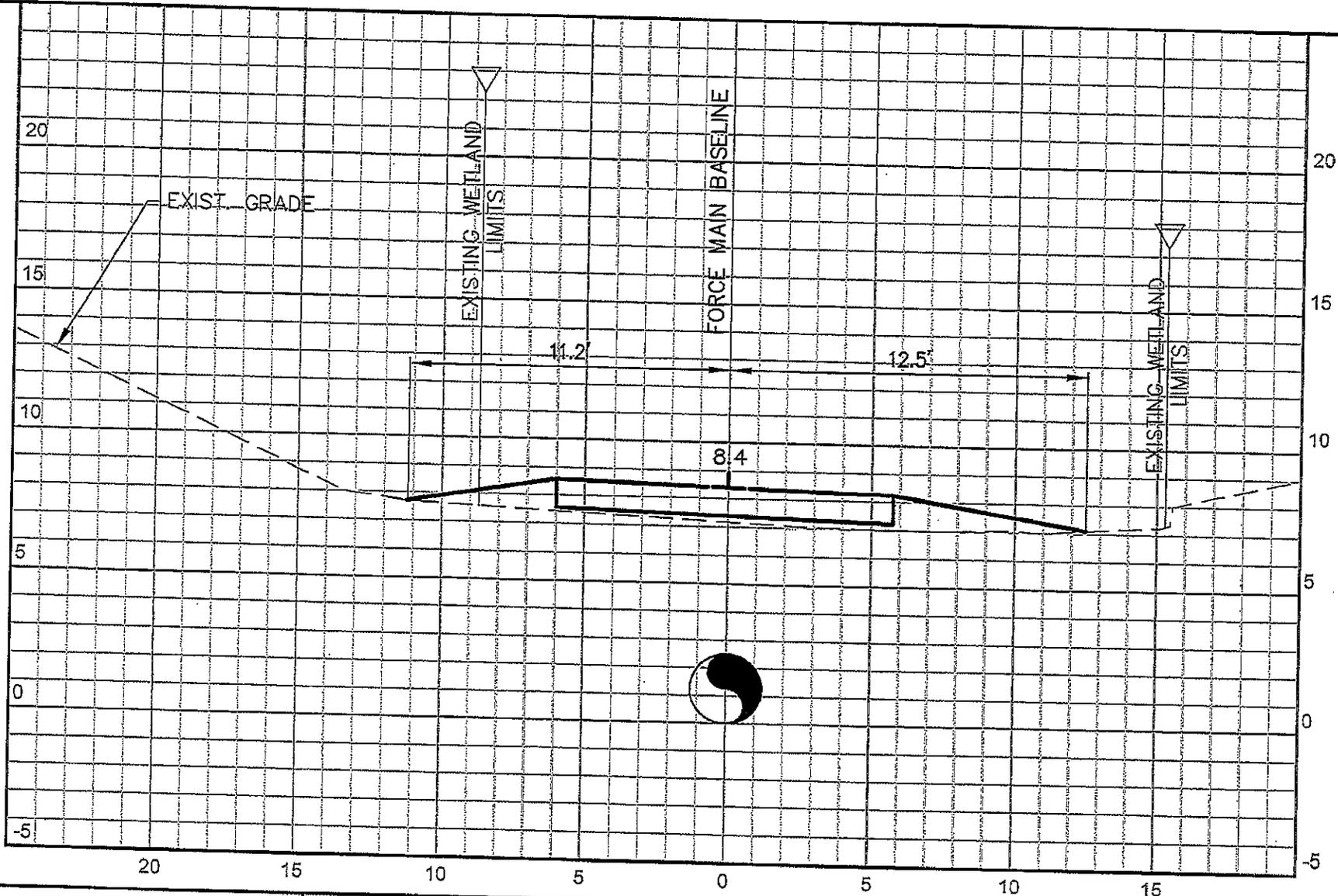


US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND C - CROSS-SECTION STA 76+00

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

PLATE 20

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CML\CONTRACT 1\CIVIL\Highway\Crosswall\Crossing Plan_XSCs.dwg Plot Date: Jul 16, 2013 - 10:56am



CDR MACLURE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

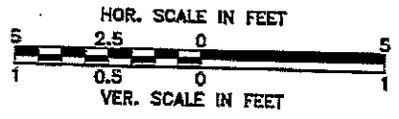
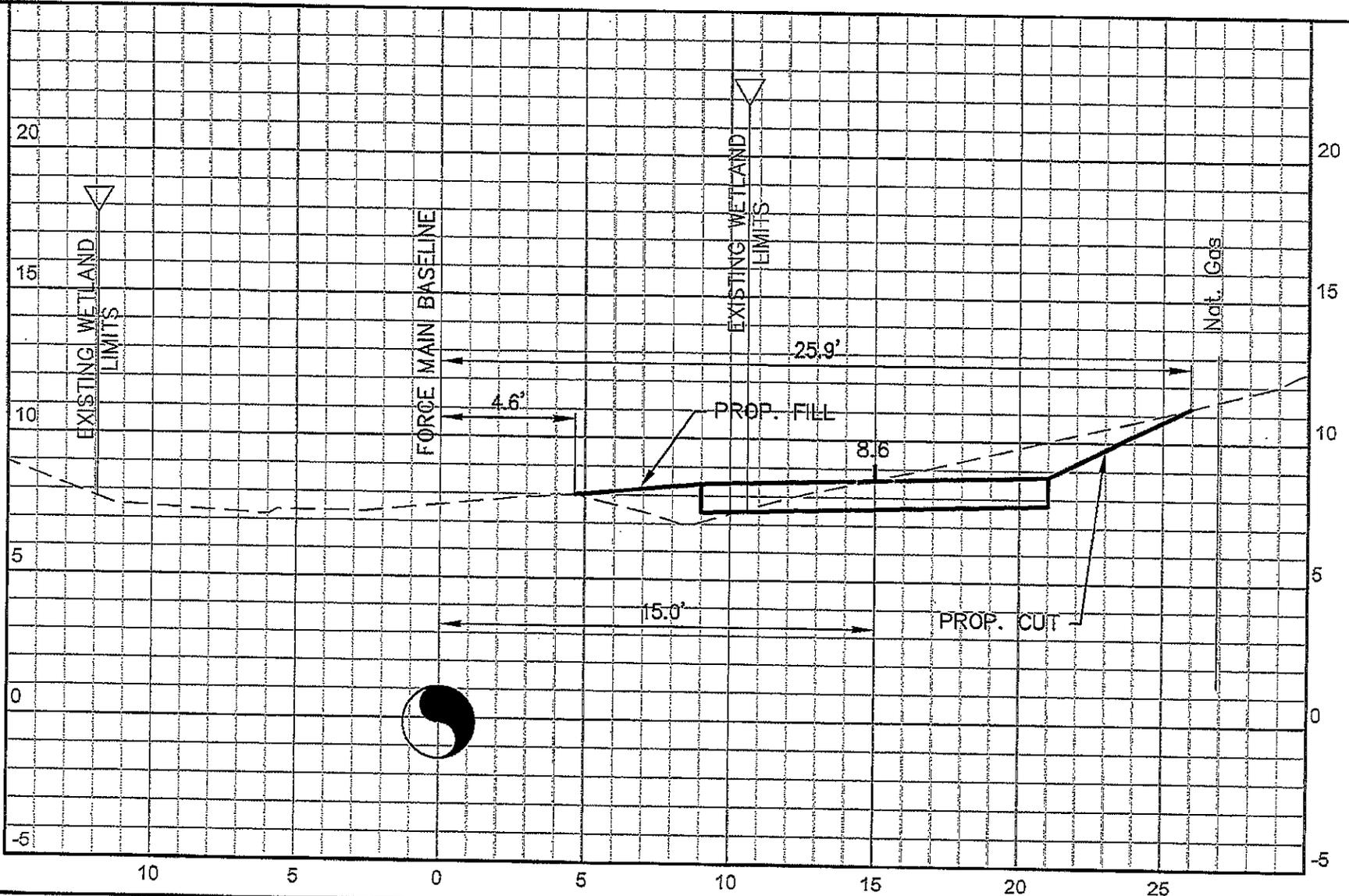


PLATE 21

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND C - CROSS-SECTION STA 76+50

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: G:\OBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT 1\CWL\Highway\Cornwell Grading Plan_XSGs.dwg Plot Date: Jul 16, 2013 10:55am



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

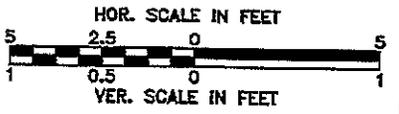


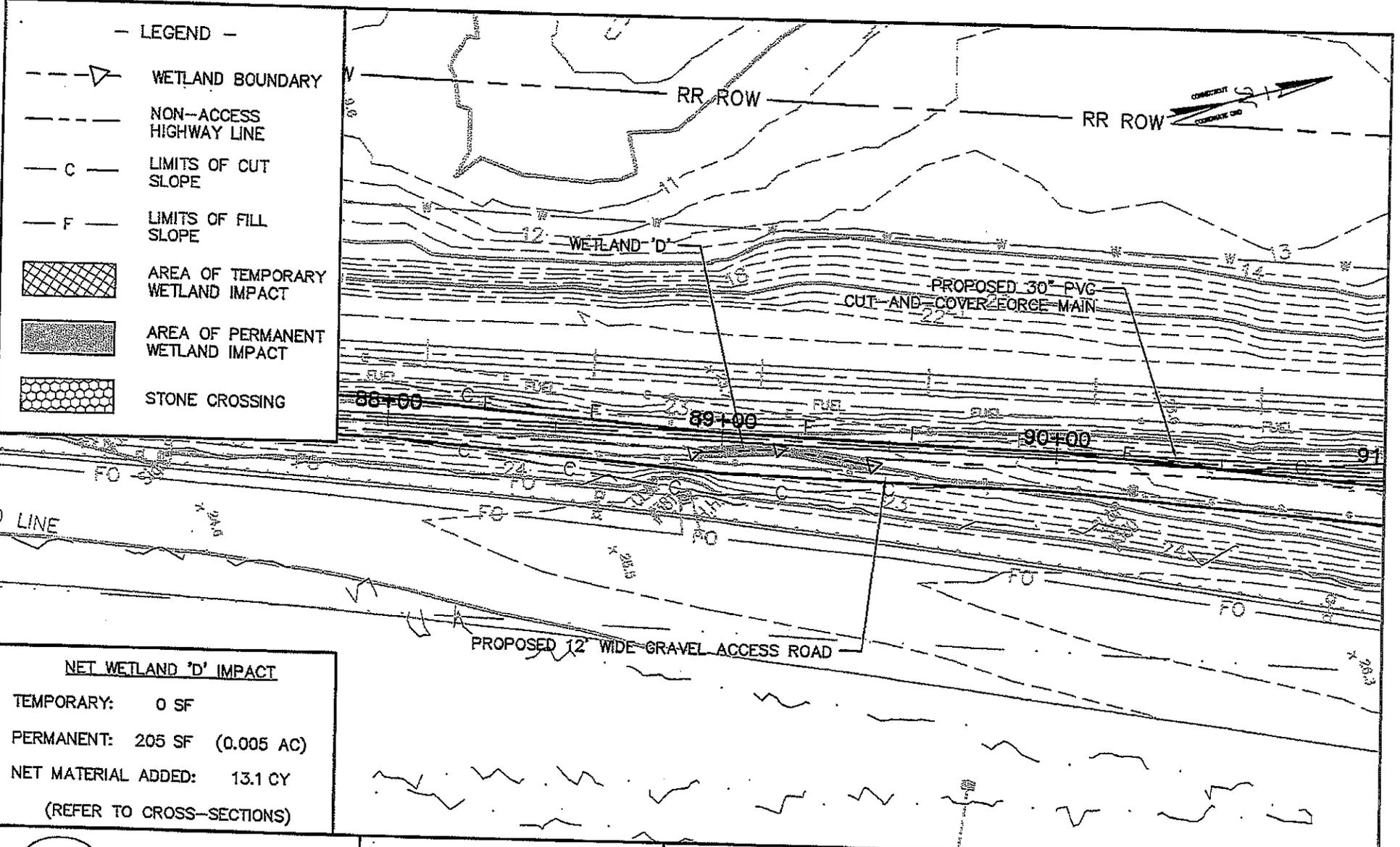
PLATE 22

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

WETLAND C - CROSS-SECTION STA 77+00

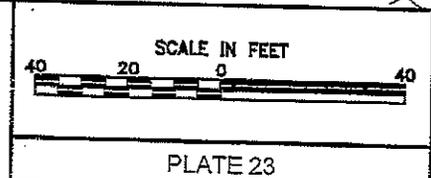
PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: C:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\Highway\Cranwell_Grading_Plan.dwg Plot Date: Jul 16, 2013 - 10:48am



NET WETLAND 'D' IMPACT	
TEMPORARY:	0 SF
PERMANENT:	205 SF (0.005 AC)
NET MATERIAL ADDED:	13.1 CY
(REFER TO CROSS-SECTIONS)	

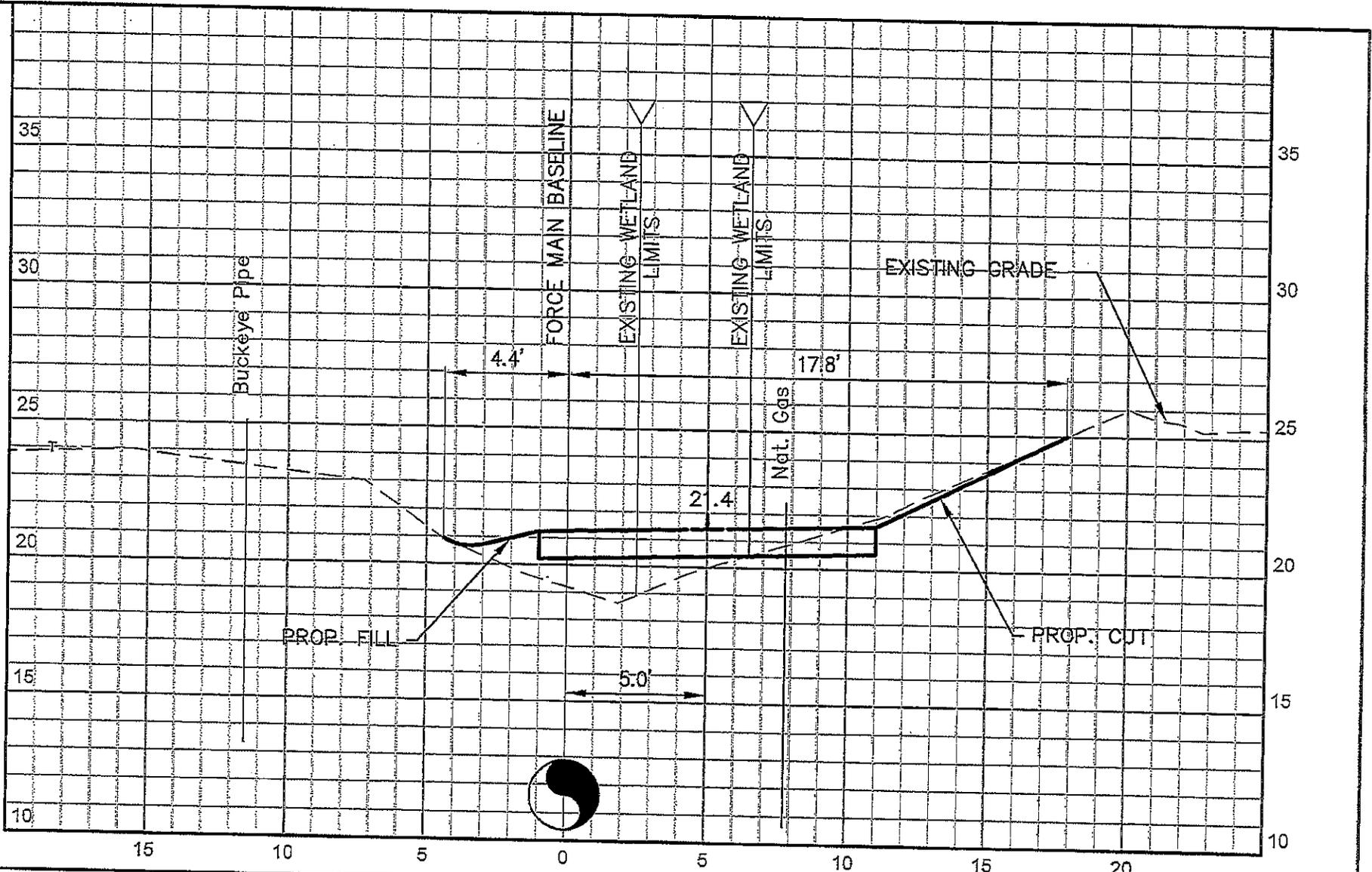
CDR MAGUIRE
2030 Silas Deane Highway
Rocky Hill, Connecticut 06067



US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND D - IMPACT AREA PLAN

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell_Grading_Plan_XSCs.dwg Plot Date: Jul 16, 2013-10:55am



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

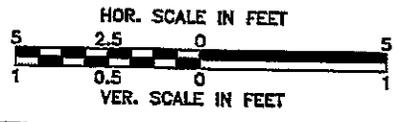


PLATE 24

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

WETLAND D - CROSS-SECTION STA 89+00

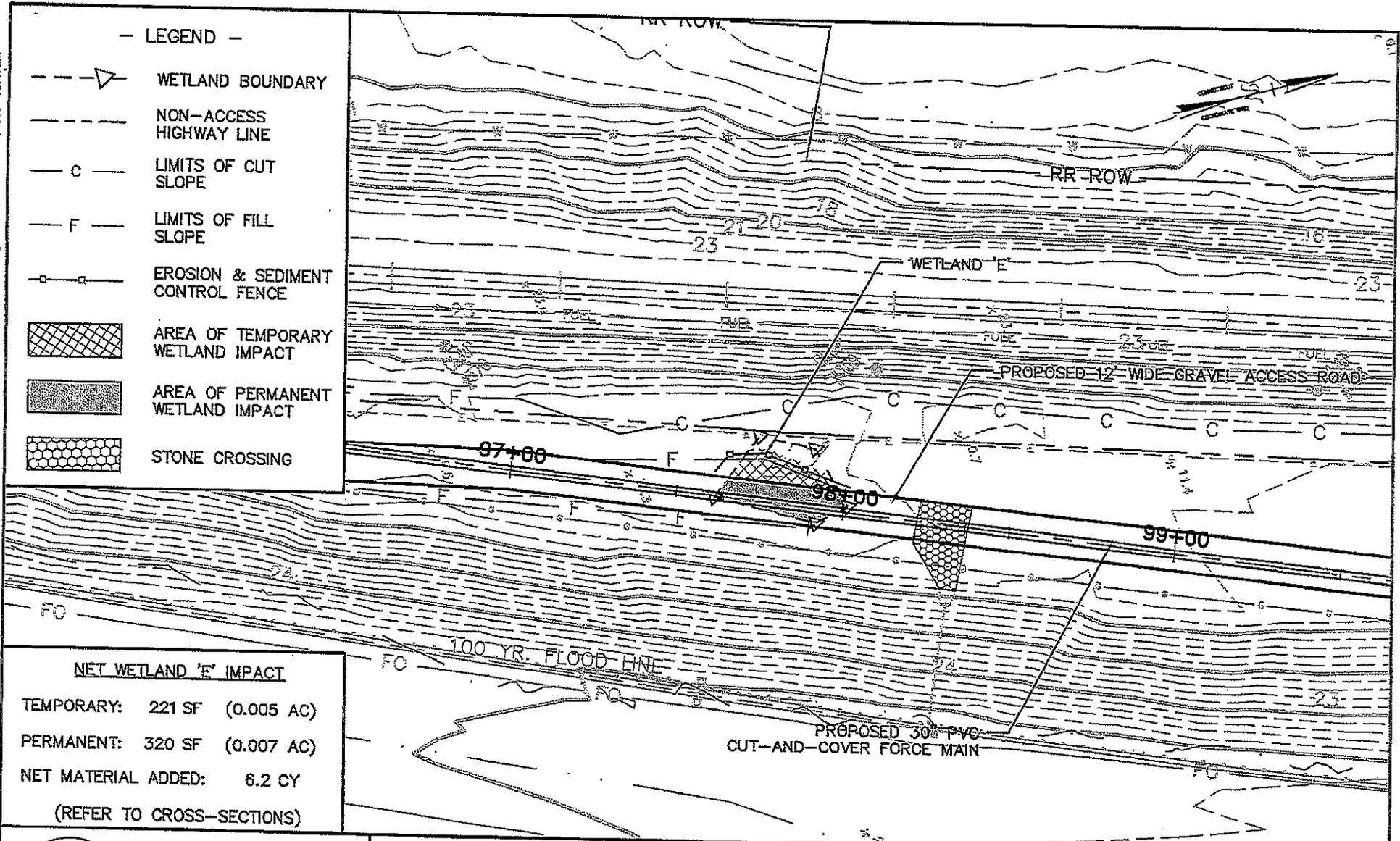
PROJECT NO.: 14712.02

DRAWN BY: TJC

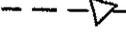
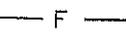
CHK'D BY: MJK

DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell_Grading_Plan.dwg Plot Date: Jul 16, 2013 - 10:47am



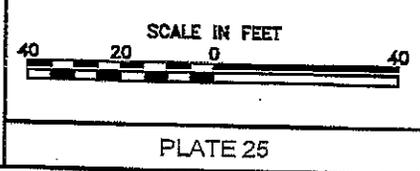
— LEGEND —

-  WETLAND BOUNDARY
-  NON-ACCESS HIGHWAY LINE
-  LIMITS OF CUT SLOPE
-  LIMITS OF FILL SLOPE
-  EROSION & SEDIMENT CONTROL FENCE
-  AREA OF TEMPORARY WETLAND IMPACT
-  AREA OF PERMANENT WETLAND IMPACT
-  STONE CROSSING

NET WETLAND 'E' IMPACT	
TEMPORARY:	221 SF (0.005 AC)
PERMANENT:	320 SF (0.007 AC)
NET MATERIAL ADDED:	6.2 CY
(REFER TO CROSS-SECTIONS)	

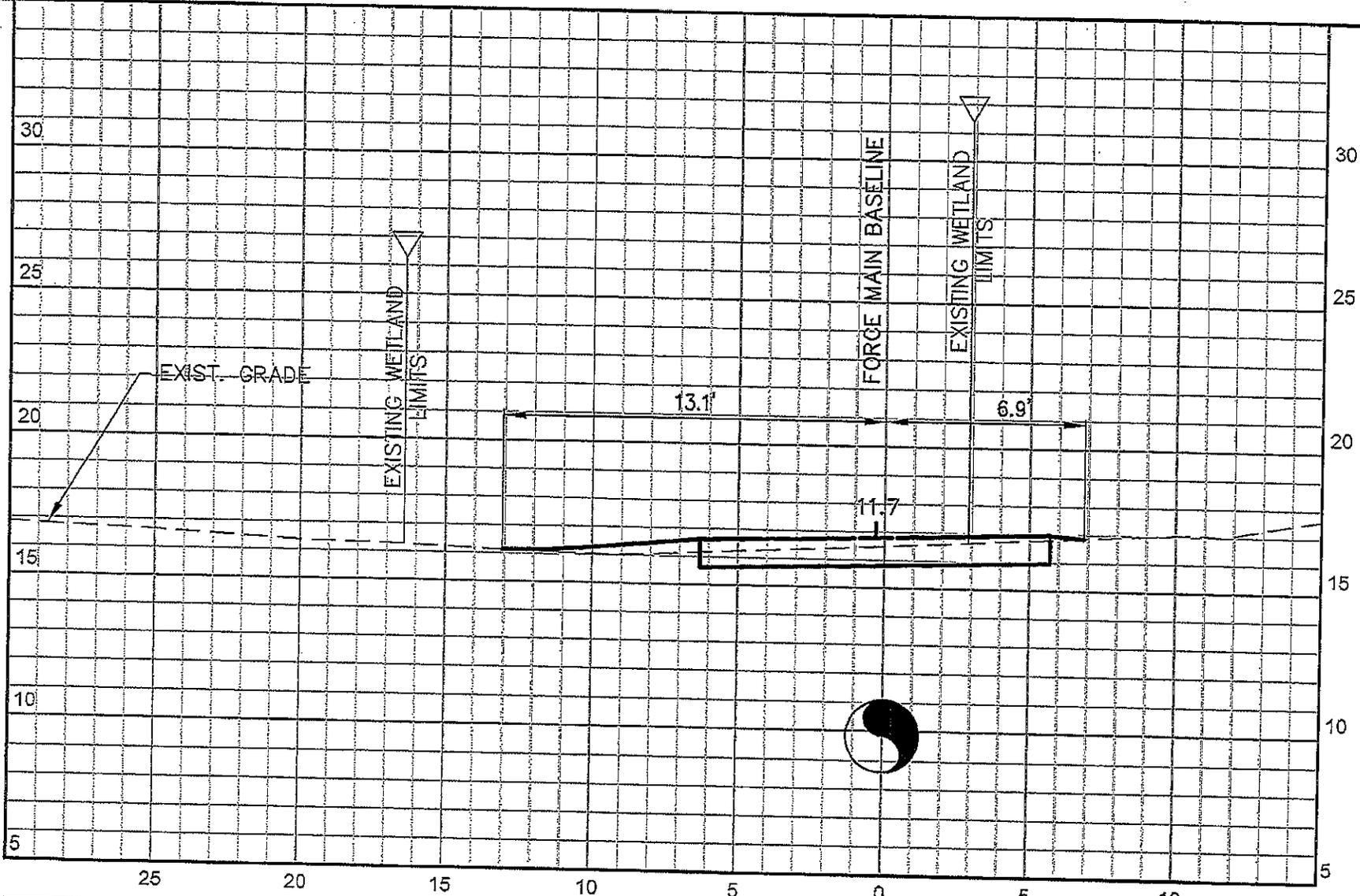


CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067



US ARMY CORPS OF ENGINEERS PROGRAMMATIC GENERAL PERMIT-2 CITY OF MIDDLETOWN, CT SEWAGE FORCE MAIN & GRAVITY SEWER	PROJECT NO.: 14712.02
	DRAWN BY: TJC
WETLAND E - IMPACT AREA PLAN	CHK'D BY: MJK
	DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown-FS_FM_Final_Design\ACAD\CONTRACT\Civil_Highway\Cromwell Grading Plan XSCs.dwg Plot Date: Jul 16, 2013 - 10:55am



CDR MAGUIRE

2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

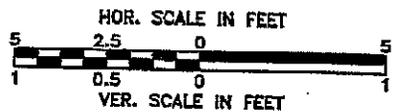
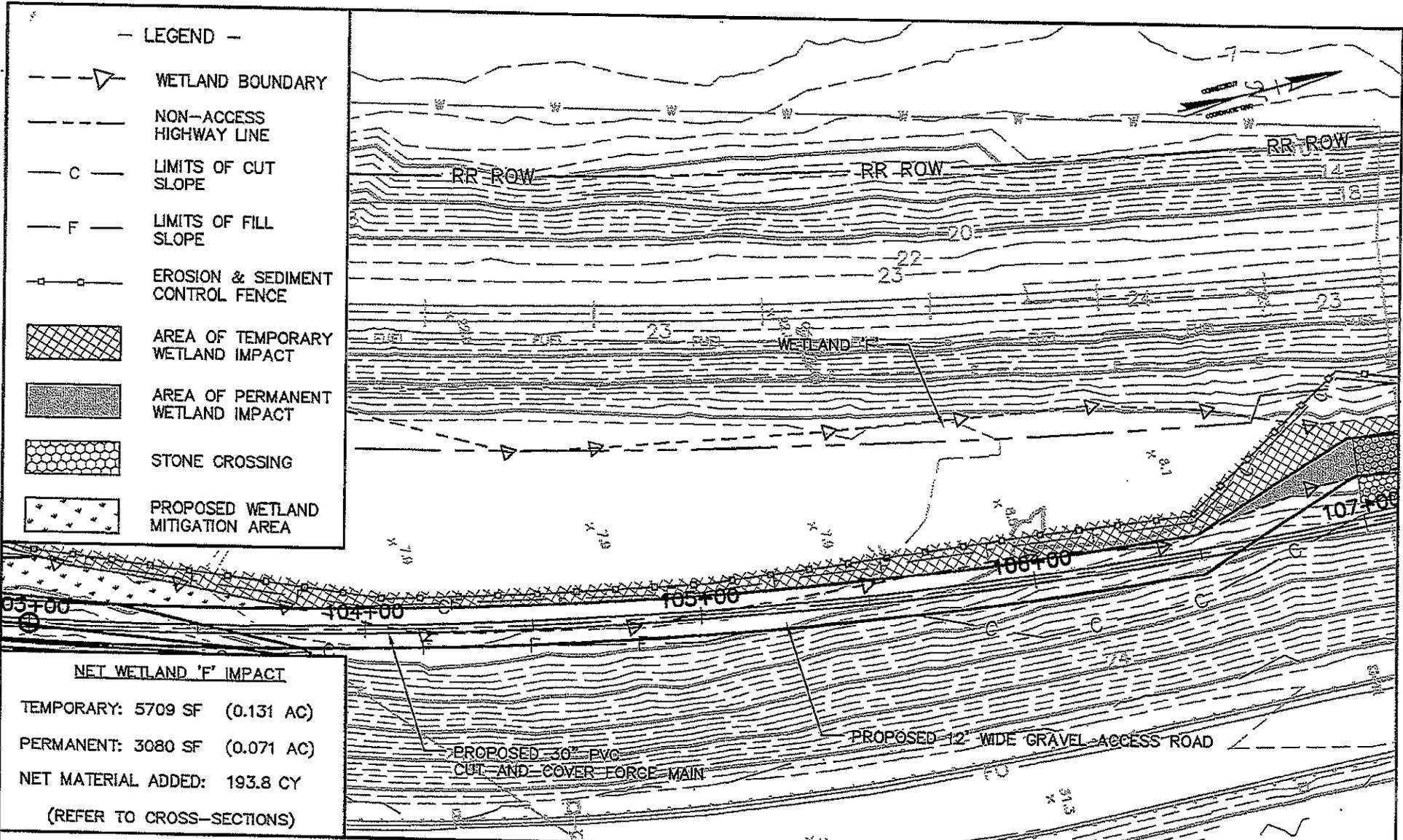


PLATE 26

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND E - CROSS-SECTION STA 97+75

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell Grading Plan.dwg Plot Date: Jul 16, 2013 - 10:46am



— LEGEND —

- WETLAND BOUNDARY
- NON-ACCESS HIGHWAY LINE
- LIMITS OF CUT SLOPE
- LIMITS OF FILL SLOPE
- EROSION & SEDIMENT CONTROL FENCE
- AREA OF TEMPORARY WETLAND IMPACT
- AREA OF PERMANENT WETLAND IMPACT
- STONE CROSSING
- PROPOSED WETLAND MITIGATION AREA

NET WETLAND 'F' IMPACT

TEMPORARY: 5709 SF (0.131 AC)
 PERMANENT: 3080 SF (0.071 AC)
 NET MATERIAL ADDED: 193.8 CY
 (REFER TO CROSS-SECTIONS)

PROPOSED 30" PVC CUT AND COVER FORCE MAIN

PROPOSED 12' WIDE GRAVEL ACCESS ROAD



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

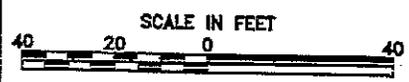


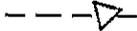
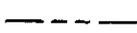
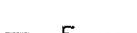
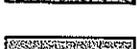
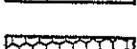
PLATE 27

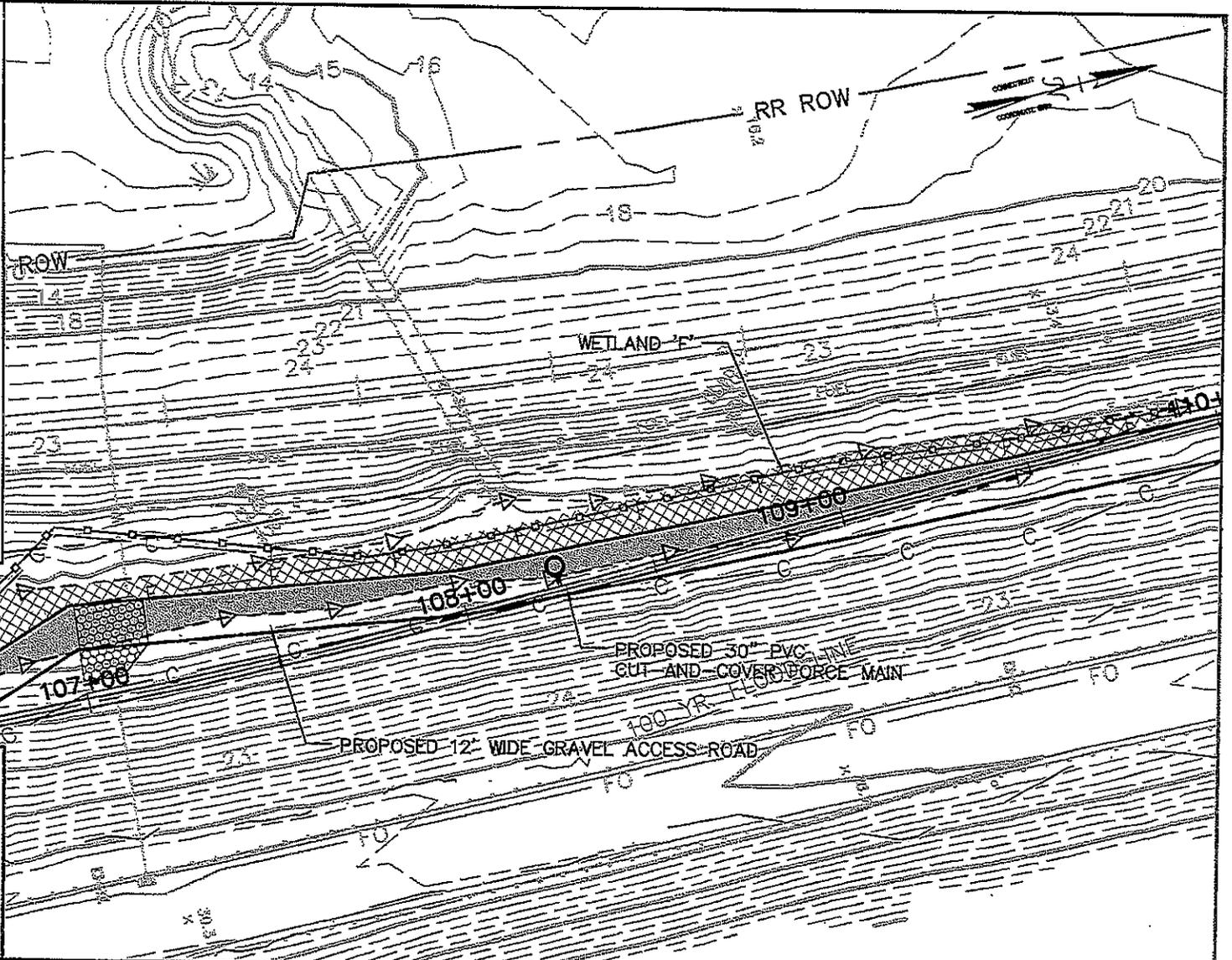
US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 WETLAND F - IMPACT AREA PLAN
 STA 103+00 - 107+00

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Drawing file: G:\JOBS\14712.02--Middletown_PS_FM_Final_Design\ACAD\CWL\CONTRACT\CWL\Highway\Crownwall\Grading\Plan.dwg Plot Date: Jul 16, 2013--10:45am

— LEGEND —

-  WETLAND BOUNDARY
-  NON-ACCESS HIGHWAY LINE
-  LIMITS OF CUT SLOPE
-  LIMITS OF FILL SLOPE
-  EROSION & SEDIMENT CONTROL FENCE
-  AREA OF TEMPORARY WETLAND IMPACT
-  AREA OF PERMANENT WETLAND IMPACT
-  STONE CROSSING



NET WETLAND 'F' IMPACT

TEMPORARY: 5709 SF (0.131 AC)

PERMANENT: 3080 SF (0.071 AC)

NET MATERIAL ADDED: 193.8 CY

(REFER TO CROSS-SECTIONS)



CDR MAGUIRE

2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

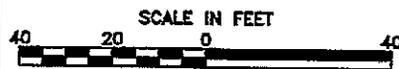


PLATE 28

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

WETLAND F - IMPACT AREA PLAN
STA 107+00 - 110+00

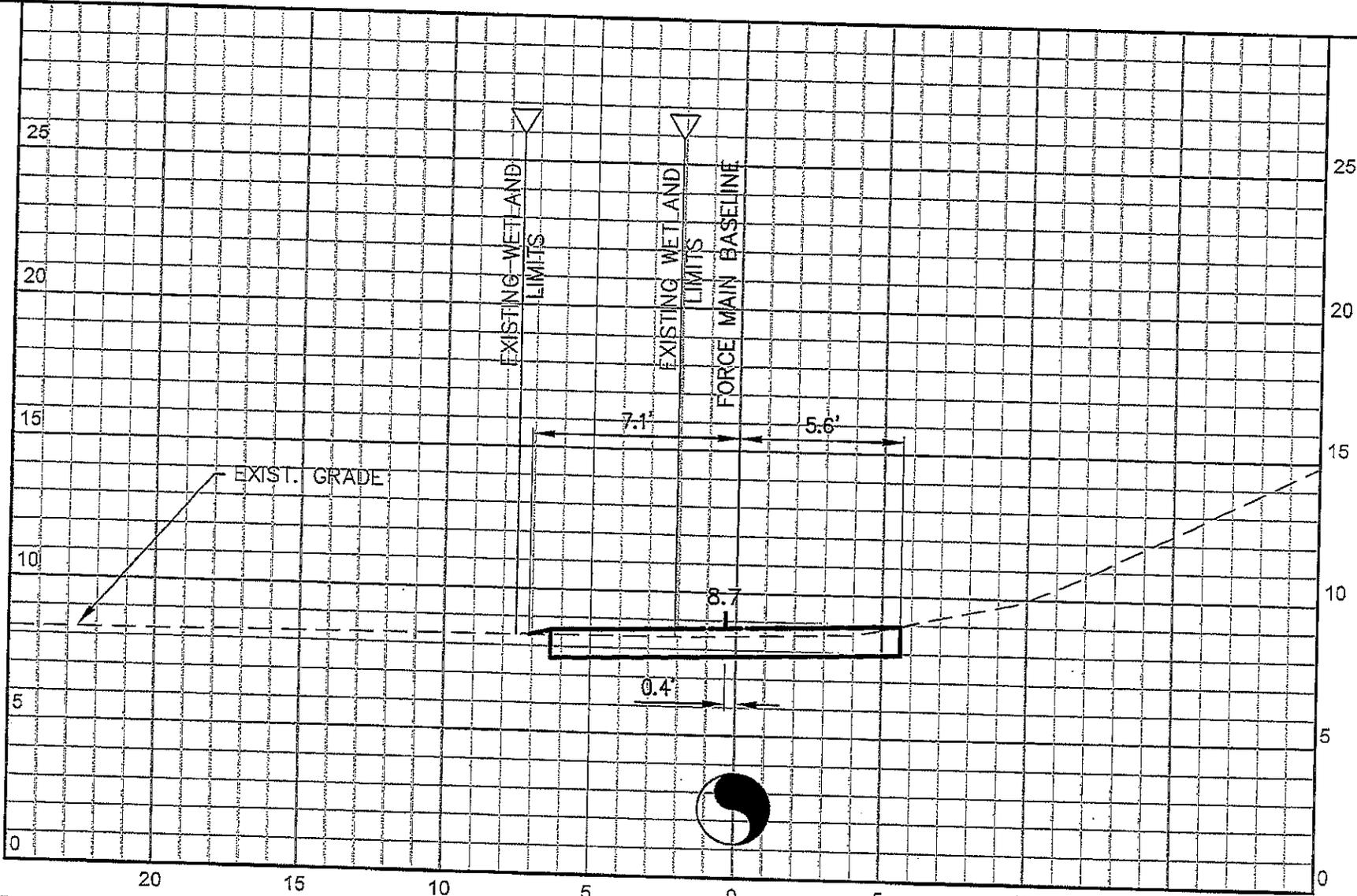
PROJECT NO.: 14712.02

DRAWN BY: TJC

CHK'D BY: MJK

DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Crownwell Grading Plan XSCs.dwg Plot Date: Jul 16, 2013 - 10:55am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

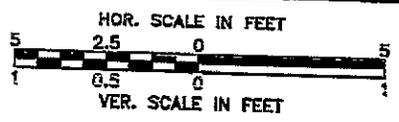
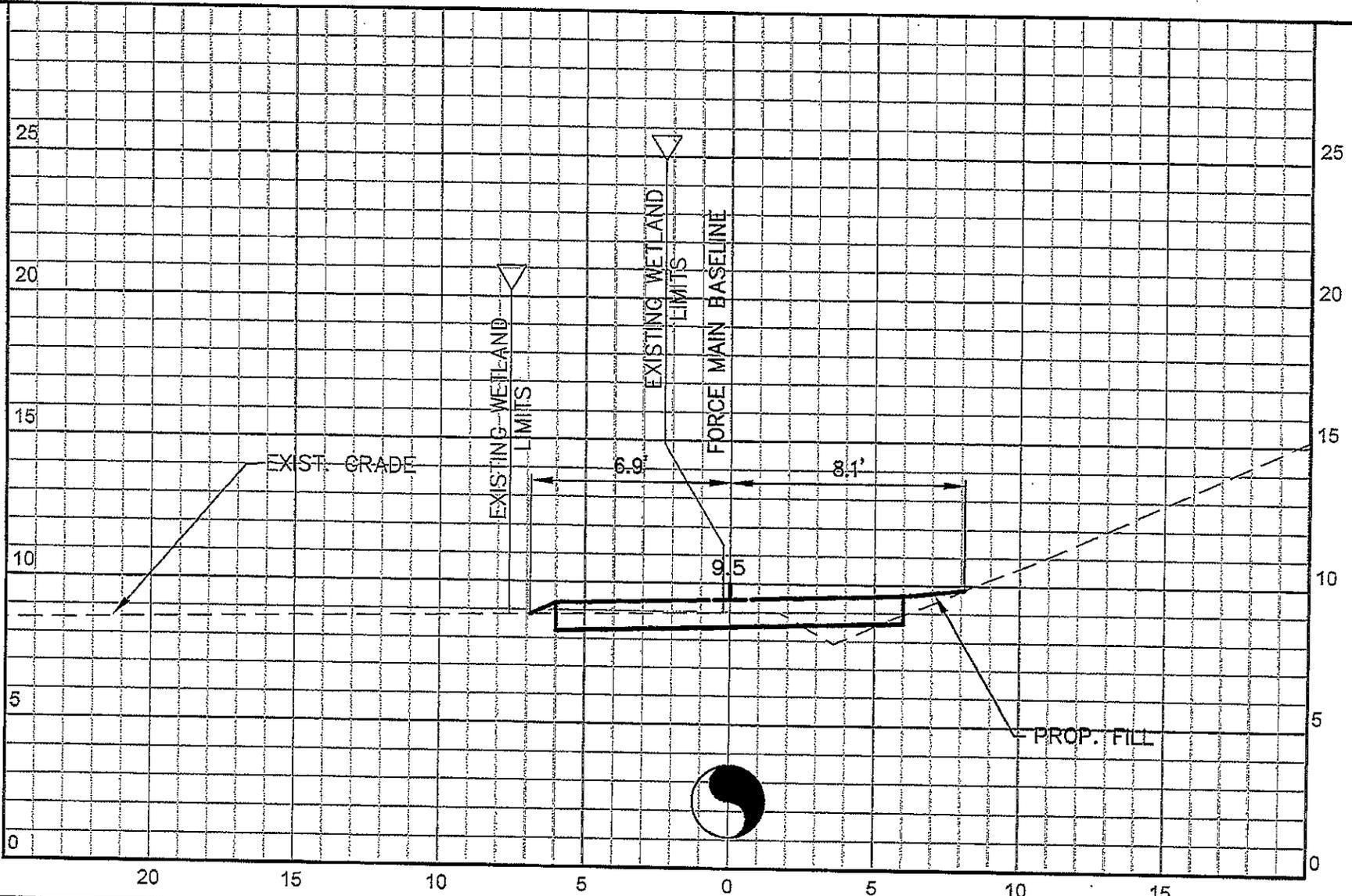


PLATE 29

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND F - CROSS-SECTION STA 104+00

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Drawing file: G:\0085\14712.02-Middletown_PS_FM_Final_Design\ACAD\Civil\CONTRACT 1\Civil\Highway\Cromwell Grading Plan XSCs.dwg Plot Date: Jul 16, 2013--10:55am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

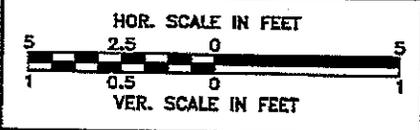


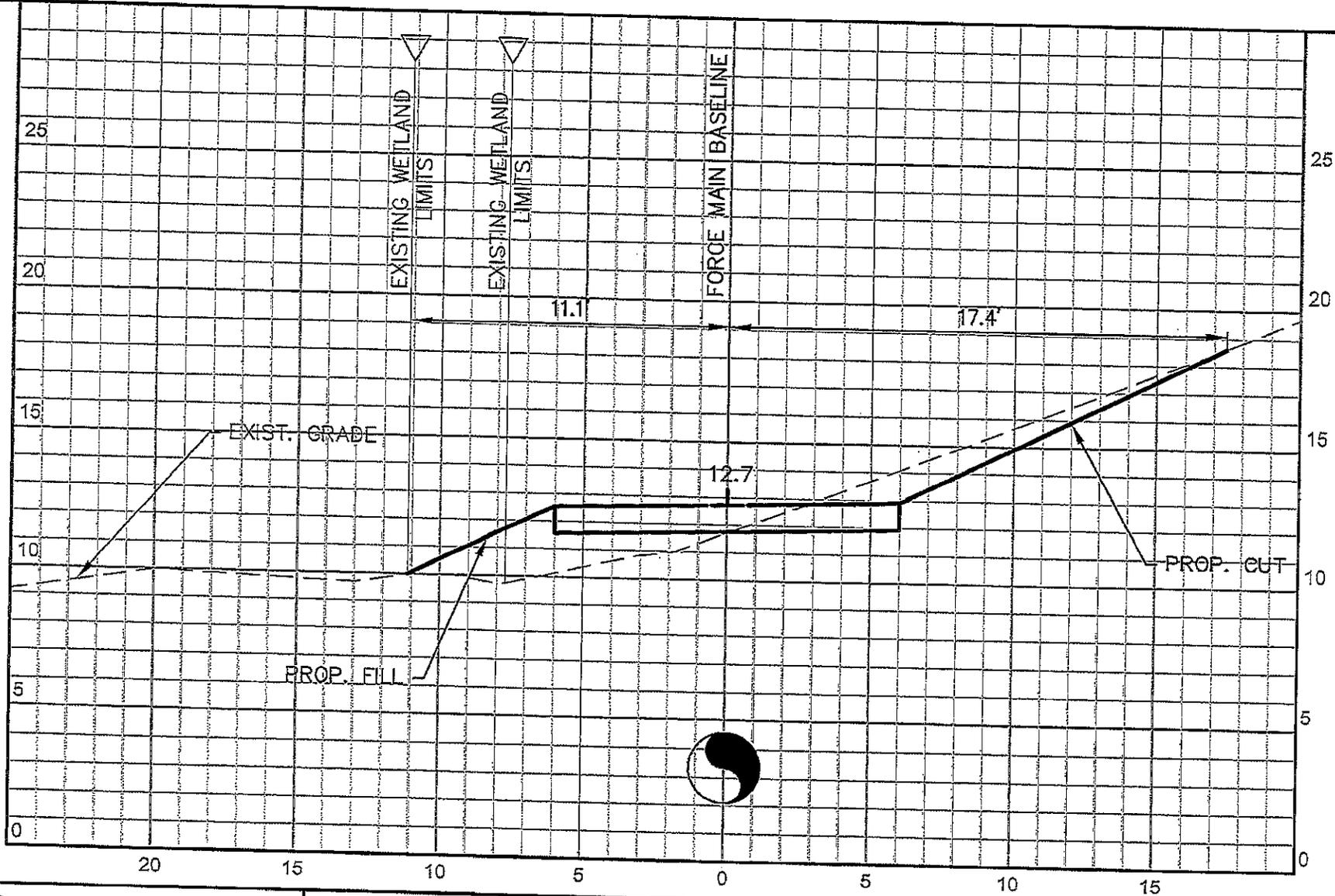
PLATE 30

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

WETLAND F - CROSS-SECTION STA 105+00

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: C:\0805\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cramwell\Grading Plan XSCs.dwg Plot Date: Jul 16, 2013 - (0:55am)



CDR MACQUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

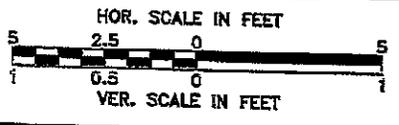
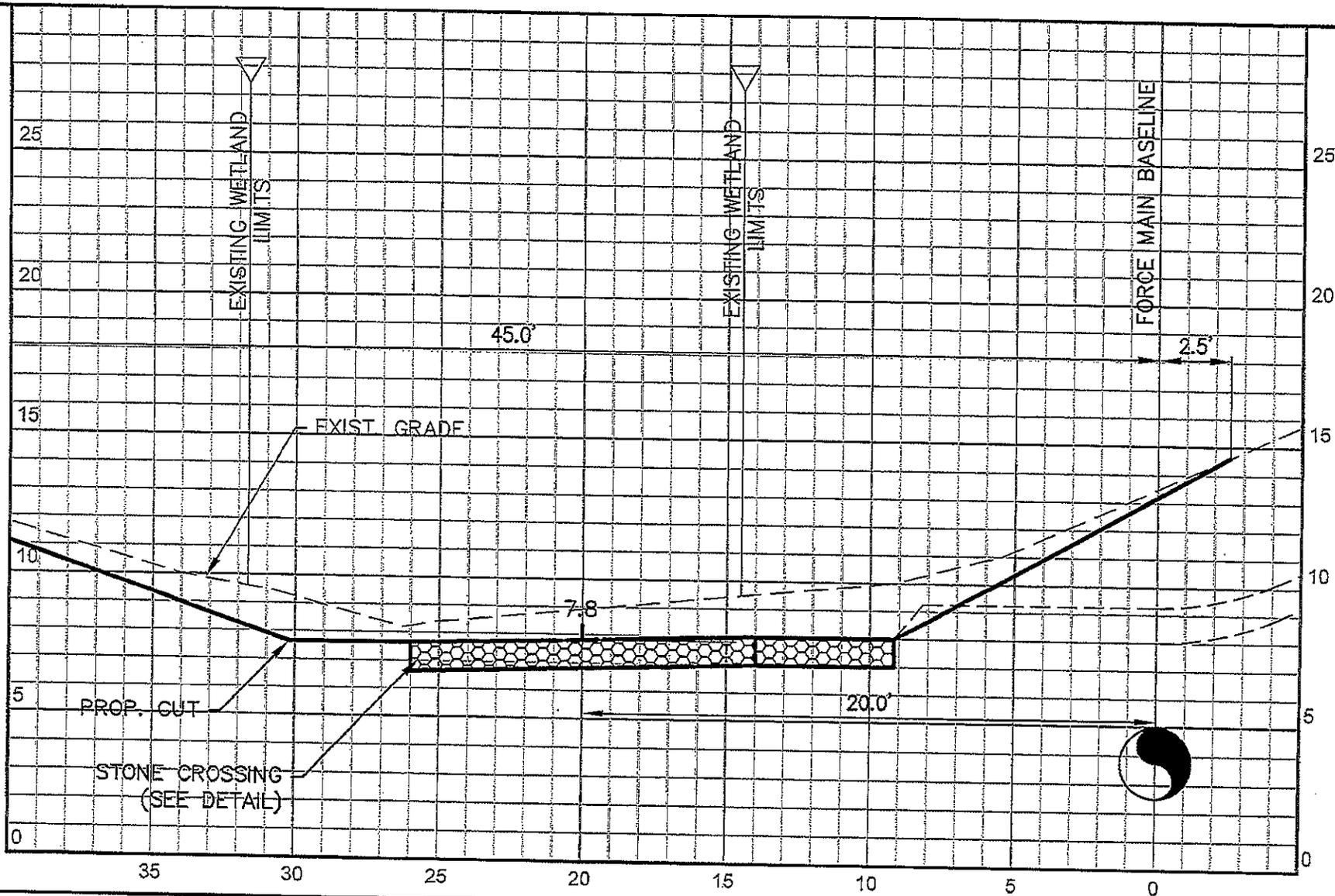


PLATE 31

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND F - CROSS-SECTION STA 106+00

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Drawing file: G:\JOBS\14712.02--Middletown--PS--Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell\Grading Plan XSCs.dwg Plot Date: Jul 16, 2013 - 10:55am



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

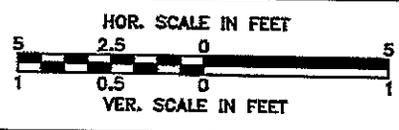
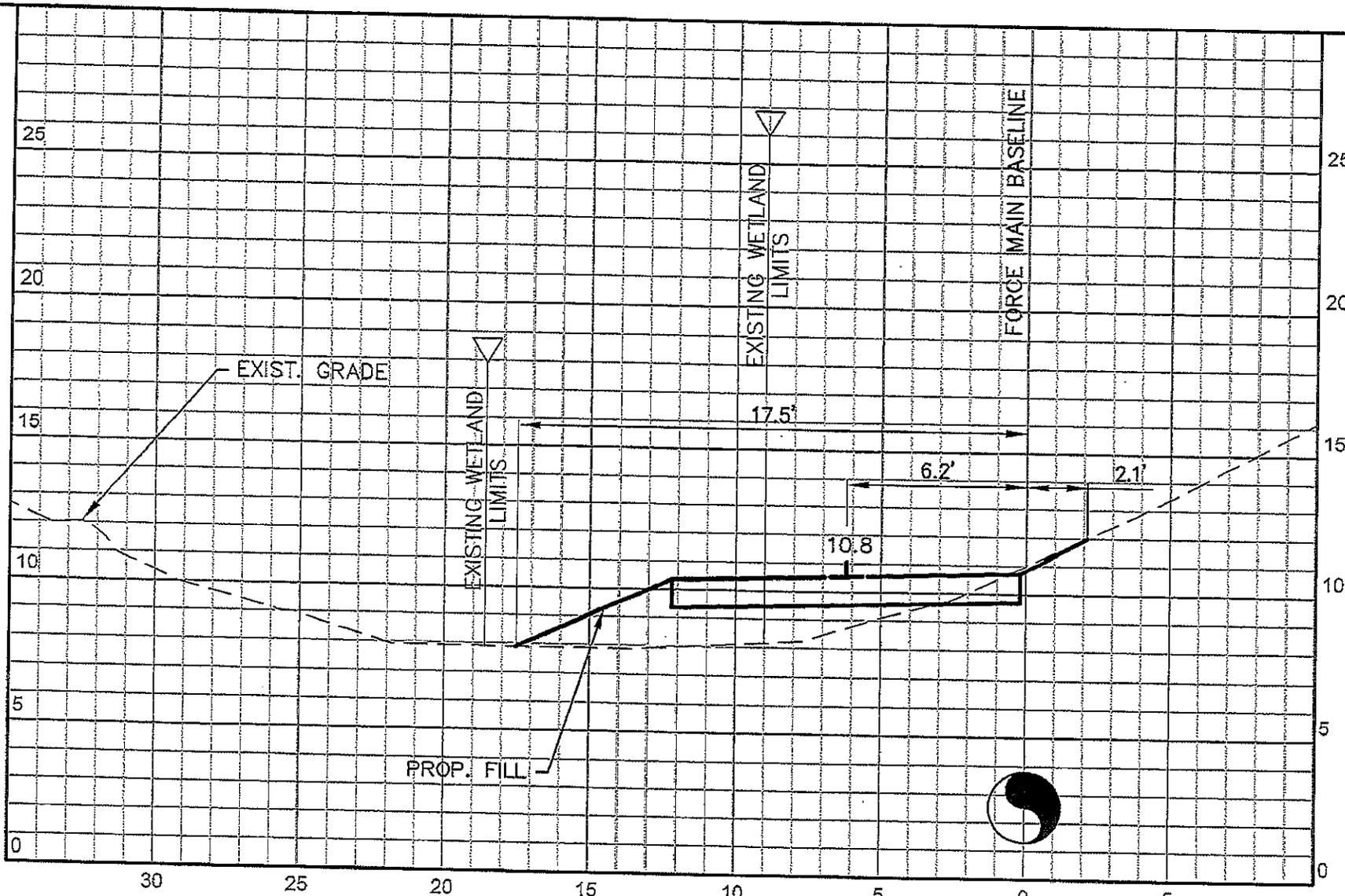


PLATE 32

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER
 WETLAND F - CROSS-SECTION STA 107+00

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

Drawing file: G:\JOHS\14712.02 - Middletown - PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell\Crossing Plan XSCs.dwg Plot Date: Jul 16, 2013 - 10:55am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

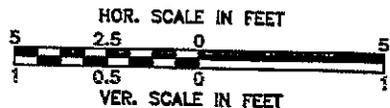
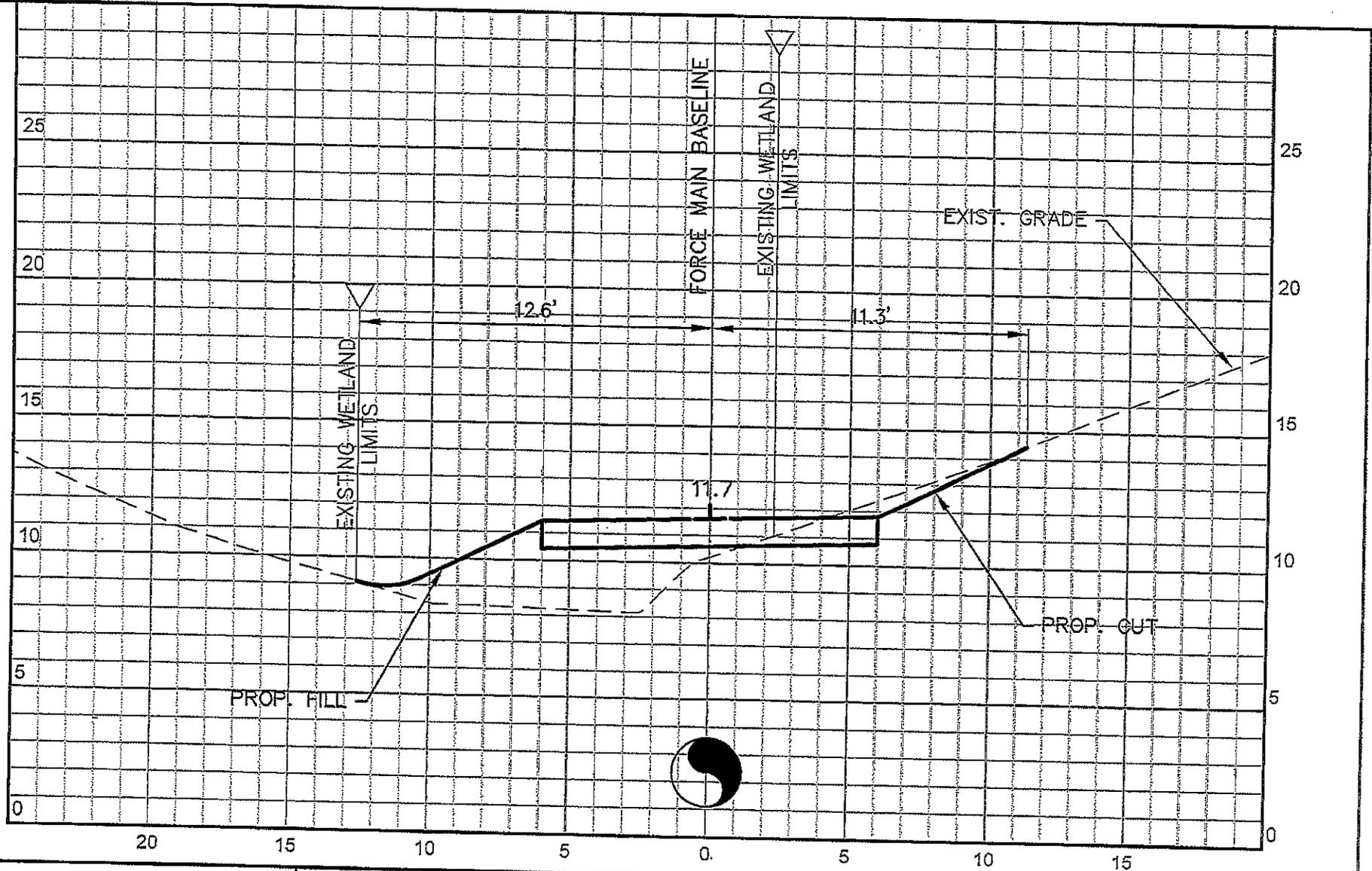


PLATE 33

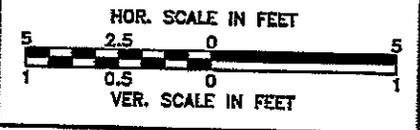
US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND F - CROSS-SECTION STA 108+00

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Drawing file: C:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVIL\CONTRACT\1\CIVIL\Highway\Cromwell_Grading_Plan_XSCs.dwg Plot Date: Jul 16, 2013--10:55am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

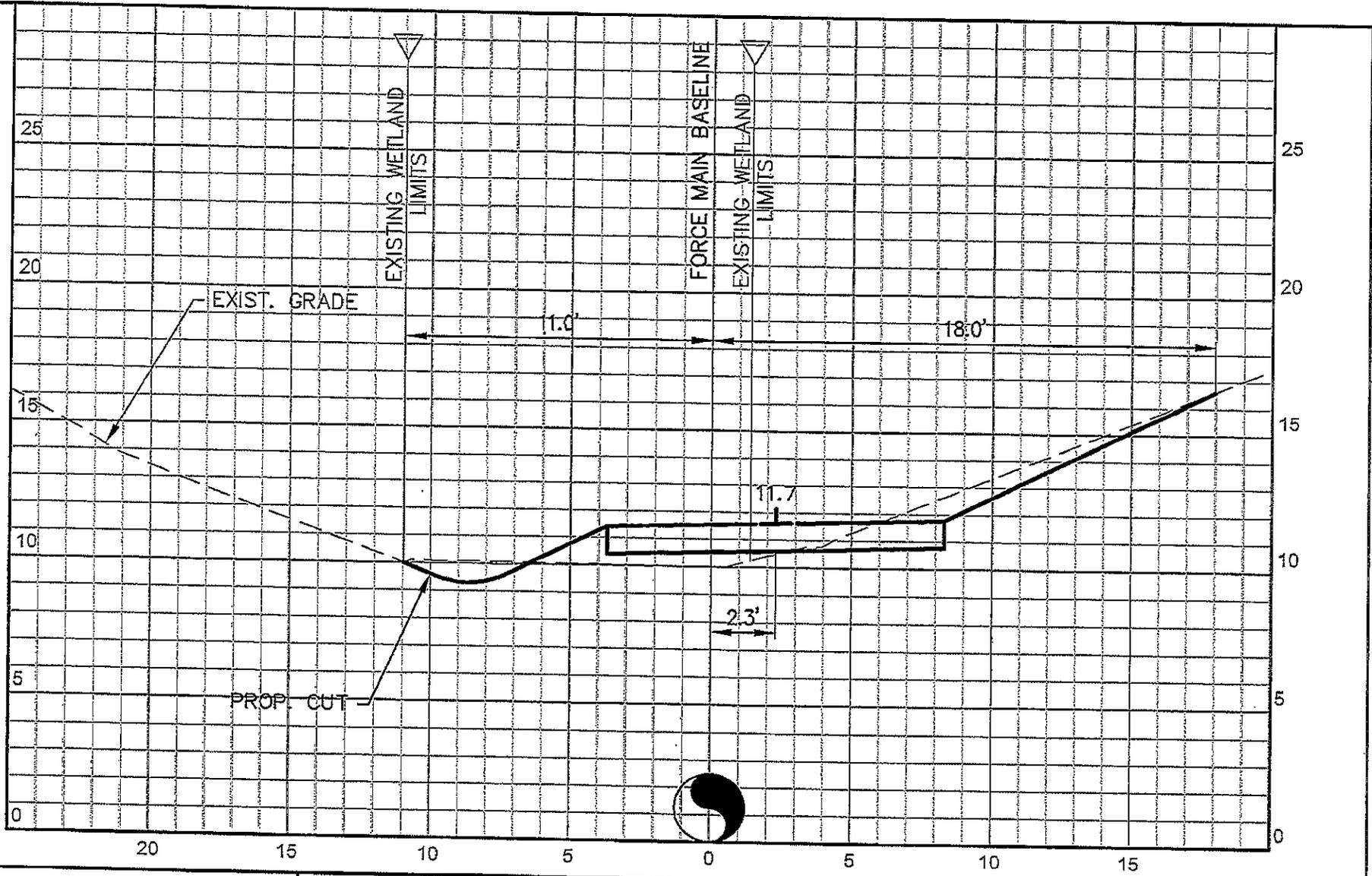


US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND F - CROSS-SECTION STA 109+00

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

PLATE 34

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Find_Design\ACD\CML\CONTRACT 1\CIVIL\Highway\Cromwell Grading Plot XSCs.dwg Plot Date: Jul 16, 2013, 10:55am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

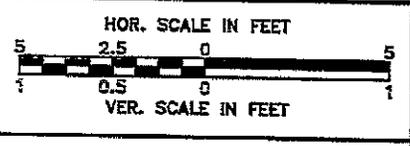


PLATE 35

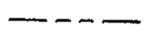
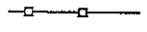
US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

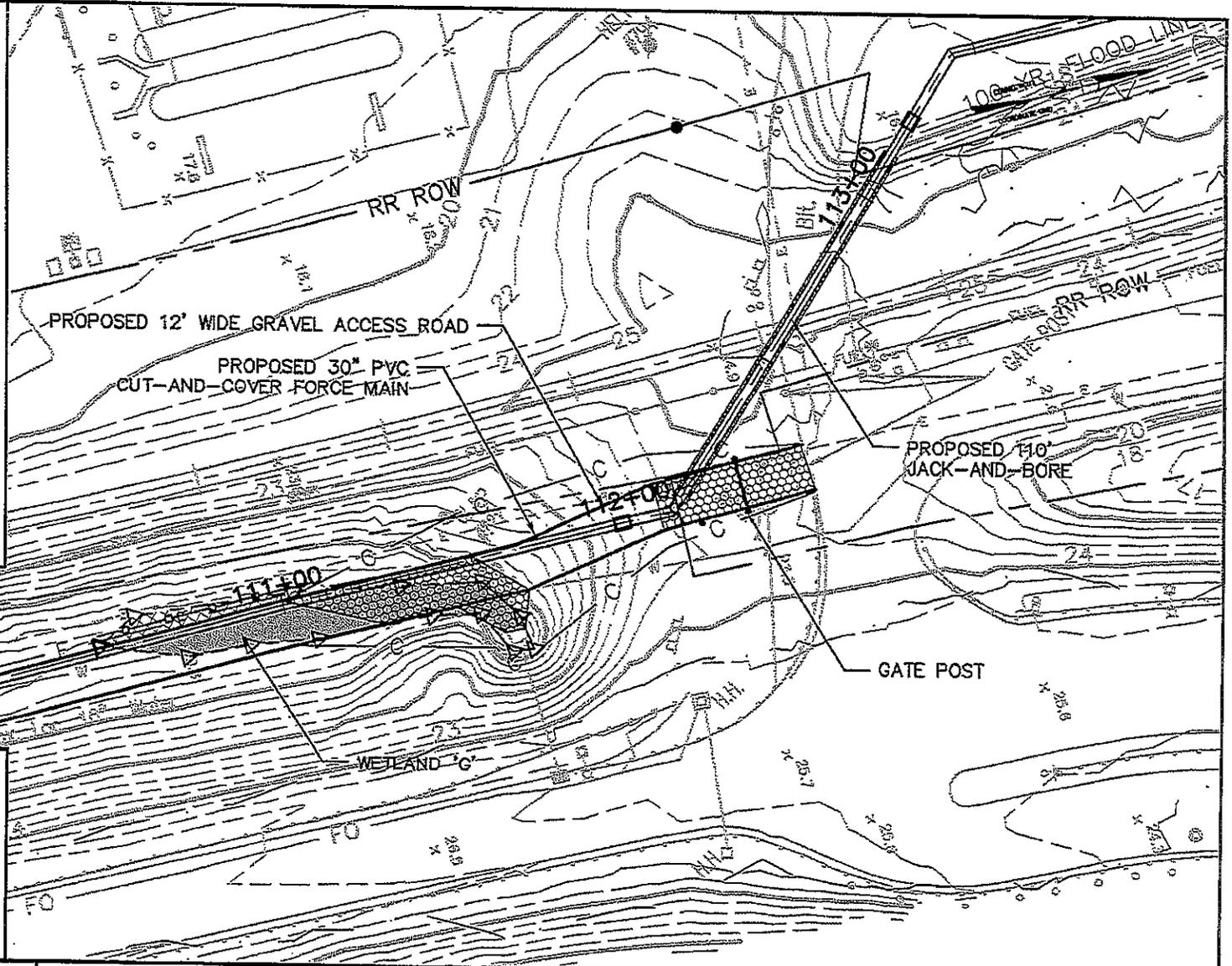
WETLAND F - CROSS-SECTION STA 109+50

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIVL\CONTRACT\CWILL\Highway\Cromwell\Grading Plan.dwg Plot Date: Jul 16, 2013 - 10:44am

— LEGEND —

-  WETLAND BOUNDARY
-  NON-ACCESS HIGHWAY LINE
-  LIMITS OF CUT SLOPE
-  LIMITS OF FILL SLOPE
-  EROSION & SEDIMENT CONTROL FENCE
-  AREA OF TEMPORARY WETLAND IMPACT
-  AREA OF PERMANENT WETLAND IMPACT
-  STONE CROSSING



NET WETLAND 'G' IMPACT

TEMPORARY: 204 SF (0.005 AC)
 PERMANENT: 930 SF (0.021 AC)
 NET MATERIAL ADDED: -2.3 CY
 (REFER TO CROSS-SECTIONS)



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067



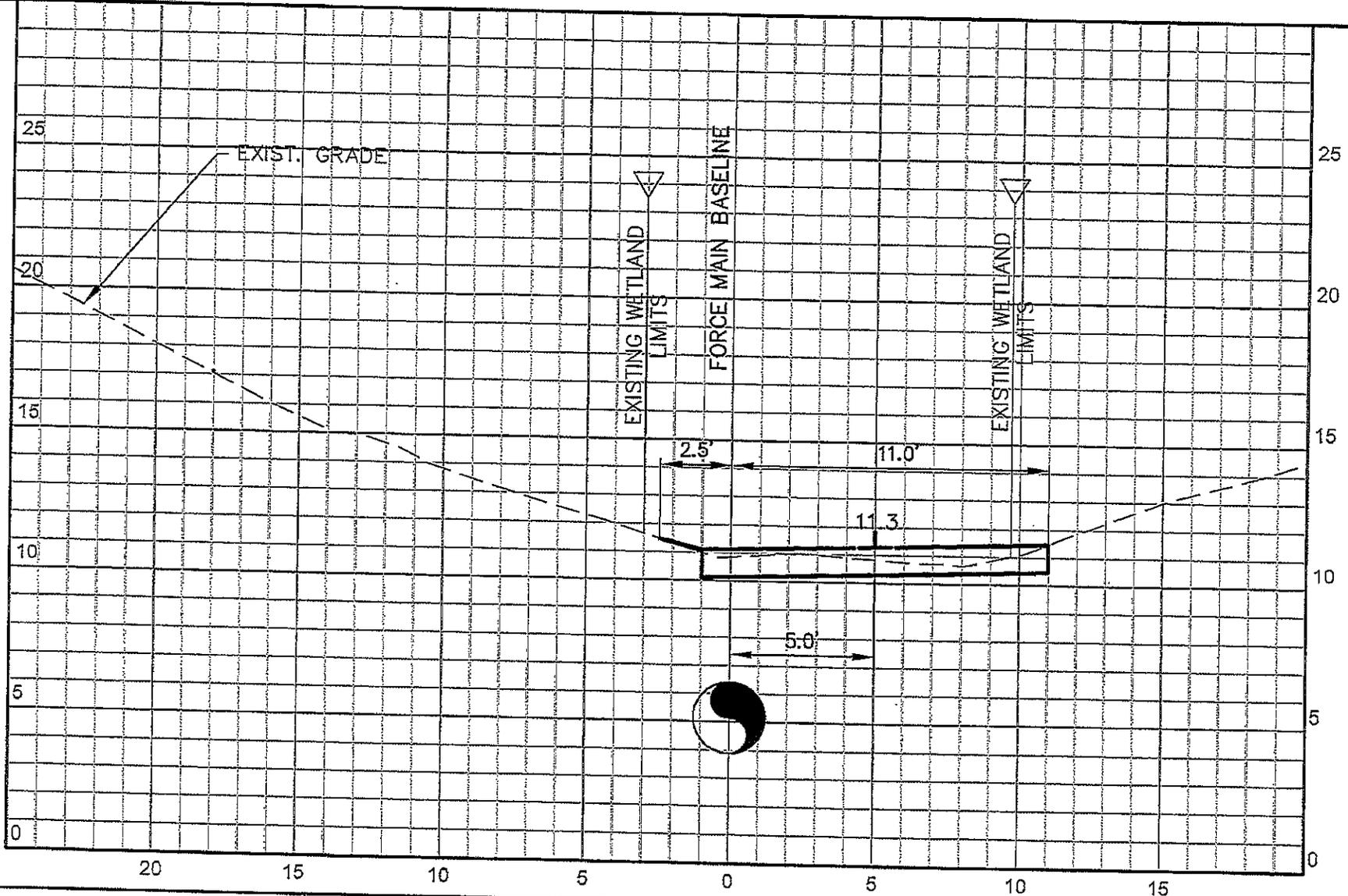
PLATE 36

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

PROJECT NO.: 14712.02
 DRAWN BY: TJC
 CHK'D BY: MJK
 DATE: 07/16/13

WETLAND G - IMPACT AREA PLAN

Drawing file: G:\OBS\14712.02 - Middletown_PS_FM_Final_Design\ACAD\CONTRACT\1\CIVIL\Highway\Crowwell_Croading_Plan_XSCs.dwg Plot Date: Jul 16, 2013 - 10:55am



CDR MAGUIRE
 2080 Silas Deane Highway
 Rocky Hill, Connecticut 06067

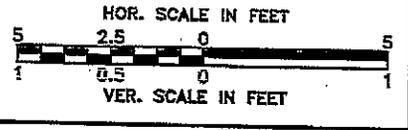


PLATE 37

US ARMY CORPS OF ENGINEERS
 PROGRAMMATIC GENERAL PERMIT-2
 CITY OF MIDDLETOWN, CT
 SEWAGE FORCE MAIN & GRAVITY SEWER

WETLAND G - CROSS-SECTION STA 111+00

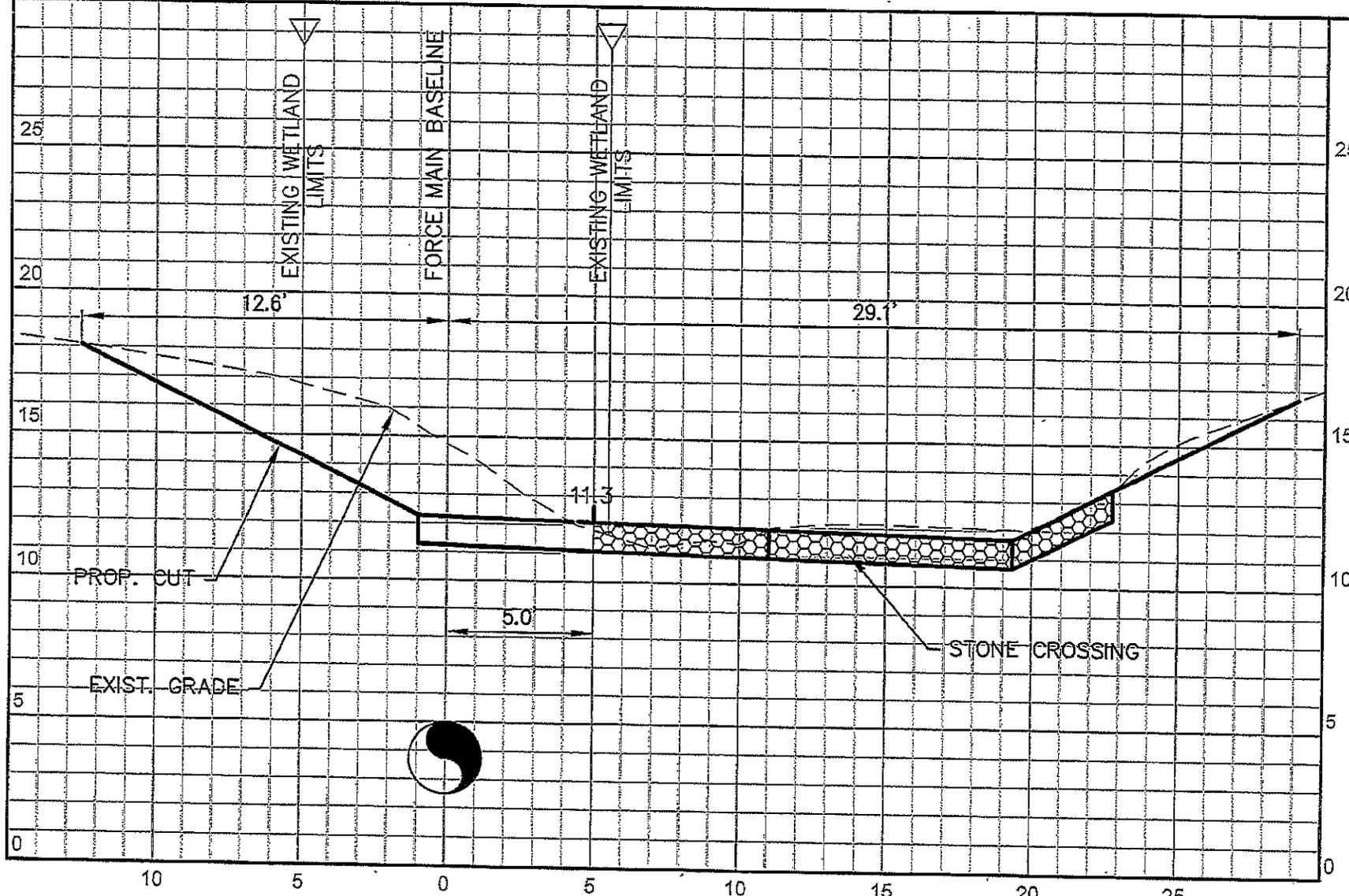
PROJECT NO.: 14712.02

DRAWN BY: TJC

CHK'D BY: MJK

DATE: 07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FM_Final_Design\ACAD\CIV\CONTRACT\CONTRACT\Highway\Cramwell\Grading Plan XSC.s.dwg Plot Date: Jul 16, 2013 - 10:55am



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

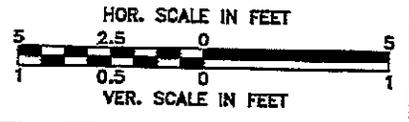


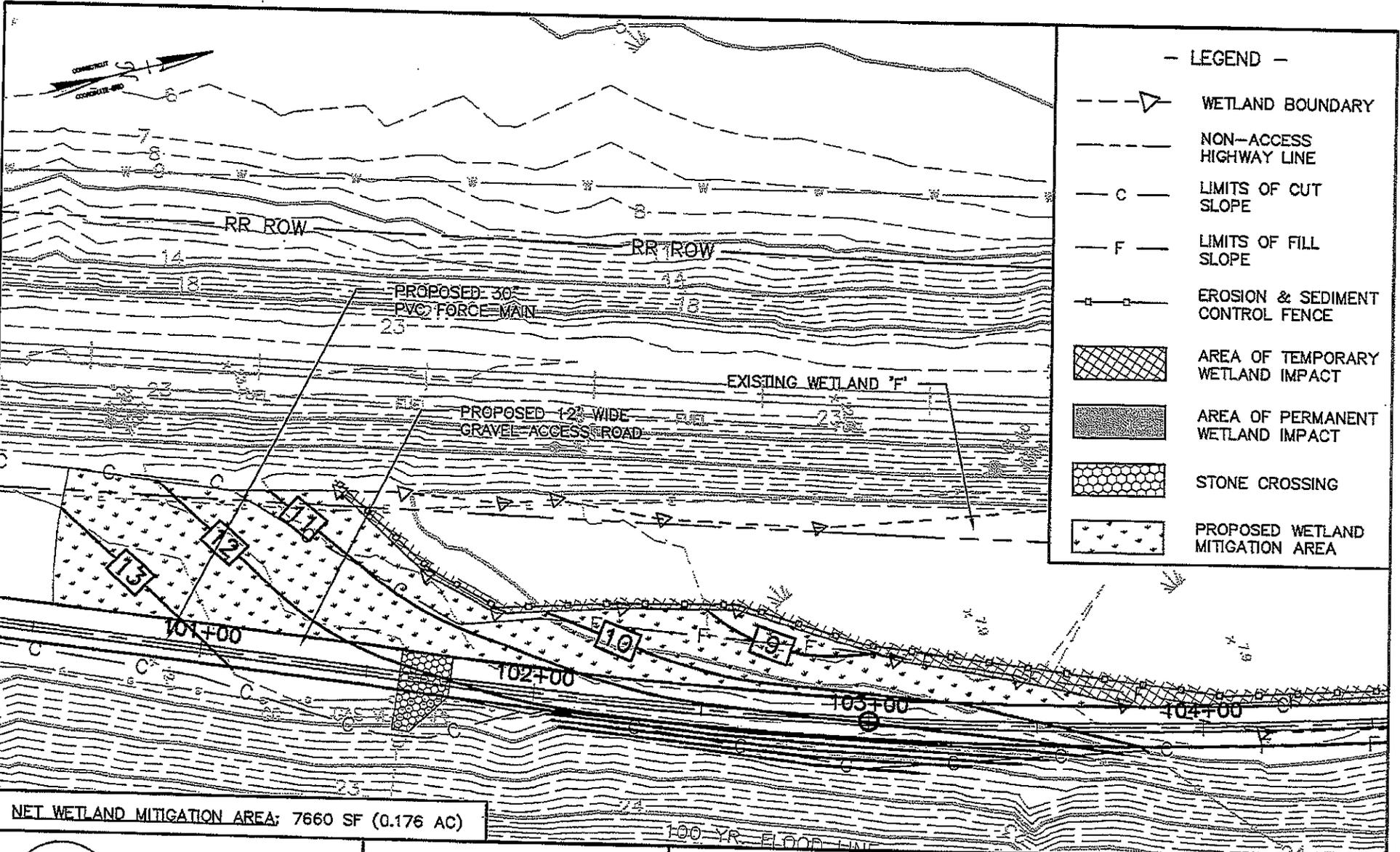
PLATE 38

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER

WETLAND G - CROSS-SECTION STA 111+50

PROJECT NO.:	14712.02
DRAWN BY:	TJC
CHK'D BY:	MJK
DATE:	07/16/13

Drawing file: G:\JOBS\14712.02-Middletown_PS_FRM_Final_Design\ACAD\CIVIL\CONTRACT\CIVIL\Highway\Cromwell Grading Plan.dwg Plot Date: Jul 16, 2013 - 10:43am



NET WETLAND MITIGATION AREA: 7660 SF (0.176 AC)



CDR MAGUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

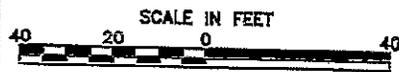


PLATE 39

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND MITIGATION AREA GRADING PLAN

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13

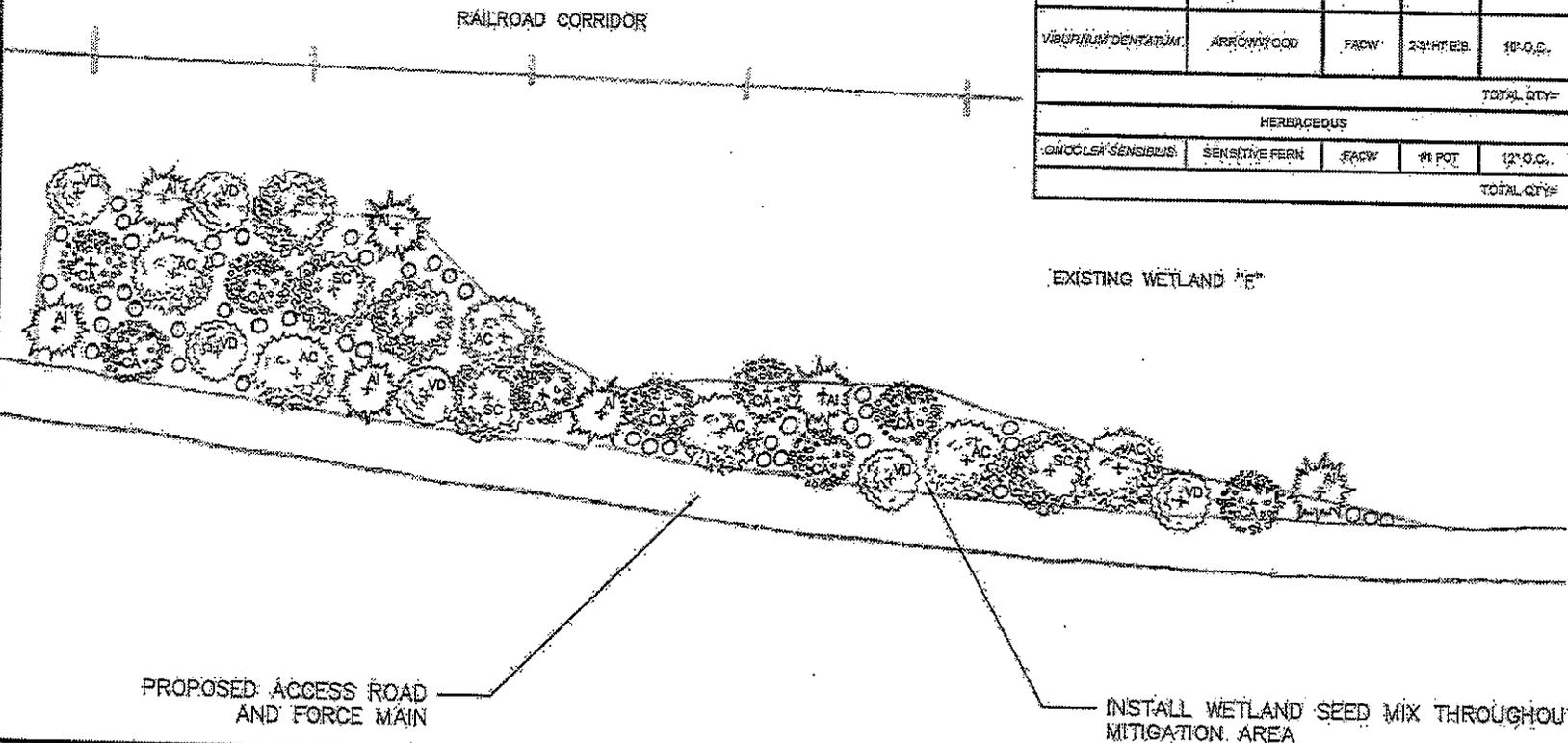
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NOTES:

1. ALL AREAS WITH WETLAND IMPACTS, BOTH TEMPORARY AND PERMANENT, WILL BE DEMARCATED AND SEEDED IN THEIR ENTIRETY WITH A WETLAND SEED MIX AS OUTLINED IN THE WETLAND MITIGATION AND ENHANCEMENT SPECIFICATION.
2. SHRUBS AND HERBACEOUS NATIVE PLANT MATERIALS WILL BE INSTALLED ONLY IN THE WETLAND MITIGATION AREA (REFER TO SITE PLAN ON C205 FOR LOCATION).

WETLAND MITIGATION AREA PLANTING PLAN:

BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	SPACING	QUANTITY	SYMBOL
SHRUBS						
<i>ALNUS INCANA</i>	SPECKLED ALDER	FACW	18" 24" HT 1BB	10' O.C.	7	
<i>VIBURNUM CANADENSIS</i>	SERVICEBERRY	FAC	4-8 FT. B.E.	10' O.C.	6	
<i>CORNUS AMOMUM</i>	SILKY DOGWOOD	FACW	28" 24" HT CONTAINER	10' O.C.	8	
<i>SAMBUCUS CANADENSIS</i>	ELDERBERRY	FACW	18" 24" HT CONTAINER	10' O.C.	5	
<i>VIBURNUM DENTATUM</i>	ARROWWOOD	FACW	23" HT. B.E.	10' O.C.	6	
TOTAL QTY=					32	
HERBACEOUS						
<i>DIOCLEA SENSIBILIS</i>	SENSITIVE FERN	FACW	#1 POT	12' O.C.	44	
TOTAL QTY=					44	



CDR MROUIRE
2080 Silas Deane Highway
Rocky Hill, Connecticut 06067

NOT TO SCALE

PLATE 40

US ARMY CORPS OF ENGINEERS
PROGRAMMATIC GENERAL PERMIT-2
CITY OF MIDDLETOWN, CT
SEWAGE FORCE MAIN & GRAVITY SEWER
WETLAND MITIGATION PLANTING PLAN

PROJECT NO.: 14712.02
DRAWN BY: TJC
CHK'D BY: MJK
DATE: 07/16/13



US Army Corps of Engineers®
New England District

**GENERAL PERMIT
WORK-START NOTIFICATION FORM**
(Minimum Notice: Two weeks before work begins)

* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Permits and Enforcement Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

Corps of Engineers Permit No. NAE-2012-571 was issued to the City of Middletown, on August 8, 2013. This work is located within the Mattabassett River, ~~Sumner Creek~~, and an unnamed wetland system within the City of Middletown. The permit authorized the permittee to install a force main sewer pipeline from a pump station in Middletown to the existing Mattabassett District Water Pollution Control Facility (WPCF) in Cromwell. This project will consist of the following work: 1) approximately 1,350 linear feet of a 24 inch force main will be Horizontal Directionally Drilled (HDD) 40 feet below the Mattabassett River at the City of Middletown/Town of Cromwell municipal boundary, 2) approximately 0.15 acres of federally regulated wetlands, located north of the Mattabassett River along Route 9, will be permanently filled as a result of an open cut and cover of the force main and subsequent construction of a gravel access road on top of the installed pipe, ~~3) approximately 1,420 square feet (0.033 acres) of forested wetland will be temporarily impacted as a result of two cut and cover sub-aqueous crossings of Sumner Creek at deKoven Drive and River Road in the City of Middletown.~~

Does not apply to Bid No. 2013-008

Does not apply to Bid No. 2013-008

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Telephone Numbers: () _____ () _____

Proposed Work Dates: Start: _____ Finish: _____

Permittee/Agent Signature: _____ Date: _____

Printed Name: _____ Title: _____

Date Permit Issued: _____ Date Permit Expires: _____

FOR USE BY THE CORPS OF ENGINEERS

PM: Lindsay Flieger Submittals Required: _____

Inspection Recommendation: _____



**US Army Corps
of Engineers**®
New England District

(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Permit Number: NAE-2012-571

Project Manager Lindsay Flieger

Name of Permittee: City of Middletown

Permit Issuance Date: August 8, 2013

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Permits and Enforcement Branch B *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

() _____
Telephone Number

() _____
Telephone Number

Effective Date: July 15, 2011

Expiration Date: July 15, 2016

Applicant: General Public in the State of Connecticut & Lands Located within the Boundaries of an Indian Reservation

**DEPARTMENT OF THE ARMY
GENERAL PERMIT**

STATE OF CONNECTICUT

&

**LANDS LOCATED WITHIN THE
BOUNDARIES OF AN INDIAN RESERVATION¹**

The New England District of the U.S. Army Corps of Engineers (Corps) hereby issues a General Permit (GP) for activities in waters of the United States (U.S.) that have minimal individual and cumulative impacts on the aquatic environment within the State of Connecticut and lands located within the exterior boundaries of an Indian reservation.

This GP is separated into sections. **Section 1** is for activities occurring within Inland Waters and Wetlands within the State of Connecticut. **Section 1A** is for activities occurring within Inland Waters and Wetlands located within the boundaries of Mashantucket. **Section 2** is for activities occurring within Tidal, Coastal and Navigable Waters.

In order for activities to qualify for this GP, they must meet the GP's terms and eligibility criteria and stipulations listed in the Definition of Categories (Appendices 1 and 2) as well as the GP's general conditions.

¹ Indian reservation lands are considered a sovereign nation, and are therefore acknowledged separately from the State of Connecticut for purposes of this General Permit.

CONNECTICUT GENERAL PERMIT

General Conditions

The following conditions, as well as Appendices 1 and 2 apply to ALL activities authorized under this GP unless otherwise specified.

1. Other Permits. Authorization under this General Permit does not obviate the need to obtain other federal, state, or local authorizations required by law.

2. Federal Jurisdictional Boundaries. Applicability of this GP shall be evaluated with reference to Federal jurisdictional boundaries. Applicants are responsible for ensuring that the boundaries depicted satisfy the Federal criteria defined at 33 CFR 328-329. Wetland boundaries need to be delineated for all wetlands on the subject parcel(s), including isolated wetlands and/or vernal pools. This requirement can be waived by the Corps and Connecticut Department of Energy & Environmental Protection, (CT DEEP) on a case-by-case basis and after coordination with the resource agencies. Wetland boundaries shall be delineated in accordance with the applicable Corps of Engineers Wetlands Delineation Manual and regional supplement. For Corps Wetland Delineation Manual, regional supplements and data sheets, and the National List of Plant Species that Occur in Wetlands, visit our website at www.nae.usace.army.mil/reg and then click on "Jurisdictional Limits and Wetlands". The Natural Resources Conservation Service (NRCS) publishes the current hydric soil definition, criteria and lists which can be found at <http://soils.usda.gov/use/hydric>. For the Field Indicators for Identifying Hydric Soils in New England, visit: www.neiwpcc.org/hydricsoils.asp.

3. Minimal Direct, Secondary and Cumulative Impacts.

- a. Projects authorized by this general permit shall have no more than minimal direct, secondary and cumulative adverse environmental impacts. Applicants shall provide information on secondary and cumulative impacts.
- b. Secondary impacts to waterway and/or wetland areas, (e.g., areas drained, flooded, cleared, excavated or fragmented) shall be added to the total fill area when determining whether the project qualifies for Category 1 or 2. Site clearing, grading and construction activities in the upland habitat within 750 feet surrounding vernal pools are secondary impacts. **(NOTE: Not applicable for activities within the exterior boundaries of the Mashantucket Reservation—see additional criteria specified within Appendix 1)**
- c. Cumulative impacts are the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems

Mitigation will generally be required to offset unavoidable direct, secondary and temporary impacts in accordance with the April 10, 2008 Mitigation Rule 33 CFR 332. See **General Condition 15** below for additional information regarding mitigation.

4. Discretionary Authority. Notwithstanding compliance with the terms and conditions of this permit, the Corps retains discretionary authority to require an Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR 320.4(a)]. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant Individual Permit review based on the concerns stated above. This authority may be invoked for projects with cumulative environmental impacts that are more than minimal, or if there is a special resource or concern associated with a particular project. Whenever the Corps notifies an applicant that an Individual Permit may be required, authorization under this GP is voided and no work may be conducted until a Corps Individual Permit is obtained or until the Corps notifies the applicant that further review has demonstrated that the work may be reviewed under this GP.

5. Single and Complete Projects means the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers.

- a. This GP shall not be used for piecemeal work and shall be applied to single and complete projects. When determining eligibility for a single and complete project, proponents must include any permanent historic fill placed since August 1993 that is associated with that project and all currently proposed temporary and permanent impact areas.
- b. For non-linear projects, a single and complete project must have independent utility. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed, even if the other phases were not built, can be considered as separate single and complete projects with independent utility.
- c. Unless the Corps determines the activity has independent utility:
 - (1) This GP shall not be used for any activity that is part of an overall project for which an Individual Permit is required.
 - (2) All components of a single project and/or all planned phases of a multi-phased project shall be treated together as constituting one single and complete project.
- d. For linear projects such as power lines or pipelines with multiple crossings, a "single and complete project" is all crossings of a single water of the U.S. (i.e. single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. If any crossing requires a Category 2 review or an individual permit, then the entire linear project shall be reviewed as one project under Category 2 or the individual permit procedures.

6. Permit On-Site. For Category 2 projects, the permittee shall ensure that a copy of this GP and the accompanying authorization letter are at the work site (and the project office) authorized by this GP whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that

affects areas of Corps jurisdiction at the site of the work authorized by this GP. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means this GP, including General Conditions and the authorization letter (including its drawings, plans, appendices and other attachments) and also includes permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract as a change order. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

7. Historic Properties. Any activity authorized by this GP shall comply with Section 106 of the National Historic Preservation Act. Information on the location and existence of historic resources can be obtained from the Connecticut Commission on Culture and Tourism, Historic Preservation and Museum Division, the National Register of Historic Places and the Tribal Historic Preservation Officer (THPO) of both the Mashantucket Pequot Tribe and the Mohegan Tribe. Project proponents shall apply to the Corps for all projects that would otherwise qualify for Category 1 if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. . These projects may be eligible under Category 2. If the permittee, while accomplishing the activity authorized by this permit, encounters a previously unidentified archaeological or other cultural resource that might be eligible for listing in the National Register of Historic Places, he/she shall immediately notify the District Engineer. The historic properties contacts can be found on Appendix 4.

8. National Lands. Any of the following is not eligible under Category 1:

- a. Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary or any area administered by the National Park Service, U. S. Fish and Wildlife Service (USFWS) or U.S. Forest Service.
- b. Work on Corps properties and/or Corps-controlled easement. Contact the Corps Real Estate Division at (978)318-8585 to initiate reviews about both Corps holdings and permit requirements.
- c. Any proposed temporary or permanent modification or use of a federal project (including but not limited to a levee, dike, floodwall, channel, seawall, bulkhead, jetty, wharf pier, or other work built by the United States), which would obstruct or impair the usefulness of the federal project in any manner, and/or would involve changes to the authorized federal project's scope, purpose, and/or functioning that go beyond minor modifications required for normal operations and maintenance and is not eligible for Category 1 and requires review and approval by the Corps pursuant to 33 USC 408.

9. Federal Threatened and Endangered Species.

- a. No activity may be authorized under this GP (Category 1 or 2) which would:
- (1) Be “likely to adversely affect” a threatened or endangered species, a proposed species, designated or proposed critical habitat (all herein referred to as “listed species or habitat”) as identified under the federal Endangered Species Act (ESA),
 - (2) Result in a “take” of any federally-listed, threatened or endangered species of fish or wildlife, or
 - (3) Result in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.
- b. No activity may be authorized under Category 1 if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat (see (c) below). The following USFWS and NMFS sites must be referenced to ensure that listed species or critical habitat are not present in the action area or to provide information on federally-listed species or habitat:
www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm and
www.nero.noaa.gov/prot_res/esp/ListE&Tspec.pdf.
- c. Proponents must submit an application if any of the activities in (a) or (b) may occur and provide information on federally-listed species or habitat to allow the Corps to conduct any required consultation under Section 7 of the ESA. The Endangered Species Act Consultation Handbook – Procedures for Conducting Section 7 Consultations and Conferences, defines action areas as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action”. [50 CFR 402.02]

10. Essential Fish Habitat. As part of the GP reviewing process, the Corps will coordinate with the NMFS in accordance with the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed “Essential Fish Habitat,” (EFH) and is broadly defined to include “those waters and substrate necessary to fish for spawning, breeding, feeding and growth to maturity.” All species managed under the MSA have had EFH designations. There are 61 species with EFH in the coastal waters of southern New England. Applicants may be required to describe and identify potential impacts to EFH. For instance, in Connecticut, this act protects Atlantic salmon (*Salmo salar*) habitat. Any work in the main stem or tributary streams of the Connecticut River watershed that are being managed for Atlantic salmon are **NOT** be eligible for authorization under Category 1 of this GP because the activity requires screening for potential impacts to designated EFH. Conservation recommendations regarding the protection of EFH for species managed under the MSA made by NMFS will normally be included as special conditions to any permit issued by the Corps. Information on the location of EFH can be obtained from NMFS. The NMFS has established a web site at www.nero.nmfs.gov/RO/DOC/appguide1.html.

11. Wild and Scenic Rivers. Any activity that occurs in the designated main stem of, within 0.25 miles up or downstream of the designated main stem of, or in tributaries within 0.25 miles of the designated main stem of a National Wild and Scenic River, or that has the potential to alter flows within a river within the National Wild and Scenic River System is not eligible for Category 1, regardless of the size of the impacts. This condition applies to both designated Wild and Scenic Rivers and rivers officially designated by Congress as study rivers for possible inclusion while such rivers are in official active study status.

The Corps will consult with the National Park Service (NPS) with regard to potential impacts of the proposed work on the resource values of the wild and scenic river. The culmination of this coordination will be a determination by the NPS and the Corps that the work: (1) may proceed as proposed; (2) may proceed with recommended conditions; or (3) could pose a direct and adverse effect on the resource values of the river and an Individual Permit is required. If preapplication consultation between the applicant and the NPS has occurred whereby NPS has made a determination that the proposed project is appropriate for authorization under this GP (with respect to Wild and Scenic River issues), this determination should be furnished to the Corps with submission of the application.

As of May 31, 2011, affected rivers in Connecticut include: the West Branch of the Farmington River from Colebrook to Canton (designated river); the Eightmile River and tributaries in Salem, Lyme and East Haddam (designated river); and the Lower Farmington River from Canton to Windsor (study river – including its tributary Salmon Brook).

Additional information can be found at: <http://www.rivers.gov/wildriverslist.html> and scrolling down to “Connecticut”.

12. Federal Navigation Project. Any structure or work that extends closer to the horizontal limits of any Corps navigation project than a distance of three times the project’s authorized depth shall be subject to removal at the owner’s expense prior to any future Corps dredging or the performance of periodic hydrographic surveys.

13. Navigation.

- a. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.
- b. The permittee understands and agrees that, if future operations by the U.S. require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

14. Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes;

- b. damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest;
- c. damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit; and
- d. design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.

15. Avoidance, Minimization and Compensatory Mitigation.

- a. Discharges of dredged or fill material into waters of the U.S., including wetlands, shall be avoided and minimized to the maximum extent practicable. Compensatory mitigation of unavoidable direct and indirect impacts (including temporal loss) is expected for all Category 2 projects. The mitigation will need to be sufficient to replace the suite of aquatic resource functions and services lost as a result of the permitted activity (see the NAE Mitigation Guidance and Recommended Ratios at <http://www.nae.usace.army.mil/reg/Mitigation/CompensatoryMitigationGuidance.pdf>).

Applicants can also pursue minimization by the implementation of low impact development (LID) practices to reduce impervious cover and better manage stormwater. Examples of LID best management practices include, but are not limited to: replacing curbs and gutters with swales; using an open space design for subdivisions; using permeable, pervious or porous pavements; constructing bio-retention systems; and/or, adding a green roof or rain garden. For additional information on these best management practices, including applicability and maintenance and cost considerations, please see <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm> and click on post construction.

For additional information see the Corps website at <http://www.nae.usace.army.mil/reg> and click on "Mitigation" to view the April 10, 2008 "Final Compensatory Mitigation Rule" (33 CFR 332) and related documents. The Q&A document states: "In order to reduce risk and uncertainty and help ensure that the required compensation is provided, the rule establishes a preference hierarchy for mitigation options. The most preferred option is mitigation bank credits, which are usually in place before the activity is permitted. In-lieu fee (ILF) program credits are second in the preference hierarchy, because they may involve larger, more ecologically valuable compensatory mitigation projects as compared to permittee-responsible mitigation. Permittee-responsible mitigation is the third option, with three possible circumstances: (1) conducted under a watershed approach, (2) on-site and in kind, and (3) off-site/out-of-kind. While Connecticut is lacking In-Lieu-Fee and Mitigation Bank choices, mitigation will be required on a case-by-case basis. However, when such choices are available, mitigation will be required for all Category 2 projects. Mitigation will become more practical as additional ILF and Banking choices become available in Connecticut.

- b. For coastal structures such as piers and docks, the height above the marsh at all points should be equal to or exceed the width of the deck. The height shall be measured from the marsh substrate to the bottom of the longitudinal support beam. This will help ensure sunlight reaches the area beneath the structure.

- c. Coastal floats must be supported at least 18" above the intertidal and shallow sub-tidal substrate during all tidal cycles.

16. Heavy Equipment in Wetlands. Operating heavy equipment other than fixed equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure (typically <3 psi), or it shall be placed on swamp/construction/timber mats (herein referred to as "construction mats") that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. Construction mats are to be placed in the wetland from the upland or from equipment positioned on swamp mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written Corps authorization. Similarly, the permittee may request written authorization from the Corps to waive use of mats during frozen or dry conditions (see General Condition 17 below). An adequate supply of spill containment equipment shall be maintained on site.

17. Temporary Fill. Fill placed into waters of the U.S. (including wetlands) totaling greater than or equal to 5,000 square feet in total area (i.e., the sum of permanent and temporary fill areas) exceeds the Category 1 threshold and may not be discharged without written authorization from the Corps. When temporary fill is used (e.g., access roads, swamp mats, cofferdams), it shall be stabilized and maintained during construction in such a way as to prevent its eroding into portions of waters of the U.S. where it is not authorized and shall be removed immediately following construction. The following criteria must also be met:

- a. Unconfined temporary fill authorized for discharge into flowing water (rivers and streams) shall consist only of clean stone.
- b. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric laid on the pre-construction wetland grade. (Swamp and timber mats are excluded from this requirement.)
- c. Temporary fill shall be removed as soon as it is no longer needed, and it shall be disposed of at an upland site and suitably contained to prevent its subsequent erosion into waters of the U.S.
- d. Waters of the U.S. where temporary fill was discharged shall be restored (see **General Condition 18**).
- e. No temporary work shall drain a water of the U.S. by providing a conduit for water on or below the surface.

18. Restoration of Inland Wetland Areas.

- a. Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be stabilized with a wetland seed mix containing only plant species native to New England and shall not contain any species listed in the "Invasive and Other Unacceptable Plant Species" Appendix in the "New England District Compensatory Mitigation Guidance".

- b. The introduction or spread of invasive plant species in disturbed areas shall be controlled. If swamp or timber mats are to be used, they shall be thoroughly cleaned before re-use.
- c. In areas of authorized temporary disturbance, if trees are cut they shall be cut at or above ground level and not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.
- d. Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

19. Coastal Bank Stabilization. Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction should be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable. For example, vertical bulkheads should only be used in situations where reflected wave energy can be tolerated. This generally eliminates bodies of water where the reflected wave energy may interfere with or impact on harbors, marinas, or other developed shore areas. A revetment is sloped and is typically employed to absorb the direct impact of waves more effectively than a vertical seawall. It typically has a less adverse effect on the beach in front of it, abutting properties and wildlife. For more information on this topic, go to the Corps Coastal Engineering Manual (supersedes the Shore Protection Manual), located at <http://chl.erd.c.usace.army.mil>. Select "Products/ Services," "Publications." Part 5, Chapter 7-8, a (2) c is particularly relevant.

20. Sedimentation and Erosion Control. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, vegetated filter strips, geotextile silt fences, hay bales or other devices, shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. These measures shall be capable of preventing erosion, of collecting sediment, suspended, and floating materials, and of filtering fine sediment. These devices shall be removed upon completion of work and the disturbed areas shall be stabilized. The sediment collected by these devices shall be removed and placed at an upland location, in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

21. Waterway Crossings.

- a. All temporary and permanent crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, and to maintain existing low flows, and so as not to obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
- b. Open bottom arches, bridge spans or embedded culverts are generally preferred over traditional culverts and are required for Category 1 projects. However, site constraints (e.g., placing footings) may make use of an open bottom arch, bridge span or embedded culverts impractical, and in these cases well-designed culverts may actually perform better. Project proponents shall consult with the Corps if an open bottom arch, bridge span or embedded culvert is impractical.

- c. No projects involving open trench excavation in flowing waters are allowed in Category 1 unless the permittee utilizes management techniques such as temporary flume pipes, culverts, cofferdams, etc. and maintains normal flows within the stream boundary's confines so the work does not occur in flowing waters. Projects utilizing these management techniques must meet the other Category 1 requirements and all of this GP's terms and conditions. If not, they will require review under the Category 2 screening procedures.
- d. Temporary bridges, culverts, or cofferdams shall be used for equipment access across streams. (**Note:** areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine applicability of this GP).
- e. Projects using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), plastic pipes, and High Density Polyethylene Pipes (HDPP) are not authorized under Category 1, either as new work or maintenance activities.
- f. For projects that otherwise meet the terms of Category 1, unconfined in-stream construction work shall be conducted during the low flow period June 1 through September 30 in any year except in instances where a specific written exception has been issued by the Connecticut Department of Energy & Environmental Protection. All other projects shall be screened pursuant to Category 2, regardless of the waterway and wetland fill and/or impact area.
- g. All temporary fill must be removed as soon as it is no longer needed and all disturbed areas must be returned to their pre-construction conditions

22. Discharge of Pollutants. All activities involving any discharge of pollutants into waters of the U.S. authorized under this GP shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 U.S.C. 1251), and applicable state and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this permit, the authorized work shall be modified to conform with these standards within 6 months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the EPA. Applicants may presume that state water quality standards are met with issuance of the Section 401 WQC (Applicable only to the Section 404 activity).

23. Spawning Areas. Discharges of dredged or fill material, and/or suspended sediment-producing activities in fish and shellfish spawning or nursery areas and amphibian and waterfowl breeding areas shall be avoided. During all times of year, impacts to these areas shall be avoided to the maximum extent practicable.

24. Storage of Seasonal Structures. Coastal structures, such as pier sections and floats, that are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location, located above mean high water (MHW) and **not** in tidal wetlands. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate and the substrate seaward of MHW.

25. Environmental Functions and Values. The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner that minimizes any adverse impacts on existing fish, wildlife, and the environment to the extent practicable. The permittee will discourage the establishment or spread of plant species identified as non-native invasive species by any federal or state agency.

26. Protection of Vernal Pools. Wetland boundaries for vernal pools and isolated wetlands on the subject parcel(s) must be delineated in accordance with Federal criteria defined at 33 CFR 328-329. For all inland Category 2 projects, the applicant must complete a vernal pool survey of the entire site, not just for the areas being directly impacted. The applicant must report the results of the survey to the Corps. If no vernal pools are found on the site, the applicant must confirm that in writing and also identify the party that conducted the survey and the survey date. This requirement may be waived by the Corps, in writing, on a case-by-case basis. Impacts to uplands in proximity (within 750 feet) to the vernal pools referenced in the Definitions of Categories shall be minimized to the maximum extent possible.

27. Invasive Species.

- a. The introduction, spread, or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work shall be avoided. Hence, swamp and timber mats shall be thoroughly cleaned before reuse.
- b. Unless otherwise directed by the Corps, all applications for Category 2 inland projects proposing fill in Corps jurisdiction shall include an Invasive Species Control Plan (ISCP).

Additional information can be found at: www.hort.uconn.edu/cipwg/

28. Inspections. The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is being or has been performed in accordance with the terms and conditions of this permit. The Corps may also require post-construction engineering drawings for completed work or post-dredging survey drawings for any dredging work. To facilitate these inspections, the permittee shall complete and return to the Corps:

- a. For Category 1 Inland projects, the **Category 1 Form (Appendix 1A)**, and the **Compliance Certification Form (Appendix 5)**.
- b. For Category 2 projects, the **Work-Start Notification Form** and the **Compliance Certification Form**. Both are provided as attachments with each Category 2 authorization letter.

29. Maintenance. The permittee shall maintain the activity authorized by this GP in good condition and in conformance with the terms and conditions of this permit. This does not include maintenance of dredging projects. Maintenance dredging is subject to the review thresholds in Appendix 2 – Coastal Definition of Categories (attached) and/or any conditions included in a written Corps authorization. Maintenance dredging includes only those areas and depths previously authorized and dredged. Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a) (2). Information on mosquito ditching and maintenance is provided at www.nae.usace.army.mil. Go to “Regulatory/Permitting,” and then “Other.”

30. Property Rights. This permit does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations.

31. Modification, Suspension, and Revocation. This permit and any individual authorizations issued thereof may either be modified, suspended, or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7; and any such action shall not be the basis for any claim for damages against the United States.

32. Restoration. The permittee, upon receipt of a notice of revocation of authorization under this permit, shall restore the wetland or waterway to its former conditions, without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.

33. Special Conditions. The Corps may impose other special conditions on a project authorized pursuant to this general permit that are determined necessary to minimize adverse environmental effects or based on any other factor of the public interest. These may be based on concerns from CT DEEP or a Federal resource agency. Failure to comply with all conditions of the authorization, including special conditions, will constitute a permit violation and may subject the permittee to criminal, civil, or administrative penalties or restoration.

34. False or Incomplete Information. If the Corps makes a determination regarding the eligibility of a project under this permit, and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the permit will not be valid, and the U.S. government may institute appropriate legal proceedings.

35. Abandonment. If the permittee decides to abandon the activity authorized under this general permit, unless such abandonment is merely the transfer of property to a third party, he/she may be required to restore the area to the satisfaction of the District Engineer.

36. Enforcement cases. This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with an on-going Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps determines that the activity may proceed independently without compromising the enforcement action.

37. Duration of Authorization. This GP expires five years from the effective date listed at the top of Page 1 of this GP. Activities authorized by this GP that have either commenced (i.e., are under construction) or are under contract to commence in reliance upon this authorization will have an additional year from this GP's expiration date to complete the work. The permittee must be able to document to the Corps' satisfaction that the project was under construction or under contract by the appropriate date. If work is not completed within the one year extended timeframe, the permittee must contact the Corps. The Corps may issue a new authorization provided the project meets the terms and conditions of the CT GP current at the time.

Activities authorized under this GP will remain authorized, unless:

- a. the GP is either modified or revoked, or
- b. discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2(e)(2).

Activities completed under the Category 1 or Category 2 authorizations of this GP will continue to be authorized by this GP after its expiration date.

38. Previously Authorized Activities:

- a. Activities completed under the authorizations of past GPs that were in effect at the time the activity was completed will continue to be authorized by those GPs.
- b. Projects that have received written verification or approval from the Corps, based on applications made to the Corps prior to issuance of this GP, regional general permits, or letters of permission shall remain authorized as specified in each authorization.
- c. Activities authorized pursuant to 33 CFR Part 330.3 ("Activities occurring before certain dates") are not affected by this GP.
- d. If the permittee sells the property associated with a General Permit authorization, the permittee may transfer the General Permit authorization to the new owner by submitting a letter to the Corps to validate the transfer. A copy of the General Permit authorization letter must be attached to the letter, and the letter must include the following statement: "The terms and conditions of this General Permit, including any special conditions, will continue to be binding on the new owner(s) of the property". This letter should be signed by both the seller and new property owner(s).

for J.M. Carthy
DISTRICT ENGINEER

7/15/11
DATE

SECTION 1
**ACTIVITIES OCCURRING WITHIN INLAND WATERS & WETLANDS
 LOCATED WITHIN THE STATE OF CONNECTICUT**

I. ACTIVITIES COVERED:

The discharge of dredged or fill material into Waters of the United States¹, which is regulated by the Corps under Section 404 of the Clean Water Act (CWA)¹

II. REVIEW PROCESS:

1. State and Local Approvals:

In order for authorizations under this GP to be valid, and before commencing any work within Corps jurisdiction, applicants are responsible for applying for and obtaining any of the following required State approvals as well as any local approvals (see General Condition 1):

Inland Wetlands and Watercourses Permit under the Inland Wetlands and Watercourses Act (Connecticut General Statutes (CGS) Sections 22a-36 to 22a-45(a), inclusive)

Water Diversion Permit under the Connecticut Water Diversion Policy Act (CGS Sections 22a-365 to 22a-378(a), inclusive)

Stream Channel Encroachment Lines Permit (CGS Sections 22a-342 to 22a-349(a), inclusive)

Dam Safety Construction Permit (CGS Sections 22a-401 to 22a-411, inclusive)

Water Quality Certification (WQC) under Section 401 of the Federal CWA (33 USC Sec. 1341). Section 401(a)(1) of the Clean Water Act requires that applicants obtain a WQC or waiver from the state water pollution control agency which in Connecticut is the Connecticut Department of Energy and Environmental Protection (CT DEEP) or U. S. EPA for Indian reservation lands to discharge dredged or fill material into waters of the U.S.

Flood Management Certification (CGS Sections 25-68b through 25-68h)

The Connecticut Department of Energy & Environmental Protection, Inland Water Resources Division (CT DEEP IWRD) has conditionally granted WQC for Category 1 activities in inland wetlands and waterways provided those activities meet the criteria as contained in the attached definition of categories.

The U.S. EPA granted WQC for Category 1 activities located on land within the exterior boundaries of an Indian Reservation.

The CT DEEP- IWRD has denied WQC for Category 2 activities in inland wetlands and waterways, until the Commissioner issues a written 401 eligibility determination.

¹Defined at 33 CFR 328

2. General Permit Review Categories:

a. Category 1 – An application to the Corps is NOT required. However, submittal of the attached Category 1 Form at Appendix 1A to the Corps and CT DEEP, IWRD is required prior to commencement of work authorized by this GP.

Eligibility Criteria

Activities in Connecticut and lands located within the exterior boundaries of an Indian reservation that meet the following criteria are eligible under Category 1 of this General Permit:

- are subject to Corps jurisdiction (See General Condition 2),
- meet the definition of Category 1 in the attached Appendix 1, Definition of Categories, and
- meet the General Conditions of the GP

Project proponents seeking Category 1 authorizations must comply with this GP's General Conditions and other federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA) and the Wild and Scenic Rivers Act. Therefore, consultation with the Corps and/or outside experts, such as the Connecticut Commission on Culture and Tourism and any appropriate Indian tribes, is recommended when there is a high likelihood of the presence of resources of concern.

Projects not eligible under Category 1 of this GP may be screened under Category 2, provided they meet the criteria as defined in the attached Definition of Categories for Category 2 activities.

b. Category 2 – An application to the Corps is required.

Eligibility Criteria

Activities in Connecticut and lands located within the exterior boundaries of an Indian reservation that meet the following criteria are eligible under Category 2 of this General Permit:

- are subject to Corps jurisdiction (See General Condition 2),
- meet the definition of Category 2 in the attached Appendix 1, Definition of Categories, and
- meet the General Conditions of the GP

3. Applying for a Category 2 permit:

A Corps application form (ENG Form 4345) is required for Category 2 activities and can be found on our website: www.nae.usace.army.mil/reg under forms as well as a list of required additional information.

Applicants must also submit the following to the Corps:

- 2 copies of the application form,
- one set of 8.5" x 11" drawings and one large-scale drawing,
- 2 copies of the wetlands functions and values assessment,
- 2 copies of Federal wetland delineation documentation (data sheets),

- one copy of the CT DEEP addendum found at:
http://www.ct.gov/dep/lib/dep/Permits_and_Licenses/LandUse_General_Permits%5CInland_Water_General_Permits/CT_addendum_app.pdf,
- one copy of any correspondence with the Connecticut Commission on Culture and Tourism and Tribal Historic Preservation Officer indicating coordination with these entities,
- an Invasive Species Control Plan (See **General Condition 27**), and
- a plan describing any proposed mitigation.

Applicants must concurrently submit three copies of the following to the CT DEEP at the address below:

- the Corps application form,
- 8.5" x 11" drawings, large scale drawings;
- wetlands functions and values assessment,
- Federal wetlands delineation documentation (data sheets),
- CT DEEP addendum, and
- a plan describing any proposed mitigation.

**State of Connecticut
Department of Energy & Environmental Protection
Central Permit Processing Unit
79 Elm Street
Hartford, CT 06106-5127**

NOTE: Applicants must submit all project revisions and modifications to both agencies.

The Corps will coordinate review of all Category 2 activities with federal and state agencies to ensure that the proposed activity results in no more than a minimal impact to the aquatic environment. To be eligible and subsequently authorized, an activity must meet the criteria in paragraph 2 above and result in no more than minimal impacts to the aquatic environment as determined by the Corps in conjunction with the interagency review team which consists of federal and state resource agencies. This may require project modifications involving avoidance, minimization, and/or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal.

NOTE: For projects receiving State funding with work proposed within a FEMA floodway/floodplain, it is recommended that applicants apply for and receive a Flood Management Certification from CT DEEP, IWRD if one is required, before applying to the Corps.

Written approval from the Corps for Category 2 activities is required before work can commence.

Emergency Situation Procedures: 33 CFR 325.2 (e) (4) states that an “emergency” is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures.” Notification to the Corps and CT DEEP – IWRD is required. The Corps will determine if a project qualifies as an emergency and will work with all applicable agencies to expedite authorization in emergency situations. If the project qualifies as an emergency, authorization under Category 1 or Category 2 of this General Permit is not required.

Individual Permit Procedures: Work that is NOT eligible under Category 2 as defined in the attached Appendix 1, Definition of Categories, or that does not meet the terms and conditions of this GP, will require review under the Corps Individual Permit procedures (see 33 CFR Part 325.1). The applicant shall submit the appropriate application materials (including the Corps ENG 4345 application form) to the Corps of Engineers. General information and application forms can be obtained at the Corps web site noted in Paragraph 3 above. An individual water quality certification is required from the CT DEEP, IWRD before Corps’ permit issuance. **The application form and instructions for Section 401 Water Quality Certification are available from the Connecticut DEP web site at <http://www.ct.gov/dep/>.**

SECTION 1A
**ACTIVITIES OCCURRING WITHIN INLAND WATERS & WETLANDS
 LOCATED WITHIN THE BOUNDARIES OF MASHANTUCKET**

I. ACTIVITIES COVERED:

The discharge of dredged or fill material into waters of the U.S.¹, which is regulated by the Corps under Section 404 of the Clean Water Act (CWA)¹

II. REVIEW PROCESS:

1. Tribal Approval:

In order for authorizations under this GP to be valid and before commencing any work within Corps jurisdiction, applicants are responsible for applying for and obtaining approval from the Mashantucket Pequot Tribal Nation (MPTN) Land Use Commission in compliance with the MPTN Inland Wetlands and Watercourses Regulation.

2. General Permit Review Categories:

a. Category 1 - An application to the Corps is NOT required. However, submittal of the attached Category 1 Form at Appendix IA to the Corps and the MPTN Natural Resources Protection and Regulatory Affairs Department is required prior to commencement of work authorized by this GP.

Eligibility Criteria

Activities in Mashantucket that meet the following criteria are eligible under Category 1 of this General Permit:

- are subject to Corps jurisdiction (See General Condition 2),
- meet the definition of Category 1 in the attached Definition of Categories, Appendix 1, and
- meet the General Conditions of the GP

Project proponents seeking Category 1 authorizations must comply with the applicable General Conditions of this GP and other federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA) and the Wild and Scenic Rivers Act. Therefore, consultation with the Corps and/or outside experts such as the Connecticut Commission on Culture and Tourism and any other appropriate Indian tribes is recommended when there is a high likelihood of the presence of resources of concern.

Projects not eligible under Category 1 of this GP may be screened under Category 2 provided they meet the applicable criteria as defined in the attached Appendix 1, Definition of Categories for Category 2 activities.

¹Defined at 33 CFR 328

b. Category 2 -An application to the Corps is required.**Eligibility Criteria**

Activities in Mashantucket that meet the following criteria are eligible under Category 2 of this General Permit:

- are subject to Corps jurisdiction (See General Condition 2),
- meet the definition of Category 2 in the attached Appendix 1, Definition of Categories, and
- meet the General Conditions of the GP

3. Applying for a Category 2 permit:

A Corps application form (ENG Form 4345) is required for Category 2 activities and can be found on our website: www.nae.usace.army.mil/reg under Forms. Applicants must submit the following to the Corps:

- 2 copies of the application form;
- One set of 8.5" x 11" drawings and one large-scale drawing;
- 2 copies of the wetlands functions and values assessment;
- 2 copies of the Federal wetland delineation documentation;
- one copy of any correspondence with the Connecticut Commission on Culture and Tourism and THPO indicating coordination with these entities;
- an Invasive Species Control Plan (See General Condition 27); and,
- a plan describing any proposed mitigation.

Applicants must concurrently submit a copy of the complete Corps application to the MPTN NRP-RA at the address below:

**Mashantucket Pequot Tribal Nation
Natural Resources Protection & Regulatory Affairs
550 Trolley Line Boulevard
P.O. Box 3202
Mashantucket, CT 06338-3202**

NOTE: Applicants must submit all project revisions and modifications to both agencies.

The Corps will coordinate review of all Category 2 activities with federal and tribal agencies to ensure that the proposed activity results in no more than a minimal impact to the aquatic environment. To be eligible and subsequently authorized, an activity must meet the criteria listed above and result in no more than minimal impacts to the aquatic environmental as determined by the Corps in conjunction with the interagency review team which consists of federal and tribal resource agencies. This may require project modifications involving avoidance, minimization, and/or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal.

Written approval for Category 2 activities from the Corps is required before work can commence.

Emergency Situation Procedures: 33 CFR 325.2 (e) (4) states that an "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures." The Corps will work with all applicable agencies to expedite authorization in emergency situations.

Individual Permit Procedures: Work that is NOT eligible under Category 2 as defined in the attached Definition of Categories, or that does not meet the terms and conditions of this GP, will require review under the Corps Individual Permit procedures (see 33 CFR Part 325.1). The applicant shall submit the appropriate application materials (including the Corps application form) to the Corps of Engineers. General information and application forms can be obtained at the Corps web site noted in paragraph 3 above. An individual water quality certification is required from EPA (or MPTN if at the time of the application EPA has determined MPTN eligible to administer the Section 401 Water Quality Certification program)

APPENDIX 1

INLAND WATERS AND WETLANDS

WATERS OF THE U.S. ⁽¹⁾(2)

DEFINITION OF CATEGORIES

Inland Waters and Wetlands: Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, not including Section 10 Navigable Waters of the United States. ⁽¹⁾(2)

Waters of the United States: Inland rivers, streams, brooks, lakes, ponds and wetlands, including navigable waters. [Refer to Title 33 CFR 328 and Section 1362 Federal Clean Water Act.] ⁽¹⁾(2)

The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present.

Navigable Waters: Waters that are subject to the ebb and flow of the tide, and Federally designated navigable waters which in Connecticut includes the Connecticut River to the Massachusetts state line.

Note: For the purposes of this GP, fill placed in the area below the high tide line (HTL), and in wetlands that border and are contiguous to tidal waters, are reviewed in the Tidal, Coastal and Navigable Waters section. (See Coastal Definition of Categories)

Activities must be conducted consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (DEP Bulletin 34) and the 2004 Connecticut Stormwater Quality Manual or subsequent revisions.

See the Page 10 of 10 for footnote definitions.

The following Activities are NOT eligible for authorization under Category 1 Within Inland Waters and Wetlands Located Within the State of Connecticut:

Piping, boxing, enclosing or covering of inland waters for other than a driveway or roadway crossing.

Projects with direct or secondary impact(s) to:

- Special Wetlands⁽³⁾
- Threatened, Endangered, or Special Concern Species ⁽⁴⁾ <http://www.dep.state.ct.us/>
- Significant Natural Communities ⁽⁴⁾ identified by the CT Natural Diversity Database <http://www.dep.state.ct.us/>

Projects requiring a Corps permit with associated construction activities within 100 feet of Special Wetlands⁽³⁾.

Projects with fill placed within a FEMA established floodway <http://msc.fema.gov> , unless the applicant has obtained a State of Connecticut Flood Management Certification for the project pursuant to section 25-68d of the Connecticut General Statutes.

Projects with fill placed within a FEMA established floodplain that would adversely affect the hydraulic characteristics of the floodplain⁽⁶⁾. **Note: Projects that have received a Flood Management Certification are assumed to have no adverse effect to hydraulic characteristics.**

Projects with detention or retention of stormwater in inland waters or wetlands including:

- Watercourse or wetland crossing that by design or default functions to provide stormwater detention,
- Retention or detention of stormwater in inland waters or wetlands, or
- Construction of stormwater detention or retention basin in inland waters or wetlands.

Projects occurring in a segment of a National Wild and Scenic River System or within 0.25 mile upstream or downstream of the main stem or tributaries of a National Wild and Scenic River System segment. <http://www.nps.gov/rivers/>

Channeling or relocating inland waters.

Unconfined in-stream work, including construction, installation or removal of sheet pile cofferdam structures, conducted from October 1 through May 31. However, installation and removal of cofferdams, other than sheet pile cofferdams, is allowed during the period October 1 through May 31.

The following Activities are NOT eligible for authorization under Category 1 within Inland Waters and Wetlands Located within the Boundaries of Mashantucket

Piping, boxing, enclosing or covering of inland waters for other than a driveway or roadway crossing.

Projects with fill placed within a FEMA established floodway <http://msc.fema.gov> , unless the applicant has a State of Connecticut Flood Management Certification for the project pursuant to section 25-68d of the Connecticut General Statutes.

Projects with fill placed within a FEMA established floodplain that would adversely affect the hydraulic characteristics of the floodplain. ⁽⁶⁾

Projects with detention or retention of stormwater in inland waters or wetlands including:

- Watercourse or wetland crossing that by design or default functions to provide stormwater detention,
- Retention or detention of stormwater in inland waters or wetlands, or
- Construction of stormwater detention or retention basin in inland waters or wetlands.

Projects occurring in a segment of a National Wild and Scenic River System or within 0.25 mile upstream or downstream of the main stem or tributaries of a National Wild and Scenic River System segment. <http://www.nps.gov/rivers/>

Channeling or relocating inland waters.

General Condition 3(c) is not applicable to projects within Mashantucket, instead the following work shall be excluded from Category 1 for all vernal pools (VPs) on, or known VPs surrounding, the project site:

- a. Any work within a VP depression (inside seasonal high water mark of pool).
- b. Any work, including roads and driveways, in the VP envelope (100' from VP depression edge)
- c. Any work that individually or cumulatively impacts >25% of the VP critical terrestrial habitat (750' from VP depression edge)

The following activities ARE eligible under CATEGORY 1:

1. A. NEW FILL AND/OR FILL ASSOCIATED WITH EXCAVATION

Less than 5,000 square feet (s.f.) of Fill and Secondary Impacts in Inland Waters and/or Wetlands.

Direct fill impacts include all temporary and permanent fill and excavation discharges resulting from a single and complete project, see **General Condition 5**.

Secondary impacts include but are not limited to impacts to inland waters or wetlands drained, dredged, flooded, cleared or degraded resulting from a single and complete project. (See 40 CFR 230.11 (g) and (h))

LIMITATIONS FOR SPECIFIC PROJECT ACTIVITIES:

UTILITY LINE RIGHT-OF-WAY CROSSINGS. These must be constructed as follows:

- When trenching, the uppermost 12 inches of the trench is backfilled to the original grade with native soil or streambed material, as appropriate, of the same nature, type and characteristics as the adjacent soil or streambed material, and
- The right-of-way is managed to prevent the introduction, establishment, or spread of plant species determined by the CT Invasive Plants Council to be invasive or potentially invasive.
http://nbii-nin.ciesin.columbia.edu/ipane/ctcouncil/CT_invasive.htm

STREAM, RIVER, BROOK CROSSINGS. The following are required for driveway or roadway crossings constructed on streams, rivers, brooks and their tributaries. These provisions do not apply to crossings of drainage ditches or waters with no definable channel.

- **CROSSING USING A BRIDGE OR OPEN-BOTTOM STRUCTURE MUST:**
 - Spans at least 1.2 times the watercourse bank full width,
 - Has an openness ratio⁽⁵⁾ equal to or greater than 0.25 meters, and
 - Allows for continuous flow of the 50-year frequency storm flows
- **CROSSING USING A CULVERT PROVIDED:**
 - The tributary watershed to the culvert does not exceed 1.0 sq. mile (640 acres),
 - The culvert gradient (slope) is no steeper than the streambed gradient immediately upstream or downstream of the culvert,
 - For a crossing constructed using a **single box or pipe arch culvert**, the inverts are set not less than 12 inches below the streambed elevation,
 - For a crossing constructed using **multiple box or pipe arch culverts**, the inverts of one of the boxes or pipe arch culverts are set not less than 12 inches below the elevation of the streambed,
 - For a crossing constructed using a **pipe culvert**, the inverts are set such that not less than 25% of the pipe diameter or 12 inches, whichever is less, is set below the streambed elevation,
 - The culvert is backfilled with natural substrate material matching upstream and downstream streambed substrate,
 - The structure does not otherwise impede the passage of fish and other aquatic organisms, and
 - The structure allows for continuous flow of the 50-year frequency storm flows

1. B. STREAM BANK STABILIZATION

LIMITATIONS:

- Bank stabilization not to exceed 200 feet in length
- Fill not to exceed an average of 1 cubic yard of per linear foot below ordinary high water
- No fill within the streambed beyond the toe of slope of the stream bank, and
- Work limited to the period June 1 through September 30

NOTE: Length is defined as the sum of the lengths of bank stabilization work along each bank of the inland water.

1. C. REPAIR AND MAINTENANCE OF EXISTING AUTHORIZED OR GRANDFATHERED FILL

Less than 5,000 s.f. of Fill and Secondary Impacts in Inland Waters and/or Wetlands.

Direct fill impacts include all temporary and permanent fill and excavation discharges resulting from a single and complete project, see General Condition 5.

Secondary impacts include but are not limited to impacts to inland waters or wetlands drained, dredged, flooded, cleared or degraded resulting from a single and complete project. (See 40 CFR 230.11 (g) and (h))

LIMITATIONS FOR SPECIFIC PROJECT ACTIVITIES:**REPAIR OR MAINTENANCE OF EXISTING, CURRENTLY SERVICEABLE, AUTHORIZED, GRANDFATHERED FILLS:**

- No change in use.
- Conditions of the original authorization apply. However, minor deviations in fill design allowed.

REPLACEMENT OF EXISTING DRIVEWAY CROSSINGS USING A BRIDGE OR OPEN-BOTTOM STRUCTURE:

- Span at least 1.2 times the watercourse bank full width,
- Has an openness ratio ⁽⁵⁾ equal to or greater than 0.25 meters,
- Allows for continuous flow of the 50-year frequency storm flows
- Does not result in a change in the normal water surface elevation of the upstream waters or wetland.

REPLACEMENT OF EXISTING ROADWAY CROSSING USING A BRIDGE OR OPEN-BOTTOM STRUCTURE:

- Spans at least 1.2 times the watercourse bank full width,
- Has an openness ratio ⁽⁵⁾ equal to or greater than 0.25 meters,
- Allows for continuous flow of the 50-year frequency storm flows
- Does not result in a change in the normal water surface elevation of the upstream waters or wetland.
- Has a riparian bank on one or both sides for wildlife passage,

REPLACEMENT OF AN EXISTING DRIVEWAY OR ROADWAY CROSSING USING A CULVERT:

- The tributary watershed to the culvert does not exceed 1.0 square mile (640 acres),
- The culvert gradient (slope) is no steeper than the streambed gradient immediately upstream or downstream of the culvert,
- For a **single box or pipe arch culvert**, the inverts are set not less than 12 inches below the elevation of the streambed,
- For **multiple box or pipe arch culverts**, the inverts of one of the boxes or pipe arch culverts are set not less than 12 inches below the elevation of the streambed,
- For a **pipe culvert**, the inverts are set such that not less than 25% of the pipe diameter or 12 inches, whichever is less, is set below the elevation of the streambed,
- The culvert is backfilled with natural substrate material matching upstream and downstream streambed substrate,
- The structure does not otherwise impede the passage of fish and other aquatic organisms, and
- The structure allows for continuous flow of the 50-year frequency storm flows

REPLACEMENT OF A UTILITY LINE WITHIN AN EXISTING RIGHT-OF-WAY CROSSING:

- No horizontal expansion or impacts beyond previously cleared areas,
- No open trench excavation w/in flowing waters w/out management techniques as stated in Special Condition 21 (c)
- When trenching, the uppermost 12 inches of the trench is backfilled with native soil or streambed material, as appropriate, of the same nature, type and characteristics as the adjacent soil or streambed material,
- There are no endangered, threatened or special concern species that would be adversely impacted (CT Natural Diversity Database)
- The right-of-way is managed to prevent the introduction, establishment, or spread of plant species determined by the CT Invasive Plants Council to be invasive or potentially invasive. http://nbi-nin.ciesin.columbia.edu/ipane/ctcouncil/CT_invasive.htm

Note: Replacement of utility line projects w/impacts solely within wetlands greater than 5,000 s.f. may be eligible for Category 1 authorization provided the standards are met. Replacement of utility line projects involving stream crossings with impacts over 5,000 s.f. must be screened under Category 2.

DAM AND FLOOD CONTROL LEVEE REPAIR

- No change in the permanent water surface elevation of the impoundment.
- Drawdown of impoundment for construction not to exceed 18 months or one growing season. (Secondary impacts from the drawdown do not count towards the 5,000 s.f. threshold).
- No dredging within impoundment area except for that essential for repair of the structure.

The following activities are NOT eligible for authorization under CATEGORY 2:

Piping, boxing, or other enclosing or covering of inland waters for other than a driveway or roadway crossing.

Projects with fill placed within a FEMA established floodplain that would adversely affect the hydraulic characteristics of the floodplain.⁽⁶⁾

Detention or retention of stormwater in inland waters or wetlands including:

- Watercourse or wetland crossing that by design or default functions to provide stormwater detention,
- Retention or detention of stormwater in inland waters or wetlands, or
- Construction of stormwater detention or retention basin in inland waters or wetlands.

The following activities ARE eligible under CATEGORY 2:

2. A. NEW FILL AND/OR FILL ASSOCIATED WITH EXCAVATION

5,000 s.f. to less than 1 acre of Fill and Secondary Impacts in Inland Waters and/or Wetlands.

Direct fill impacts include all temporary and permanent fill and excavation discharges resulting from a single and complete project.

Secondary impacts include, but are not limited to impacts to inland waters or wetlands drained, dredged, flooded, cleared or degraded resulting from a single and complete project. (See 40 CFR 230.11 (g) and (h))

LIMITATIONS FOR SPECIFIC PROJECT ACTIVITIES:

UTILITY LINE RIGHT-OF-WAY CROSSING:

- The uppermost 12 inches of the trench is backfilled with native soil or streambed material, as appropriate, consistent with the adjacent soil or streambed material, and
- The right-of-way is managed to prevent the introduction, establishment, or spread of plant species determined by the Connecticut Invasive Plants Council to be invasive or potentially invasive.
http://invasives.eeb.uconn.edu/ipane/ctcouncil/CT_Invasive_Plant_List.htm
- Temporary mats are not counted towards the 1 acre threshold provided they are adequately cleaned after previous use, removed immediately after completion of construction, and disposed of at an upland site.

STREAM, RIVER, BROOK CROSSINGS. The following are required for driveway or roadway crossings constructed on streams, rivers, brooks and their tributaries. These provisions do not apply to crossings of drainage ditches or waters with no definable channel.

- **CROSSING CONSTRUCTED USING A BRIDGE OR OPEN-BOTTOM STRUCTURE:**
 - Spans at least 1.2 times the watercourse bank full width,
 - Has an openness ratio⁽⁵⁾ equal to or greater than 0.25 meters, and
 - Allows for continuous flow of the 50-year frequency storm flows
- **CROSSING CONSTRUCTED USING A CULVERT:**
 - The use of a bridge or open-bottom structure is determined to be not practicable,
 - For a crossing constructed with a **single box or pipe arch culvert**, the inverts are set not less than 12 inches below the elevation of the natural streambed,
 - For a crossing constructed with **multiple box or pipe arch culverts**, the inverts of one of the boxes or pipe arch culverts are set at least 12 inches below the elevation of the natural streambed,
 - For a crossing constructed with a **pipe culvert**, the inverts are set such that not less than 25% of the diameter of the pipe or 12 inches, whichever is less, is set below the elevation of the natural stream bed,
 - The culvert gradient (slope) is no steeper than the streambed gradient immediately upstream or downstream of the culvert,
 - The culvert is backfilled with natural substrate material matching upstream and downstream substrate,
 - The culvert has an openness ratio⁽⁵⁾ equal to or greater than 0.25 meters
 - The structure does not result in a change in the normal water surface elevation of the upstream waters or wetlands, and
 - The structure allows for continuous flow of the 50-year frequency storm flows
 - There is no practicable alternative location for the crossing that would have less environmental impacts.

NOTE: In instances where it is determined by the agencies that it is not practicable to construct a crossing consistent with the standards, the crossing may be authorized as a Category 2 project provided that the crossing is constructed in a manner that minimizes impediments to fish and aquatic life passage to the greatest extent practicable. A mere showing of expense will not necessarily determine that compliance with the standards is not practicable. Documentation should be submitted with the Category 2 application package.

2. B. STREAM BANK STABILIZATION

Stream Bank Stabilization not to exceed 500 feet in length with the following limitations:

- Fill not to exceed an average of 1 cubic yard per linear foot below ordinary high water
- No fill within the streambed beyond the toe of slope of the stream bank, and
- Work limited to the period June 1 through September 30

NOTE: Length is defined as the sum of the lengths of bank stabilization work along each bank of the inland water.

2. C. REPAIR & MAINTENANCE OF EXISTING AUTHORIZED OR GRANDFATHERED FILL

Replacement of Non-Serviceable Fills, or Repair or Maintenance of Serviceable Fills with horizontal expansion of less than 1 acre or with a change in use.

LIMITATIONS FOR SPECIFIC PROJECT ACTIVITIES:

REPLACEMENT OF EXISTING STREAM, RIVER, BROOK CROSSINGS. The following are required for the replacement of existing driveway or roadway crossings constructed on streams, rivers, brooks and their tributaries. These provisions do not apply to crossings of drainage ditches or waters with no definable channel.

- **CROSSING RECONSTRUCTED USING A BRIDGE OR OPEN-BOTTOM STRUCTURE:**
 - Spans at least 1.2 times the watercourse bank full width,
 - Has an openness ratio⁽⁵⁾ equal to or greater than 0.25 meters, and
 - Allows for continuous flow of the 50-year frequency storm flows
- **CROSSING RECONSTRUCTED USING A CULVERT:**
 - The use of a bridge or open-bottom structure is determined to be not practicable,
 - For a crossing constructed with a **single box or pipe arch culvert**, the inverts are set not less than 12 inches below the elevation of the natural streambed,
 - For a crossing constructed with **multiple box or pipe arch culverts**, the inverts of one of the boxes or pipe arch culverts are set at least 12 inches below the elevation of the natural streambed,
 - For a crossing constructed with a **pipe culvert**, the inverts are set such that not less than diameter of the pipe or 12 inches, whichever is less, is set below the elevation of the natural stream bed,
 - The culvert is backfilled with natural substrate material matching upstream and downstream substrate,
 - The culvert has an openness ratio⁽⁵⁾ equal to or greater than 0.25 meters
 - The structure does not result in a change in the normal water surface elevation of the upstream waters or wetlands, and
 - The structure allows for continuous flow of the 50-year frequency storm flows
- **UTILITY LINE RIGHT-OF-WAY CROSSING:**
 - Temporary mats are not counted towards the 1 acre threshold provided they are adequately cleaned after previous use, removed immediately after completion of construction, and disposed of at an upland site

NOTE: In instances where it is determined by the agencies that it is not practicable to construct a crossing consistent with the standards, the crossing may be authorized as a Category 2 project provided that the crossing is constructed in a manner that minimizes impediments to fish and aquatic life passage to the greatest extent practicable. A mere showing of expense will not necessarily determine that compliance with the standards is not practicable. Documentation should be submitted with the Category 2 application package.

2. D. WETLAND OR STREAM RESTORATION OR ENHANCEMENT

Such projects with any amount of impact may be screened for eligibility under Category 2. The Corps, in concurrence with State and Federal agencies, must determine that net adverse effects are minimal.

2. E. POND OR LAKE RESTORATION OR ENHANCEMENT

Such projects with any amount of impact may be screened for eligibility under Category 2. The Corps, in concurrence with the Connecticut Department of Energy & Environmental Protection, Inland Water Resources Division (CT DEEP, IWRD), must determine that net adverse effects are minimal.

LIMITATIONS:

- There is no horizontal expansion of the pond or lake.
- Excavation is limited to restoring the pond or lake basin to its original contours through the removal of accumulated material,
- Excavated material is disposed outside of inland waters, wetlands and floodplains,
- The area being dredged is physically isolated from adjoining areas of flowing water during construction,
- Best management practices are employed to avoid creating erosion, sedimentation or water quality degradation during excavation and during any period of dewatering and refilling,
- Adequate littoral zones and cover are maintained to provide habitat suitable for supporting fish and other aquatic life during construction, and following completion of the project
- During the period of pond or lake refilling, continual downstream flow is maintained consistent with the requirements under Water Diversion Regulations, Section 22a-377(b)-1(b) of the Regulations of Connecticut State Agencies.

DEFINITIONS

- (1) **Waters of the U. S.:** Inland rivers, streams, brooks, lakes, ponds and wetlands. [Refer to Title 33 CFR 328 and Section 1362 Federal Clean Water Act], including navigable waters.
- (2) **Navigable Waters:** Waters that are subject to the ebb and flow of the tide, and Federally designated navigable waters which in Connecticut includes the Connecticut River to the Massachusetts state line. [Refer to Title 33 CFR Part 329 and Section 1362 Federal Clean Water Act]
- (3) **Special Wetlands:** Include vernal pools, bogs, fens, cedar swamps, spruce swamps, calcareous seepage swamps, and wetlands that provide habitat for threatened or endangered species or species of special concern as designated by the State of Connecticut Natural Diversity Database. The following definitions for bogs, calcareous seepage wetlands, cedar swamps, fens, spruce swamps, and vernal pools apply for the purposes of this GP:
- Bog:** a peat accumulating wetland dominated by sphagnum moss. Typical plant species include sphagnum moss, leatherleaf, black spruce, pitcher plant and sundew.
- Calcareous Seepage Swamp:** a forested wetland characterized by the discharge of groundwater with a chemistry influenced by underlying limestone geology.
- Cedar Swamp:** a forested wetland characterized by the presence of Northern White Cedar or Atlantic White Cedar.
- Fen:** a peat accumulating wetland dominated by sedges and/or ericaceous shrubs. Typical plant species include low sedges, ericaceous shrubs, sphagnum and other mosses.
- Spruce Swamp:** a forested wetland characterized by the presence of Red or Black Spruce.
- Vernal Pool:** an often temporary body of water occurring in a shallow depression of natural or human origin that fills during spring rains and snow melt and typically dries up during summer months. Vernal pools support populations of species specially adapted to reproducing in these habitats. Such species may include wood frogs, mole salamanders (*Ambystoma* sp.), fairy shrimp, fingernail clams, and other amphibians, reptiles and invertebrates. Vernal pools lack breeding populations of fish. (NOTE: The Corps will determine on a case-by-case basis which vernal pools are within their jurisdiction. When Corps jurisdiction over a project has been established, impacts to vernal pools from project activities will be considered. All vernal pools are subject to the jurisdiction of the CT DEEP under Connecticut Water Quality Standards or, the Mashantucket Pequot Tribal Nation under the MPTN IWWC Regulation.)
- (4) **Threatened, Endangered or Special Concern Species; Significant Natural Communities:** Species listed by CT DEEP pursuant to Chapter 495 of the Connecticut General Statute as threatened or endangered species or species of special concern. Known locations of threatened and endangered species and species of special concern, and significant natural communities are identified on maps entitled "State and Federal Listed Species and Significant Natural Communities", as amended. These maps are available at city or town clerk offices and in the CT DEEP File Room located on the store level of 79 Elm Street, Hartford and on their website: <http://www.ct.gov/dep/>
- (5) **Openness Ratio:** The cross-sectional area (in square meters) of the opening of a structure divided by the length (measured in meters) of the structure. For a box culvert, openness ratio = (height x width)/length (measured in meters). The imbedded portion of the culvert is not included in the cross-sectional area used for calculating the openness ratio.
- (6) **Adverse Effect to Hydraulic Characteristics:** An adverse effect to hydraulic characteristics includes an increase in flood water surface elevation, an increase in flood flow velocity or a restriction of flood flow conveyance in a manner that would impact upstream, downstream or adjacent property.



Appendix 1A: Category 1 Certification Form
(Required for all Inland Projects in Connecticut)

US Army Corps
of Engineers®

New England District

Submit this form before work commences to the following addresses:

U.S. Army Corps of Engineers, Permits & Enforcement Branch B (CT),
696 Virginia Road, Concord, MA 01742-2751

Connecticut Department of Energy & Environmental Protection, CT DEEP,
Inland Water Resources Division, 79 Elm Street, Hartford, CT 06106-5127
(not required if work is done within exterior boundaries of Mashantucket)

Permittee Name & Address: _____

Phone number & Email address: _____

Work Location/Address: _____

Latitude/Longitude coordinates: _____

Waterway name: _____

Contractor Name & Address: _____

Phone number & Email address: _____

Proposed Work Dates: Start: _____ Finish: _____

Work will be done within Inland Waters & Wetlands under the following categories – refer to Appendix 1 (check all that apply):

_____ 1.A. New Fill and/or Fill Associated with Excavation

_____ 1.B. Stream Bank Stabilization

_____ 1.C. Repair & Maintenance of Existing Authorized or Grandfathered Fill.

Wetland impact: _____ square feet (sf) Waterway impact: _____ sf and/or _____ linear feet

Brief Project Description _____

Project purpose: _____

Secondary Impacts include but are not limited to impacts to inland waters or wetlands drained, dredged, flooded, cleared or degraded resulting from a single and complete project. See General Condition 3.

Does your project include any of these secondary impacts? Y/N – If yes, please describe them:

Your signature below, as permittee, indicates that you accept and agree to comply with the terms, eligibility criteria, and general conditions of Category 1 of this Connecticut General Permit.

Permittee Signature: _____ Date: _____

SECTION 2:
ACTIVITIES OCCURRING WITHIN
TIDAL, COASTAL AND NAVIGABLE WATERS

The state's Coastal Area is statutorily defined as: all lands and waters within the municipalities of Greenwich, Stamford, Darien, Norwalk, Westport, Fairfield, Bridgeport, Stratford, Shelton, Milford, Borough of Woodmont, Orange, West Haven, New Haven, Hamden, North Haven, East Haven, Branford, Guilford, Madison, Clinton, Westbrook, Deep River, Chester, Essex, Borough of Fenwick, Old Saybrook, Lyme, Old Lyme, East Lyme, Waterford, New London, Montville, Norwich, Preston, Ledyard, Groton (city, Town and Long Point Borough), Mystic and Stonington (Town & Borough) [Section 22a-94(a) CGS].

Navigable Waters: Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. The Connecticut River has been determined to be a navigable water of the United States. [Refer to Title 33 CFR Part 329]

I. ACTIVITIES COVERED:

- Work and structures that are located in, under or over any navigable water of the U.S.¹ that affect the course, location, condition, or capacity of such waters; or the excavating from or depositing material in navigable waters. (Regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899);
- The discharge of dredged or fill material into waters of the U.S.², which is regulated by the Corps under Section 404 of the Clean Water Act (CWA)

II. REVIEW PROCESS:

1. Connecticut Department of Energy & Environmental Protection, Office of Long Island Sound Programs (DEEP OLISP) approvals:

In order for authorizations under this GP to be valid and before commencing any work within Corps jurisdiction, applicants are responsible for applying for and obtaining any of the following required State or local approvals (see General Condition 1):

Tidal Wetlands Permit under the Tidal Wetlands Act (CGS Sections 22a-28 to 22a-35a inclusive)

Certificate of Permission (CGS Section 22a-363b)

Long Island Sound General Permits (CGS Sections 22a-28 to 22a-35 and Sections 22a-359 to 22a-363f inclusive)

¹ Defined at 33 CFR 329

² Defined at 33 CFR 328

(State and Local Approvals continued):**Structures, Dredging and Fill Permits (CGS Section 22a-359 through 22a-363f)**

Approvals for marine-based aquaculture activities required by Connecticut General Statutes Section 22-11h implemented by the CT Department of Agriculture, Bureau of Aquaculture (DA/BA) including individual in-water structures used for aquaculture, as defined in Section 22-11c, including, but not limited to, racks, cages, or bags, as well as buoys marking such structures.

Water Quality Certification (WQC) Issuance or waiver under Section 401 of the Federal CWA (33 USC Section 1341). Section 401(a)(1) of the Clean Water Act requires that applicants obtain a WQC or waiver from the state water pollution control agency (CT DEEP) or EPA for Indian reservation lands to discharge dredged or fill material into waters of the U.S.

Coastal Zone Management Consistency (CZM) - Concurrence under Section 307 of the Federal CZM Act of 1972, as amended. Section 307(c) of the CZM of 1972, as amended, requires applicants to obtain a certification or waiver from CT DEEP OLISP that the activity complies with the state's CZM program for activities affecting a state's Coastal Area.

Project proponents involving dredging/excavation and associated disposal within the Byram River must also coordinate with NY DOS directly to obtain a certification or waiver that the activity complies with NYDOS' CZM program. Also, all projects with disposal at any of the Long Island Sound Disposal Sites require NY DOS CZM consistency. Additional information can be found at their website: http://www.nyswaterfronts.com/consistency_federal.asp.

2. Corps Authorizations - The two GP review categories are listed below:

a. Category 1 – No application/notification is required to be submitted to the Corps by the applicant. However, DEEP OLISP will forward copies of application packages and their approvals to the Corps on a weekly basis. If the Corps determines that a project meets Category 1, the Corps will forward verification of eligibility to the applicant.

Eligibility Criteria

Activities in Connecticut and lands located within the exterior boundaries of an Indian reservation may proceed without application or notification to the Corps if they:

- are subject to Corps jurisdiction
- meet the definition of Category 1 in Appendix 2 – Coastal Definition of Categories, and
- meet the General Conditions of the GP

Note: Activities subject to Corps jurisdiction that are NOT regulated by the DEEP OLISP will be subject to the Category 2 screening requirements of this GP.

Project proponents seeking eligibility under Category 1 must comply with the General Conditions of the GP and other federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA) and the Wild and Scenic Rivers Act. Therefore, consultation with the Corps and/or outside experts such as the Connecticut Commission on Culture and Tourism and any appropriate Indian tribes is recommended when there is a likelihood of the presence of resources of concern.

Projects not eligible under Category 1 of this GP may be screened under Category 2 provided they meet the Category 2 criteria.

b. Category 2 (Reporting – Requiring Review/Written Authorization)

Eligibility Criteria

Activities in Connecticut and lands located within the exterior boundaries of an Indian reservation that meet the following criteria **require written approval from the Corps:**

- are subject to Corps jurisdiction,
- meet the definition of Category 2 in Appendix 2 – Coastal Definition of Categories, and
- meet the General Conditions of this GP

3. Applying for a Category 2 permit:

a. CT DEEP, OLISP regulated activities

Structures and Dredging Permit Applications: Applicants/agents must submit to the Corps, a copy of the DEEP Permit Consultation Form for U.S. Army Corps of Engineers Review along with project plans. The Corps will then coordinate this information with the interagency review team (see paragraph 4 below) and then return the form to applicants/agents for their submission to DEEP OLISP.

COPs/GPs/Time Extensions/Modifications: OLISP will forward copies of application packages and approvals to the Corps on a weekly basis. If a project is determined to meet Category 2 and is complete, the Corps will coordinate these projects with the interagency review team. If the Corps determines that an Individual permit or additional information is required, the Corps will coordinate directly with the applicant/agent. Requests for time extensions should be sent to both OLISP and the Corps.

NOTE: For projects which involve dredging and open water disposal - Applicants/agents must submit requests for sampling plans to the DEEP, OLISP and the Corps simultaneously, as well as other required information specific to dredging/open water disposal, a detailed open water disposal site alternative analysis, and a completed NY DOS Federal Consistency Assessment Form found at <http://nyswaterfronts.com/downloads/pdfs/fcaf2.pdf>. Please see our website at <http://www.nae.usace.army.mil/Regulatory/> for a list of all required additional information.

b. Aquaculture activities regulated by the Department of Agriculture

This refers to marine- and land-based aquaculture activities, including associated structures regulated by the DA/BA, Connecticut General Statutes Section 22-11h.

Applicants should apply directly to the DA/BA using the Joint Application for Aquaculture form found at: http://www.nae.usace.army.mil/reg/Permits/CT_AquacultureApplication.pdf. The DA/BA will forward a copy of the aquaculture application package to the Corps, the State of Connecticut Department of Energy & Environmental Protection's (CT DEEP) Boating Division, Marine Fisheries Division, Office of Long Island Sound Programs (OLISP), and CT DEEP, Inland Water Resources Division (IWRD) for activities impacting inland waters.

These application packages for marine-based activities will be screened by the Corps, the Federal resource agencies, and the CT DEEP, OLISP with input from the CT DEEP Boating and Marine Fisheries Divisions. Screening will initiate review of the application by the CT DEEP OLISP for Coastal Zone Management consistency concurrence. The CT DEEP OLISP will make a determination on the completeness of the application for CZM consistency review and/or the eligibility of the activity for state aquaculture permit exemption within 30 days from the date of the screening meeting.

4. Review Procedures:

The Corps will coordinate review of all Category 2 activities with federal and state agencies (interagency review team), as necessary. To be eligible and subsequently authorized, an activity must meet the eligibility criteria listed above and result in no more than minimal impacts to the aquatic environment as determined by the Corps in conjunction with the interagency review team. This may require project modifications involving avoidance, minimization, and/or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal. Applicants are responsible for applying for the appropriate state and local approvals. This GP is not valid until all required CT DEEP, OLISP authorizations are granted.

Emergency Situation Procedures: 33 CFR 325.2 (e)(4) states that an "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures." Notification to the Corps is required. The Corps will determine if a project qualifies as an emergency and will work with all applicable agencies to expedite authorization in emergency situations. If the project qualifies as an emergency, authorization under Category 1 or Category 2 of this General Permit is not required.

Individual/Standard Permit Procedures: Work that is not eligible under Category 2 as defined in Appendix 2, Definition of Categories, or that does not meet the terms and general conditions of this GP, will require the submission of an application to the Corps for an Individual Permit (see 33 CFR Part 325.1). The applicant should submit the appropriate application materials (including the Corps application form) at the earliest possible date. General information and application forms can be obtained at our website at <http://www.nae.usace.army.mil/reg/Forms/Application.pdf> or by calling us. Individual WQC and CZM consistency concurrence are required, when applicable, from the State of Connecticut before Corps issuance of an individual permit. The Corps encourages applicants to concurrently apply for a Corps Individual Permit and state permits.

APPENDIX 2

<p>NAVIGABLE WATERS OF THE UNITED STATES</p>	<p align="center">COASTAL DEFINITION OF CATEGORIES</p> <p>See definition of Navigable Waters at Section 2, page 1. The jurisdictional limits are the mean high water (MHW) line in tidal waters and the ordinary high water (OHW) mark in non-tidal portions of the Federally designated navigable river (Connecticut River). For the purposes of this GP, fill placed below the high tide line (HTL), and in bordering wetlands* to tidal waters are also reviewed under this Navigable Waters section.</p> <p><i>*A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary high water mark (MHW in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary high water mark and above the normal hydrologic influence of their adjacent waterbody.</i></p> <p>NOTE: No fill or excavation in Special Aquatic Sites (SAS, which include wetlands (inland and salt marsh), mud flats, vegetated shallows (permanently inundated areas that support rooted aquatic vegetation such as eel grass, celery grass, and tape grass), coral reefs, and riffle and pool complexes. Fill and excavation activities in SAS will require an Individual Permit. However, restoration projects impacting SAS can be reviewed under Category 2.[Refer to 40 CFR Part 230 Subpart E]</p>	
	<p>CATEGORY 1 - Activities Eligible for Authorization</p>	<p>CATEGORY 2 - Activities Eligible for Authorization</p>
<p>A. FILL/EXCAVATION Fill area includes all temporary and permanent wetland/ waterway fills.</p>	<p>No provisions for new or previously unauthorized fills in Category 1, other than discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided the U.S. Coast Guard issues a bridge permit or appropriate approval. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.</p> <p><i>No fill in the main stem of the Connecticut River</i></p> <p><i>No fill within 200' of Federal Navigation Project (FNPs) limits. FNPs are defined on Page 2 of this Appendix.</i></p>	<p><1 acre waterway/wetland fill and/or excavation including secondary waterway impacts (e.g., areas drained, flooded, fragmented or mechanically cleared or degraded).</p> <p><i>There are no areal limits to Integrated Marsh Management (including open marsh management) or wetland restoration projects, provided that impacts to the aquatic resources are minimal and there is a preplanning component to the project that includes review, representation and approval from all federal and state agencies on the screening committee.</i></p> <p><i>There are no areal limits to beach nourishment projects with compatible grain size.</i></p>
<p>B. REPAIR AND MAINTENANCE WORK</p>	<p>Repair, replacement in kind or maintenance of existing, currently serviceable, grandfathered* or authorized fills and structures provided:</p> <ul style="list-style-type: none"> • No expansion or change in use • Must be rebuilt in same footprint, however, minor deviations in structure design allowed. <p><i>*Grandfather dates include work performed and structures installed before 1968 & fill placed before 1975 for Corps purposes only.</i></p>	<p>Repair/maintenance of any non-serviceable structures or fill or repair/maintenance of serviceable structures or fills with expansion up to one acre or change in use.</p> <p>Includes retention of previously unauthorized structures or fill.</p>

	CATEGORY 1- Activities Eligible for Authorization	CATEGORY 2- Activities Eligible for Authorization
<p>C. DREDGING/ EXCAVATION AND ASSOCIATED DISPOSAL</p> <p>NOTE: All dredging/excavation and associated disposal projects proposed in the Byram River must coordinate with NY DOS for coastal zone review.</p>	<p>Maintenance dredging (with any amount of yardage) provided:</p> <ul style="list-style-type: none"> • Contained upland disposal • Proper siltation controls used & maintained to prevent runback into waterway/wetland • No direct or indirect impacts to Special Aquatic Sites (SAS) or shellfish beds • No work in the main stem of the Connecticut River • Work occurring only between October 1 through January 15 	<p>Maintenance, new, or improvement dredging with disposal at upland, open water, confined aquatic disposal cells, or beach nourishment, provided material to be dredged is determined suitable for disposal by the Corps and has less than 25,000 c.y. of material being disposed of at any Long Island Sound disposal site.</p> <p>NOTE: All disposal of dredged material at any Long Island Sound disposal site requires CZM consistency from NY DOS.</p> <p>Maintenance dredging with upland disposal that is not eligible under Category 1.</p>
<p>D. MOORINGS</p> <p>Moorings and/or their moored vessels proposed to be located within the horizontal limits of a Federal Channel are not eligible for this GP and require an Individual Permit.</p> <p>Commercial mooring fields require an Individual Permit</p> <p><i>Boundaries of Submerged Aquatic Vegetation (SAV) may be required to be located/surveyed in the field. See Corps website for guidance document.</i></p>	<p>Private, non-commercial, non-rental, single-boat moorings provided:</p> <ul style="list-style-type: none"> • Not associated with any boating facility *, including those in a Federal Anchorage. • No moorings within Federal anchorages • No interference with navigation. • Not located in SAS or shellfish beds • Must have harbormaster approval <p><i>*Facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockominiums, etc.</i></p>	<p>All single commercial moorings in all locations and any single moorings that do not have harbormaster approval and/or are located in Federal Navigation Projects (FNPs) – See Page 2 above for definition of FNPs.</p> <p>All moorings that do not meet Category 1, provided:</p> <ul style="list-style-type: none"> • No interference with navigation • No adverse impact to SAS

	CATEGORY 1- Activities Eligible for Authorization	CATEGORY 2- Activities Eligible for Authorization
<p>E. PILE-SUPPORTED STRUCTURES AND FLOATS</p> <p><i>Boundaries of Submerged Aquatic Vegetation (SAV) may be required to be located/surveyed in the field. See Corps website for guidance document.</i></p>	<p>Private residential structures with a length limit of 40' beyond mean high water and to a depth of -4' mean low water and limited to 4' in width. Pile-supported structures/floats may not be positioned over SAS.</p> <p>Floats must be supported at least 18" above the intertidal and shallow sub-tidal substrate during all tidal cycles.</p> <ul style="list-style-type: none"> • No structures or floats can be located within the buffer zone (3x the authorized depth of the FNP) of the horizontal limits of FNPs. • No structures or floats can extend across >25% of the waterway width at mean low water. • No new structures or floats associated with boating facilities. • No new pile-supported structures within designated Shellfish Concentration Areas by the Connecticut Department of Environmental Protection, Coastal Area Management Program under CGS Sec. 22a-90 <p>Reconfiguration of existing authorized structures; private or commercial, provided those structures do not extend beyond the existing perimeter of the facility or encroach into SAS.</p>	<p>Structures or floats that are not associated with a new or previously unauthorized boating facility that do not meet Category 1, provided:</p> <ul style="list-style-type: none"> • No interference with navigation • No adverse impact to SAS <p>New structures within an existing boating facility provided those structures do not extend beyond the existing perimeter of the facility.</p> <p>No structures or floats that extend, or with docked or moored vessels, will extend within the horizontal limits of a FNP. See Page 2 above for definition of FNPs.</p>

	CATEGORY 1- Activities Eligible for Authorization	CATEGORY 2- Activities Eligible for Authorization
<p>F. AQUACULTURE PROJECTS AND FISHERIES</p> <p>No shellfish dredging, including mechanical or hydraulic in SAS (including SAV), no placement of cultch in beds of SAV under this GP. IP required.</p> <p>Depth of cultch or spatting-shell limited to the minimum necessary for full coverage of the farmed bed bottom and must not result in visible degradation of habitat for other aquatic resources.</p> <p>All structures must be permitted by State of Connecticut Navigation Safety/Boating Access Unit and marked in conformance with applicable State or U.S. Coast Guard Aids to Navigation.</p> <p>No adverse impacts to navigation.</p> <p>Refer to Section 2 coastal text for other requirements.</p>	<p>All facilities must be installed and operated in compliance with the attached Appendix 3 - CT Aquaculture Special Conditions</p> <p>Fish & wildlife harvesting, enhancement, and attraction devices and activities such as pound nets, crab traps, eel pots, lobster traps, shellfish digging, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This does NOT authorize artificial reefs, impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster.</p> <p>Shellfish seeding/spatted-shell or cultch for the purposes of enhancement or restoration of a native shellfish population and for bottom cultivation associated with commercial shellfish aquaculture on leased grounds that have historically been similarly cultivated.</p> <p>Research, educational or publicly funded experimental aquaculture gear (see definition to the right) or other research activities for indigenous species not to exceed 2 acres.</p> <p>Suspended cages or nets located wholly below and within the footprint of an <u>authorized</u> fixed or floating structure provided there is a vertical clearance of at least 2 feet between the bottom of the gear and the sea floor at mean low water.</p> <p>Installation of a maximum of two floating upwellers with a combined area not to exceed 160 square feet. Cannot be located within the buffer of a FNP**</p> <p>Small-scale shellfish aquaculture gear as listed below with a gear perimeter or footprint (whichever is greater) ≤ 2 acres, with no interference to public access, and must comply with CT DEP OLISP Minor Aquaculture General Permit Reporting requirements:</p> <ul style="list-style-type: none"> • 50 or less bottom cages/bags/racks/trays • 50 or less floating cages/bags/racks/trays • 50 or less floating cages/nets suspended on one or more surface-buoyed long-lines • Predator netting/screens 	<p>All facilities must be installed and operated in compliance with the attached Appendix 3 - CT Aquaculture Special Conditions (Appendix</p> <p>All rearing, grow-out or depuration devices or other structures for the culture of native shellfish or marine organisms that do not meet the eligibility requirements of Category 1.</p> <p>Installation of intake and discharge structures for a land-based hatchery.</p> <p>All sub-surface buoyed long-lines.</p> <p><i>Boundaries of SAV's may be required to be located/surveyed in the field. See Corps website for guidance document.</i></p> <p><i>For additional information, please see "A Guide for Marine Aquaculture Permitting in Connecticut" for guidance and application materials found at: www.nae.usace.army.mil/reg/Permits/CT_AquaculturePermitGuide.pdf</i></p> <p>DEFINITIONS:</p> <p><i>Shellfish Seeding - "the placement of shellfish seed and/or suitable substrate to facilitate shellfish settlement and increase production."</i></p> <p><i>Shellfish Seed - "Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments."</i></p> <p><i>Aquaculture Gear - "Any gear used to contain and/or cultivate shellfish including, but not limited to lines, racks, cages, bags, anchoring devices and buoys required to suspend or mark such structures."</i></p> <p><i>** FNPs are comprised of Federal Channels and Federal Anchorages. Please click on the link below for more information: http://www.nae.usace.army.mil/navigation/navigation2.asp?mystate=ct</i></p>

	CATEGORY 1- Activities Eligible for Authorization	CATEGORY 2- Activities Eligible for Authorization
<p>G. MISCELLANEOUS</p>	<p>Temporary buoys, markers, floats, and similar structures for recreational use during specific events, provided they are removed no later than 30 days after the specific event.</p> <p>The placement of aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard (See 33 CFR 66, Chapter I, C) or as required by CT DEP Navigation Safety/Boating Access Unit.</p> <p>Oil spill clean-up structures and fill done in accordance with Connecticut emergency certification. Special Aquatic Sites must typically be restored in place to approximate pre-impact elevation. Test plots <100 SF for the planting of native, non-invasive wetland species. No grading or discharge of fill, no plant growing devices and no interference with navigation.</p> <p>Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, tide gages, water recording devices, water quality testing and improvement devices, and similar structures. Structures may not restrict movement of aquatic organisms.</p> <p>Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes, and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, and historic resources surveys (but not recovery). This does not authorize fill or work in SAS, permanent structures or the drilling and the discharge of excavated material from test wells for oil and gas exploration (the plugging of such wells is authorized).</p>	<p>Structures or work in or affecting tidal or navigable waters that are not defined under any of the previous headings listed above. Includes, but is not limited to, utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, bridges, tunnels and horizontal directional drilling activities seaward of the mean high water line.</p> <p>Aquatic habitat restoration, establishment, and enhancement of tidal wetlands and riparian areas provided those activities are proactive and result in net increases in aquatic resource functions and services as decided by the Corps in consultation with federal and state agencies that the net effects are beneficial.</p> <p>Specific activities required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency or Licensed Site Professional with established legal or regulatory authority. Wetlands must typically be restored in place at the same elevation to qualify.</p>
<p>H. BRIDGE WORK</p> <p>No causeways or approach fills.</p>	<p>Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills, provided the U. S. Coast Guard issued a bridge permit.</p> <p><i>No fill in SAS. No work in the main stem of the Connecticut River. No work within Federal Navigation Project.</i></p>	<p>Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the United States, including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills, provided the U. S. Coast Guard authorizes such discharges as part of the bridge permit.</p>

APPENDIX 3

GENERAL PERMIT - STANDARD AQUACULTURE
TERMS AND CONDITIONS

DEPARTMENT OF THE ARMY/STATE OF CONNECTICUT

2011 Connecticut General Permit

1. Aquaculture activities under this General Permit as identified within Appendix 2, Section F are subject to the General Permit Conditions and Requirements of the May 31, 2011 Connecticut General Permit (www.nae.usace.army.mil/reg/Permits/CT_PGP.pdf).
2. The project proponent must receive all applicable local and state authorizations for shellfish and aquaculture related activities from Connecticut Department of Agriculture, Bureau of Aquaculture (CT DA/BA) and the Connecticut Department of Energy & Environmental protection (CT DEEP) including a CT DA/BA lease and/or license in accordance with Connecticut General Statutes (CGS) §22-11h, register, if required, with CT DEEP Office of Long Island Sound Programs (OLISP) under the *General Permit for Minor Aquaculture Activities and/or General Permit for Placement of Cultch*, and be in receipt of a *Permit for Regulatory Markers* from CT DEEP Boating Division, if one is required.
3. Before the authorized structures are installed the project proponent **must** submit a permit application and receive authorization for Regulatory Markers ([Link to Regulatory Marker Permit](#)) from the CT DEEP Boating Division, Navigation Safety/Boating Access Unit, P.O. Box 280, 333 Ferry Road, Old Lyme, CT 06371-0280. If CT DEEP Boating regulation does not apply, the applicant shall contact the U.S. Coast Guard (USCG), First District; Aids to Navigation Branch at 408 Atlantic Avenue, Boston, MA 02110-3350 (800-848-3942) to coordinate the proper buoy markers. The permittee shall install and maintain lights, markings and other features as the CT DEEP/USCG requires. Note: Documentation of this coordination will be necessary for existing operations that seek reconfigurations and/or new approvals for structures from the Dept. of Army and for authorizations from the CT DA/BA.
4. Gear may not be located over or within beds of submerged aquatic vegetation (SAV) such as eelgrass or turtle grass, and coastal wetlands (salt marsh), nor shall such beds or vegetated marsh areas be damaged or removed. Routine lease activity including cage maintenance, washing etc. shall not occur within 25 feet of the edge of beds of SAV.
5. All gear shall be designed and deployed in such a manner as to limit, to the greatest extent practicable, negative impacts on avian resources such as, but not limited to, shore birds, wading birds or members of the waterfowl group. This is meant to include nesting, feeding or resting activities by migratory birds identified at 50 CFR 10.13.

APPENDIX 3

GENERAL PERMIT - STANDARD AQUACULTURE
TERMS AND CONDITIONS

DEPARTMENT OF THE ARMY/STATE OF CONNECTICUT

2011 Connecticut General Permit

6. Installation of structures, their mooring tackle and lines and any attendant vessels shall not create a hazard or interfere with existing navigation uses in the waterway, and structures shall be set back from the Federal Navigation Project (FNP) a distance of at least 200 feet. A list of Connecticut FNP projects can be obtained from the U.S Army Corps of Engineers website ([Link to Federal Navigation Projects](#)).
7. The right of the public to traverse or utilize the waters not physically occupied by authorized structures and/or moored vessels within the areal limits of the authorized gear perimeter shall not be impeded.
8. The placement of cultch shall occur only in appropriate locations for working the bed bottom and colonization by oysters, based upon factors of salinity, water quality, water circulation patterns, and substrate composition and such placement shall not create or exacerbate adverse impact to any aquatic resource (finfish, shellfish, marine mammals, coastal birds), water quality, Essential Fish Habitat¹ or Special Aquatic Sites².
9. New applications of cultch and spatting-shell for the purposes of enhancement or restoration of a native shellfish population and for bottom cultivation associated with commercial shellfish aquaculture on leased grounds cannot be placed within SAV and is limited to the minimum amount necessary for coverage of the target area.
10. The permittee shall be responsible to remove all gear and associated equipment within any leased or designated shellfish area in the event that the operator surrenders or loses the right to its use. ³
11. The subject aquaculture activity shall not discernibly interfere with natural sedimentation and erosion processes.

¹ Essential Fish Habitat: Those waters and substrate necessary to fish for spawning, breeding, feeding and growth to maturity.

² Special Aquatic Sites: Include Wetlands (inland and salt marsh), intertidal mud flats, vegetated shallow (permanently inundated areas that support rooted aquatic vegetation such as eelgrass, celery grass and tapegrass), and coral reefs. Per 30 CFR Part 230 Subpart E.

³ In some situations, a performance bond may be required.

APPENDIX 3

GENERAL PERMIT - STANDARD AQUACULTURE
TERMS AND CONDITIONS

DEPARTMENT OF THE ARMY/STATE OF CONNECTICUT

2011 Connecticut General Permit

12. To be eligible for authorization under Category 1 of this permit, an upwelling device and/or work floats cannot exceed two units or a combined total square footage of 160 square feet. These structures must be permitted by State of Connecticut Navigation Safety/Boating Access Unit and/or marked in conformance with applicable State or U.S. Coast Guard Aids to Navigation.
13. Suspended cages or nets for the rearing or grow out of shellfish are permitted under this category, provided they are located wholly below and within the footprint of an existing, authorized fixed or floating structure and provided there is a vertical clearance of at least 2 feet between the bottom of the gear and the sea floor at MLW. The structures that the gear will be adhered to must be in conformance with the structures permit for that "site."
14. Aquaculture projects authorized herein shall not interfere with public shore access at or below mean high water or interfere with the access to any riparian or littoral property.

APPENDIX 4

CONTACTS FOR CONNECTICUT GENERAL PERMIT:

1. FEDERAL

U.S. Army Corps of Engineers
 New England District, Regulatory Division
 696 Virginia Road
 Concord, Massachusetts 01742-2751
 (800) 343-4789 or (978) 318-8335
 (978) 318-8303 - fax

National Park Service
 North Atlantic Region
 15 State Street
 Boston, Massachusetts 02109
 (617) 223-5203

Federal Endangered Species (F&WS):
 U.S. Fish and Wildlife Service
 70 Commercial Street, Suite 300
 Concord, New Hampshire 03301-5087
 (603) 223-2541

Federal Endangered Species & EFH (NMFS)
 National Marine Fisheries Service
 55 Great Republic Drive
 Gloucester, MA 01930
 Phone: (978) 281-9102
 (978) 281-9301 - fax

U.S. Environmental Protection Agency, Region I
 5 Post Office Square, Suite 100
 Boston, Massachusetts 02109
 (617) 918-2000

Department of Agriculture
 Bureau of Aquaculture
 P. O. Box 97
 190 Rogers Avenue
 Milford, Connecticut 06460
 (203) 874-0696

2. STATE OF CONNECTICUT***Department of Energy & Environmental Protection***

(Coastal Projects)
 Office of Long Island Sound Programs
 79 Elm Street
 Hartford, Connecticut 06106-5127
 (860) 424-3034

(Inland Projects)
 Inland Water Resources Division
 79 Elm Street
 Hartford, Connecticut 06106-5127
 (860) 424-3019

(Mashantucket Pequot Tribal Nation)
 Department of Natural Resources Protection &
 Regulatory Affairs
 550 Trolley Line Boulevard
 P. O. Box 3202
 Mashantucket, Connecticut 06338-3202

(Aquaculture Projects)
 Connecticut Department of Agriculture
 Bureau of Aquaculture & Laboratory
 PO Box 97
 Milford, CT 06460
 (203) 874-0696

(State Endangered Species)
 Bureau of Natural Resources
 Wildlife Division
 Natural Diversity Data Base
 79 Elm Street
 Hartford, Connecticut 06106-5127
 (860) 424-3011

3. HISTORIC PROPERTIES

Tribal Historic Preservation Officers

Mashantucket Pequot Tribal Historic Pres. Officer
 Attn: Ms. Kathleen Knowles
 Mashantucket Pequot Tribal Nation
 550 Trolley Line Boulevard
 P. O. Box 3202
 Mashantucket, Connecticut 06338-3202
 (860) 396-6887

Mohegan Tribe Cultural Department
 Attn: Ms. Elaine Thomas, THPO
 5 Crow Hill Road
 Uncasville, Connecticut 06382
 (860) 862-6393

Archaeological Information

Connecticut Commission on Culture and Tourism
 Historic Preservation & Museum Division
 One Constitution Plaza, 2nd Floor
 Hartford, Connecticut 06103-6103
 (860) 424-3005

4. ORGANIZATIONAL WEBSITES

U. S. Army Corps of Engineers www.nae.usace.army.mil (click “Regulatory/Permitting”)
 U. S. Army Corps of Engineers Headquarters www.usace.army.mil (click “Services for the Public”)
 U.S. Environmental Protection Agency www.epa.gov/owow/wetlands/
 National Marine Fisheries Service www.nmfs.noaa.gov
 U.S. Fish and Wildlife Service www.fws.gov
 National Park Service www.nps.gov/rivers/index.html/
 Federal Emergency Management Agency www.fema.gov
 Connecticut Dept. of Energy & Environmental Protection www.ct.gov/dep/
 Connecticut Dept. of Agriculture, Bureau of Aquaculture & Laboratory www.ct.gov/doag/
 U.S. Environmental Protection Agency, Region 1 – Low Impact Development-practices and state-specific resources, including CT DEP Stormwater Quality Manual www.epa.gov/nc/topics/water/lid.html
 U.S. Environmental Protection Agency – Green Infrastructure website www.epa.gov/greeninfrastructure



**US Army Corps
of Engineers** ®
New England District

Appendix 5

(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

Permit Number: _____

Project Manager _____

Name of Permittee: _____

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

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*****
* MAIL TO: U.S. Army Corps of Engineers, New England District      *
*           Permits and Enforcement Branch B                       *
*           Regulatory Division                                     *
*           696 Virginia Road                                       *
*           Concord, Massachusetts 01742-2751                     *
*****

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Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

() _____
Telephone Number

() _____
Telephone Number