(860) 594-3129

Subject: Project No. 26-118
F.A.P. No. 1026(104)
Chester: Replacement of Bridge No. 2695,
Route 148 over Great Brook.

November 28, 2011

NOTICE TO CONTRACTORS:

This is to notify all concerned and especially the prospective bidders that the bid opening for the subject project is still scheduled for November 30, 2001 at 2:00 P.M. in the Conference Room of the Department of Transportation Administration Building, 2800 Berlin Turnpike, Newington, Connecticut.

The Department has established a general mailbox to receive contractor questions. Please send all future questions to DOTContracts@ct.gov.

Addendum No. 2 is attached

This Addendum is necessary to add a Special Provision and DEEP Permit, revised Federal Wage Rates permits and to answer questions asked on the subject project.

Philip J. Melchionne

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

NOVEMBER 28, 2011
REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK
FEDERAL AID PROJECT NO. 1026(104)
STATE PROJECT NO. 26-118
TOWN OF CHESTER

ADDENDUM NO. 2

SPECIAL PROVISION
NEW SPECIAL PROVISION

The following Special Provision is hereby added to the Contract:

- NOTICE TO CONTRACTOR – NON DISCRIMINATION REQUIREMENT

QUESTION & ANSWER

Q1. The Precast Concrete Box Culvert Sections are shown with an approximate 130 degree skew. Per spec section page 169 the sidewall length of a culvert shall not be less than 4'. Based upon this information the overall culvert end sections would be 16' long. Precast concrete box culvert form work is traditionally 8' max in length. Can this piece be produced in (2) sections with a secondary closure pour between the sections to tie them together? One section would be a traditional (4) sided culvert and the other section would comprise of the roof, floor and (1) wall. Otherwise these end pieces cannot be produced with the skew shown.

A1. Multiple precast sections with non-parallel ends will be required at the box culvert inlet and outlet as conceptually shown in Stage II Construction plans on Sheet No. 06.06 of the contract plans and in accordance with the special provision. This may require the use of custom forms. All box culvert sections are to be precast and comprised of a roof, a floor and 2 walls. A secondary pour tying sections together is not permitted.

The attached CTDEEP Flood Management Certification (approval date November 8, 2011) is hereby added to the contract.

The Bid Proposal Form and Detailed Estimate Sheet are not affected by this Addendum.

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

The Federal Wage Rates dated October 7, 2011 are hereby deleted and replaced with the attached Federal Wage Rates dated October 14, 2011.

The foregoing is hereby made a part of the contract.

NOTICE TO CONTRACTOR - NON DISCRIMINATION REQUIREMENT

Non Discrimination Requirement (pursuant to section 4a-60 and 4a-60a of the Connecticut General Statutes, as revised): References to "minority business enterprises" in this Section are not applicable to Federal-aid projects/contracts. Federal-aid projects/contracts are instead subject to the Federal Disadvantaged Business Enterprise Program.

(a) For purposes of this Section, the following terms are defined as follows:

i. "Commission" means the Commission on Human Rights and Opportunities;
ii. "Contract" and "contract" include any extension or modification of the Contract or contract;
iii. "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor;
iv. "gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose.
v. "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations;
vi. "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements;
vii. "marital status" means being single, married as recognized by the state of Connecticut, widowed, separated or divorced;
viii. "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders;
ix. "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and
x. "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or

repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms "Contract" and “contract” do not include a contract where each contractor is (1) a political subdivision of the state, including, but not limited to, a municipality, (2) a quasi-public agency, as defined in Conn. Gen. Stat. Section 1-120, (3) any other state, including but not limited to any federally recognized Indian tribal governments, as defined in Conn. Gen. Stat. Section 1-267, (4) the federal government, (5) a foreign government, or (6) an agency of a subdivision, agency, state or government described in the immediately preceding enumerated items (1), (2), (3), (4) or (5).

(b) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut; and the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved; (2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers’ representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

(c) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.

(d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.

(e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes §46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

(f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.

(g) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and (4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.

(h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter."

The Nondiscrimination Certifications can be found at the Office of Policy and Management website.

http://www.ct.gov/opm/cwp/view.asp?a=2982&Q=390928

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

November 8, 2011

Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131

Attn: Mark W. Alexander

RE: FM-201103094
Replacement of Bridge No. 02695, Route 148 over Great Brook
Town of Chester

Dear Mr. Alexander,

The Inland Water Resources Division of the Department of Energy and Environmental Protection has reviewed the flood management certification prepared by Aija Zeidenbergs and signed by Thomas J. Maziarz of the Connecticut Department of Transportation. The certification document dated April 5, 2011 and submitted on April 29, 2011 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 replacing a bridge No. 02695, route 148 over Great Brook as shown on plans entitled "Replacement of Bridge No. 02695, Route 148 over Great Brook," dated January 2010 and signed by John H. Miller, P.E. The project is located within the 100-year floodplain associated with the Great Brook.

The above referenced certification is hereby approved with the following conditions:

- All unconfined instream work is prohibited from March 1 to June 30, inclusive
- Driving of steel H-piles within cofferdams must be limited to no more than 12 hours per day during March 1 to June 30, inclusive

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 Anna Laskin of the Inland Water Resources Division at (860) 424-3522.

Sincerely,

Denise Ruzicka
Director, Inland Water Resources Division

cc: Close, Jensen and Miller, P.C., 1137 Silas Deane Highway, Wethersfield, CT 06109, attn: Aija Zeidenbergs

Permit Application for Programs Administered by the Inland Water Resources Division

Please complete this application form in accordance with the instructions (DEP-IWRD-INST-100) in order to ensure the proper handling of your application. Print or type unless otherwise noted. You must submit the *Permit Application Transmittal Form* (DEP-APP-001) and the initial fee along with this form.

DEP USE ONLY

Part I: Application Type

Check the appropriate box identifying the application type.

This application is for (check one):	Please identify any previous or existing permit/authorization/registration number in the space provided.
☒ A *new* application	Existing permit/authorization/registration number:
☐ A *renewal* of an existing permit	
☐ A *modification* of an existing permit	Expiration Date:

Part II: Permit Type and Fee Information

Please note: effective August 21, 2003, the application fees for the programs administered by the Inland Water Resources Division have increased as listed in the following table. The fee for municipalities is 50% of the listed rates.

Type of Permit (check *all* that apply):	Fee to submit with application:
☐ **Inland Wetlands & Watercourses** CGS Sec. 22a-36 et seq.	none
☐ **Dam Construction** *CGS Sec. 22a-403*	none
☐ **401 Water Quality Certificate** *33 U.S.C. 1341*	none
☒ **Flood Management Certification** *CGS Sec. 25-68(b) - (h)*	none
Stream Channel Encroachment *CGS Sec. 22a-342*	
☐ No change in grade and no construction of above-ground structures	$470.00
☐ A change in grade and no construction of above-ground structures	$940.00
☐ A change in grade and above-ground structures or buildings	$4,000.00
Water Diversion: Consumptive Use *CGS Sec. 22a-372(e)*	
☐ Withdrawal > 0.05 and < 0.5 mgd	$2,050.00
☐ Withdrawal ≥ 0.5 and < 2.0 mgd	$4,000.00
☐ Withdrawal ≥ 2.0 mgd	$6,250.00
Water Diversion: Nonconsumptive Use *CGS Sec. 22a-372(e)*	
☐ Watershed < 0.5 sq mi	$2,050.00
☐ Watershed ≥ 0.5 sq mi and < 2.0 sq mi	$4,000.00
☐ Watershed ≥ 2.0 sq mi	$6,250.00

Part III: Applicant Information

1. Fill in the name of the applicant(s) as indicated on the *Permit Application Transmittal Form* (DEP-APP-001):

   Applicant: **State of Connecticut, Department of Transportation**

   Phone: **860-594-2931** ext. Fax: **860-594-3028**

   ☐ Check here if there are co-applicants. If so, label and attach additional sheet(s) with the required information to this sheet.

2. Applicant's interest in property at which the proposed activity is to be located:

   ☒ site owner ☐ option holder ☐ lessee

   ☐ easement holder ☐ operator ☐ other (specify):

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

   Name: **Thomas J. Maziarz**

   Mailing Address: **2800 Berlin Turnpike, P.O. Box 317546**

   City/Town: **Newington** State: **CT** Zip Code: **06131-7546**

   Business Phone: **860-594-2931** ext. Fax: **860-594-3028**

   Contact Person: **Mark W. Alexander** Title: **Trans.Asst.Plan.Director**

4. List attorney or other representative, if applicable:

   Firm Name:

   Mailing Address:

   City/Town: State: Zip Code:

   Business Phone: ext. Fax:

   Attorney:

5. Facility or Property Owner, if different than the applicant:

   Name:

   Mailing Address:

   City/Town: State: Zip Code:

   Business Phone: ext. Fax:

   Contact Person: Title:

   Home address of owner (for Inland Wetlands applications only):

   Mailing Address:

   City/Town: State: Zip Code:

   Home Phone:

Part III: Applicant Information (continued)

6. List any engineer(s) or other consultant(s) employed or retained to assist in preparing the application or in designing or constructing the activity. ☐ Check here if additional sheets are necessary, and label and attach them to this sheet.

Name: **Close, Jensen and Miller, P.C.**

Mailing Address: **1137 Silas Deane Highway**

City/Town: **Wethersfield** State: **CT** Zip Code: **06109**

Business Phone: **860-563-9375** ext. Fax: **860-721-1802**

Contact Person: **Aija Zeidenbergs** Title: **Environmental Coordinator**

Service Provided: **Application Preparation, Hydrology and Hydraulics**

Part IV: Site Information

1. **Site Location:**

a. Name of facility, if applicable: **Bridge No. 02695**

Street Address or Description of Location: **Route 148 over Great Brook**

City/Town: **Chester** State: **CT** Zip Code:

Project No., if applicable: **Project No. 26-118**

b. Tax Assessor's Reference: Map **N/A** Block **N/A** Lot **N/A**

(Assessor's reference is not required if requester is an agency of the State of Connecticut.)

c. Latitude and Longitude of the approximate "center of the site" in *degrees, minutes, and seconds*:

Latitude: **72°-26'-59"** Longitude: **41°-24'-14"**

Method of determination (check one):

☐ GPS ☒ USGS Map ☐ Other (please specify):

If a USGS Map was used, provide the quadrangle name: **Deep River**

d. Drainage Basin number(s) wherein the proposed activity will take place: **4017**

e. Flood Insurance Rate Map Panel Number: **090060 0006 C**

Date of the map referenced: **02/02/90**

f. If applying for a SCEL permit, identify the property wherein the proposed activity will take place by indicating the following:

SCEL Map number(s):

Property Identifier:

Date of the map referenced:

2. **COASTAL BOUNDARY:** Is the activity which is the subject of this application located within the coastal boundary as delineated on DEP approved coastal boundary maps? ☒ Yes ☐ No

If yes, and this application is for a new permit or for a modification of an existing permit, you must submit a *Coastal Consistency Review Form* (DEP-APP-004) with your application as Attachment P.

Information on the coastal boundary is available at the local town hall or on the "Coastal Boundary Map"

available at DEP Maps and Publications (860-424-3555).

Part IV: Site Information (continued)

3. **ENDANGERED OR THREATENED SPECIES:** Is the project site located within an area identified as a habitat for endangered, threatened or special concern species as identified on the "State and Federal Listed Species and Natural Communities Map"? ☒ Yes ☐ No Date of Map: **August 2010**

   If yes, complete and submit a *Connecticut Natural Diversity Data Base* (CT NDDB) *Review Request Form* (DEP-APP-007) to the address specified on the form. **Please note NDDB review generally takes 4 to 6 weeks and may require additional documentation from the applicant. DEP strongly recommends that applicants complete this process before submitting the subject application.**

   When submitting this application form, include copies of any correspondence to and from the NDDB, including copies of the completed *CT NDDB Review Request Form*, as Attachment K (Environmental Report) or in Attachment Q if no environmental report is required.

   For more information visit the DEP website at www.ct.gov/dep/endangeredspecies (Review/Data Requests) or call the NDDB at 860-424-3011.

4. **AQUIFER PROTECTION AREAS:** Is the site located within a town required to establish Aquifer Protection Areas, as defined in section 22a-354a through 354bb of the General Statutes (CGS)?

   ☐ Yes ☒ No

   If yes, is the site within an area identified on a Level A or Level B map? ☐ Yes ☐ No

   To view the applicable list of towns and maps visit the DEP website at www.ct.gov/dep/aquiferprotection

   To speak with someone about the Aquifer Protection Areas, call 860-424-3020.

5. **CONSERVATION OR PRESERVATION RESTRICTION:** Is the property subject to a conservation or preservation restriction? ☐ Yes ☒ No

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

6. **Other Permits:** List any previous federal, state or local permits or certificates that have already been issued for the site or for the proposed activity:

Type or Nature of Permit	Permit No. Issuing Authority	Date Issued	Expiration Date	Permittee Name

Part V: Supporting Documents

Please check the attachments submitted as verification that *all* applicable attachments have been submitted with this application form. When submitting any supporting documents, please label the documents as indicated in this part (e.g., Attachment A, etc.) and be sure to include the applicant's name as indicated on the *Permit Application Transmittal Form*. The specific information required in each attachment is described in the *Instructions for Completing A Permit Application for Inland Water Resources Division Activities* (DEP-IWRD-INST-100).

☒ Attachment A: Executive Summary

☒ Attachment B: An 8 1/2" x 11" copy of a United States Geological Survey (USGS) Topographic Quadrangle Map (scale: 1:24,000) with the regulated activity or project site outlined or pinpointed, as appropriate.

☐ Attachment C: *Documentation Form for: Inland Wetlands and Watercourses Permit, Stream Channel*

Part V: Supporting Documents (continued)

☐ Attachment D: *Documentation Form for Water Diversion Permit* (DEP-IWRD-APP-102)

☐ Attachment E: *Documentation Form for a Dam Construction Permit* (DEP-IWRD-APP-103)

☒ Attachment F: *Documentation Form for Flood Management Certification* (DEP-IWRD-APP-104) (State Agencies Only)

☒ Attachment G: Plan Sheets and Drawings

☒ Attachment H: Engineering Documentation

Part 1: *Engineering Report Checklist* (DEP-IWRD-APP-105A) and an Engineering Report

Part 2: *Hydrologic and Hydraulic Consistency Worksheet* (DEP-IWRD-APP-105B)

Section I: Floodplain Management

Section II: Stormwater Management

For state agencies only:

Section III: State Grants and Loans

Section IV: Disposal of State Land

☒ Attachment I: Flood Contingency Plan

☐ Attachment J: Soil Scientist Report (not required for Flood Management Certification)

☐ Attachment K: Environmental Report (not required for Flood Management Certification)

☐ Attachment L: Mitigation Report - wetlands and watercourses, fish and wildlife (not required for Flood Management Certification)

☐ Attachment M: Alternatives Assessment (not required for Flood Management Certification)

☐ Attachment N: *Applicant Compliance Information Form* (DEP-APP-002) (not required for Flood Management Certification or 401 Water Quality Certification Approvals)

☐ Attachment O: *Applicant Background Information Form* (DEP-APP-008) (not required for Flood Management Certification)

☒ Attachment P: *Coastal Consistency Review Form* (DEP-APP-004) (if applicable)

☒ Attachment Q: Other Information: any other information the applicant deems relevant or is required by DEP.

Number of Copies of Application:

Submit one original of all application forms, certifications, reports and supporting documents and the number of photocopies of all such materials as noted on the *Permit Application Transmittal Form*. When applying for more than one permit, you should submit the original and no more than six copies.

Part VI: Application Certification

The applicant *and* **all** individuals responsible for actually preparing the application or supporting documentation must sign this part. An application will be considered insufficient unless **all** required signatures are provided. You must include signatures of any person preparing any report or parts thereof filed in support of this application (i.e., professional engineers, surveyors, soil scientists, biologists, environmental and other consultants, etc.).

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief.

I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

I certify that this application is on complete and accurate forms as prescribed by the commissioner without alteration of the text.

I certify that I will comply with all notice requirements as listed in Section 22a-6g of the General Statutes."

Thomas J Maziarz
Signature of Applicant

4-5-2011
Date

Thomas J. Maziarz
Name of Applicant (print or type)

Bureau Chief Policy & Planning
Title (if applicable)

Aija Zeidenbergs
Signature of Preparer (if different than above)

4/1/11
Date

Aija Zeidenbergs
Name of Preparer (print or type)

Environmental Coordinator
Title (if applicable)

☐ Check here if additional signatures are required.

If so, please reproduce this sheet and attach signed copies to this sheet.

Reminder: After submitting this application to DEP, except in the case of a Flood Management Certification, you must publish a notice of the application immediately and submit a certified copy of this published notice to DEP. See "Notice of Permit Application" section in the instructions (DEP-IWRD-INST-100).

List the name of the newspaper the Notice of Permit Application will be published in:

Note: Please submit the *Permit Application Transmittal Form*, Application Form, Fee, and all Supporting Documents to:

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

Attachment A: Executive Summary

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

Bridge No. 02695 was built in 1913 and is 19 feet (5.7 m) long and 24 feet 2 inches (7.25 m) wide. It carries one 10-foot (3 m) travel lane and one 1-foot (0.3 m) shoulder for each direction of Route 148 traffic over Great Brook. The bridge is constructed on a horizontal tangent alignment with an approximate 18° skew angle. Vertically, the roadway section in the vicinity of the bridge is located in a slight sag curve. The 15-foot (4.5 m) clear span superstructure is composed of a collection of steel stringers, a corrugated steel arch and a concrete slab. The curb-to-curb roadway width on the bridge measures 22 feet (6.6 m). The roadway at the project site is classified as Rural Major Collector. The water surface elevation at the upstream bridge face for the 100-yr storm is 9.05-feet (2.76 m) which is 3.74-feet (1.14 m) above the existing low chord elevation of 5.31-feet (1.62 m). A weathering steel beam rail system is anchored to each fascia of the bridge. The substructure consists of stone masonry abutments with flared wingwalls. The west abutment and northwest wingwall are protected by a concrete scour wall.

The bridge was inspected in March 1998. The inspection revealed that the replacement is necessary to correct the structural deficiencies and scour critical nature of the existing bridge. The structural deficiencies include heavy deterioration of the existing concrete bridge deck. The existing bridge is founded on spread footings and is subject to undermining of the foundations, deeming the bridge scour critical. Additionally, the bridge is considered hydraulically deficient based on the design storm frequency.

The proposed replacement structure consists of two precast concrete box culverts with cast-in-place reinforced concrete wingwalls. The primary flow box will be a 12-foot wide by 7-foot high (3.6 m x 2.1 m) cell set below the stream elevation and filled with native stream bed material to the existing stream bed elevation. The centerline of this cell will be coincident with the centerline of Great Brook. The second cell will be a 12-foot wide by 5-foot high (3.6 m x 1.5 m) cell placed immediately adjacent to the primary cell. This cell shall have a concrete bottom with a flow line approximately 0.5 feet (0.16 m) higher than the flow line of the primary cell, therefore serving as a by-pass conduit to pass higher storm related flows. The new bridge will provide a 32-foot (9.6 m) curb-to-curb width to accommodate 11-foot (3.3 m) travel lanes and 5-foot (1.5 m) shoulders along Route 148 which is a designated state bikeway. Additionally an 8.5-foot (2.6 m) grassed area and a 10-foot (3.1 m) sidewalk; which is greater than the minimum five foot sidewalk, are being provided on the structure in order to provide adequate sight distance from driveways adjacent to the structure. The invasive plant species on the embankments adjacent to the bridge will be removed as part of the project. A landscape plan has been developed for the disturbed area. The drainage area of Great Brook is approximately 5.34 square miles (1,383.06 ha) and the watershed consists of residential, undeveloped and lightly developed land.

The entire project is located within an established FEMA 100-year floodplain (Zone AE). The openness ratio of the proposed bridge will be 0.28 with a cross-sectional area of 63.94 square feet (5.94 square meters). The proposed water surface elevation at the bridge is 8.08-feet (2.46 m). This is 1.66-feet (0.51 m) below the proposed roadway surface elevation of 9.74-feet (2.97 m). Several project activities will affect the wetlands and watercourses. The overall temporary and permanent impacts to the wetlands are 0.107 acres (428.8 square meters). The impact areas have been divided into two categories: impacts below the ordinary high water (OHW) line and impacts between the OHW line and the wetland line. The total area to be impacted below the OHW line is 0.077 acres (310.41 square meters). Permanent impacts to the area below the OHW line will amount to 0.024 acres (96.52 square meters), with a net excavation of 107.22 cubic yards (81.98 cubic meters). Permanent impacts are those associated with installation of the precast concrete box culvert structure. There will be channel excavation and reconstruction work, slope establishment with riprap slope protection as well as installation of a 1.5 foot (450 mm) and 1 foot (300 mm) RCCE. Temporary impacts to the area below the OHW line will amount to 0.053 acres (213.89 square meters). Temporary impacts to wetlands are a result of the cofferdam and dewatering required during construction. A 30-inch (750 mm) temporary diversion pipe will be used to divert the water so the work can be preformed in the dry. Installation and removal of cofferdams, a temporary earth retaining system, and erosion control systems will be necessary to facilitate the installation of the proposed box culverts.

Attachment A: Executive Summary (continued)

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

The total area to be impacted between the OHW line and wetland line is 0.030 acres (121.4 square meters). Permanent impacts to the area between the OHW line and wetland line will amount to 0.017 acres (67.55 square meters) with a net excavation of 20.97 cubic yards (16.03 cubic meters). Permanent impacts are those associated with slope establishment with riprap. Temporary impacts to the area between the OHW line and wetland line will amount to 0.013 acres (50.84 square meters). Temporary impacts to wetlands are a result of the cofferdam and dewatering required during construction.

Construction is expected to last eight months anticipating that all unconfined instream work will be prohibited March 1 to June 30. It is anticipated that the temporary 30-inch (750 mm) bypass pipe will be installed in Stage 1 and removed in Stage 3. It is anticipated that the installation of the bypass pipe will be after June 30th (late construction season) and removed prior to March 1st of the following season, therefore allowing fish to pass through the undisturbed channel from March 1st to June 30th. The roadway will be closed during Stage 2 and a detour in effect for approximately 8 weeks to begin after Labor Day, per the Town's request. Construction is anticipated to begin in the Spring of 2012 with most of the work completed by the end of the construction season. Minor planting, turf establishment and grading will be necessary in the Spring of 2013.

Attachment B: United States Geological Survey (USGS) Topographic Quadrangle Map

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

List of Attachments

- U.S.G.S. Topographic Quadrangle Map
  Town of Deep River
  Dated 1961, Revised 1971

Name: DEEP RIVER
Date: 9/17/2010
Scale: 1 inch equals 2000 feet

Location: 041° 24' 14.27" N 072° 26' 58.72" W

Attachment F: Documentation Form for Flood Management Certification

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

List of Attachments

- Documentation Form for Flood Management Certification
  Form No. DEP-IWRD-APP-104

Attachment F: Documentation Form for Flood Management Certification

1. Applicant Name: **State of Connecticut, Department of Transportation**
   (as indicated on the *Permit Application Transmittal Form*)

2. Name of Subject Facility or Project/Project Number:

   State Project No. 26-118, Replacement of Bridge No. 02695, Route 148 over Great Brook in Chester.

3. Name of floodplain and watercourse:

   Great Brook and unnamed wetlands tributary thereto.

4. This Certification is submitted for the Commissioner's approval pursuant to Section 25-68d of the General Statutes. I hereby certify that based on my reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the proposed activity described in this application is consistent with all applicable standards and criteria established in Sections 25-68d(b) of the General Statutes and Sections 25-68h-1 through 25-68h-3, inclusive, of the Regulations of Connecticut State Agencies.

Thomas J Maziarz — 4-5-2011

Signature of the head of the certifying State agency or his/her designated agent — Date

Thomas J. Maziarz — **Bureau Chief-Policy & Planning**

Name of the head of the certifying State agency or his/her designated agent (print or type) — Title (if applicable)

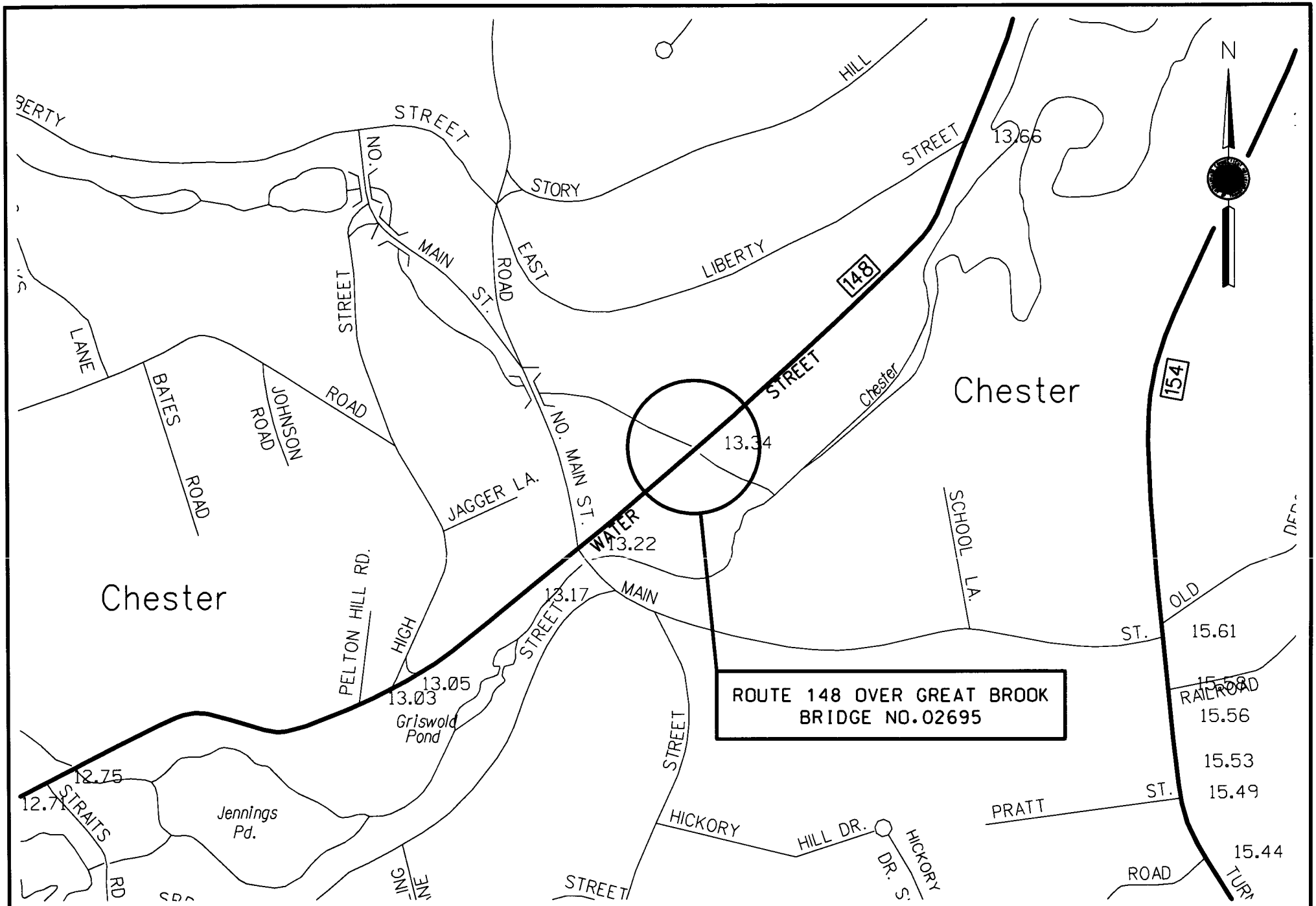
Attachment G: Plan Sheets and Drawings

Inland Wetlands and Watercourses
Flood Management Certification

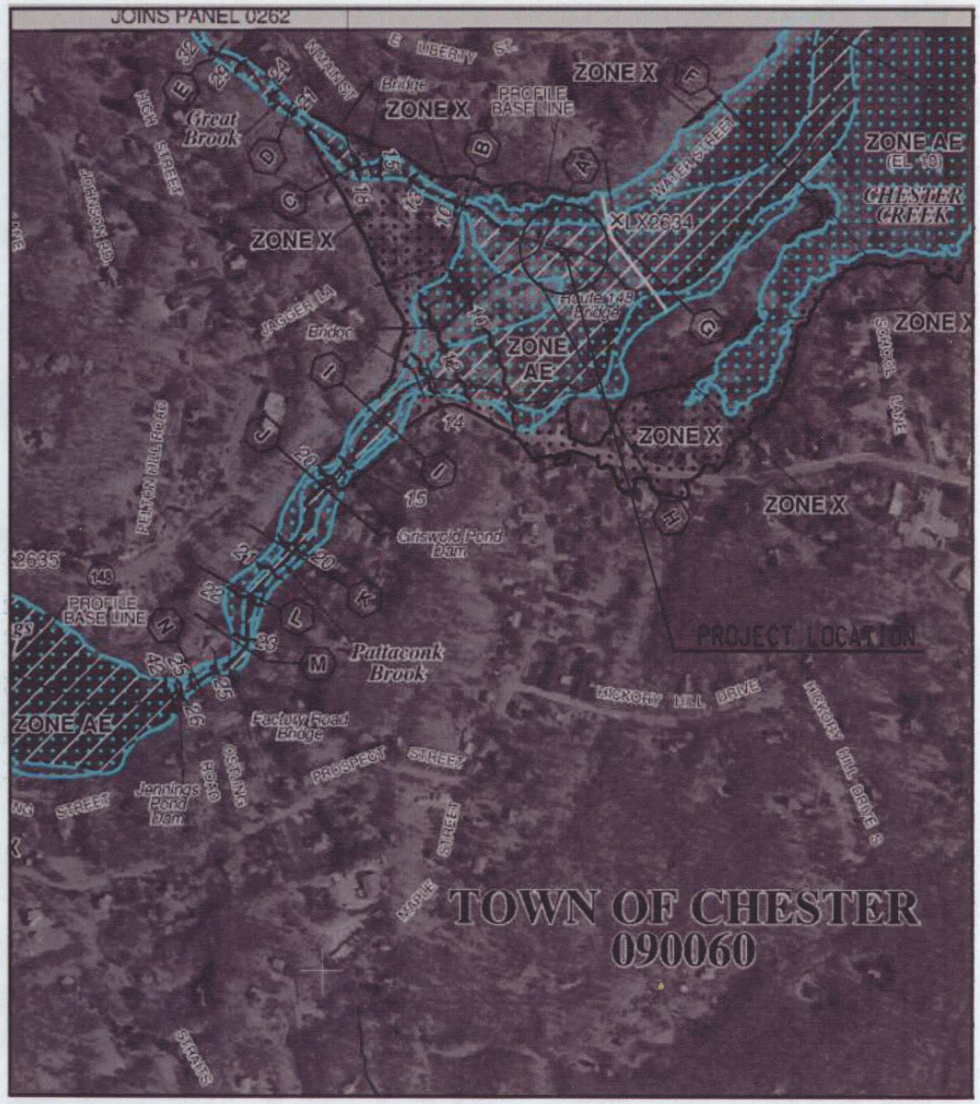
Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

List of Plan Sheets and Drawings

Figure 1	Location Map	February 2011
Figure 2	Flood Insurance Rate Map	February 2011
Figure 3	Coastal Resources	February 2011
Figure 4	Existing Plan	February 2011
Figure 5	Existing Bridge Elevation	February 2011
Figure 6	Existing Bridge Section	February 2011
Figure 7	Proposed Plan	February 2011
Figure 8	Grading Plan	February 2011
Figure 9	Typical Sections	February 2011
Figure 10	Profile	February 2011
Figure 11	Proposed Bridge Elevation	February 2011
Figure 12	Proposed Bridge Section	February 2011
Figure 13	Stage 1 Construction Plan	February 2011
Figure 14	Stage 2 Construction Plan	February 2011
Figure 15	Stage 3 Construction Plan	February 2011
Figure 16	Sedimentation and Erosion Control Detail I	February 2011
Figure 17	Sedimentation and Erosion Control Detail II	February 2011
Figure 18	Sedimentation and Erosion Control Detail III	February 2011
Figure 19	Pump Discharge Details	February 2011
Figure 20	Temporary 750 mm Pipe Details	February 2011
Figure 21	Planting Plan	February 2011
Figure 22	Area of Temporary Impact	February 2011
Figure 23	Area of Permanent Impact	February 2011
Figure 24	Existing Vegetation Plan	February 2011
Figure 25	Proposed Drainage Plan	February 2011



C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	LOCATION PLAN U.S.G.S. QUAD MAP: DEEP RIVER, CT. UTM ZONE 18 4586.4km N. 713.3km E	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT. APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	DATE: FEBRUARY, 2011 FIGURE: 1



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include zones A, AE, AH, AO, A1, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain
ZONE D	Areas in which flood hazards are undetermined, but possible

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

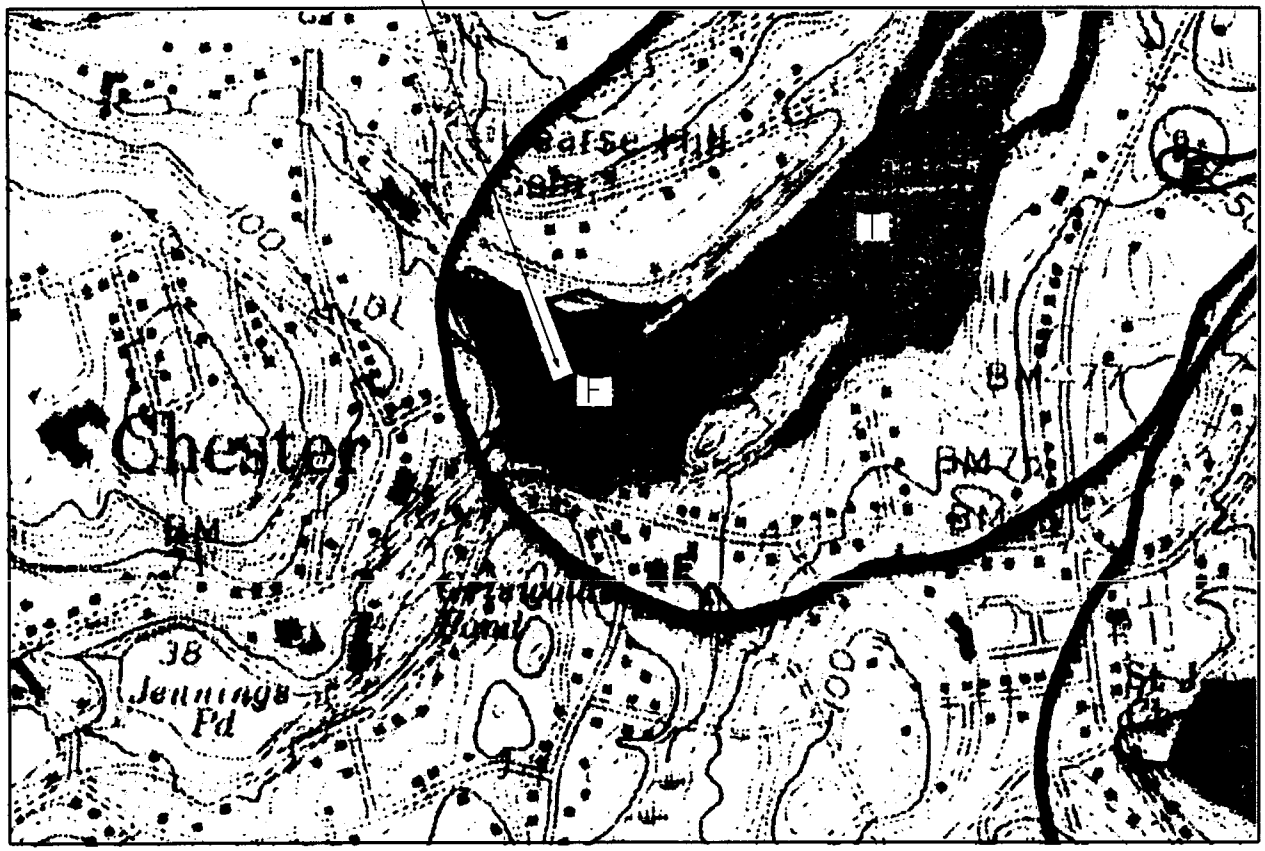
- (A)—(A) Cross section line
- (23)—(23) Transect line
- 07°07'30", 41°29'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4475000mN — 1000-meter Universal Transverse Mercator grid values, zone 18
- 6300000 FT — 5000-foot grid values: Connecticut State Plane coordinate system, (FIPSZONE 0600), Lambert Conformal Conic
- 1135510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 28, 2008
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	FLOOD INSURANCE RATE MAP SOURCE: FEMA COMMUNITY PANEL NO. 090060 0264 G	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 2

PROJECT LOCATION

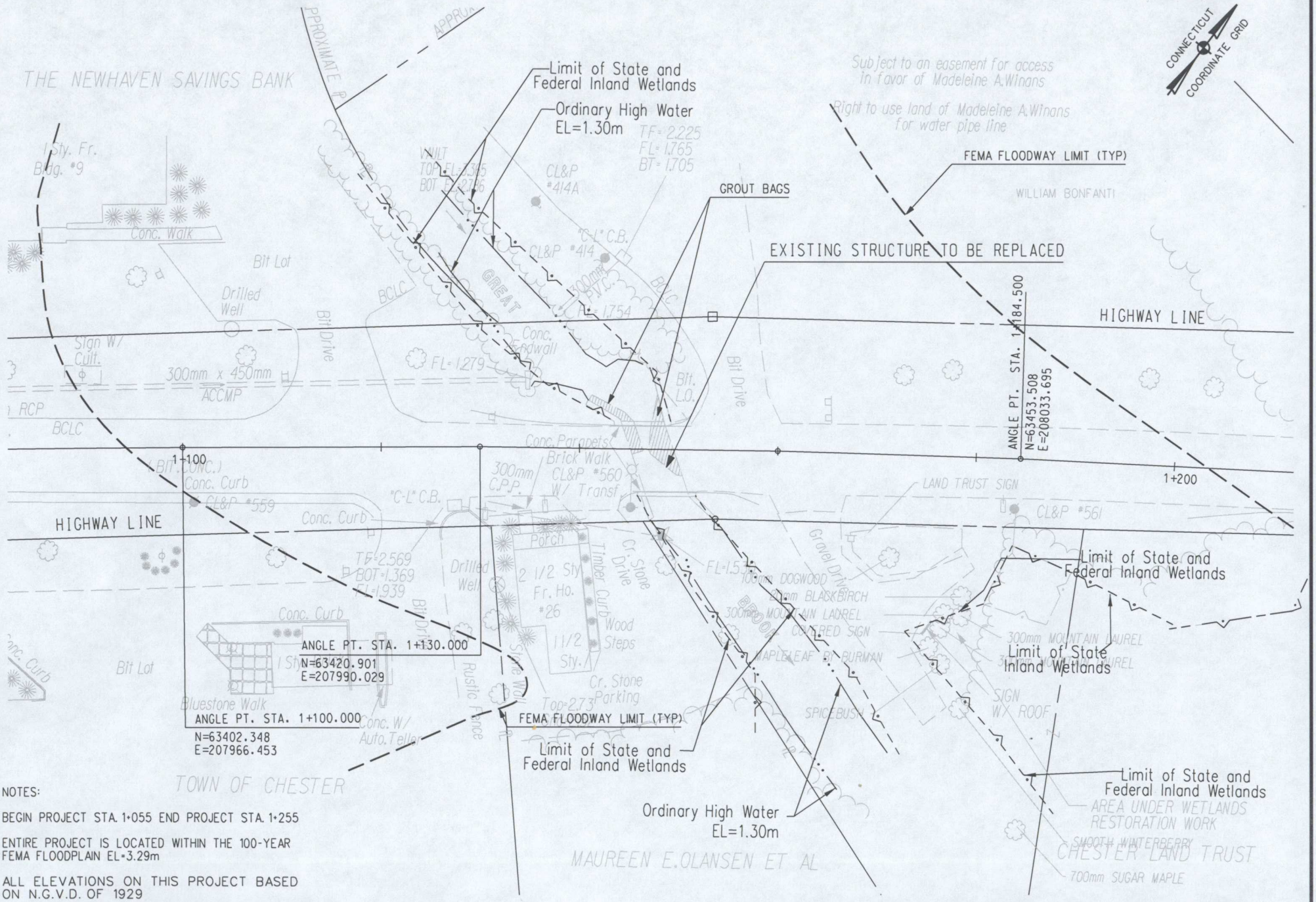


LEGEND

F FRESHWATER WETLANDS AND UNDESIGNATED TIDAL WETLANDS:
AREAS DEFINED IN SECTION 22A-38 OF THE CONNECTICUT GENERAL STATUTES AS "LAND, INCLUDING SUBMERGED LAND, NOT REGULATED PURSUANT TO SECTIONS 22A-28 TO 22A-35 ('TIDAL' WETLANDS AND WATERCOURSES ACT), INCLUSIVE, WHICH CONSISTS OF ANY OF THE SOIL TYPES DESIGNATED AS POORLY DRAINED, VERY POORLY DRAINED, ALLUVIAL AND FLOODPLAIN... (INLAND WETLANDS AND WATERCOURSES ACT)." INCLUDES ALL FRESHWATER WETLAND SOILS AND ANY POORLY TO VERY POORLY DRAINED SOILS OF THE PAWCATUCK AND WESTBROOK SERIES (TIDAL WETLAND SOILS) THAT ARE UNMAPPED AND UNREGULATED BY THE STATE TIDAL WETLAND PROGRAM.
(SOURCES: 1,5)

T REGULATED TIDAL WETLANDS:
OFFICIAL STATE DESIGNATED AND REGULATED TIDAL WETLANDS LOCATEDWITHIN THE COASTAL BOUNDRY. THE AREAS DEPICTED ON THIS MAP SHALL IN NO WAY SUPERSEDE THE OFFICIAL STATE REGULATED TIDAL WETLAND MAPS AT THE SCALE OF 1:2400.
(SOURCE: 6)

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	COASTAL RESOURCES 1979. PREPARED BY COASTAL AREA MANAGEMENT PROGRAM, CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION. SCALE IN METERS 1:10,000	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 3



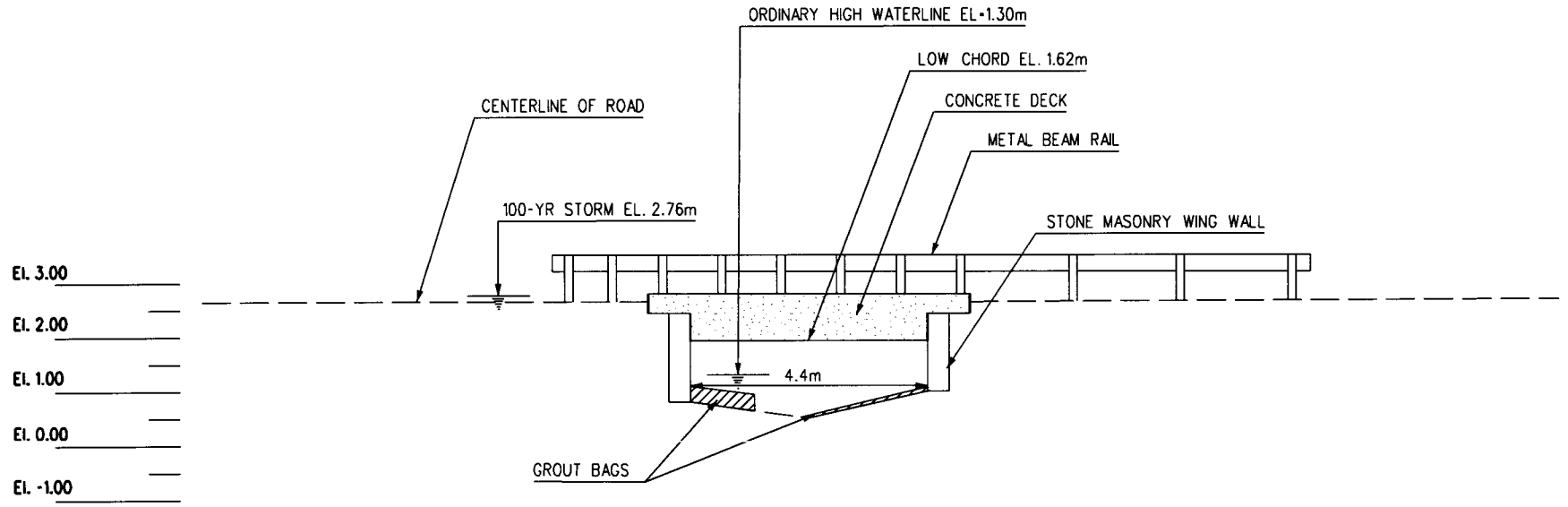
NOTES:

BEGIN PROJECT STA. 1+055 END PROJECT STA. 1+255

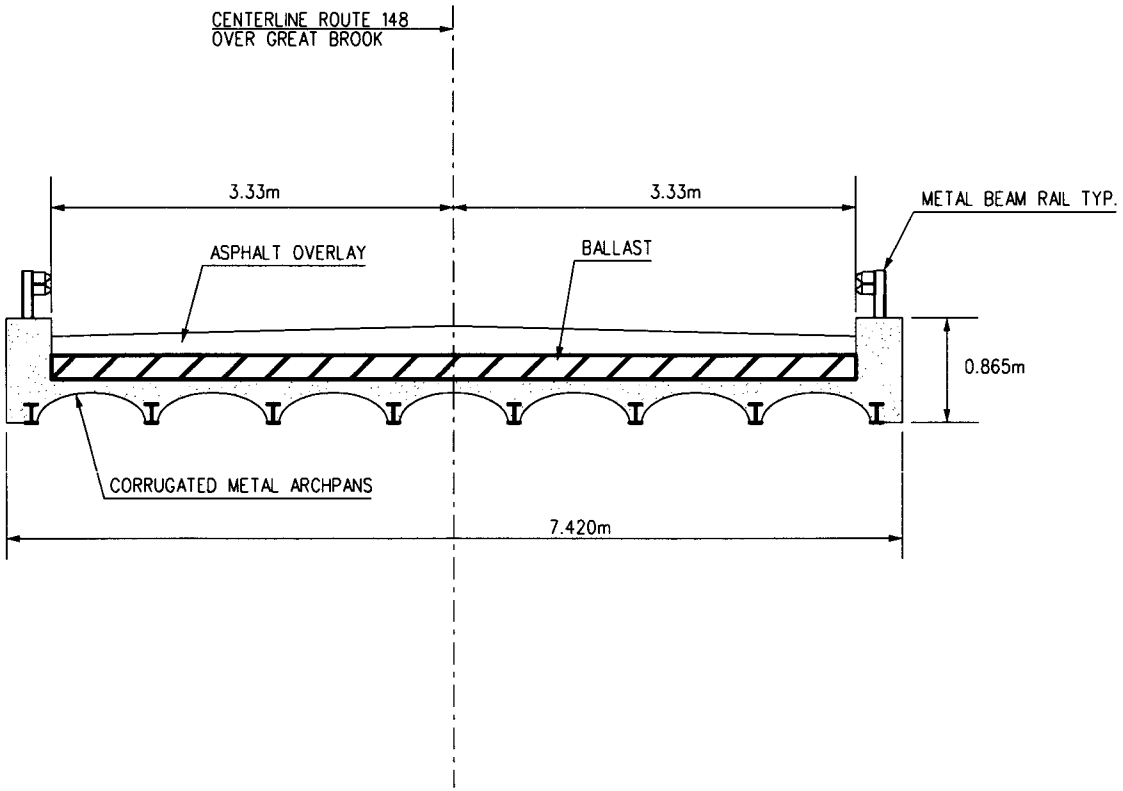
ENTIRE PROJECT IS LOCATED WITHIN THE 100-YEAR FEMA FLOODPLAIN EL=3.29m

ALL ELEVATIONS ON THIS PROJECT BASED ON N.G.V.D. OF 1929

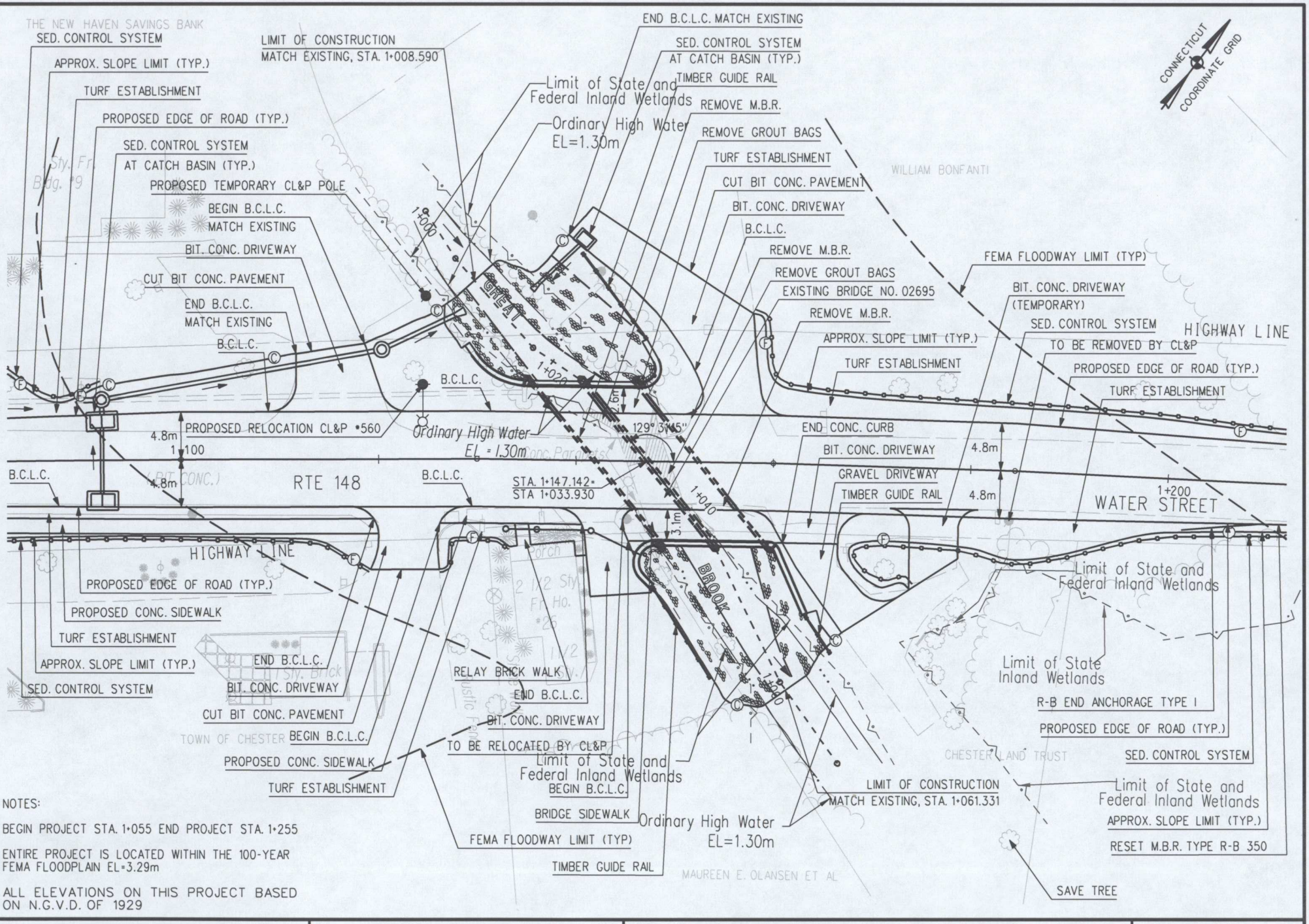
C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	EXISTING PLAN 10 5 0 5 10 SCALE IN METERS 1:500	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 4



C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	EXISTING BRIDGE ELEVATION NOT TO SCALE	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 5



C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	EXISTING BRIDGE SECTION NOT TO SCALE	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 6



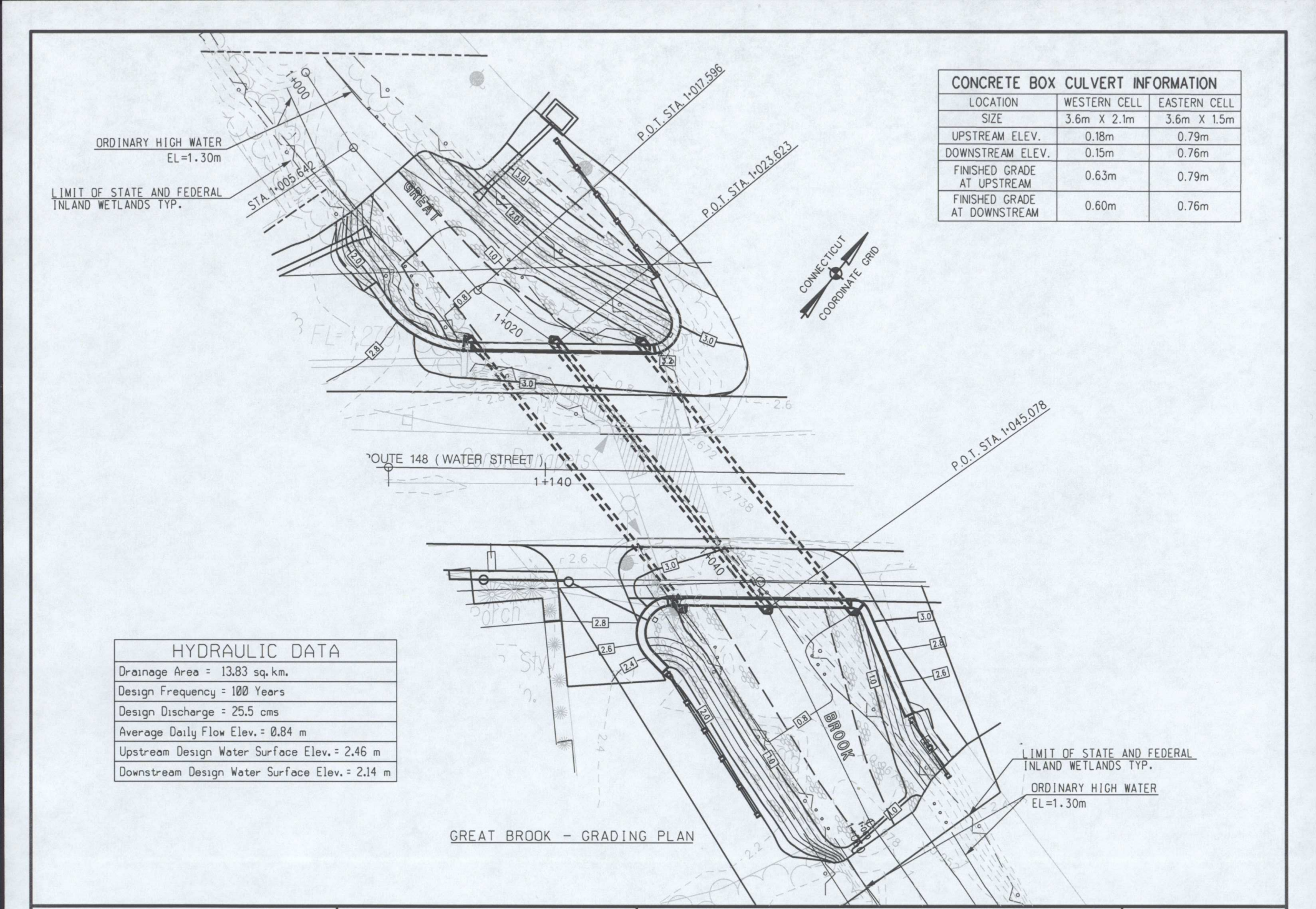
NOTES:

BEGIN PROJECT STA. 1+055 END PROJECT STA. 1+255

ENTIRE PROJECT IS LOCATED WITHIN THE 100-YEAR FEMA FLOODPLAIN EL=3.29m

ALL ELEVATIONS ON THIS PROJECT BASED ON N.G.V.D. OF 1929

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	PROPOSED PLAN 10 5 0 5 10 SCALE IN METERS 1:500	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 7



CONCRETE BOX CULVERT INFORMATION		
LOCATION	WESTERN CELL	EASTERN CELL
SIZE	3.6m X 2.1m	3.6m X 1.5m
UPSTREAM ELEV.	0.18m	0.79m
DOWNSTREAM ELEV.	0.15m	0.76m
FINISHED GRADE AT UPSTREAM	0.63m	0.79m
FINISHED GRADE AT DOWNSTREAM	0.60m	0.76m

HYDRAULIC DATA
Drainage Area = 13.83 sq. km.
Design Frequency = 100 Years
Design Discharge = 25.5 cms
Average Daily Flow Elev. = 0.84 m
Upstream Design Water Surface Elev. = 2.46 m
Downstream Design Water Surface Elev. = 2.14 m

GREAT BROOK - GRADING PLAN

C. J. M. Close, Jensen, & Miller
Consulting Engineers, Land Planners, & Surveyors
1137 Silas Deane Highway
Wethersfield, Connecticut 06109

GRADING PLAN

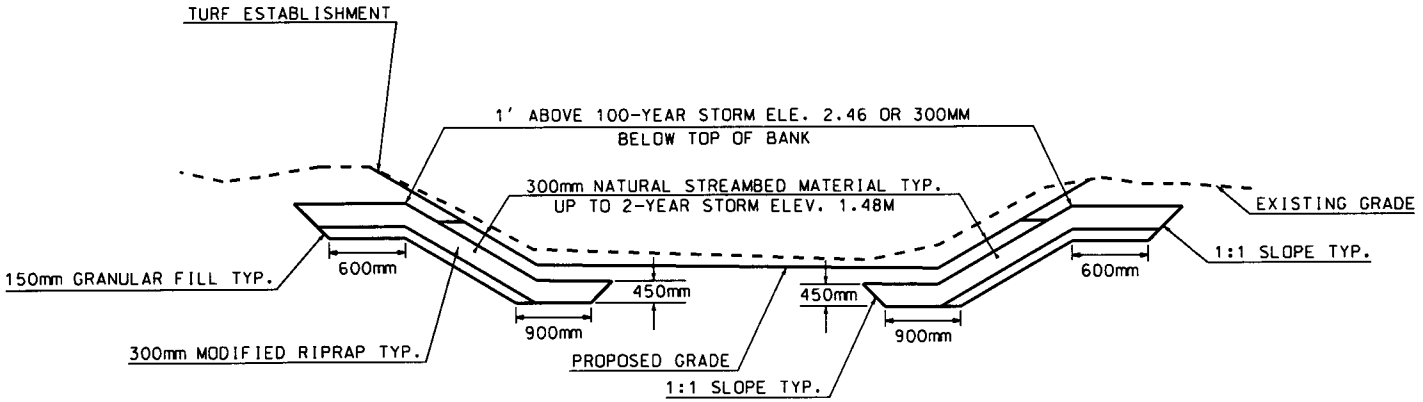
SCALE 1:300

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

FIGURE:
8

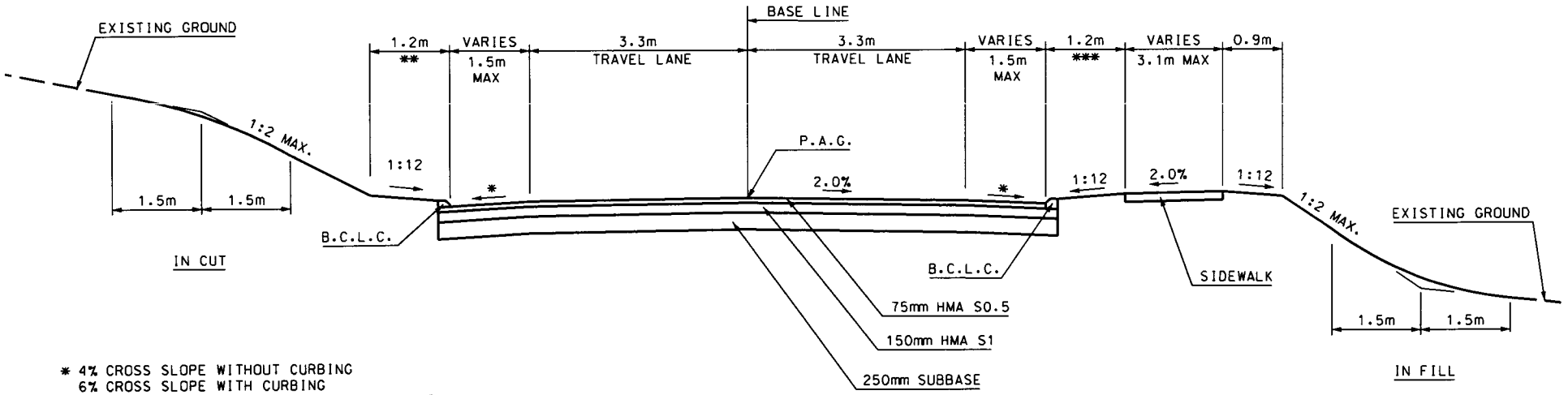


NOTES FOR GREAT BROOK TYPICAL SECTION

1 : FOR GRADING ALONG THE BOTTOM OF THE BROOK. SEE GRADING PLAN.
2 : MAXIMUM SIDE SLOPE IS 2:1.
3 : PROVIDE 300MM NATURAL STREAMBED MATERIAL COVER OVER RIPRAP UP TO 2-YEAR STORM ELEV. 1.48M.
4 : WIDTH OF THE BROOK VARIES. SEE CROSS SECTIONS.

GREAT BROOK TYPICAL SECTION

NOT TO SCALE



* 4% CROSS SLOPE WITHOUT CURBING
6% CROSS SLOPE WITH CURBING
CONTINUE CROSS SLOPE OF TRAVEL LANE WHEN SHOULDER WIDTH IS LESS THEN 1.2m.

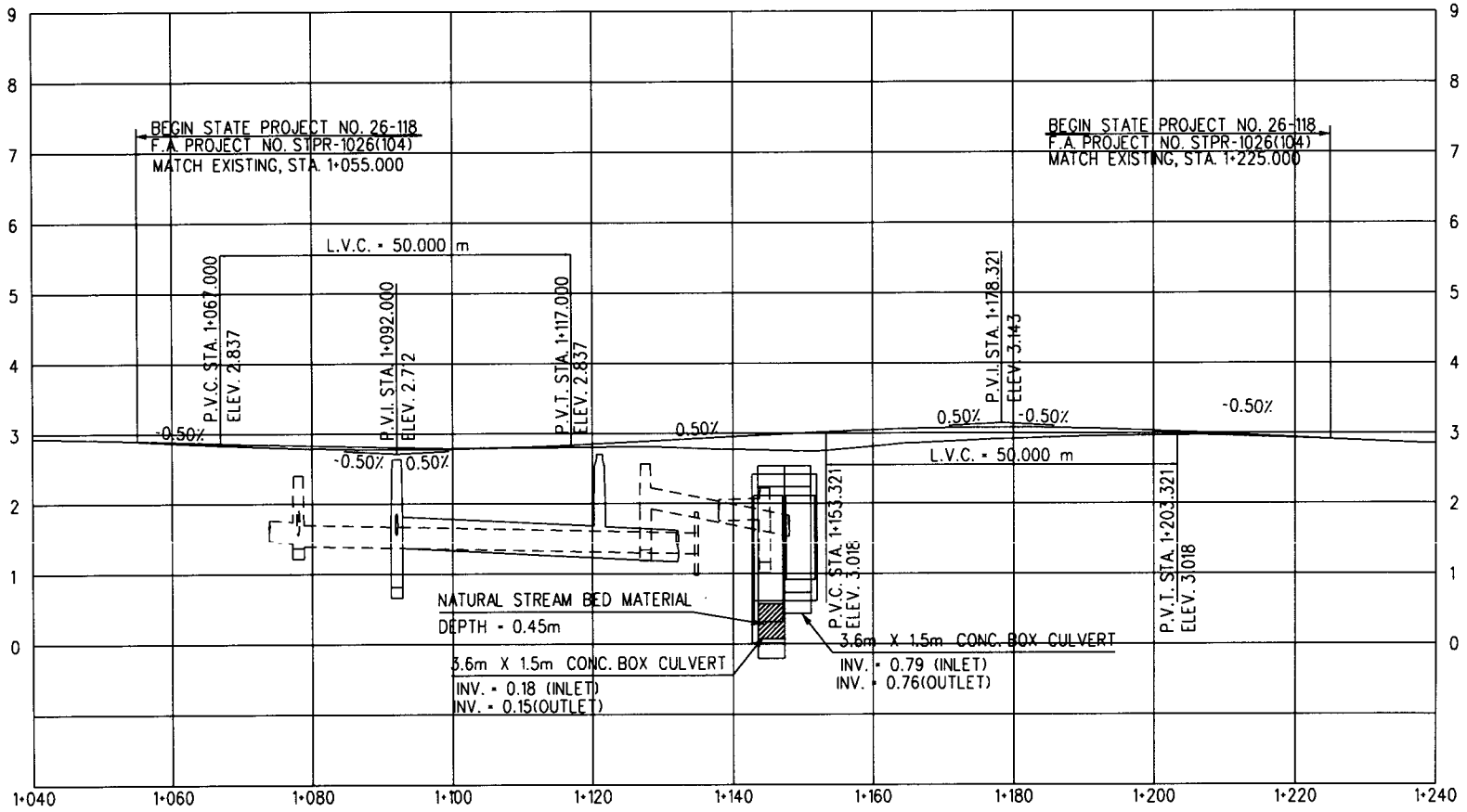
** 2.6m OVER CULVERT SEE PLANS. CROSS SECTIONS AND BRIDGE PLANS

*** 3.1m SIDEWALK OVER CULVERT SEE PLANS. CROSS SECTIONS AND BRIDGE PLANS. 2.0% SLOPE OVER CULVERT IS TOWARDS THE ROADWAY

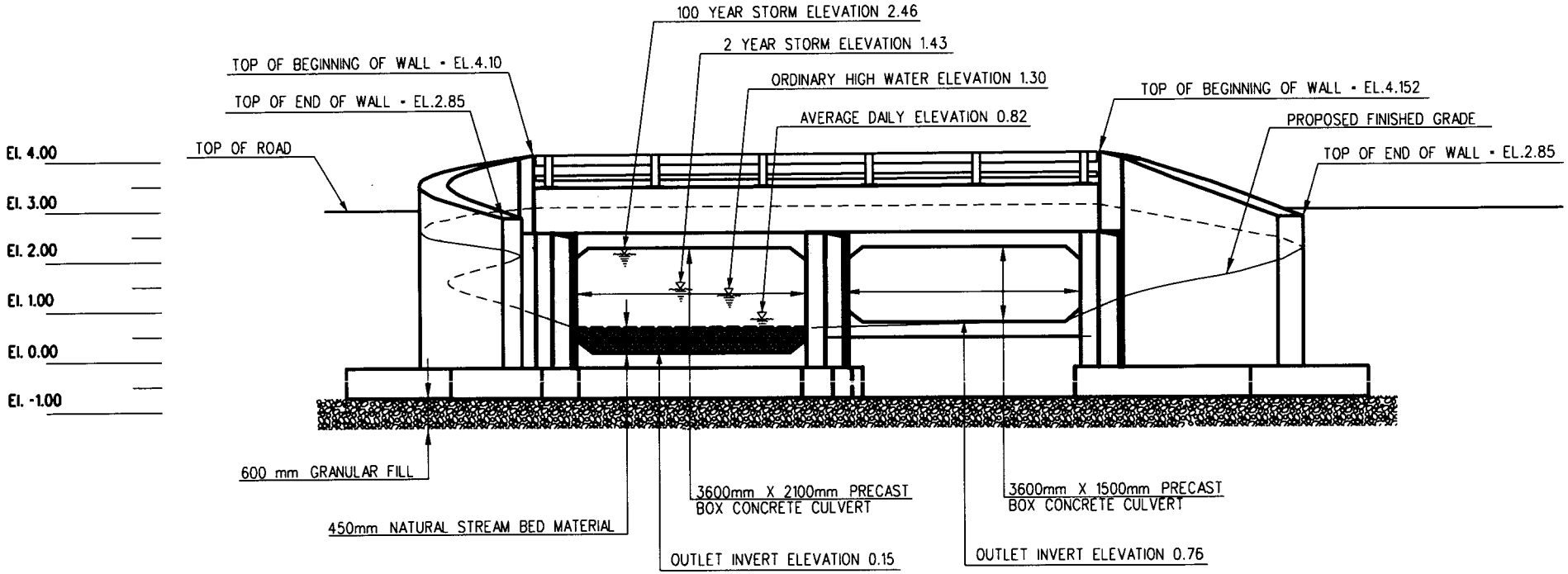
ROUTE 148 TYPICAL SECTION

NOT TO SCALE

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	TYPICAL SECTIONS	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 9



C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	PROFILE SCALE IN METERS HORZ. 1:1000 VERT. 1:100	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT. APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	DATE: FEBRUARY, 2011 FIGURE: 10



OUTLET ELEVATION

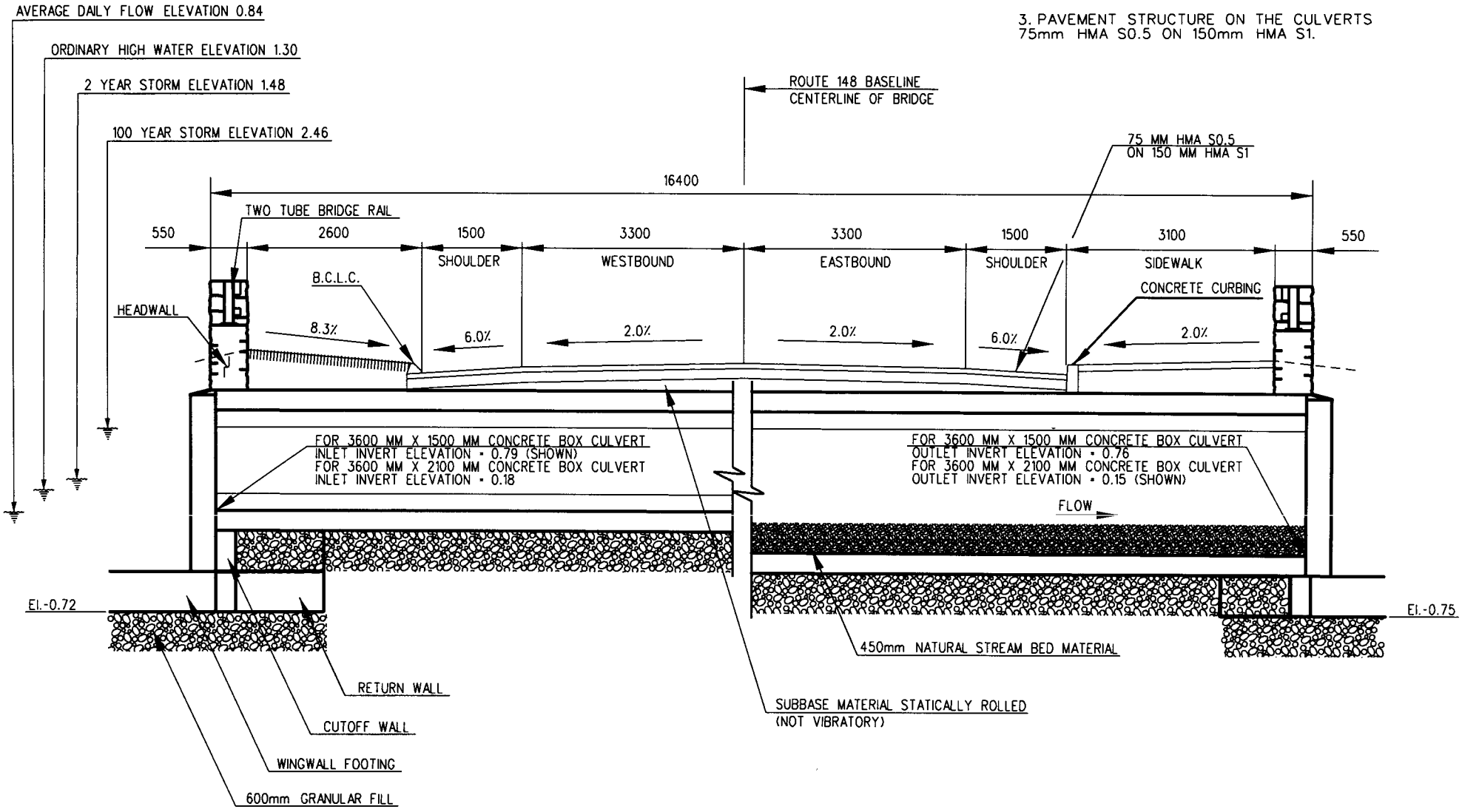
C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	PROPOSED BRIDGE ELEVATION NOT TO SCALE	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT. APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	DATE: FEBRUARY, 2011 FIGURE: 11

NOTES:

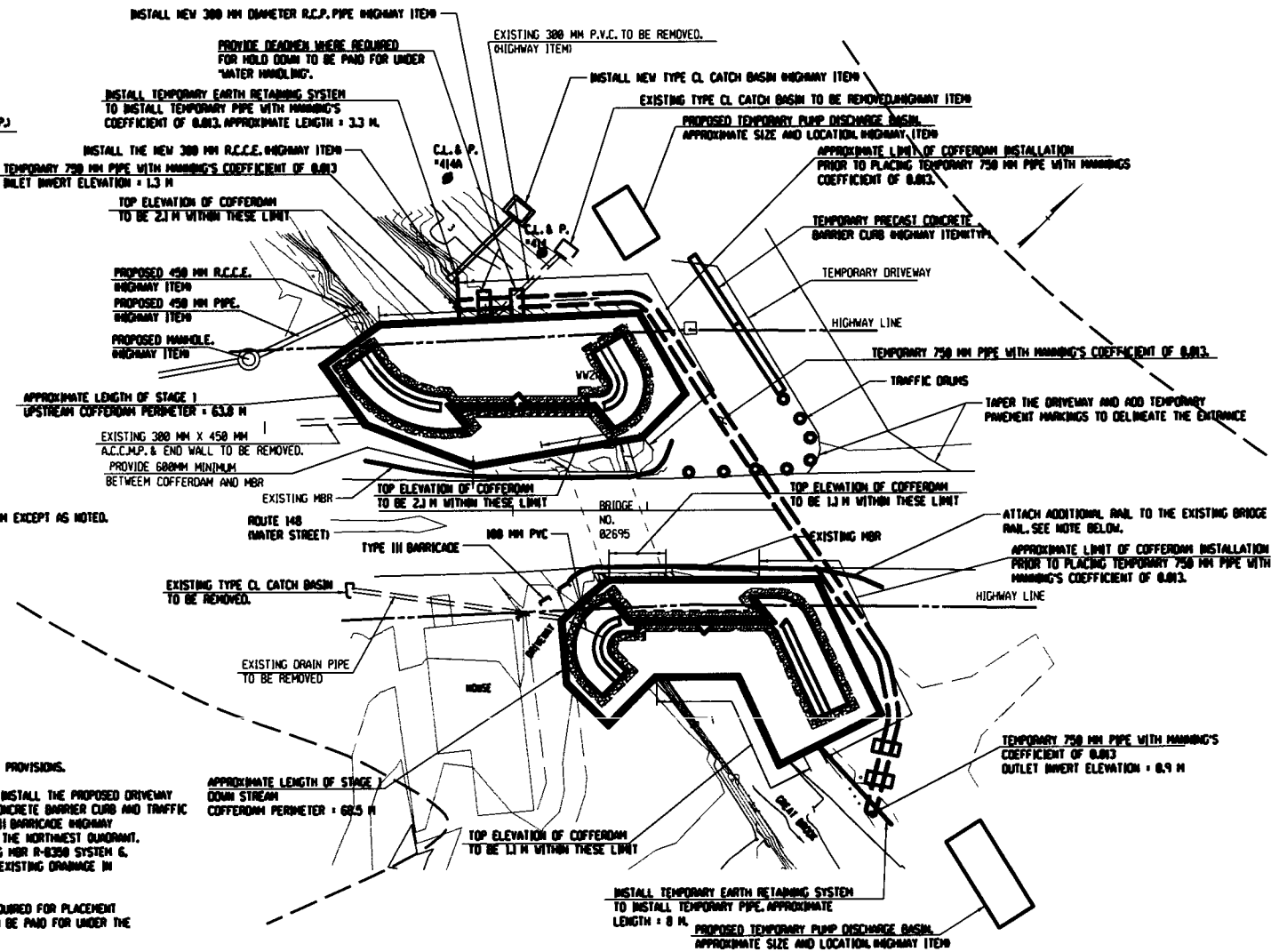
1. WATER SURFACE ELEVATIONS SHOWN APPLY TO UPSTREAM OF BRIDGE.

2. BRIDGE DIMENTIONS SHOWN 90° OF BASELINE.

3. PAVEMENT STRUCTURE ON THE CULVERTS 75mm HMA S0.5 ON 150mm HMA S1.



C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	PROPOSED BRIDGE SECTION NOT TO SCALE	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT. APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	DATE: FEBRUARY, 2011 FIGURE: 12



NOTE:

ENTIRE PROJECT SITE IS WITHIN THE FEMA 100-YEAR FLOODPLAIN LIMIT.

TOP OF COFFERDAM : UPSTREAM EL. = 3.6 M EXCEPT AS NOTED. DOWNSTREAM EL. = 3.6 M EXCEPT AS NOTED.

TEMPORARY WATER HANDLING DATA
AVERAGE DAILY FLOW = 0.23 CMS
AVERAGE SPRING FLOW = 0.42 CMS
2-YEAR FREQUENCY DISCHARGE = 4.81 CMS
TEMPORARY DESIGN DISCHARGE = 0.84 CMS
TEMPORARY DESIGN FREQUENCY = LESS THAN 2-YEAR (TWICE THE AVERAGE SPRING FLOW)
TEMPORARY WATER SURFACE ELEVATION UPSTREAM = 2.12 M
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM = 0.97 M

STAGE 1 CONSTRUCTION NOTES

1 - PERFORM A CONDITION SURVEY PRIOR TO THE START OF CONSTRUCTION, SEE SPECIAL PROVISIONS.

2 - CONSTRUCT TEMPORARY DRIVEWAY AND REMOVE DRIVEWAY DRAINAGE (HIGHWAY ITEM). INSTALL THE PROPOSED DRIVEWAY DRAINAGE AND TYPE C CATCH BASIN (HIGHWAY ITEM). PLACE TEMPORARY PRECAST CONCRETE BARRIER CURB AND TRAFFIC DRUMS (HIGHWAY ITEM) ALONG THE TEMPORARY NORTHEAST DRIVEWAY. PLACE TYPE III BARRICADE (HIGHWAY ITEM) ACROSS SOUTHWEST DRIVEWAY. INSTALL PROPOSED MANHOLE AND DRAINAGE IN THE NORTHWEST QUADRANT. MODIFY SOUTHEAST METAL BEAM RAIL TO PROTECT TRAFFIC AT COFFERDAM, (ADDING MBR R-B350 SYSTEM 6, WITH TYPE 2 ANCHORAGE (HIGHWAY ITEM) TO EXISTING HIGHWAY RAIL). REMOVE ALL EXISTING DRAINAGE IN NORTHWEST AND SOUTHWEST QUADRANTS.

3 - INSTALL PORTION OF COFFERDAM AT INLET AND OUTLET EAST OF GREAT BROOK REQUIRED FOR PLACEMENT OF TEMPORARY 750 MM PIPE WITH MANNING'S COEFFICIENT OF 0.013. THIS WORK TO BE PAID FOR UNDER THE ITEM "COFFERDAM AND DEWATERING".

4 - INSTALL UPSTREAM AND DOWNSTREAM TEMPORARY EARTH RETAINING SYSTEM, EXCAVATE TRENCH AND INSTALL TEMPORARY 750MM PIPE WITH MANNING'S COEFFICIENT OF 0.013. INSTALL DEADMEN THEN BACKFILL THE PIPE. TRENCHING, PLACEMENT OF TEMPORARY PIPE WITH MANNING'S COEFFICIENT OF 0.013, DEADMEN AND BACKFILL TO BE PAID FOR UNDER THE ITEM "HANDLING WATER". TRENCHING AND INSTALLATION OF THE TEMPORARY 750MM PIPE WITH MANNING'S COEFFICIENT OF 0.013 ACROSS ROUTE 148 WILL BE DURING A SHORT DURATION ROAD CLOSURE IN ACCORDANCE WITH THE ITEM "PROCECUSION AND PROGRESS"

5 - COMPLETE INSTALLATION OF COFFERDAM UPSTREAM AND DOWNSTREAM, REMOVE PORTION OF EXISTING WINGWALLS AND GROUT BAGS AS NECESSARY. INSTALL TEMPORARY PUMP DISCHARGE BASINS. DIVERT THE STREAM THROUGH THE TEMPORARY 750 MM PIPE WITH MANNING'S COEFFICIENT OF 0.013.

6 - EXCAVATE TO REQUIRED ELEVATION AND PLACE GRANULAR FILL.

7 - CONSTRUCT CUTOFF WALLS, RETURN WALLS, WINGWALL FOOTINGS AND PORTION OF THE WINGWALL STEMS FOR THE BOX CULVERTS.

8 - IN WINGWALL 1B INSTALL PORTION OF 100MM PVC PIPE FOR YARD DRAIN.

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Consulting Engineers, Land Planners, & Surveyors
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Wethersfield, Connecticut 06109

STAGE 1 CONSTRUCTION PLAN

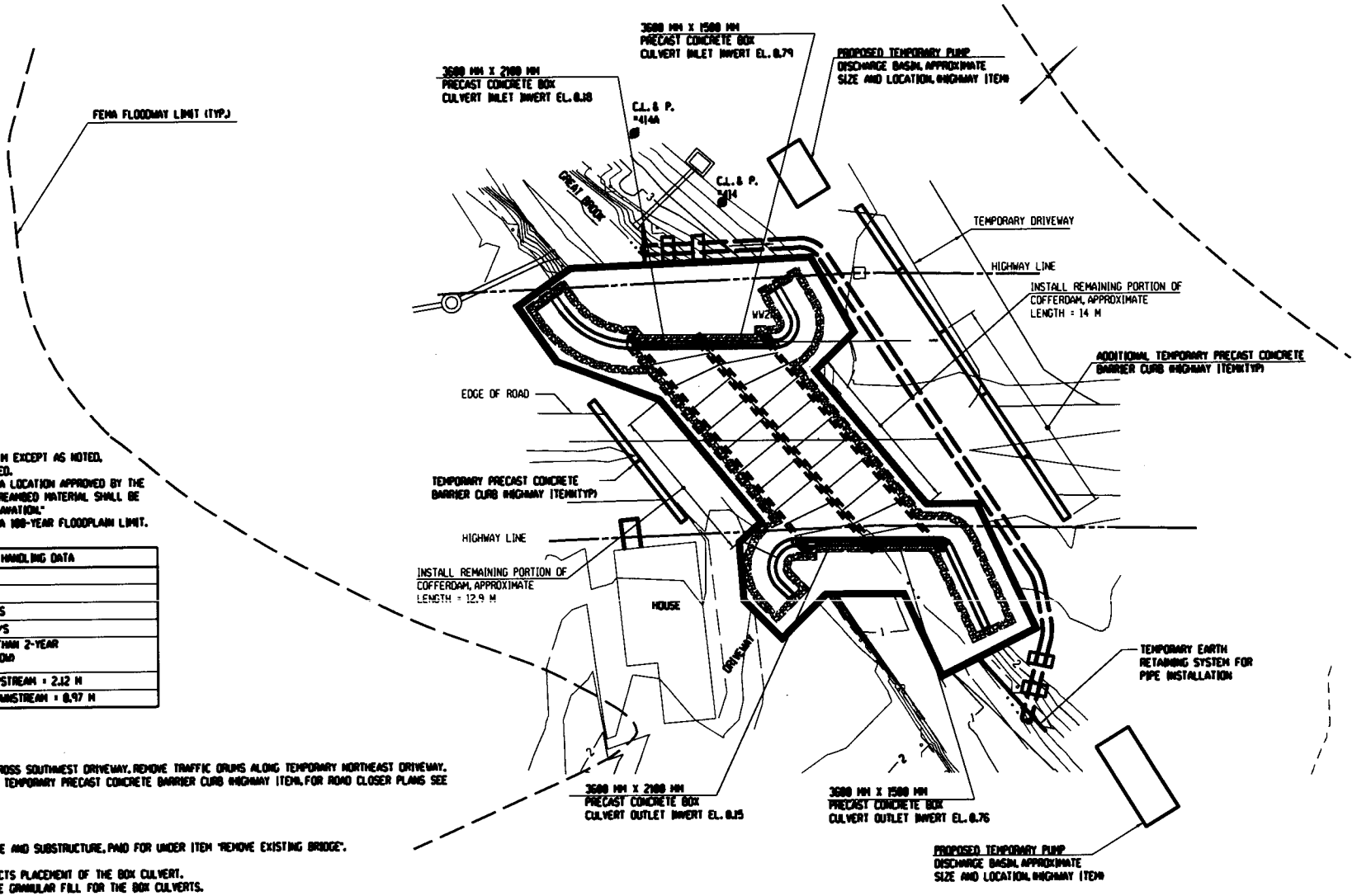
10 5 0 5 10
SCALE IN METERS
1:500

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

FIGURE:
13



NOTES :

1 - TOP OF COFFERDAM : UPSTREAM EL. = 3.6 M EXCEPT AS NOTED.
DOWNSTREAM EL. = 3.6 M EXCEPT AS NOTED.
2 - THE COST OF REMOVING, STOCKPILING (AT A LOCATION APPROVED BY THE ENGINEER) AND REUSING THE EXISTING STREAMBED MATERIAL SHALL BE PAID FOR UNDER THE ITEM "CHANNEL EXCAVATION."
3 - ENTIRE PROJECT SITE IS WITHIN THE FEMA 100-YEAR FLOODPLAIN LIMIT.

TEMPORARY WATER HANDLING DATA
AVERAGE DAILY FLOW = 0.23 CMS
AVERAGE SPRING FLOW = 0.42 CMS
2-YEAR FREQUENCY DISCHARGE = 4.81 CMS
TEMPORARY DESIGN DISCHARGE = 0.84 CMS
TEMPORARY DESIGN FREQUENCY = LESS THAN 2-YEAR (TWICE THE AVERAGE SPRING FLOW)
TEMPORARY WATER SURFACE ELEVATION UPSTREAM = 2.12 M
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM = 8.97 M

STAGE II CONSTRUCTION NOTES

1 - REMOVE TYPE III BARRICADE (HIGHWAY ITEM) ACROSS SOUTHWEST DRIVEWAY. REMOVE TRAFFIC DRUMS ALONG TEMPORARY NORTHEAST DRIVEWAY. REMOVE METAL BEAM RAILS. PLACE ADDITIONAL TEMPORARY PRECAST CONCRETE BARRIER CURB (HIGHWAY ITEM). FOR ROAD CLOSER PLANS SEE HIGHWAY SHEETS.

2 - INSTALL REMAINING PORTION OF COFFERDAM.

3 - REMOVE THE EXISTING BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE. PAID FOR UNDER ITEM "REMOVE EXISTING BRIDGE".

4 - REMOVE PORTION OF COFFERDAM THAT RESTRICTS PLACEMENT OF THE BOX CULVERT. EXCAVATE TO REQUIRED ELEVATION AND PLACE GRANULAR FILL FOR THE BOX CULVERTS.

5 - INSTALL BOX CULVERTS AND CONSTRUCT REMAINING PORTION OF WINGWALL STEMS AND CONSTRUCT HOSINGS.

6 - INSTALL 450MM OF NATURAL STREAMBED MATERIAL IN THE 3600MM X 2100MM BOX. SEE NOTICE TO CONTRACTOR.

7 - BEGIN BACKFILLING. INSTALL YARD DRAIN AND 100 MM PVC.

8 - INSTALL METAL BRIDGE RAIL.

9 - COMPLETE BACKFILL TO FINISHED ELEVATIONS AND KEY-IN RIPRAP ALONG ALL WINGWALLS.

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Wethersfield, Connecticut 06109

STAGE 2 CONSTRUCTION PLAN

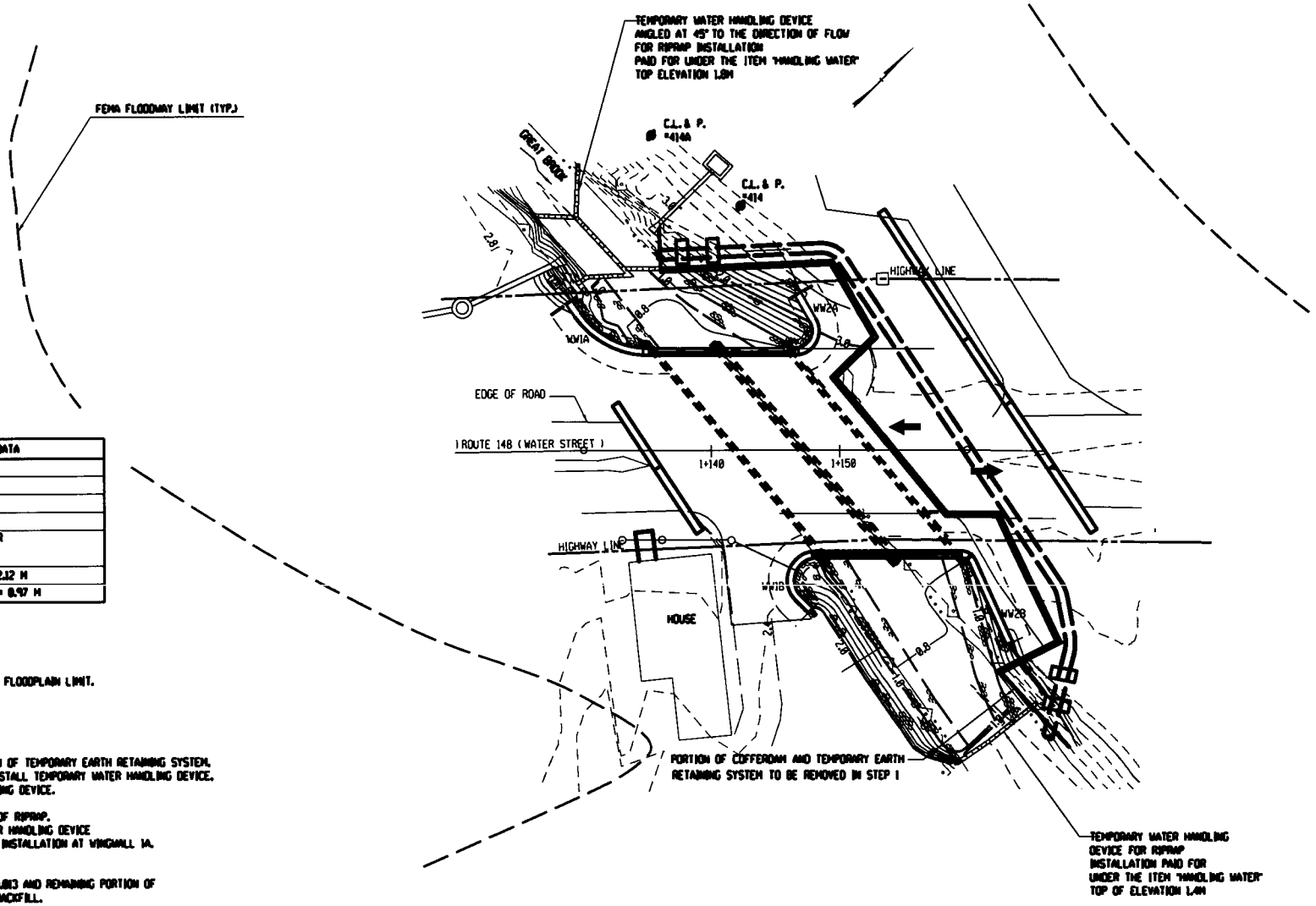
10 5 0 5 10
SCALE IN METERS
1:500

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

FIGURE:
14



TEMPORARY WATER HANDLING DATA
AVERAGE DAILY FLOW = 0.23 CM/S
AVERAGE SPRING FLOW = 0.42 CM/S
2-YEAR FREQUENCY DISCHARGE = 4.81 CM/S
TEMPORARY DESIGN DISCHARGE = 0.84 CM/S
TEMPORARY DESIGN FREQUENCY = LESS THAN 2-YEAR (TWICE THE AVERAGE SPRING FLOW)
TEMPORARY WATER SURFACE ELEVATION UPSTREAM = 2.12 M
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM = 0.97 M

NOTE:

ENTIRE PROJECT SITE IS WITHIN THE FEMA 100-YEAR FLOODPLAIN LIMIT.

STAGE III CONSTRUCTION NOTES

1 - REMOVE TEMPORARY PUMP DISCHARGE BASINS. REMOVE PORTION OF TEMPORARY EARTH RETAINING SYSTEM. REMOVE COFFERDAM AT OUTLET FOR PLACEMENT OF RIPRAP. INSTALL TEMPORARY WATER HANDLING DEVICE. INSTALL RIPRAP AT OUTLET. REMOVE TEMPORARY WATER HANDLING DEVICE.

2 - REMOVE PORTION OF COFFERDAM AT INLET FOR PLACEMENT OF RIPRAP. ALLOW FLOW INTO THE BOX CULVERT. PLACE TEMPORARY WATER HANDLING DEVICE FOR RIPRAP INSTALLATION AT WINGWALL 1A. COMPLETE RIPRAP INSTALLATION AT WINGWALL 1A. REMOVE PORTION OF TEMPORARY WATER HANDLING DEVICE.

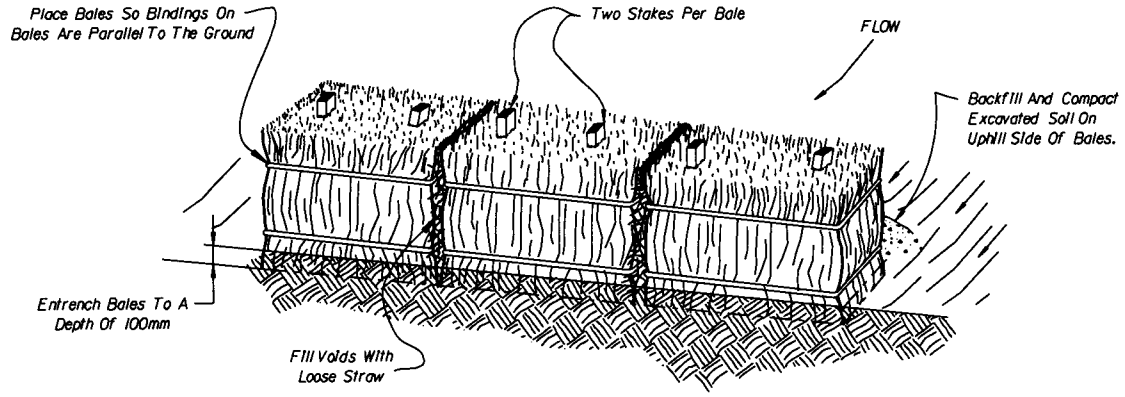
3 - REMOVE TEMPORARY PIPE WITH MANNING'S COEFFICIENT OF 0.013 AND REMAINING PORTION OF COFFERDAM AND TEMPORARY EARTH RETAINING SYSTEM THEN BACKFILL.

4 - INSTALL TEMPORARY WATER HANDLING DEVICE AT WINGWALL 2A FOR PLACEMENT OF REMAINING RIPRAP. INSTALL RIPRAP THEN REMOVE TEMPORARY WATER HANDLING DEVICE.

5 - CONSTRUCT ROADWAY, INSTALL APPURTENANCES AND REMOVE TEMPORARY BARRIERS.

6 - PERFORM A POST-CONSTRUCTION CONDITION SURVEY.

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	STAGE 3 CONSTRUCTION PLAN 10 5 0 5 10 SCALE IN METERS 1:500	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT. APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	DATE: FEBRUARY, 2011 FIGURE: 15



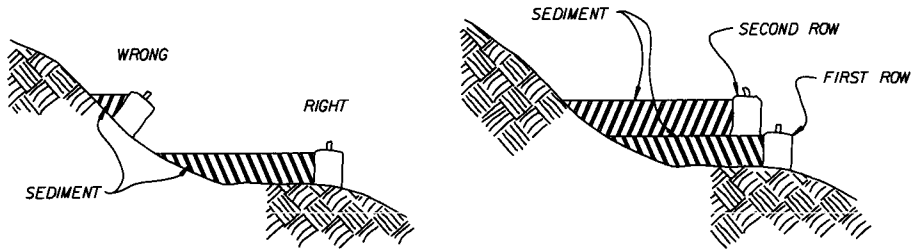
INSTALLATION

A) Ideally, Bales Should Be Entrenched 100 mm And Tightly Butted Together. Bales Can Be Successfully Placed Without A Trench If Good Ground Contact Is Made. Remove Heavy Brush And Fill All Voids With Loose Straw.

B) Bales Shall Be Only Used As A Temporary Barrier And For No Longer Than 60 Days. They Shall Not Be Used On A Job Adjacent To A Residential Neighborhood, Residences Or Adjacent To Or In A Watercourse.

C) When Sedimentation Deposits Reach Within The Top Half Of Bales, Remove Sedimentation Or Add Additional Bales On Sedimentation Directly Behind First Row Of Bales As Directed By Engineer.

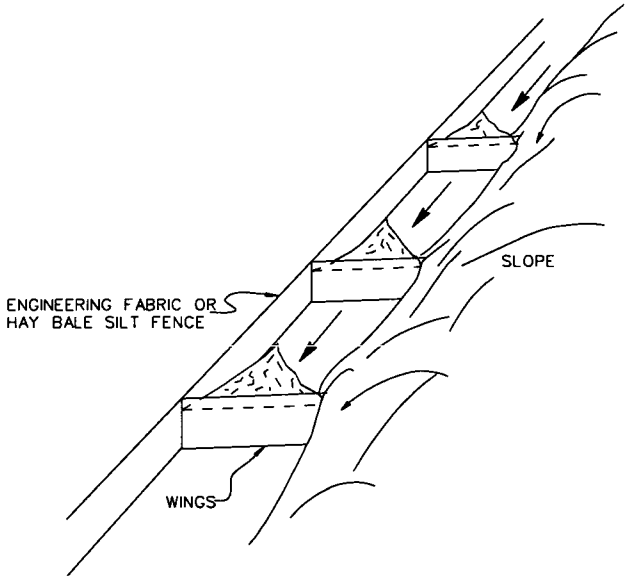
D) Upon Establishment Of Ground Cover On Disturbed Areas And When Directed By Engineer, Hay Bales Will Be Removed And Used As Mulch. Any Sedimentation Will Be Thinly Spread Upon Established Ground Cover.



PREFERRED PLACEMENT

Bales Placed Away From Toe Of Slope Have A Larger Confinement Area. Additional Bales Should Be Added Behind Original Bales Before Sedimentation Tops The First Bales.

DIKES HAY / STRAW BALES



WHEN USING SILT FENCE ALONG TOE OF SLOPE, ADD WINGS TO PREVENT SEDIMENT FROM MOVING ALONG THE FENCE AND OFF THE SITE. SPACING OF THE WING SHALL BE DETERMINED BY THE ENGINEER.

SEDIMENTATION CONTROL SYSTEM
TOE OF SLOPE

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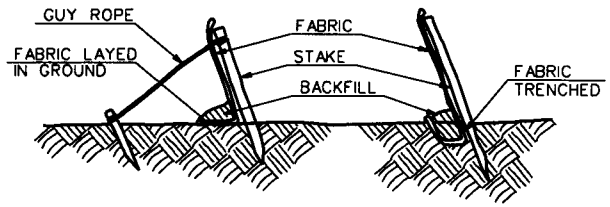
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJ. NO. 26-118	FIGURE: 16

END VIEW



BACKFILLED FABRIC TOE

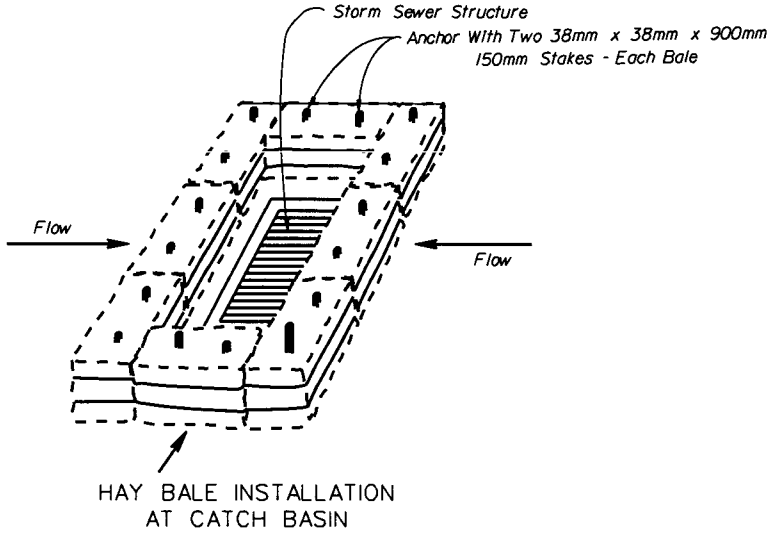
TRENCHING FABRIC TOE

SELF SUPPORTING SILT FENCE SHOULD BE PLACED SO THE FENCE LEANS TOWARD THE SOURCE OF SEDIMENT. SPACING OF STAKES AND USE OF GUY ROPES ARE DETERMINED ACCORDING TO FIELD NEEDS. GUY ROPE/WIRE AND TIE BACK STAKE SHOULD BE OF SUFFICIENT SIZE TO WITHSTAND THE EXPECTED LOAD. FOLLOW MANUFACTURER'S RECOMMENDATION FOR TRENCH DIMENSIONS.

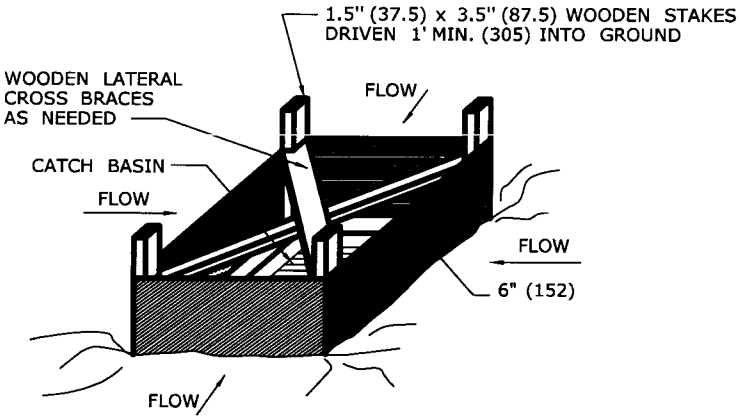
NOTES:

- *A) Minimum Length Of Silt Fence Is 4.5m.*
- *B) Maximum Post Spacing Is 3m.*
- *C) Joints Only At Support Post With Minimum 150mm Overlap, Securely Sealed.*
- *D) Sedimentation Deposits Shall Be Removed When It Reaches ½ The Height Of The Silt Fence.*
- *E) Silt Fence Shall Not Be Used In A Water Course.*
- *F) Upon Establishment Of Ground Cover On Disturbed Areas, And When Directed By The Engineer, Fence Will Be Removed And Any Sedimentation Will Be Thinly Spread Upon Existing Ground Cover.*

SILT FENCE INSTALLATION



HAY BALE INSTALLATION AT CATCH BASIN



GEOTEXTILE FENCE AT CATCH BASIN

CATCH BASIN IN A DEPRESSION

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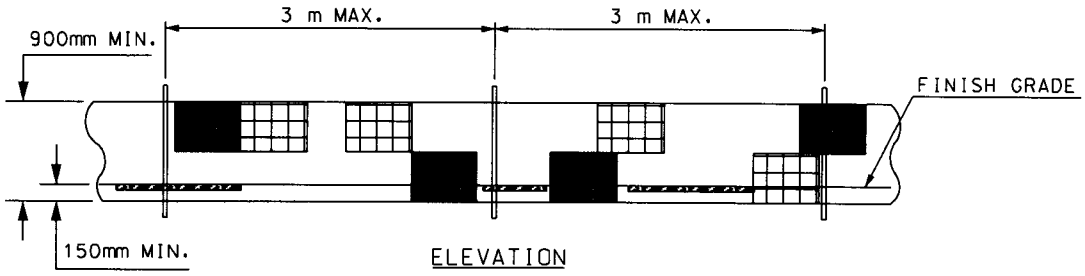
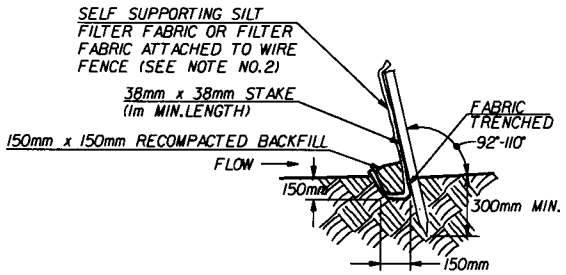
SILT FENCE NOTES:

1.) INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.

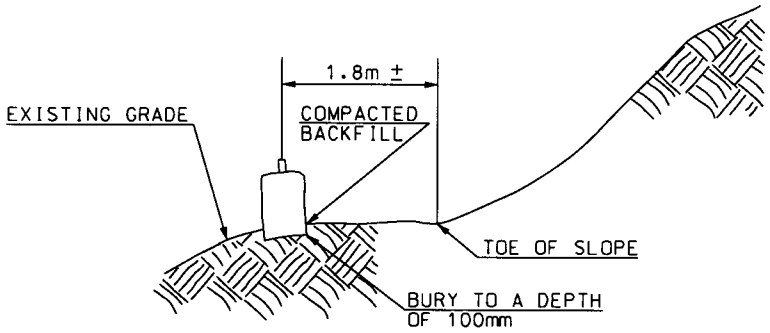
2.) SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.75 KG. STEEL / METER) THE MINIMUM POST LENGTH SHALL BE 1.2 M.



ELEVATION



SILT FENCE



HAYBALES

EROSION & SEDIMENTATION CONTROL NOTES

No construction shall proceed until sediment and erosion control plans prepared by the Contractor have been submitted in writing and approved by the Engineer, and until such controls have been installed as the engineer directs. Such plans shall be consistent with the requirements of ConnDOT's Standard Specification Form 816, the Connecticut Council on Soil & Water Conservation document, "Connecticut Guidelines on Soil Erosion and Sediment Control", as revised, which is available from the Connecticut Department of Enviornmental Protection, and with ConnDOT's document, "On-Site Mitigation for Construction Activities", as revised.

The Contractor shall inspect temporary sediment and erosion controls immediately after each rainfall and at least daily during prolonged rainfall. The Contractor shall maintain all sediment and erosion control devices in a functional condition in accordance with the above referenced documents.

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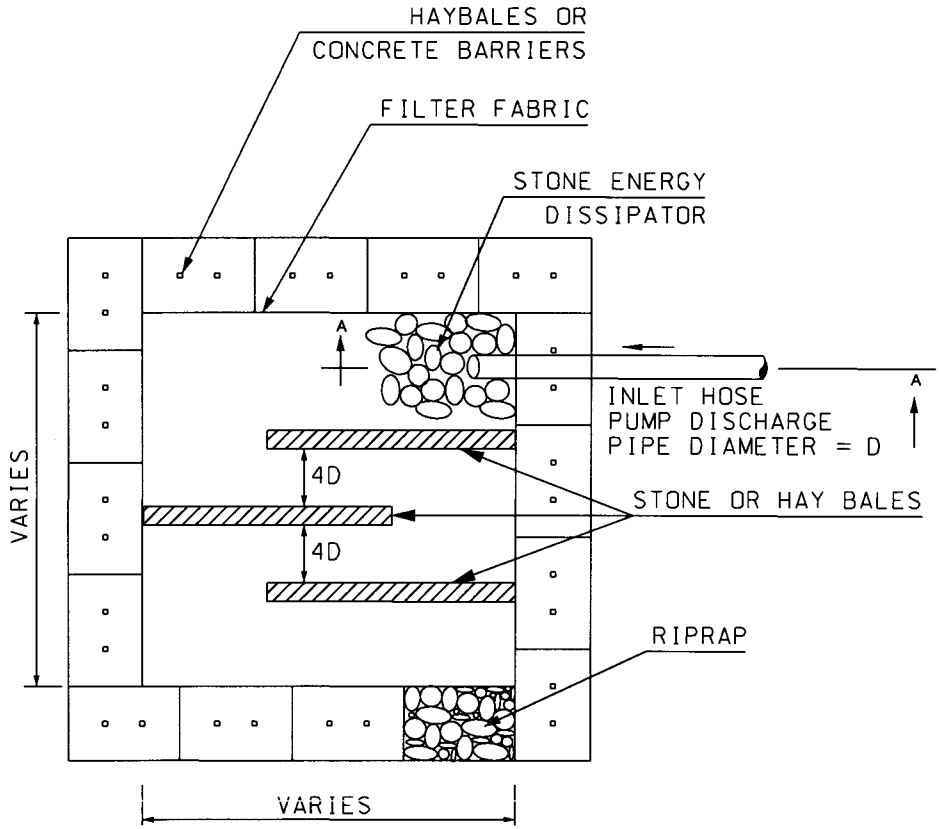
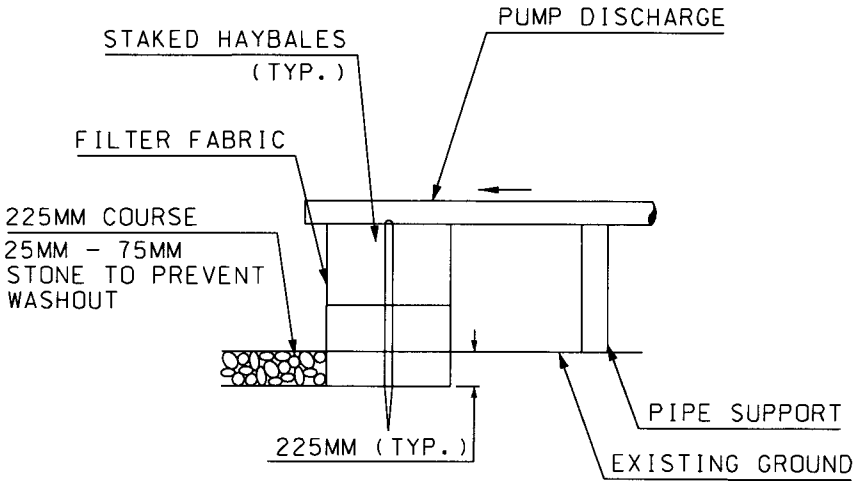
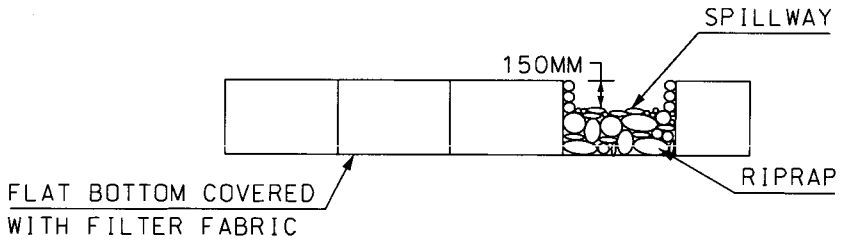


PLAN



SECTION A-A



ELEVATION

NOTES:

1. CONTRACTOR TO BRACE HAY BALES AS REQUIRED FOR STABILITY.
2. HEIGHT MAY VARY DEPENDENT UPON DE-WATERING RATE.
3. VOLUME OF BASIN IS EQUAL TO THE MAXIMUM VOLUME OF WATER CAPABLE OF BEING PUMPED OVER ONE HOUR. THIS VOLUME CAN BE DETERMINED BY PUMP MANUFACTURER'S SPECIFICATIONS. IF PUMPING VOLUME EXCEEDS BASIN CAPACITY, BASIN MAY BE USED IN TANDEM OR IN TIERS.
4. PUMP SETTING BASIN SHALL BE USED TO HANDLE WASTEWATER FROM DEWATERING OPERATIONS IN SITUATIONS WHERE WASTEWATER CANNOT BE PUMPED DIRECTLY TO A SEDIMENT TRAP OR BASIN. BASIN SHALL BE LOCATED OUTSIDE OF WETLANDS, AND BUFFERS.

TEMPORARY PUMP DISCHARGE/ DEWATERING BASIN DETAILS

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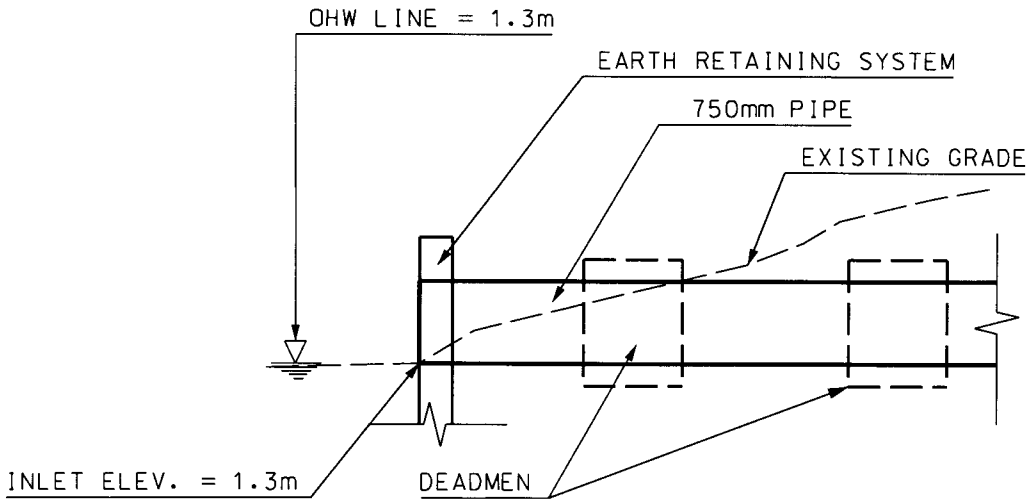
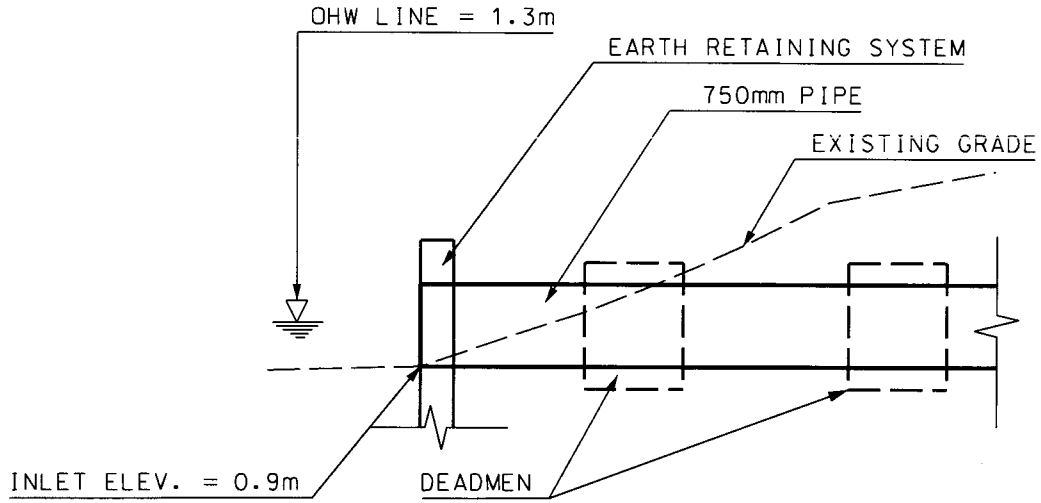
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJ. NO. 26-118	FIGURE: 19

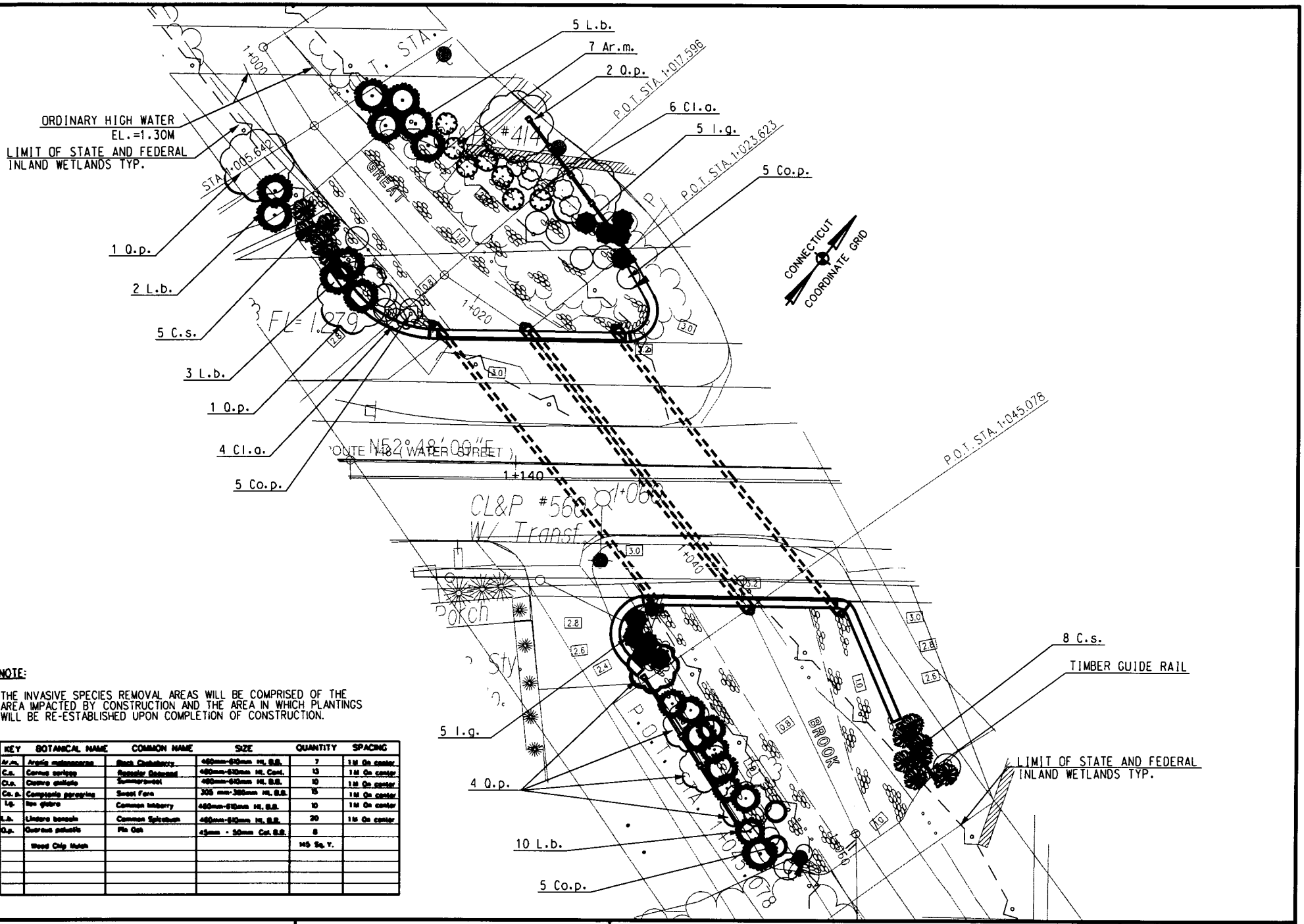


INLET



OUTLET

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	TEMPORARY 750 mm PIPE DETAILS N.T.S.	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJ. NO. 26-118	FIGURE: 20



NOTE:

THE INVASIVE SPECIES REMOVAL AREAS WILL BE COMPRISED OF THE AREA IMPACTED BY CONSTRUCTION AND THE AREA IN WHICH PLANTINGS WILL BE RE-ESTABLISHED UPON COMPLETION OF CONSTRUCTION.

KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
Ar.m.	Aronia melanocarpa	Black Chokeberry	460mm-610mm Ht. B.B.	7	1M On center
C.s.	Cornus sericea	Redosier Dogwood	460mm-610mm Ht. Cont.	13	1M On center
Cl.a.	Clethra alnifolia	Summersweet	460mm-610mm Ht. B.B.	10	1M On center
Co. s.	Comptonia peregrina	Sweet Fern	305 mm-380mm Ht. B.B.	15	1M On center
I.g.	Ilex glabra	Common Inkberry	460mm-610mm Ht. B.B.	10	1M On center
L.b.	Lindera benzoin	Common Spicebush	460mm-610mm Ht. B.B.	20	1M On center
Q.p.	Quercus palustris	Pin Oak	45mm - 50mm Cal. B.B.	8	
	Wood Chip Mulch			145 Sq. Y.	

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PLANTING PLAN

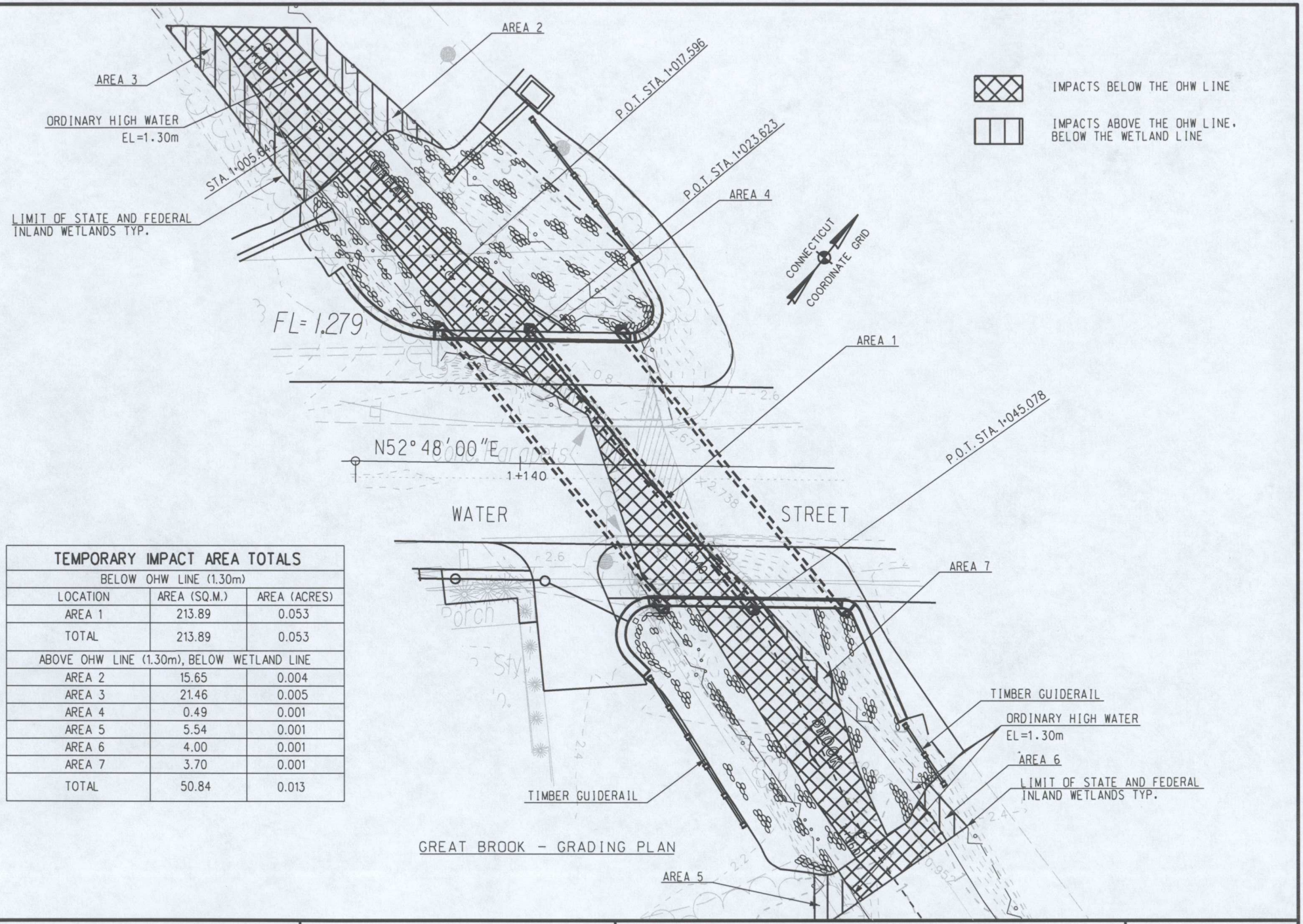
SCALE 1:300

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

FIGURE:
21



GREAT BROOK - GRADING PLAN

TEMPORARY IMPACT AREA TOTALS		
BELOW OHW LINE (1.30m)		
LOCATION	AREA (SQ.M.)	AREA (ACRES)
AREA 1	213.89	0.053
TOTAL	213.89	0.053
ABOVE OHW LINE (1.30m), BELOW WETLAND LINE		
AREA 2	15.65	0.004
AREA 3	21.46	0.005
AREA 4	0.49	0.001
AREA 5	5.54	0.001
AREA 6	4.00	0.001
AREA 7	3.70	0.001
TOTAL	50.84	0.013

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AREA OF TEMPORARY IMPACT

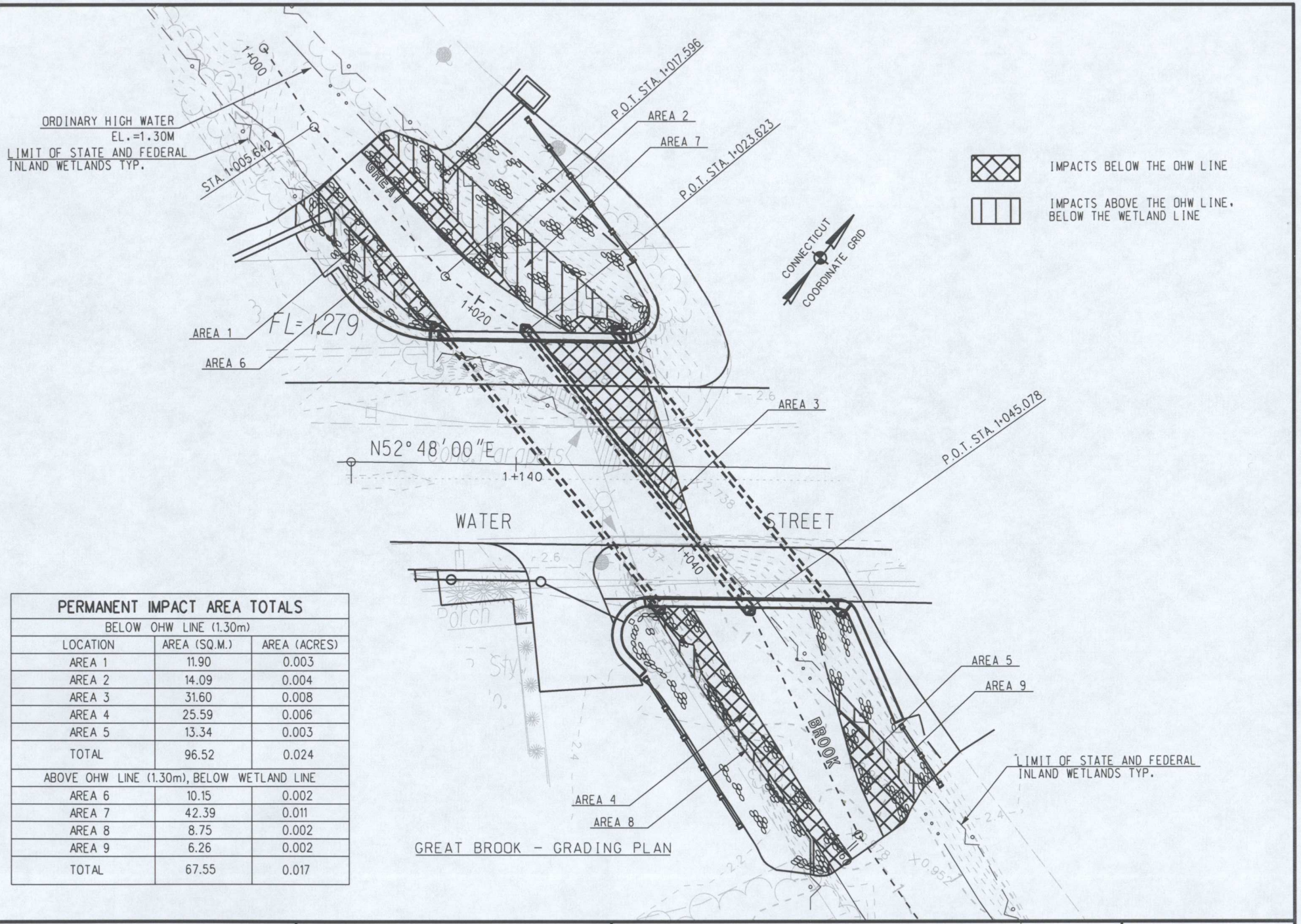
SCALE 1:300

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

FIGURE:
22



GREAT BROOK - GRADING PLAN

PERMANENT IMPACT AREA TOTALS		
BELOW OHW LINE (1.30m)		
LOCATION	AREA (SQ.M.)	AREA (ACRES)
AREA 1	11.90	0.003
AREA 2	14.09	0.004
AREA 3	31.60	0.008
AREA 4	25.59	0.006
AREA 5	13.34	0.003
TOTAL	96.52	0.024
ABOVE OHW LINE (1.30m), BELOW WETLAND LINE		
AREA 6	10.15	0.002
AREA 7	42.39	0.011
AREA 8	8.75	0.002
AREA 9	6.26	0.002
TOTAL	67.55	0.017

C. J. M.
Close, Jensen, & Miller
Consulting Engineers, Land Planners, & Surveyors
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AREA OF PERMANENT IMPACT

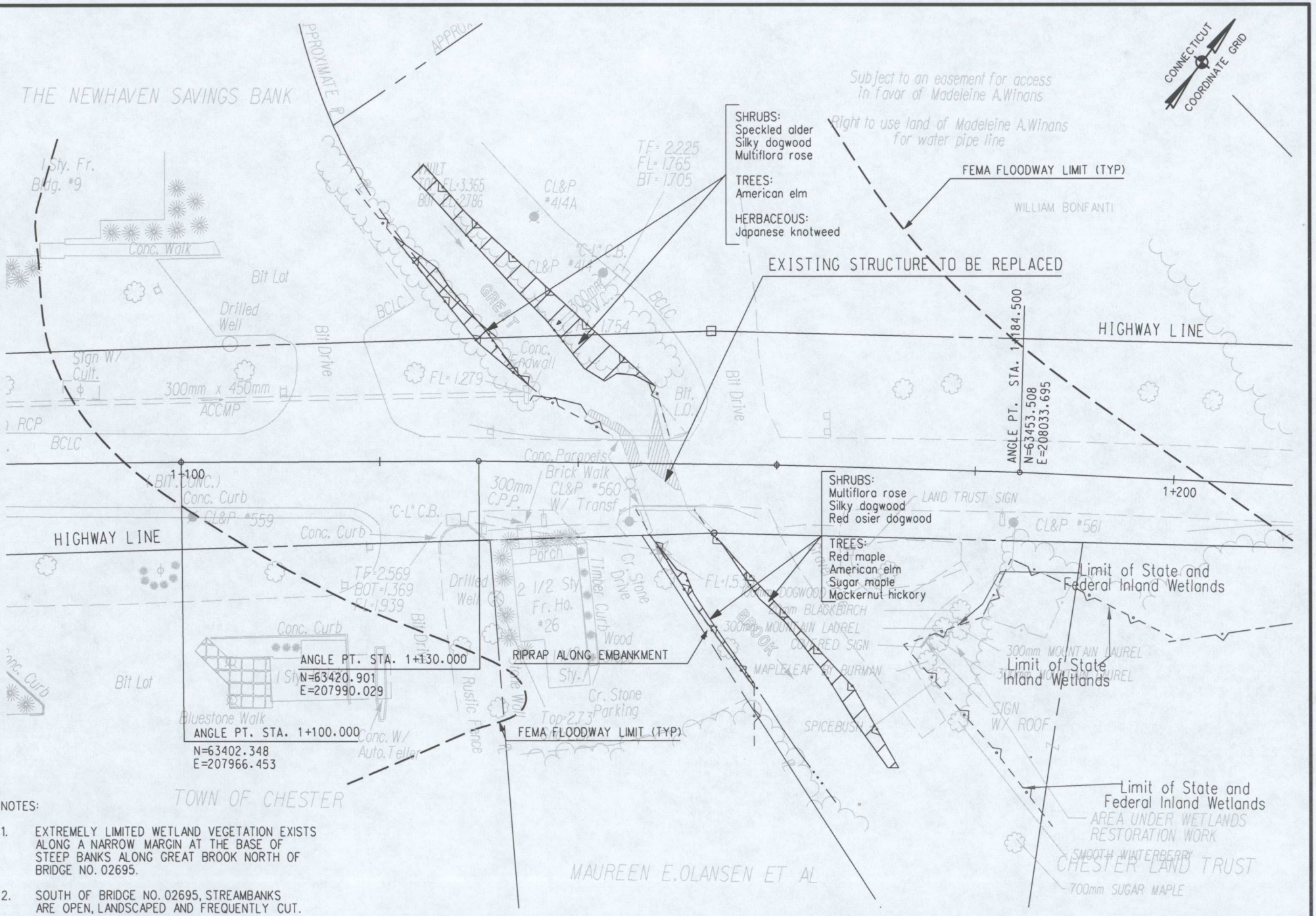
SCALE 1:300

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

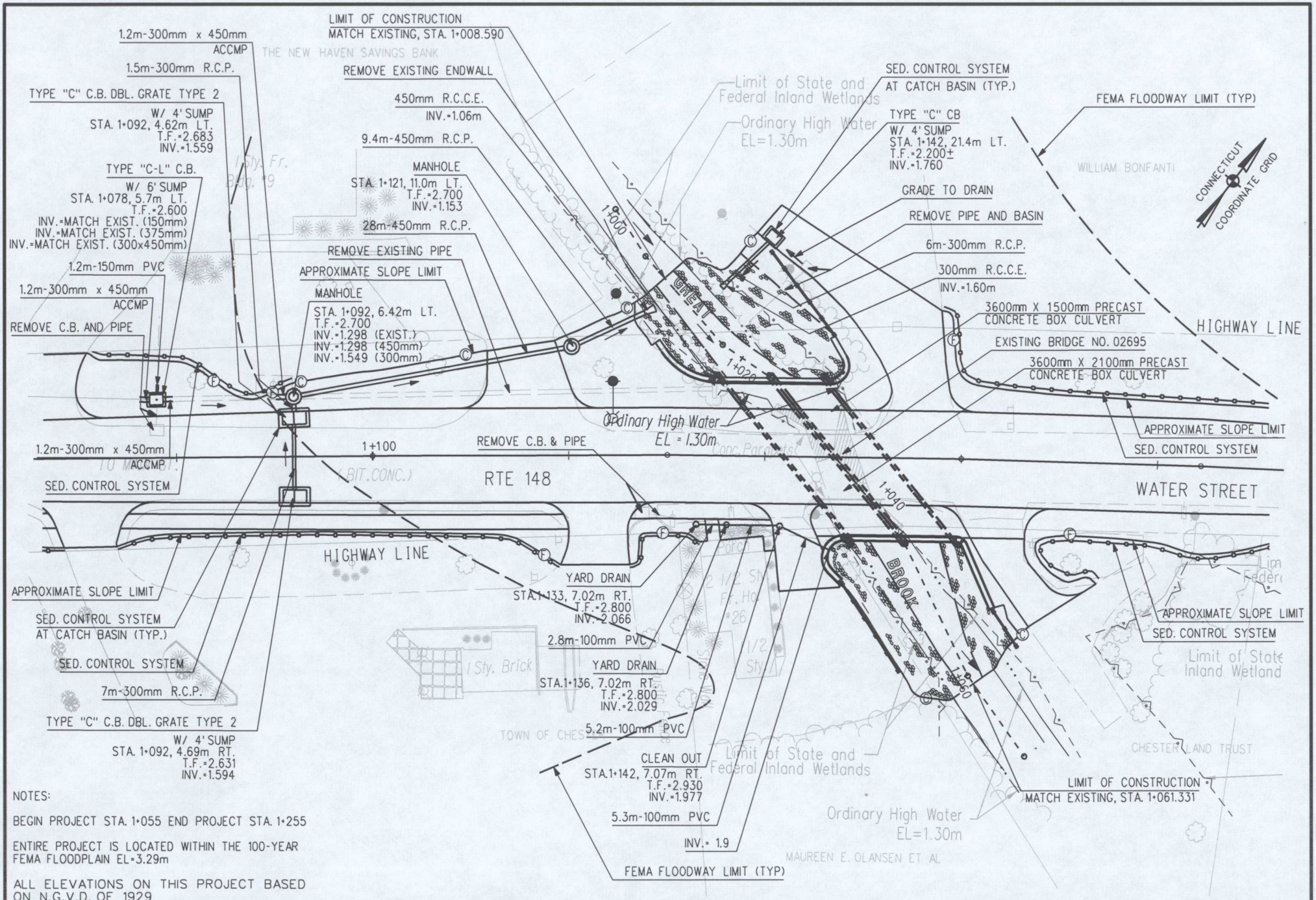
FIGURE:
23



NOTES:

1. EXTREMELY LIMITED WETLAND VEGETATION EXISTS ALONG A NARROW MARGIN AT THE BASE OF STEEP BANKS ALONG GREAT BROOK NORTH OF BRIDGE NO. 02695.
2. SOUTH OF BRIDGE NO. 02695, STREAMBANKS ARE OPEN, LANDSCAPED AND FREQUENTLY CUT.

C. J. M. Close, Jensen, & Miller Consulting Engineers, Land Planners, & Surveyors 1137 Silas Deane Highway Wethersfield, Connecticut 06109	EXISTING VEGETATION PLAN 10 5 0 5 10 SCALE IN METERS 1:500	REPLACEMENT OF BRIDGE NO. 02695 ROUTE 148 OVER GREAT BROOK, CHESTER, CT.	DATE: FEBRUARY, 2011
		APPLICATION BY: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118	FIGURE: 24



NOTES:

BEGIN PROJECT STA. 1+055 END PROJECT STA. 1+255

ENTIRE PROJECT IS LOCATED WITHIN THE 100-YEAR FEMA FLOODPLAIN EL=3.29m

ALL ELEVATIONS ON THIS PROJECT BASED ON N.G.V.D. OF 1929

C. J. M. Close, Jensen, & Miller
Consulting Engineers, Land Planners, & Surveyors
1137 Silas Deane Highway
Wethersfield, Connecticut 06109

PROPOSED DRAINAGE PLAN

10 5 0 5 10
SCALE IN METERS
1:500

REPLACEMENT OF BRIDGE NO. 02695
ROUTE 148 OVER GREAT BROOK, CHESTER, CT.

APPLICATION BY: STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION, PROJECT NO. 26-118

DATE:
FEBRUARY, 2011

FIGURE:
25

Attachment H: Engineering Documentation

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

List of Attachments

- Part 1: Engineering Report Checklist (DEP-IWRD-APP-105A)
  Engineering Report
- Part 2: Hydrologic and Hydraulic Consistency Worksheet (DEP-IWRD-APP-105B)
  Section I Floodplain Management
  Section II Stormwater Management
- Final Hydraulic Analysis Report
  Proposed Replacement of Bridge No. 02695
  Route 148 over Great Brook
  Town of Chester
  Prepared by: Close, Jensen and Miller, P.C.
  Dated: January 2005, Revised April 2006
- Drainage Report, Dated January 2011

Attachment H: Engineering Documentation

Part 1: Engineering Report Checklist

The following is a checklist of requirements that need to be completed, included and submitted as part of the Engineering Report. Please complete this checklist by identifying where each requirement listed is addressed in the Engineering Report (report title and page numbers). If an item is not applicable, place "NA" in the box. Attach the completed checklist as the cover sheet to engineering reports, as applicable, which fully describe the design of the proposed facilities or other actions and the hydraulic and hydrologic effects thereof. The application instructions (DEP-IWRD-INST-100) should be consulted for a complete description of each item listed. This checklist is required to be signed and sealed by a professional engineer licensed in the State of Connecticut.

Stormwater Management

Location of Item	Item Description
Drainage Comps.	Description of the design storm frequency intensity, volume and duration
N/A	Watershed maps, existing and proposed
Drainage Comps.	Computations for Tc
N/A	Imperviousness calculations
N/A	NRCS runoff curve numbers, volumetric runoff coefficients
N/A	Computations used to determine peak runoff rates, and velocities for each watershed area (24-hour storm): • Stream Channel Protection: 2-year frequency ("over-control" of 2-year storm) • Conveyance Protection: 10-year frequency • Peak Runoff Attenuation: 2-year, 10-year, and 100-year frequency • Emergency Outlet Sizing: safely pass the 100-year frequency or larger storm
N/A	Hydrograph routing calculations
N/A	Description, schematics, and calculations for drainage and stormwater management systems, bridges and culverts
N/A	Infiltration rates
N/A	Documentation of sources
N/A	Computer disk containing input and output data and the associated program for all computer models used in the analyses
Drainage Comps.	Hard copy of input and output data including input/output tables
N/A	Detention basin analysis including timing and duration of expected outflow, stream stability analysis and hydrograph summation

Flood Plain Assessment

Location of Item	Item Description
Hydraulic Analysis Report Attach. H	Description or simulation of existing and proposed conditions upstream and downstream of the proposed activity
N/A	(For SCEL applications only) A determination of the effect of the proposed activity on flooding and flood hazards together with an equivalent encroachment on the opposite bank for the flood event establishing the encroachment lines
Attachment G	For any bridge or culvert placement or replacement with a drainage area of 100 acres or more, plan sheets showing the existing and proposed inundation area for the 2, 10, 25, 50, and 100 year discharges, carried to convergence
N/A	A description and analysis of the floodplain modifications required to restore any flood conveyance and flood storage capacity
N/A	Demonstration that backwater from the proposed activity will not impact an existing dam, dike, or similar structure
Hydraulic Analysis Report	Backup data and complete hydraulic analysis for proposed modifications to the floodplain including location plan and plot for sections, profile sheet, summary sheet

Dams, Dikes, Diversion Channels, Similar Structures

Location of Item	Item Description
N/A	Primary and emergency spillway and outlet structure erosion protection
N/A	Dam breach analysis
N/A	Geotechnical evaluation
N/A	Construction Specifications for foundation preparation, embankment material, outlet structure, and construction inspection

Soil Erosion and Sediment Control Plan

Location of Item	Item Description
Attachment G	Narrative
Attachment G	Drawings
Attachment G	Details
N/A	Calculations for Engineered Measures

Professional Certification

For any Engineering Report submitted as part of the IWRD permit application, the following certification must be signed and sealed by a professional engineer licensed to practice in Connecticut and submitted with the Engineering Report Checklist and Report.

"I certify that in my professional judgement, each requirement listed in the Engineering Report Checklist has been addressed in the Engineering Report submitted as part of the IWRD permit application as Attachment H, Part 1 and that the information is true, accurate and complete to the best of my knowledge and belief.

This certification is based on my review of the Engineering Report.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes."

Thomas J Maziarz
Signature of Applicant

4-5-2011
Date

Thomas J. Maziarz
Name of Applicant (print or type)

Bureau Chief-Policy & Planning
Title (if applicable)

John H Miller
Signature of Professional Engineer

4/1/11
Date

John H. Miller, P.E., L.S.
Name of Professional Engineer (print or type)

4142
P.E. Number (if applicable)

Affix P.E. Stamp Here
(if applicable)

Attachment H: Engineering Documentation

Part 2: Hydrologic and Hydraulic Consistency Worksheet

Inland Water Resources Division Permit Activities

This worksheet has four sections; only complete the section(s) applicable to the proposed project. Where a question requires a "Yes" or "No" answer, select the appropriate response and explain your response, if required, in the space provided.

Section I: **Floodplain Management** *(if the proposed project involves a structure, obstruction, encroachment or work in a watercourse, floodplain, or coastal high hazard area)*

Section II: **Stormwater Management** *(if the proposed project involves stormwater drainage or stormwater runoff)*

Sections III: **State Grants and Loans** and **Section IV: Disposal of State Land** *(only if the applicant is a state agency seeking flood management certification approval for state grants and loans or disposal of state land)*

Contents:

Definitions of terms used in these worksheets are found in Section 25-68b of the Connecticut General Statutes and Section 25-68h-1 of the Regulations of Connecticut State Agencies and in the National Flood Insurance Program Regulations (44 CFR, Chapter 1, Subchapter B, Part 59.1).

Section I: Floodplain Management

Name of Applicant: **State of Connecticut, Department of Transportation**

Name of Proposed Project: **Project No. 26-118, Replacement of Bridge No. 02695**

1. General Criteria

a. *Critical Activity* - Does the proposed project involve the treatment, storage and disposal of hazardous waste or the siting of hospitals, housing for the elderly, schools or residences, in the 0.2 per cent [500 year] floodplain? ☐ Yes ☒ No

If yes, the base flood for the critical activity shall have a recurrence interval equal to the 500 year flood event; if no, the base flood for the activity shall have a recurrence interval equal to the 100 year flood event.

b. *Nonintensive Floodplain Uses* - Will the proposed project promote development in floodplains or will utilities servicing the project be located so as to enable floodplain development?

☐ Yes ☒ No

Explain:

c. *National Flood Insurance Program* (NFIP) - Will the proposed project be located within an area of special flood hazard designated by the Federal Emergency Management Agency (FEMA)?

☒ Yes ☐ No If yes, list the FEMA flood zone(s):

Zone AE

Does the proposed project meet the NFIP minimum standards established in 44 CFR, Chapter 1, Subchapter B, Part 60.3, floodplain management criteria for flood-prone areas?

☒ Yes ☐ No

d. *Municipal Regulations* - Has the municipality in which the proposed project is to be located adopted floodplain regulations containing requirements that are more restrictive than the NFIP floodplain management criteria for flood-prone areas? ☐ Yes ☒ No

If yes, describe the more restrictive requirements:

Does the proposed project comply with the more restrictive standards of the municipality?

☐ Yes ☐ No

Section I: Floodplain Management (continued)

2. *Flooding and Flood Hazards*

a. *Flooding* - Will the proposed project pose any hazard to human life, health or property in the event of a base flood? ☐ Yes ☒ No

If yes, explain:

b. *Flood Velocities* - Will the proposed project cause an increase in flow velocity or depth during the base flood discharge? ☒ Yes ☐ No

If yes, the increase in velocity is: **5.9** fps **1.8 mps**
and/or the increase in depth is: ft.

Will such increase in velocity or depth cause channel erosion or pose any hazard to human life, health or property? ☐ Yes ☒ No

Explain:

The increase is due to the proposed larger bridge opening which reduces the current backwater effect caused by the inadequate bridge opening. No channel erosion is anticipated due to the natural armoring along the bottom of the channel.

c. *Flood Storage* - Will the proposed project affect the flood storage capacity or flood control value of the floodplain? ☐ Yes ☒ No

If yes, describe the effects:

d. *Degrading or Aggrading Stream Beds* - Is the streambed currently degrading or aggrading?

☐ Degrading ☐ Aggrading ☒ Neither

Has the project design addressed degrading or aggrading streambed conditions?

☐ Yes ☒ No

e. *Ice Jams* - Is the watercourse prone to ice jams or floods due to ice? ☐ Yes ☒ No

Has the project design considered ice jams or floods due to ice? ☐ Yes ☒ No

Section I: Floodplain Management (continued)

f. *Storage of Materials & Equipment* - Will the construction or use of the proposed project involve the storage of materials below the 500 year flood elevation that are buoyant, hazardous, flammable, explosive, soluble, expansive or radioactive, or the storage of any other materials which could be injurious to human, animal or plant life in the event of a flood?

☒ Yes ☐ No

If yes, describe the materials and how such materials will be protected from flood damage, secured or removed from the floodplain to prevent pollution and hazards to life and property.

The entire project is located within the 500-year floodplain; however, the construction materials should not pose a hazard to human, animal, or plant life in the event of a flood since they will be removed prior to the flood or properly secured. The Contractor will be required to submit a Flood Contingency Plan for the engineers approval prior to construction, see Attachment I for more information.

Storage of materials that could be injurious to human health or the environment in the event of flooding is prohibited below the elevation of the 500 year flood. Other material or equipment may be stored below the 500 year flood elevation provided that such material or equipment is not subject to major damage by floods, and provided that such material or equipment is firmly anchored, restrained or enclosed to prevent it from floating away or that such material or equipment can be removed prior to flooding.

g. *Floodwater Loads* - Will structures, facilities and stored materials be anchored or otherwise designed to prevent floatation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy? ☒ Yes ☐ No

3. *Standards for Structures in Floodplains or Coastal High Hazard Areas*

Does the proposed project involve a new or substantially improved structure or facility located within a floodplain or coastal high hazard area? ☐ Yes ☒ No

If yes, complete this subsection; if no, skip to subsection 4 (***Topography Changes within Floodplain***).

a. *Structures in Coastal High Hazard Areas* - Will the structure or facility be located within an NFIP coastal high hazard area? ☐ Yes ☐ No

If no, skip to paragraph 3(b); if yes:

1. Will the structure or facility be located landward of the reach of mean high tide?

   ☐ Yes ☐ No

2. Will a new structure or facility be located on an undeveloped coastal barrier beach designated by FEMA? ☐ Yes ☐ No

3. If the structure or facility is/will be located within a coastal high hazard area, the structure or facility must be elevated on pilings or columns so that the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to at least one foot above the base flood level and the pile or column foundation and structure attached thereto must be anchored to resist floatation, collapse and lateral movement due to the effects of wind, velocity waters, hurricane wave wash, and base flood water loads acting simultaneously on all building components.

   Does the proposed structure or facility meet these standards? ☐ Yes ☐ No

   The base flood elevation is: ft. (Datum:)

   The elevation of the lowest horizontal structural member is: ft. (Datum:)

Section I: Floodplain Management (continued)

4. Will the space below the lowest floor be either free of obstruction or constructed with non-supporting breakaway walls? ☐ Yes ☐ No

5. Will fill be used for structural support of any buildings within coastal high hazard areas?

☐ Yes ☐ No

b. *Structures in Floodplain Areas* - Are the structures residential or nonresidential?

☐ Residential ☐ Nonresidential If *nonresidential*, skip to paragraph 3(d) below.

c. *Residential Structures* - If the structure or facility is for human habitation will the lowest floor of such structure or facility, including its basement, be elevated one foot above the level of the 500 year flood?

☐ Yes ☐ No

The 500 year flood elevation is: ft. (Datum:)

The elevation of the lowest floor, including basement, is: ft. (Datum:)

d. *Non-residential Structures* - If the structure or facility is not intended for residential uses, will the lowest floor of such structure or facility, including its basement, be elevated to or above the 100 year flood height or be floodproofed to that height, or in the case of a critical activity, the 500 year flood height?

☐ Yes ☐ No

If yes, the structure will be: ☐ Elevated ☐ Floodproofed

The base flood elevation is: ft. (Datum:)

The elevation of the lowest floor, including basement, is: ft. (Datum:)

The structure is floodproofed to: ft. (Datum:)

Note: for insurance purposes nonresidential structures must be floodproofed to at least one foot above the base flood elevation. DEP strongly encourages that the height of floodproofing incorporate one foot of freeboard.

e. *Utilities* - Will service facilities such as electrical, heating, ventilation, plumbing, and air conditioning equipment be constructed at or above the elevation of the base flood or floodproofed with a passive system? ☐ Yes ☐ No

f. *Water Supply Systems* - Does the proposed project include a new or replacement water supply system?
☐ Yes ☐ No

If yes, is the water supply system designed to prevent floodwaters from entering and contaminating the system during the base flood? ☐ Yes ☐ No

g. *Sanitary Sewage Systems* - Does the proposed project include a new or replacement sanitary sewage or collection system? ☐ Yes ☐ No

If yes, is the sanitary sewage system designed to minimize or eliminate the infiltration of flood waters into the systems and discharges from the systems into flood waters during the base flood?

☐ Yes ☐ No

h. *Foundation Drains* - Are foundation drains of buildings designed to prevent backflow from the 100 year frequency flood into the building?

☐ Yes ☐ No ☐ No foundation drains

Section I: Floodplain Management (continued)

4. *Activity within Floodplain*

Does the proposed project involve activity in a floodplain including but not limited to filling, dumping, construction, excavating, or grading?

☒ Yes ☐ No If no, skip to subsection 5 ***(Alterations of Watercourses)***.

If yes, does the proposed project include encroachments, including fill, new construction, substantial improvements, or other development within a NFIP adopted regulatory floodway?

☒ Yes ☐ No If yes, skip to paragraph 4(b) below.

a. *No Regulatory Floodway* - The NFIP requires that until a regulatory floodway is designated, that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point. (If no regulatory floodway has been adopted, project impacts may be evaluated by considering an equivalent conveyance loss on the opposite side of the river from the proposed project.)

Is the proposed project consistent with this requirement? ☐ Yes ☐ No

b. *Floodway Encroachments* - Will the proposed encroachment into the floodway result in any increase in flood levels during either the 100 year or 10 year discharges?

100 year: ☒ Yes; the increase is: **0.12** (in 1/100ths of a foot) ☐ No

If yes, has the applicant received approval of such increase in accordance with 44 CFR, Chapter 1, Subchapter B, Part 65.12? ☐ Yes ☒ No

10 year: ☒ Yes; the increase is: **0.14** (in 1/100ths of a foot) ☐ No

Note: Increases occur within State's right-of-way

c. *Coastal Areas* - Flood hazard potential in coastal areas shall be evaluated considering surface profiles of the combined occurrence of tides, storm surges, and peak runoff. The starting water surface elevation for the base flood in watersheds with time of concentrations of over 6 hours shall be the 10 year frequency tidal surge level.

If the proposed project is in a coastal area, have the hydraulic analyses incorporated these criteria?

☒ Yes ☐ No ☐ Not in Coastal Area

5. *Alterations of Watercourses*

Does the proposed project include the construction or alteration to a natural perennial watercourse or man-made channel?

☒ Yes ☐ No If no, skip to subsection 6 ***(Culverts and Bridges)***; if yes, complete the following subsection:

a. *Topography Change* - Is the watercourse or channel located within a regulatory floodway or Zone A1-30 or AE as designated by the NFIP? ☒ Yes ☐ No

b. *Hydraulic Capacity* - Does the channel have a minimum flow capacity of a flood equal to at least the 25 year frequency flood? ☒ Yes ☐ No

The channel capacity is designed for the: **100** year flood.

Does the channel have an inner channel with a capacity of a 2 year frequency flood? ☒ Yes ☐ No

Section I: Floodplain Management (continued)

c. *Aquatic Habitat* - Channel alterations should be designed to create aquatic habitats suitable for fisheries, including suitable habitat for maintaining fish populations and to enable fish passage, and to maintain or improve water quality, aesthetics, and recreation.

Has the applicant had any pre-application meetings or correspondence with DEP Fisheries?

☒ Yes ☐ No

Check each of the following criteria that have been incorporated into the project design:

☐ 1. artificial channel linings have been avoided;

☒ 2. the channel will encourage ecological productivity and diversity;

☒ 3. the channel and its banks will be compatible with their surroundings;

☒ 4. the channel will vary in its width, depth, invert elevations, and side slopes to provide diverse aquatic habitat;

☒ 5. straightening existing channels and thereby decreasing their length has been avoided;

☒ 6. the channel will not create barriers to upstream and downstream fish passage;

☐ 7. the channel will contain pools and riffles and a low flow channel to concentrate seasonal low water flows;

☐ 8. the channel will contain flow deflectors, boulders and low check dams to enhance aquatic habitat;

☒ 9. stream bank vegetation will be preserved where feasible and disturbed stream bank areas will be replanted with suitable vegetation;

☒ 10. clean natural stream bed materials of a suitable size will be incorporated in the new channel; and

☒ 11. construction of the proposed project will be scheduled to minimize conflicts with spawning, stocking, and recreational fishing seasons.

Describe how the above aquatic habitat design criteria have been incorporated into the project design:

The new structure will consist of two concrete box culverts. The primary flow box will be a 12-foot wide by 7-foot high (3.6 m x 2.1 m) cell set below the stream elevation and filled with native stream bed material to the existing stream bed elevation (cobble/boulder and coarse sand bottom.) The centerline of this cell will be coincident with the centerline of Great Brook. The second cell will be a 12-foot wide by 5-foot high (3.6 m x 1.5 m) cell placed immediately adjacent to the primary cell. This cell shall have a concrete bottom with a flow line approximately 0.5 feet (0.16 m) higher than the flow line of the primary cell, therefore serving as a by-pass conduit to pass higher storm related flows.In order to protect all migratory species unconfined instream construction activities are prohibited between March 1 and June 30. The main stream will allow for full fish passage during this time per CTDEP Fisheries comments dated April 2, 2004. Also, in accordance with CTDEP Fisheries comments a planting plan has been developed for the site in order to reestablish the vegetation along the edges of Great Brook that will be disturbed during construction.

Section I: Floodplain Management (continued)

6. *Culverts and Bridges*

Does the proposed project involve the repair or new construction of a culvert or bridge?

☒ Yes ☐ No If no, go to subsection 7 ***(Temporary Hydraulic Facilities)***.

If yes, complete this subsection:

a. *Fish Passage* - Does the culvert design allow for the passage of fish? ☒ Yes ☐ No

If yes, describe the specific design provisions for fish passage:

The proposed box culverts will allow for fish passage. The proposed primary flow box culvert will be placed below the existing stream bed elevation and filled with native stream bed material (approximately 1.5 feet (0.45 m)) to the existing streambed elevation.

b. *Depressed Structural Floors* - Is the rigid structural floor of the culvert or bridge depressed below the normal stream bed to allow a natural stream bed to form over the floor?

☒ Yes ☐ No ☐ No rigid structural floor

c. *Multiple Openings* - The use of a single large culvert or bridge opening is preferred over the use of multiple small openings. Has the design minimized the use of multiple small openings?

☐ Yes ☒ No

If no, explain:

The proposed structure consists of two precast concrete box culverts in order to reduce scour and expedite construction.

d. *Sag Vertical Curves* - Does the design utilize solid parapet walls in the sag part of a vertical curve?

☐ Yes ☒ No ☐ Not located in a sag vertical curve

e. *Debris Blockage* - Is the culvert or bridge prone to blockage by debris? ☐ Yes ☒ No

If yes, has the project design incorporated measures to minimize the potential for debris blockage?

☐ Yes ☐ No

f. *Topography Change* - Is the culvert or bridge located within a regulatory floodway or Zone A1-30 or AE as designated by the NFIP? ☒ Yes ☐ No

Section I: Floodplain Management (continued)

g. *State Highways* - Does the watercourse pass under a state roadway?

☒ Yes ☐ No If no, skip to paragraph 6(g)(2).

If yes, culverts and bridges for state highways shall be designed in accordance with the Connecticut Department of Transportation (DOT) Drainage Manual and all applicants should refer to it for specific design criteria. In general, however, the Drainage Manual requires the following:

(Place a check mark for all applicable criteria utilized)

☐ *Minor Structures* - Minor structures have a drainage area of less than one square mile in which there is no established watercourse. They shall be designed to pass the 25 year frequency discharge.

☐ *Small Structures* - Small structures have a drainage area of less than one square mile in which there is an established watercourse. *They* shall be designed to pass the 50 year frequency discharge.

☒ *Intermediate Structures* - Intermediate structures have a drainage area greater than one square mile and less than 10 square miles. They *shall* be designed to pass the 100 year frequency discharge with reasonable underclearance.

☐ *Large Structures* - Large structures have a drainage area greater than 10 square miles and less than 1000 square miles. They shall be designed to pass the 100 year frequency discharge with an underclearance not less than two feet.

☐ *Monumental Structures* - Monumental structures *have* a drainage area greater than 1000 square miles. They shall be designed to meet the requirements of the Connecticut Department of Environmental Protection, U.S. Army Corps of Engineers, and the U.S. Coast Guard.

☐ *Tidal Structures* - Tidal structures are subject to tidal action and shall be classified as minor, small, intermediate, etc. depending on their drainage area. These structures shall be designed in accordance with the previously listed *classifications*. However if the highway is subject to frequent tidal flooding, the design storm may be made consistent with the frequency of flooding by tidal action. The proposed culvert or bridge is classified as:

☐ Tidal, minor

☐ Tidal, small

☐ Tidal, intermediate

☐ Tidal, large

☐ Tidal, monumental

1. Has the structure been designed in accordance with the criteria established in the DOT Drainage Manual? ☒ Yes ☐ No

   If no, describe the lower design standards and the reasons for not complying with the DOT Drainage Manual:

Section I: Floodplain Management (continued)

2. Will the proposed culvert or bridge increase upstream water surface elevations in the event of a base flood above that which would have been obtained in the natural channel if the highway embankment were not constructed? ☐ Yes ☒ No

   If yes, is the increase in elevation more than one foot? Describe:

3. Will the proposed culvert or bridge be designed so that flooding during the design discharge does not endanger the roadway or cause damage to upstream developed property? (NOTE: The design discharge for culverts and bridges on state highways should be that which was determined by FEMA. If the applicant judges that the FEMA discharge is inappropriate, the project should be analyzed for both the applicant's computed flow and the FEMA discharge. The project, however, must still meet the standards of the NFIP.) ☒ Yes ☐ No

   Explain:

   The proposed water surface elevation at the upstream face of the bridge for the 100-year storm event with the 10-year backwater effect from the Connecticut River is 1.64 feet (0.5 m) below the roadway surface elevation. In addition, there is a decrease of 0.75 feet (0.23 m) from the existing water surface elevation at this location.

h. *Local Roads & Driveways* - Local roads (not state highways) and driveways may be designed for flood frequencies and underclearances less stringent than those specified in the DOT Drainage Manual when (check all that have been incorporated into the project design):

   ☐ 1. the road is at or close to the floodplain grade

   ☐ 2. water surface elevations are not increased by more than one foot nor cause damage to upstream properties

   ☐ 3. provisions are made to barricade the road when overtopped

   ☐ 4. the road or driveway is posted as being subject to flooding

   ☐ 5. the road or driveway has low traffic volume

   ☐ 6. alternate routes are available

   The culvert or bridge has been designed to pass the: year frequency discharge with an underclearance of: feet.

   Utilizing the DOT Drainage Manual classifications listed under paragraph 6(g) above, the culvert or bridge is classified as a: structure.

Section I: Floodplain Management (continued)

h. If the culvert or bridge is designed to standards lower than which is stipulated in the DOT Drainage Manual, list such standards and the reasons for the lower design standards:

i. *Downstream Peak Flows* - Will the proposed culvert or bridge increase downstream peak flows by decreasing existing headwater depths during flooding events? ☐ Yes ☒ No

If yes, describe the selected design criteria and the impacts to downstream properties:

7. *Temporary Hydraulic Facilities*

Temporary hydraulic facilities include all channels, culverts or bridges which are required for haul roads, channel relocations, culvert installations, bridge construction, temporary roads, or detours. They are to be designed with the same care which is used for the primary facility.

If the proposed activity involves a temporary hydraulic facility(s), has such facility been designed in accordance with Chapter 6, Appendix F, "Temporary Hydraulic Facilities," of the DOT Drainage Manual?

☒ Yes ☐ No ☐ No temporary hydraulic facilities

If yes, the design flood frequency is the: **<2** year flood.

Describe the temporary facilities:

The temporary facilities consist of temporary cofferdams to dewater the work areas and a temporary bypass pipe. The temporary bypass pipe will be a 750 mm (30-inch) smooth interior polyvinyl chloride (PVC) plastic pipe and will be installed as part of stage 1 construction.

Section II: Stormwater Management

Name of Applicant: **State of Connecticut, Department of Transportation**

Name of Proposed Project: **Project No. 26-118, Bridge No. 02695**

1. *Stormwater Runoff*

The proposed project will (check all that apply):

- ☒ Increase the area of impervious surfaces
- ☒ Increase runoff coefficients
- ☐ Alter existing drainage patterns
- ☐ Alter time of concentrations
- ☐ Change the timing of runoff in relation to adjacent watersheds

Will the proposed project impact downstream areas by increasing peak flow rates, the timing of runoff, or the volume of runoff? ☐ Yes ☒ No

If yes, describe the downstream impacts for the 2, 10 and 100 year frequency discharges:

The pre and post development peak flow rates at the downstream design point are as follows:

Return Frequency (Year)	Peak Discharges (CFS)	
	Pre-Development	Post-Development
2		
10		
100		

The above peak discharges were computed utilizing the: hour duration storm. This duration storm was selected because:

Section II: Stormwater Management (continued)

Describe the location of the design point and why this location was chosen:

2. *Stormwater Detention Facilities*

Does the proposed project include the construction of any stormwater detention facilities?

☐ Yes ☒ No If no, skip to subsection 3 ***(Storm Drainage Systems)***.

If yes, has the DEP determined whether a dam construction permit is required? ☐ Yes ☐ No

The pre and post development peak flow rates at the downstream design point are as follows:

Return Frequency (Year)	Peak Discharges (CFS)		
	Pre-Development	Post-Development (without detention)	Post-Development (with detention)
2			
10			
100			

The above peak discharges were computed utilizing the: hour duration storm. This duration storm was selected because:

Describe the location of the design point and why this location was chosen:

Section II: Stormwater Management (continued)

If the proposed project increases peak flow rates for the 2, 10 or 100 year frequency discharges, describe the impacts to downstream areas:

Will the detention facility aggravate erosion along the downstream channel? ☐ Yes ☐ No

In certain situations, detention of stormwater aggravates downstream flooding. This occurs when the discharge from a subwatershed is delayed by a detention facility so that it adds to the peak discharge from another subwatershed. Adding the hydrographs of the two subwatersheds results in a higher peak discharge over that which would occur if detention were not present.

Is the location of the detention facility within the watershed suitable for detention? ☐ Yes ☐ No

Explain:

3. *Storm Drainage Systems*

Does the proposed project include the construction of subsurface storm drainage systems?

☒ Yes ☐ No If no, you have completed Section II of the worksheets.

If yes, complete this subsection:

a. *DOT Standards* - Is the proposed storm drainage system designed in accordance with the Connecticut Department of Transportation's (DOT) Drainage Manual? ☒ Yes ☐ No

If no, describe the lower design standards and the reasons for not complying with the Drainage Manual:

b. *Design Storm* - Is the storm drainage system designed for a ten year frequency storm without closing the use of the facility? ☒ Yes ☐ No

c. *Future Development* - Has the design of the system considered future development of adjacent properties? ☐ Yes ☒ No

Section II: Stormwater Management (continued)

d. *Outlet Protection* - Have the outlets from the system been designed to minimize the potential for downstream erosion? ☒ Yes ☐ No

e. *Overland Flow* - Has the use of curbing been minimized to encourage overland dispersed flow through stable vegetated areas? ☐ Yes ☒ No

f. *Vegetated Filter Strips* - Has the design incorporated the use of vegetated filter strips or grass swales to improve the quality of water outletting from the storm drainage system? ☐ Yes ☒ No

g. *Stormwater Treatment* - Describe features of the stormwater collection system intended to improve the quality of stormwater runoff prior to its discharge to surface waters.

The proposed system includes the addition of four deep sumps for particle separation which will pretreat the stormwater discharging into Great Brook. Also, the bank of Great Brook is protected with riprap providing outlet protection. The yard drains will have a primarily grass drainage area to pretreat the runoff before it discharges into Great Brook.

h. *E & S Control Plan* - Has the design and installation of the storm drainage system been coordinated with the soil erosion and sediment control plan prepared in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control? ☒ Yes ☐ No

Explain:

Erosion and sediment control is incorporated throughout the site including but not limited to the use of modified riprap along the slopes of Great Brook and the outlets of each of the drainage systems, the use of sedimentation control systems located at each fill slope, as well as providing a temporary pump discharge basins during construction; all of which are in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

STATE BRIDGE PROGRAM
State Project No. 170-1475

COMPLETE (INDEPENDENTLY BOUND) COPY OF REPORT IS BEING PROVIDED AS A STAND-ALONE SUPPLEMENT TO THE PERMIT APPLICATION PACKAGE

FINAL

HYDRAULIC ANALYSIS REPORT

PROPOSED REPLACEMENT OF

BRIDGE NO. 02695

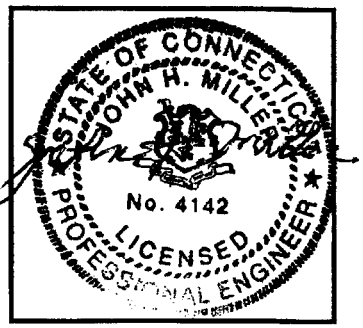
Route 148 over Great Brook

Town of Chester

Prepared by: Aija Zeidenbergs Date: 4/25/06
Aija Zeidenbergs

Checked by: Thomas M. Ryan Date: 4/25/06
Thomas M. Ryan, P.E.
ConnDOT Approved Hydraulic Engineer

Approved by: John H. Miller Date: 4/25/06
John H. Miller, P.E., L.S.



Close, Jensen and Miller, P.C.
Wethersfield, Connecticut
Issued January 2005
Revised December 2005
Revised April 2006

Drainage Report
Project No. 26-118
Replacement of Bridge No. 02695
Route 148 Over Great Brook
Chester, Connecticut

Prepared By

Close, Jensen and Miller, P.C.

December 1, 2010
Revised: January 19, 2011

Drainage Report
Project No. 26-118
Replacement of Bridge No. 02695
Route 148 Over Great Brook
Chester, Connecticut

Contents

Existing Conditions

System 1

The first and largest system is utilized to collect runoff on the east approach roadway. The existing system consists of four Type "C" catch basins and two Type "C-L" catch basins. The system discharges to the southern bank of Great Brook via a 300 mm x 450 mm ACCMP through a concrete end wall.

System 2

The second system consists of one existing Type "C-L" catch basin located on the northern bank of Great Brook. This catch basin collects runoff from the driveway and parking lot of the residence at 27 Water Street. This catch basin discharges via 6 meters of 300 mm R.C.P. into Great Brook.

System 3

The third existing system consists of one existing Type "C-L" catch basin located on the southern bank of Great Brook. This catch basin collects runoff from the low point along the southern portion of Route 148. The catch basin discharges via 300 mm C.P.P. into Great Brook.

Analysis Methods

The flows resulting from runoff and capture by the various systems involved in the project were calculated using Hydraflow Storm Sewers 2005 v11.0.0.9 by Intellisolve. The times of concentration were calculated using USDA's WinTR-55 Small Watershed Hydrology v1.00.08. The minimum times of concentration used for calculation are as follows:

- 5 minutes for paved areas
- 10 minutes for unpaved/grassed areas

The following runoff coefficients were used when calculating land use and composite runoff coefficients:

- 0.90 for impervious land cover
- 0.35 for grassed areas

All storm events were run using the ConnDOT supplied IDF curve for Connecticut. The flows were calculated for both the 10-Year and 25-Year storm events to ensure proper operation of the systems.

Proposed Conditions

The proposed project is located on Water St. (Rt. 148) in Chester, CT. The project includes the replacement of bridge number 02695 over Great Brook, as well as subsurface drainage improvements. The bridge can be found on Water St. between North Main Street and East Liberty Street.

There are three total subsurface drainage systems that will be affected by the construction.

System 1

The proposed system will consist of the four existing catch basins located outside the proposed project limits, one existing Type C-L catch basin that is being relocated within the project limits, two proposed Type "C" double grate Type II catch basin located at the low point and two new manhole junctions. The two proposed double grate catch basins will have 4-ft. sumps placed in them and the existing relocated type "C-L" catch basin will have a 6-ft. sump. The sumps will allow for particle separation before runoff

is discharged into the riprap side slopes of Great Brook. The existing Type "C" catch basin located at station 1+078 lt. and the existing type "C-L" catch basin located at Sta. 1+127 are proposed to be removed. All water flow typically collected by the removed basins will be directed to and collected by the proposed type "C" double grate basins. The proposed system is connected by approximately 37.4 meters of proposed 450 mm R.C.P., 73 meters of existing 300 mm x 450 mm A.C.C.M.P., and 29.5 meters of existing 300mm R.C.P., and discharges to the southern bank of Great Brook via a proposed 450 mm R.C.C.E. The proposed discharge is to be located 10 meters upstream of the existing discharge point, removing it further from the bridge. The bank of Great Brook at the proposed discharge site will be protected by rip rap. Outlet velocity is calculated to be 1.0 m/s for the 25-year storm event, and additional outlet protection measures are not needed.

The total drainage area consists of approximately 7858 square meters. The composite runoff coefficient is calculated to be 0.62 (4068 square meters of grass, 3790 square meters of impervious cover). The total flow calculated was 0.070 cms for the 10-year storm, and 0.089 cms for the 25-year storm.

System 2

The second system consists of one "C" catch basin, 6 meters of 300 mm R.C.P., and discharges via a proposed 300 mm R.C.C.E. to the northern bank of Great Brook. This system will be relocated 4.7 meters farther upstream of the existing discharge point. The bank of Great Brook at the proposed discharge site will be stabilized with riprap. Outlet velocity is calculated to be 1.1 m/s for the 25-year storm event, and additional outlet protection measures are not needed.

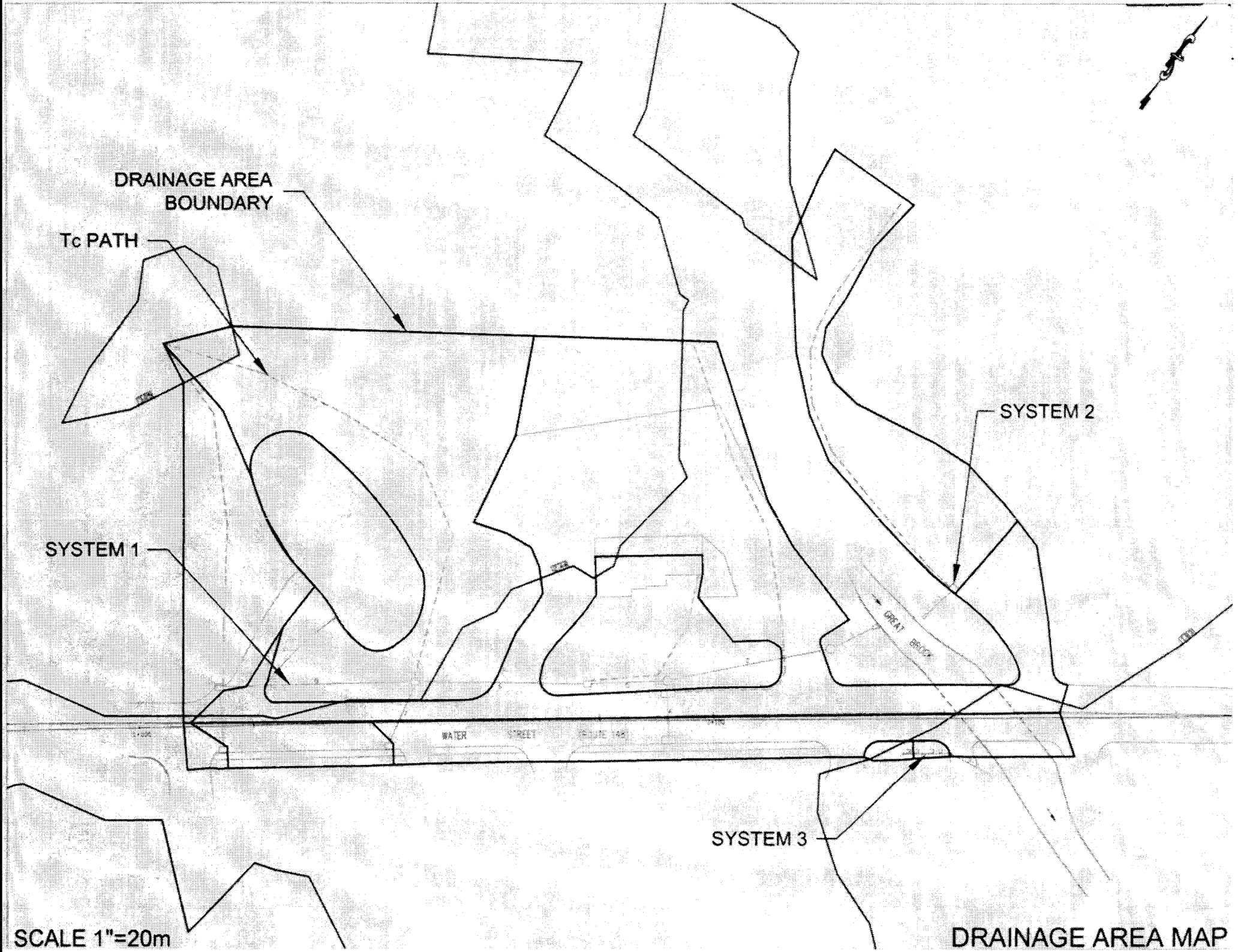
The total drainage area consists of approximately 984 square meters. The composite runoff coefficient is calculated to be 0.9, since all runoff comes from impervious cover. The total flow calculated was 0.039 cms for the 10-year storm, and 0.045 cms for the 25-year storm.

System 3

The third and final system consists of two yard drains, a clean out junction, and approximately 15.7 meters of 100 mm P.V.C. The system captures runoff from the front lawn of 26 Water Street and discharges to the southern bank of Great Brook downstream of the bridge. The bank of Great Brook at the proposed discharge site is protected by existing rip rap. Outlet velocity is calculated to be 0.6 m/s for the 25-year storm event, and additional outlet protection measures are not needed.

The total drainage area consists of approximately 42 square meters. The composite runoff coefficient is calculated to be 0.35, since all runoff comes from grassed cover. The total flow calculated was 0.002 cms for the 10-year storm, and 0.003 cms for the 25-year storm.

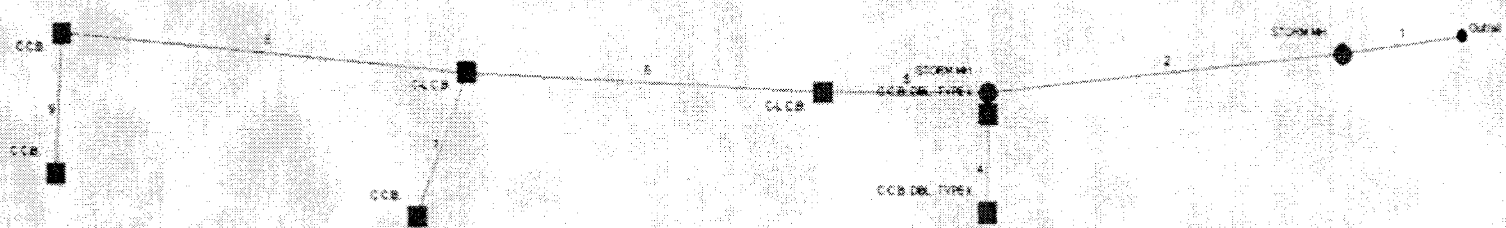
APPENDIX


DRAINAGE AREA BOUNDARY
Tc PATH
SYSTEM 1
SYSTEM 2
SYSTEM 3
WATER STREET
GREAT BROOK
SCALE 1"=20m
DRAINAGE AREA MAP

	Inlet	Location	Drainage Area (ha)				T_c* (min)
			Grassed	*Impervious*	*Total*	$C_{composite}$	
System 1	"C" C.B. DBL. TYPE II	1+092 left	0.05187	0.25595	0.30782	0.80731	9
	"C" C.B. DBL. TYPE II	1+092 right	0.01127	0.07074	0.08201	0.82444	5
	"C-L" C.B.	1+078 left	0.05306	0.01300	0.06607	0.45824	15
	"C-L" C.B.	1+047 left	0.22043	0.00597	0.22641	0.36451	17
	"C" C.B.	1+043 right	0.00343	0.01908	0.02251	0.81614	5
	"C" C.B.	1+015 left	0.06645	0.00983	0.07628	0.42090	16
	"C" C.B.	1+015 right	0.00030	0.00442	0.00471	0.86540	5
Total			0.40681	0.37899	0.78580	0.61526	
System 2	"C-L" C.B.		0.00000	0.09836	0.09836	0.90000	5
Total			0.00000	0.09836	0.09836	0.90000	
System 3	Yard Drain	1+033 right	0.00258	0.00000	0.00258	0.35000	10
	Yard Drain	1+036 right	0.00164	0.00000	0.00164	0.35000	10
Total			0.00422	0.00000	0.00422	0.35000	

* T_c's were calculated using WinTR-55 Small Watershed Hydrology

Hydraflow Plan View



Rt.148 - Chester (Great Brook)	No. Lines: 9	12-01-2010

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(m)	Incr (ha)	Total (ha)	(C)	Incr	Total	Inlet (min)	Syst (min)	(cm/h)	(cms)	(cms)	(m/s)	Size (mm)	Slope (%)	Up (m)	Dn (m)	Up (m)	Dn (m)	Up (m)	Dn (m)	
1	End	9.4	0.00	0.61	0.00	0.00	0.35	0.0	27.2	7.2	0.070	0.308	0.750	450	0.99	1.153	1.060	1.369	1.381	2.700	0.000	
2	1	28.0	0.00	0.61	0.00	0.00	0.35	0.0	26.4	7.4	0.071	0.223	1.022	450	0.52	1.298	1.153	1.485	1.374	2.700	2.700	
3	2	1.5	0.11	0.20	0.90	0.10	0.17	9.0	9.0	12.6	0.060	0.086	1.263	300	0.67	1.559	1.549	1.752	1.741	2.683	2.700	
4	3	7.0	0.09	0.09	0.83	0.07	0.07	5.0	5.0	15.7	0.033	0.074	0.468	300	0.50	1.594	1.559	1.872	1.866	2.631	2.683	
5	2	13.0	0.07	0.41	0.46	0.03	0.17	15.0	25.6	7.5	0.036	0.274	0.549	450	0.78	1.400	1.298	1.558	1.562	2.400	2.700	
6	5	28.0	0.23	0.34	0.36	0.08	0.14	17.0	23.6	7.8	0.031	0.245	0.749	450	0.62	1.615	1.440	1.738	1.596	2.470	2.400	
7	6	11.0	0.02	0.02	0.82	0.02	0.02	5.0	5.0	15.7	0.007	0.000	0.401	300	-0.50	1.695	1.750	1.858	1.816	2.725	2.470	
8	6	32.0	0.08	0.09	0.42	0.03	0.04	16.0	16.0	9.6	0.011	0.046	0.234	450	0.02	1.630	1.623	1.784	1.777	2.650	2.470	
9	8	10.0	0.01	0.01	0.86	0.01	0.01	5.0	5.0	15.7	0.004	0.127	0.517	300	1.46	2.066	1.920	2.114	1.968	2.776	2.650	

Rt.148 - Chester (Great Brook) | Number of lines: 9 | Run Date: 12-01-2010

NOTES: Intensity = 68.97 / (Inlet time + 4.70) ^ 0.65; Return period = 10 Yrs.

Inlet Report

Line No	Inlet ID	Q = CIA (cms)	Q carry (cms)	Q capt (cms)	Q byp (cms)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (mm)	L (m)	area (sqm)	L (m)	W (m)	So (m/m)	W (m)	Sw (m/m)	Sx (m/m)	n	Depth (m)	Spread (m)	Depth (m)	Spread (m)	Depr (mm)	
1	STORM MH	0.000	0.000	0.000	0.000	MH	0.0	0.000	0.000	0.000	0.000	Sag	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Off
2	STORM MH	0.000	0.000	0.000	0.000	MH	0.0	0.000	0.000	0.000	0.000	Sag	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Off
3	C C.B. DBL. TYP	0.034	0.000	0.034	0.000	Grate	0.0	0.000	0.580	2.180	0.610	Sag	1.500	0.040	0.020	0.000	0.033	0.833	0.033	0.833	0.000	Off
4	C C.B. DBL. TYP	0.033	0.000	0.033	0.000	Grate	0.0	0.000	0.580	2.180	0.610	Sag	1.500	0.040	0.020	0.000	0.032	0.802	0.032	0.802	0.000	Off
5	C-L C.B.	0.009	0.000	0.009	0.000	Grate	0.0	0.000	0.290	0.480	0.610	Sag	0.610	0.080	0.050	0.000	0.021	0.267	0.021	0.267	0.000	Off
6	C-L C.B.	0.021	0.000	0.021	0.000	Grate	0.0	0.000	0.290	0.480	0.610	Sag	0.610	0.080	0.050	0.000	0.038	0.481	0.038	0.481	0.000	Off
7	C C.B.	0.007	0.000	0.007	0.000	Grate	0.0	0.000	0.000	0.305	0.610	0.005	1.500	0.040	0.020	0.013	0.036	0.900	0.036	0.900	0.000	4
8	C C.B.	0.009	0.000	0.009	0.000	Grate	0.0	0.000	0.290	0.480	0.610	Sag	1.500	0.080	0.050	0.000	0.022	0.269	0.022	0.269	0.000	Off
9	C C.B.	0.004	0.000	0.004	0.000	Grate	0.0	0.000	0.000	0.305	0.610	0.005	1.500	0.040	0.020	0.013	0.028	0.707	0.028	0.707	0.000	7

Rt.148 - Chester (Great Brook) | Number of lines: 9 | Run Date: 12-01-2010

NOTES: Inlet N-Values = 0.016 ; Intensity = 68.97 / (Inlet time + 4.70) ^ 0.65; Return period = 10 Yrs. ; * Indicates Known Q added

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(mm)	(cms)	(m)	(m)	(m)	(sqm)	(m/s)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(sqm)	(m/s)	(m)	(m)	(%)	(%)	(m)	(K)	(m)
1	450	0.070	1.060	1.381	0.321	0.121	0.574	0.017	1.398	n/a	9.4	1.153	1.369	0.216	0.075	0.925	0.044	1.412i	n/a	n/a	-0.029	0.15	n/a
2	450	0.071	1.153	1.374	0.221	0.078	0.910	0.042	1.417	n/a	28.0	1.298	1.485 j	0.187**	0.063	1.134	0.066	1.551i	n/a	n/a	0.068	1.00	n/a
3	300	0.060	1.549	1.741	0.192*	0.048	1.265	0.082	1.823	n/a	1.5	1.559	1.752	0.193**	0.048	1.260	0.081	1.833i	n/a	n/a	-0.071	0.50	n/a
4	300	0.033	1.559	1.866	0.300	0.071	0.460	0.011	1.877	0.097	7.0	1.594	1.872	0.278	0.068	0.476	0.012	1.883	0.084	0.090	0.006	1.00	0.012
5	450	0.036	1.298	1.562	0.264	0.097	0.371	0.007	1.569	0.032	13.0	1.400	1.558	0.158	0.050	0.726	0.027	1.584	0.197	0.115	0.015	0.50	0.013
6	450	0.031	1.440	1.596	0.156	0.049	0.627	0.020	1.616	n/a	28.0	1.615	1.738 j	0.123**	0.035	0.870	0.039	1.777i	n/a	n/a	n/a	1.44	n/a
7	300	0.007	1.750	1.816	0.066*	0.012	0.620	0.020	1.836	0.414	11.0	1.695	1.858	0.163	0.039	0.182	0.002	1.859	0.014	0.214	0.024	1.00	0.002
8	450	0.011	1.623	1.777	0.154	0.048	0.233	0.003	1.780	0.021	32.0	1.630	1.784	0.154	0.048	0.234	0.003	1.786	0.021	0.021	0.007	1.50	0.004
9	300	0.004	1.920	1.968	0.048*	0.007	0.517	0.014	1.981	n/a	10.0	2.066	2.114	0.048**	0.007	0.517	0.014	2.127i	n/a	n/a	n/a	1.00	n/a

Rt.148 - Chester (Great Brook) | Number of lines: 9 | Run Date: 12-01-2010

Notes: * Critical depth assumed.; ** Critical depth.; j-Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
		(m)	(ha)	(ha)	(C)			(min)	(min)	(cm/h)	(cms)	(cms)	(m/s)	(mm)	(%)	(m)	(m)	(m)	(m)	(m)	(m)	
1	End	9.4	0.00	0.61	0.00	0.00	0.35	0.0	25.1	9.3	0.089	0.308	0.978	450	0.99	1.153	1.060	1.364	1.381	2.700	0.000	
2	1	28.0	0.00	0.61	0.00	0.00	0.35	0.0	24.4	9.4	0.091	0.223	1.016	450	0.52	1.298	1.153	1.510	1.456	2.700	2.700	
3	2	1.5	0.11	0.20	0.90	0.10	0.17	9.0	9.0	15.0	0.072	0.086	1.360	300	0.67	1.559	1.549	1.772	1.759	2.683	2.700	
4	3	7.0	0.09	0.09	0.83	0.07	0.07	5.0	5.0	18.0	0.037	0.074	0.527	300	0.50	1.594	1.559	1.916	1.907	2.631	2.683	
5	2	13.0	0.07	0.41	0.46	0.03	0.17	15.0	23.8	9.6	0.046	0.274	0.531	450	0.78	1.400	1.298	1.602	1.606	2.400	2.700	
6	5	28.0	0.23	0.34	0.36	0.08	0.14	17.0	22.2	10.0	0.039	0.245	0.768	450	0.62	1.615	1.440	1.754	1.633	2.470	2.400	
7	6	11.0	0.02	0.02	0.82	0.02	0.02	5.0	5.0	18.0	0.008	0.000	0.423	300	-0.50	1.695	1.750	1.863	1.821	2.725	2.470	
8	6	32.0	0.08	0.09	0.42	0.03	0.04	16.0	16.0	11.8	0.014	0.046	0.237	450	0.02	1.630	1.623	1.807	1.801	2.650	2.470	
9	8	10.0	0.01	0.01	0.86	0.01	0.01	5.0	5.0	18.0	0.004	0.127	0.536	300	1.46	2.066	1.920	2.117	1.971	2.776	2.650	

Rt.148 - Chester (Great Brook) | Number of lines: 9 | Run Date: 12-01-2010

NOTES: Intensity = 186.67 / (Inlet time + 11.60) ^ 0.83; Return period = 25 Yrs.

Inlet Report

Line No	Inlet ID	Q = CIA (cms)	Q carry (cms)	Q capt (cms)	Q byp (cms)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (mm)	L (m)	area (sqm)	L (m)	W (m)	So (m/m)	W (m)	Sw (m/m)	Sx (m/m)	n	Depth (m)	Spread (m)	Depth (m)	Spread (m)	Depr (mm)	
1	STORM MH	0.000	0.000	0.000	0.000	MH	0.0	0.000	0.000	0.000	0.000	Sag	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Off
2	STORM MH	0.000	0.000	0.000	0.000	MH	0.0	0.000	0.000	0.000	0.000	Sag	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Off
3	C C.B. DBL. TYP	0.041	0.000	0.041	0.000	Grate	0.0	0.000	0.580	2.180	0.610	Sag	1.500	0.040	0.020	0.000	0.038	0.940	0.038	0.940	0.000	Off
4	C C.B. DBL. TYP	0.037	0.000	0.037	0.000	Grate	0.0	0.000	0.580	2.180	0.610	Sag	1.500	0.040	0.020	0.000	0.035	0.878	0.035	0.878	0.000	Off
5	C-L C.B.	0.011	0.000	0.011	0.000	Grate	0.0	0.000	0.290	0.480	0.610	Sag	0.610	0.080	0.050	0.000	0.024	0.306	0.024	0.306	0.000	Off
6	C-L C.B.	0.026	0.000	0.026	0.000	Grate	0.0	0.000	0.290	0.480	0.610	Sag	0.610	0.080	0.050	0.000	0.044	0.552	0.044	0.552	0.000	Off
7	C C.B.	0.008	0.000	0.008	0.000	Grate	0.0	0.000	0.000	0.305	0.610	0.005	1.500	0.040	0.020	0.013	0.038	0.948	0.038	0.948	0.000	4
8	C C.B.	0.011	0.000	0.011	0.000	Grate	0.0	0.000	0.290	0.480	0.610	Sag	1.500	0.080	0.050	0.000	0.025	0.309	0.025	0.309	0.000	Off
9	C C.B.	0.004	0.000	0.004	0.000	Grate	0.0	0.000	0.000	0.305	0.610	0.005	1.500	0.040	0.020	0.013	0.030	0.745	0.030	0.745	0.000	7

Rt.148 - Chester (Great Brook) | Number of lines: 9 | Run Date: 12-01-2010

NOTES: Inlet N-Values = 0.016 ; Intensity = 186.67 / (Inlet time + 11.60) ^ 0.83; Return period = 25 Yrs. ; * Indicates Known Q added

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(mm)	(cms)	(m)	(m)	(m)	(sqm)	(m/s)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(sqm)	(m/s)	(m)	(m)	(%)	(%)	(m)	(K)	(m)
1	450	0.089	1.060	1.381	0.321	0.121	0.737	0.028	1.409	n/a	9.4	1.153	1.364 j	0.211**	0.073	1.220	0.076	1.440i	n/a	n/a	-0.044	0.15	n/a
2	450	0.091	1.153	1.456	0.303	0.114	0.797	0.032	1.489	n/a	28.0	1.298	1.510 j	0.212**	0.074	1.235	0.078	1.588i	n/a	n/a	n/a	1.00	n/a
3	300	0.072	1.549	1.759	0.210*	0.053	1.369	0.096	1.855	n/a	1.5	1.559	1.772	0.213**	0.054	1.350	0.093	1.865i	n/a	n/a	-0.083	0.50	n/a
4	300	0.037	1.559	1.907	0.300	0.071	0.527	0.014	1.922	0.127	7.0	1.594	1.916	0.300	0.071	0.527	0.014	1.930	0.127	0.127	0.009	1.00	0.014
5	450	0.046	1.298	1.606	0.308	0.116	0.397	0.008	1.614	0.034	13.0	1.400	1.602	0.202	0.069	0.665	0.023	1.625	0.129	0.081	0.011	0.50	0.011
6	450	0.039	1.440	1.633	0.193	0.065	0.599	0.018	1.651	n/a	28.0	1.615	1.754 j	0.139**	0.042	0.936	0.045	1.799i	n/a	n/a	n/a	1.44	n/a
7	300	0.008	1.750	1.821	0.071*	0.013	0.645	0.021	1.842	0.414	11.0	1.695	1.863	0.168	0.041	0.200	0.002	1.865	0.017	0.215	0.024	1.00	0.002
8	450	0.014	1.623	1.801	0.178	0.058	0.236	0.003	1.804	0.018	32.0	1.630	1.807	0.177	0.058	0.238	0.003	1.810	0.019	0.019	0.006	1.50	0.004
9	300	0.004	1.920	1.971	0.051*	0.008	0.536	0.015	1.986	n/a	10.0	2.066	2.117	0.051**	0.008	0.536	0.015	2.132i	n/a	n/a	n/a	1.00	n/a

Rt.148 - Chester (Great Brook) | Number of lines: 9 | Run Date: 12-01-2010

Notes: * Critical depth assumed.; ** Critical depth.; j-Line contains hyd. jump.

AGC

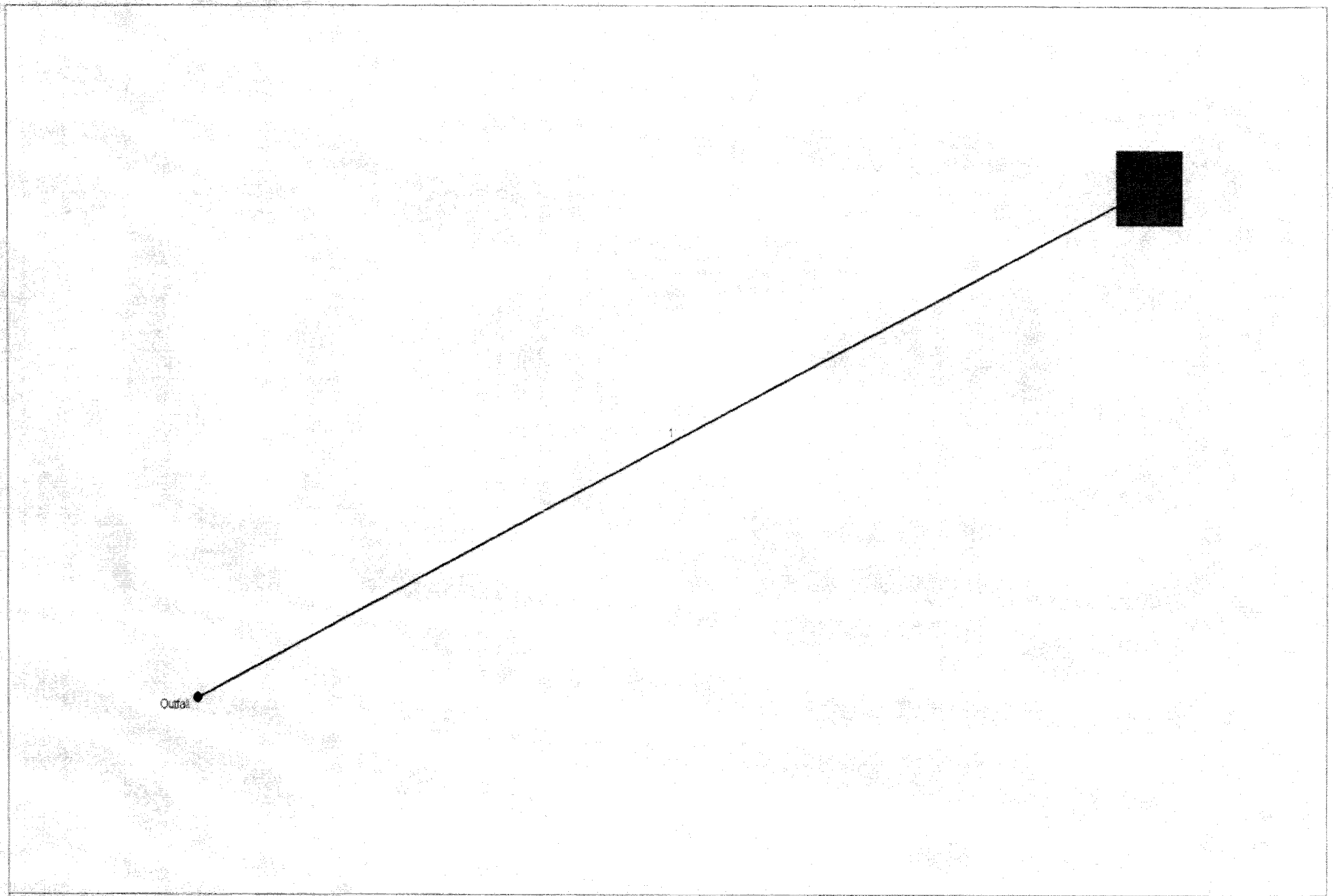
Water St.

Middlesex County, Connecticut

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (m)	Slope (m/m)	Mannings's n	End Area (sq m)	Wetted Perimeter (m)	Velocity (m/sec)	Travel Time (hr)
1+092 left							
SHEET	10.91	0.0075	0.150				0.105
SHALLOW	52.45	0.0075	0.025				0.027
SHALLOW	16.31	0.0050	0.025				0.010
					Time of Concentration		0.142
1+078 left							
SHEET	30.48	0.0075	0.150				0.238
					Time of Concentration		0.238
1+047 left							
SHEET	30.00	0.0075	0.150				0.235
SHALLOW	58.81	0.0075	0.050				0.038
					Time of Concentration		0.273
1+015 left							
SHEET	30.00	0.0075	0.150				0.235
SHALLOW	31.87	0.0075	0.050				0.021
					Time of Concentration		0.256
System 2							
SHEET	30.00	0.0075	0.011				0.029
SHALLOW	49.38	0.0075	0.025				0.026
					Time of Concentration		0.100

Hydraflow Plan View



Rt.148 - Chester (System 2)	No. Lines: 1	12-01-2010

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(m)	Incr (ha)	Total (ha)	(C)	Incr	Total	Inlet (min)	Syst (min)	(cm/h)	(cms)	(cms)	(m/s)	Size (mm)	Slope (%)	Up (m)	Dn (m)	Up (m)	Dn (m)	Up (m)	Dn (m)	
1	End	6.0	0.10	0.10	0.90	0.09	0.09	5.0	5.0	15.7	0.039	0.171	1.026	300	2.67	1.760	1.600	1.915	1.765	2.200	1.600	

Rt.148 - Chester (System 2) | Number of lines: 1 | Run Date: 01-19-2011

NOTES: Intensity = 68.97 / (Inlet time + 4.70) ^ 0.65; Return period = 10 Yrs.

Inlet Report

Line No	Inlet ID	Q = CIA (cms)	Q carry (cms)	Q capt (cms)	Q byp (cms)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (mm)	L (m)	area (sqm)	L (m)	W (m)	So (m/m)	W (m)	Sw (m/m)	Sx (m/m)	n	Depth (m)	Spread (m)	Depth (m)	Spread (m)	Depr (mm)	
1		0.039	0.000	0.039	0.000	Grate	152.4	1.829	0.186	1.219	0.610	Sag	0.610	0.080	0.050	0.013	0.013	0.161	0.045	0.340	50.800	Off

Rt.148 - Chester (System 2) | Number of lines: 1 | Run Date: 01-19-2011

NOTES: Inlet N-Values = 0.016 ; Intensity = 68.97 / (Inlet time + 4.70) ^ 0.65; Return period = 10 Yrs. ; * Indicates Known Q added

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (m)	HGL elev (m)	Depth (m)	Area (sqm)	Vel (m/s)	Vel head (m)	EGL elev (m)	Sf (%)		Invert elev (m)	HGL elev (m)	Depth (m)	Area (sqm)	Vel (m/s)	Vel head (m)	EGL elev (m)	Sf (%)	Ave Sf (%)	Enrgy loss (m)		
	(mm)	(cms)									(m)											(K)	(m)
1	300	0.039	1.600	1.765	0.165	0.040	0.984	0.049	1.814	n/a	6.0	1.760	1.915 j	0.155**	0.037	1.068	0.058	1.973i	n/a	n/a	n/a	1.00	n/a

Rt.148 - Chester (System 2) | Number of lines: 1 | Run Date: 01-19-2011

Notes: ; ** Critical depth.; j-Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(m)	Incr (ha)	Total (ha)	(C)	Incr	Total	Inlet (min)	Syst (min)	(cm/h)	(cms)	(cms)	(m/s)	Size (mm)	Slope (%)	Up (m)	Dn (m)	Up (m)	Dn (m)	Up (m)	Dn (m)	
1	End	6.0	0.10	0.10	0.90	0.09	0.09	5.0	5.0	18.0	0.045	0.171	1.124	300	2.67	1.760	1.600	1.925	1.765	2.200	1.600	

Rt.148 - Chester (System 2) | Number of lines: 1 | Run Date: 01-19-2011

NOTES: Intensity = 186.67 / (Inlet time + 11.60) ^ 0.83; Return period = 25 Yrs.

Inlet Report

Line No	Inlet ID	Q = CIA (cms)	Q carry (cms)	Q capt (cms)	Q byp (cms)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (mm)	L (m)	area (sqm)	L (m)	W (m)	So (m/m)	W (m)	Sw (m/m)	Sx (m/m)	n	Depth (m)	Spread (m)	Depth (m)	Spread (m)	Depr (mm)	
1		0.045	0.000	0.045	0.000	Grate	152.4	1.829	0.186	1.219	0.610	Sag	0.610	0.080	0.050	0.013	0.017	0.214	0.050	0.373	50.800	Off

Rt.148 - Chester (System 2) | Number of lines: 1 | Run Date: 01-19-2011

NOTES: Inlet N-Values = 0.016 ; Intensity = 186.67 / (Inlet time + 11.60) ^ 0.83; Return period = 25 Yrs. ; * Indicates Known Q added

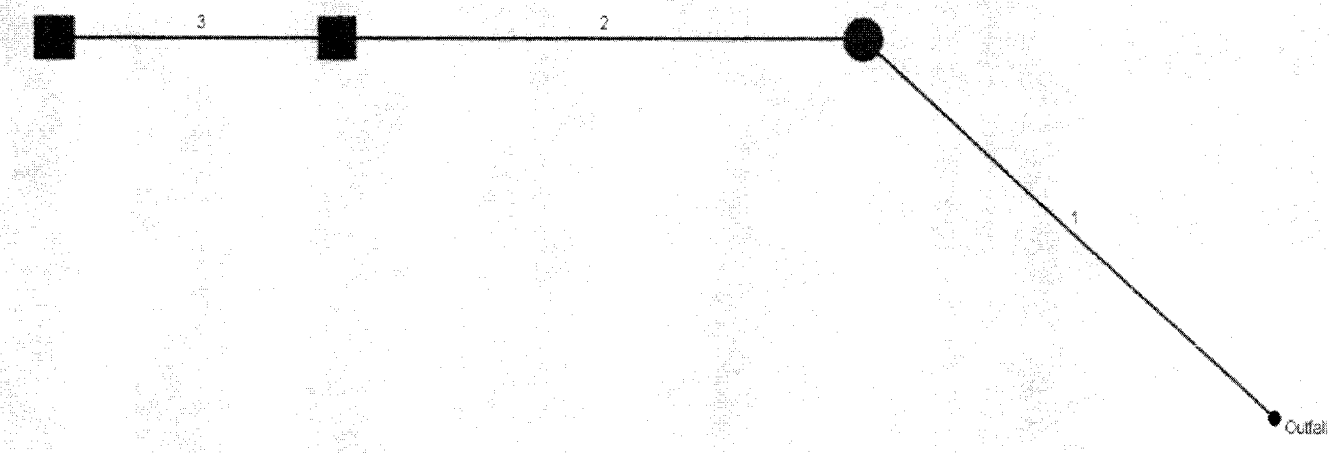
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (m)	HGL elev (m)	Depth (m)	Area (sqm)	Vel (m/s)	Vel head (m)	EGL elev (m)	Sf (%)		Invert elev (m)	HGL elev (m)	Depth (m)	Area (sqm)	Vel (m/s)	Vel head (m)	EGL elev (m)	Sf (%)	Ave Sf (%)	Enrgy loss (m)		
	(mm)	(cms)									(m)											(K)	(m)
1	300	0.045	1.600	1.765	0.165	0.040	1.124	0.064	1.830	n/a	6.0	1.760	1.925	0.165**	0.040	1.124	0.064	1.990i	n/a	n/a	n/a	1.00	n/a

Rt.148 - Chester (System 2) | Number of lines: 1 | Run Date: 01-19-2011

Notes: ; ** Critical depth.

Hydraflow Plan View



Rt.148 - Chester (System 3)	No. Lines: 3	12-01-2010

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(m)	Incr (ha)	Total (ha)	(C)	Incr	Total	Inlet (min)	Syst (min)	(cm/h)	(cms)	(cms)	(m/s)	Size (mm)	Slope (%)	Up (m)	Dn (m)	Up (m)	Dn (m)	Up (m)	Dn (m)	
1	End	5.3	0.00	0.02	0.00	0.00	0.01	0.0	10.6	11.7	0.002	0.008	0.554	100	1.45	1.977	1.900	2.026	1.954	2.930	1.900	
2	1	5.2	0.01	0.02	0.35	0.00	0.01	10.0	10.3	11.8	0.002	0.007	0.489	100	1.00	2.029	1.977	2.079	2.047	2.800	2.930	
3	2	2.8	0.01	0.01	0.35	0.00	0.00	10.0	10.0	12.0	0.001	0.008	0.329	100	1.32	2.066	2.029	2.102	2.100	2.800	2.800	

Rt.148 - Chester (System 3) | Number of lines: 3 | Run Date: 12-01-2010

NOTES: Intensity = 68.97 / (Inlet time + 4.70) ^ 0.65; Return period = 10 Yrs.

Inlet Report

Line No	Inlet ID	Q = CIA (cms)	Q carry (cms)	Q capt (cms)	Q byp (cms)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (mm)	L (m)	area (sqm)	L (m)	W (m)	So (m/m)	W (m)	Sw (m/m)	Sx (m/m)	n	Depth (m)	Spread (m)	Depth (m)	Spread (m)	Depr (mm)	
1		0.000	0.000	0.000	0.000	MH	0.0	0.000	0.000	0.000	0.000	Sag	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Off
2		0.001	0.000	0.001	0.000	Grate	0.0	0.000	0.071	0.300	0.300	Sag	0.610	0.080	0.050	0.000	0.008	0.106	0.008	0.106	0.000	Off
3		0.001	0.000	0.001	0.000	Grate	0.0	0.000	0.071	0.300	0.300	Sag	0.610	0.080	0.050	0.000	0.008	0.106	0.008	0.106	0.000	Off

Rt.148 - Chester (System 3) | Number of lines: 3 | Run Date: 12-01-2010

NOTES: Inlet N-Values = 0.016 ; Intensity = 68.97 / (Inlet time + 4.70) ^ 0.65; Return period = 10 Yrs. ; * Indicates Known Q added

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (m)	HGL elev (m)	Depth (m)	Area (sqm)	Vel (m/s)	Vel head (m)	EGL elev (m)	Sf (%)		Invert elev (m)	HGL elev (m)	Depth (m)	Area (sqm)	Vel (m/s)	Vel head (m)	EGL elev (m)	Sf (%)	Ave Sf (%)	Enrgy loss (m)		
	(mm)	(cms)									(m)											(K)	(m)
1	100	0.002	1.900	1.954	0.054	0.004	0.524	0.014	1.968	n/a	5.3	1.977	2.026 j	0.049**	0.004	0.585	0.017	2.044i	n/a	n/a	n/a	0.69	n/a
2	100	0.002	1.977	2.047	0.070	0.006	0.390	0.008	2.055	n/a	5.2	2.029	2.079 j	0.050**	0.004	0.588	0.018	2.096i	n/a	n/a	n/a	0.50	n/a
3	100	0.001	2.029	2.100	0.071	0.006	0.196	0.002	2.102	n/a	2.8	2.066	2.102 j	0.036**	0.003	0.463	0.011	2.113i	n/a	n/a	0.000	1.00	n/a

Rt.148 - Chester (System 3) | Number of lines: 3 | Run Date: 12-01-2010

Notes: ; ** Critical depth.; j-Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(m)	Incr (ha)	Total (ha)	(C)	Incr	Total	Inlet (min)	Syst (min)	(cm/h)	(cms)	(cms)	(m/s)	Size (mm)	Slope (%)	Up (m)	Dn (m)	Up (m)	Dn (m)	Up (m)	Dn (m)	
1	End	5.3	0.00	0.02	0.00	0.00	0.01	0.0	10.5	14.2	0.003	0.008	0.629	100	1.45	1.977	1.900	2.031	1.954	2.930	1.900	
2	1	5.2	0.01	0.02	0.35	0.00	0.01	10.0	10.3	14.3	0.003	0.007	0.522	100	1.00	2.029	1.977	2.084	2.057	2.800	2.930	
3	2	2.8	0.01	0.01	0.35	0.00	0.00	10.0	10.0	14.5	0.001	0.008	0.346	100	1.32	2.066	2.029	2.106	2.109	2.800	2.800	

Rt.148 - Chester (System 3) | Number of lines: 3 | Run Date: 12-01-2010

NOTES: Intensity = 186.67 / (Inlet time + 11.60) ^ 0.83; Return period = 25 Yrs.

Inlet Report

Line No	Inlet ID	Q = CIA (cms)	Q carry (cms)	Q capt (cms)	Q byp (cms)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (mm)	L (m)	area (sqm)	L (m)	W (m)	So (m/m)	W (m)	Sw (m/m)	Sx (m/m)	n	Depth (m)	Spread (m)	Depth (m)	Spread (m)	Depr (mm)	
1		0.000	0.000	0.000	0.000	MH	0.0	0.000	0.000	0.000	0.000	Sag	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Off
2		0.001	0.000	0.001	0.000	Grate	0.0	0.000	0.071	0.300	0.300	Sag	0.610	0.080	0.050	0.000	0.010	0.120	0.010	0.120	0.000	Off
3		0.001	0.000	0.001	0.000	Grate	0.0	0.000	0.071	0.300	0.300	Sag	0.610	0.080	0.050	0.000	0.010	0.120	0.010	0.120	0.000	Off

Rt.148 - Chester (System 3) | Number of lines: 3 | Run Date: 12-01-2010

NOTES: Inlet N-Values = 0.016 ; Intensity = 186.67 / (Inlet time + 11.60) ^ 0.83; Return period = 25 Yrs. ; * Indicates Known Q added

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(mm)	(cms)	(m)	(m)	(m)	(sqm)	(m/s)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(sqm)	(m/s)	(m)	(m)	(%)	(%)	(m)	(K)	(m)
1	100	0.003	1.900	1.954	0.054	0.004	0.629	0.020	1.975	n/a	5.3	1.977	2.031	0.054**	0.004	0.629	0.020	2.052i	n/a	n/a	n/a	0.69	n/a
2	100	0.003	1.977	2.057	0.080	0.007	0.414	0.009	2.065	n/a	5.2	2.029	2.084 j	0.055**	0.004	0.631	0.020	2.104i	n/a	n/a	n/a	0.50	n/a
3	100	0.001	2.029	2.109	0.080	0.007	0.208	0.002	2.111	n/a	2.8	2.066	2.106 j	0.040**	0.003	0.484	0.012	2.118i	n/a	n/a	-0.006	1.00	n/a

Rt.148 - Chester (System 3) | Number of lines: 3 | Run Date: 12-01-2010

Notes: ; ** Critical depth.; j-Line contains hyd. jump.

Attachment I: Flood Contingency Plan

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

Construction Flood Contingency Operations Plan

There are no construction activities proposed that would pose a hazard to human life, health or property during significant precipitation events. The Contractor will be prohibited from storing any equipment or materials within wetland and watercourse areas of the floodplain of Great Brook.

Prior to commencement of any construction, the Contractor will submit to the Engineer for approval, a written Flood Contingency Plan. The plan will include the following:

- A description of the means by which the Contractor will remove from within the floodplain, all material, equipment and personnel prior to a predicted major storm. A major storm shall be defined as a storm predicted by the NOAA weather service with warnings of flooding, severe thunderstorms, or similarly severe weather conditions or effects.
- Provisions for notifying workers engaged in work on or near the bridge of an impending storm.
- Provisions for securing work in progress prior to a major storm.

All operations will be under the jurisdiction of Mr. Carl E. Nelson, P.E., during construction. He can be contacted at (860) 823-3204.

Post Construction Flood Contingency Operations Plan

None needed. The proposed structure will pass the 100-year design storm.

At the completion of construction the CTDOT Maintenance Department will take the responsibility for the bridge. All operations will be under the jurisdiction of Mr. John S. DeCastro. He can be contacted at (860) 823-3211.

Attachment Q: Other Information

Inland Wetlands and Watercourses
Flood Management Certification

Applicant: State of Connecticut, Department of Transportation
Project No. 26-118 (Constr.), 170-1475 (P.E.)
Replacement of Bridge No. 02695 in Chester
Route 148 over Great Brook

List of Attachments

- Letter from the State of Connecticut, Connecticut Historical Commission dated June 11, 2001, with a determination that the project will have no effect on historic, architectural, or archaeological resources.
- CTDEP Inland Fisheries Division Coordination Transmittal Memorandum from Mr. Brian D. Murphy of the State of Connecticut Department of Environmental Protection, Bureau of Natural Resources-Inland Fisheries Division dated September 28, 2010.
- Email from Mr. Brian D. Murphy of the State of Connecticut Department of Environmental Protection, Bureau of Natural Resources-Inland Fisheries Division dated September 28, 2010 to Ms. Kimberly C. Lesay.
- Letter from Mr. Brian D. Murphy of the State of Connecticut Department of Environmental Protection, Bureau of Natural Resources-Inland Fisheries Division dated April 2, 2004 to Ms. Cheryl Chase.
- NDDB Review Request Form.
- Photos of the existing bridge site.

STATE OF CONNECTICUT

CONNECTICUT HISTORICAL COMMISSION

June 11, 2001

Mr. Thomas M. Ryan
Close, Jensen and Miller
1137 Silas Deane Highway
Wethersfield, CT 06109-4201

Subject: Route 148 Bridge (#02695)
Chester, CT
CONNDOT #170-1475

Dear Mr. Ryan:

The State Historic Preservation Office has reviewed the above-named project. This office expects that the proposed undertaking will have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places.

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

We recommend that the responsible agency provide concerned citizens with the opportunity to review and comment upon the proposed undertaking in accordance with the National Historic Preservation Act of 1966 and the Connecticut Environmental Policy Act.

For further information please contact Dr. David A. Poirier, Staff Archaeologist.

Sincerely,

Dawn Maddox
Deputy State Historic
Preservation Officer

cc: Mr. Ralph Steadham/CONNDOT

TEL: (860) 566-3005 e-mail: cthist@neca.com *FAX: (860) 566-5078*
59 SOUTH PROSPECT ST. - HARTFORD, CONN 06106 - 1901

CTDEP INLAND FISHERIES DIVISION COORDINATION TRANSMITTAL MEMORANDUM

DOT Project #: 26-118 **Town:** Chester **Bridge #:** 2695

Waterway: Great Brook **Drainage Basin Name & Number:** Chester Creek 4017

Project Description / Scope of work: The proposed replacement consists of two precast concrete box culverts with cast-in-place reinforced concrete wingwalls.

Initial Coordination

The following information is provided as required:

Submittal Date: _____
Plan Date: _____

____ Legible location map with project site clearly marked.
____ Description of scope of work and if developed, pertinent ½ scale plans as deemed relevant.
____ Area photographs.

To be completed by CTDEP Inland Fisheries Division and returned to DOT Environmental Planning Division

____ Affect of proposal on our program interests is negligible.No further review is warranted.
____ Additional information is required, a list of requested information is attache
____ Comments and recommendations are attached.

Initials _____
Date: _____

Structure Type Agreement

The following information is provided as required:

Plan date: _____

____ Copies of previous correspondence from Fisheries Division.
____ If previous recommendations cannot be incorporated, provide narrative explaining why.
____ ½ scale plans of pertinent plan sheets including plan view, elevation view, profile and details as deemed relevant.

To be completed by CTDEP Inland Fisheries Division and returned to DOT Environmental Planning Division

Initials BDM
Date: 9/28/10

x DEP Fisheries agrees to the structure type presented in the plans.
____ Comments and recommendations are attached.

Final Fisheries Sign-Off

____ ***Check here if project is not FM MOU eligible and will be finalized through DEP IWRD.***

The following information is provided as required:

Plan date: 8-10

X Copies of previous correspondence from Fisheries Division.
____ If previous recommendations cannot be incorporated, provide narrative explaining why.
X ½ scale plans of pertinent plan sheets including plan view, elevation view, profile and details as deemed relevant.

To be completed by CTDEP Inland Fisheries Division and returned to DOT Environmental Planning Division

x DEP Fisheries comments have been adequately incorporated into project plans.
____ The attached Special Conditions must be incorporated into the contract language.

Brian D. Murphy
DEP Fisheries Biologist

9/28/2010
Date

Rebecca Ruitto

From: Aija Zeidenbergs
Sent: Tuesday, September 28, 2010 12:01 PM
To: Rebecca Ruitto; E. Allen Randall
Subject: FW: State Project No. 26-118, Bridge No. 02695, Route 148 over Great Brook in Chester
Attachments: FisheriesCoordinationMemoProj.26-118.xlsx

Importance: Low

fyi

From: Murphy, Brian [mailto:Brian.Murphy@ct.gov]
Sent: Tuesday, September 28, 2010 12:00 PM
To: Lesay, Kimberly C
Cc: Aija Zeidenbergs; Johnson, Mark
Subject: RE: State Project No. 26-118, Bridge No. 02695, Route 148 over Great Brook in Chester
Importance: Low

Hi Kim,

I have no further comments regarding this project. All prior recommendations have been incorporated into the project design.
Mark, this project may also be permitted through OLISP.

Regards,
Brian D. Murphy, Senior Fisheries Habitat Biologist
CTDEP Inland Fisheries Division
Habitat Conservation and Enhancement Program
209 Hebron Road
Marlborough, CT 06447
Phone:860-295-9523
Fax: 860-344-2941
brian.murphy@ct.gov

From: Lesay, Kimberly C
Sent: Monday, September 20, 2010 3:50 PM
To: Murphy, Brian
Cc: 'Aija Zeidenbergs'
Subject: FW: State Project No. 26-118, Bridge No. 02695, Route 148 over Great Brook in Chester

Brian - for another round of review - thank you! Kim

Kimberly Lesay
Transportation Planner II
DOT Environmental Planning Division
Bureau of Policy and Planning
Kimberly.Lesay@ct.gov
phone (860) 594-2933

From: Aija Zeidenbergs [mailto:azeidenbergs@cjmpc.com]
Sent: Monday, September 20, 2010 2:41 PM
To: Lesay, Kimberly C
Cc: Rebecca Ruitto; E. Allen Randall
Subject: FW: State Project No. 26-118, Bridge No. 02695, Route 148 over Great Brook in Chester

Hi Kim,

Please disregard the previous email attachments I sent earlier in the day. They did not contain the updated plans. Attached is the current information to be forwarded to DEP Fisheries for review.

Sorry for the confusion.

Thank you,
Aija

From: Aija Zeidenbergs
Sent: Monday, September 20, 2010 9:35 AM
To: 'Lesay, Kimberly C'
Cc: Rebecca Ruitto; E. Allen Randall
Subject: State Project No. 26-118, Bridge No. 02695, Route 148 over Great Brook in Chester

Hi Kim,

Attached are files containing a Fisheries Transmittal memo and supporting documentation to be forwarded to Brian Murphy for his final review. We've attached his initial review comments as well as our responses.

Let me know if you need additional information.

Thank you,
Aija

Aija Zeidenbergs
Environmental Coordinator

Close, Jensen and Miller, P.C.
Phone: (860)-563-9375 EXT. 263
Fax: (860)-721-1802
Email: azeidenbergs@cjmpc.com

Basin: 4107

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
Inland Fisheries Division
Habitat Conservation and Enhancement Program
Eastern District Headquarters
209 Hebron Road
Marlborough, CT 06447
Tel: (860)295-9523

TO: Cheryl Chase, Civil Engineer III, IWRD

FROM: Brian D. Murphy, Senior Fisheries Biologist

DATE: April 2, 2004

SUBJECT: IW2004GP03, Great Brook, Chester, Culvert Replacement

---

I have had an opportunity to review application materials associated with IW2004GP03 involving the installation of twin 10 ft. W by 6 ft. H concrete box culverts within Great Brook, Chester at the Route 148 crossing. Project activities are not expected to alter existing streambed elevations. The streambed will be excavated down 2 feet in depth to set the boxes on 1 ft. in depth granular fill. The boxes will be filled with 1 ft. in depth surplus excavated stream materials.

Preliminary comments on this project were provided to the DOT's consultant, refer to February 28, 1996 correspondence from Brian Murphy, DEP to Brian Kuta, CLM, which were included in the permit application materials.

This project as presently designed will ensure fish passage through this section of stream. Great Brook supports a mixed coldwater/warmwater fish community and is annually stocked in upstream areas by the Inland Fisheries Division with adult brook trout. The brook also supports anadromous fish runs of river herring (alewife and blueback herring) and sea lamprey. Instream work as related to the rehabilitation of the bridge could possibly disrupt upstream migration of anadromous fishes. Given this critical location and potential construction related impacts to migratory fishes, the following recommendations are provided to protect the integrity of anadromous fish runs and avoid upstream migratory conflicts.

(1) The proposed water handling plan, stage II, shows the installation of what appears to be a sheetpile cofferdam in which the entire stream width of Great Brook will be blocked with flows being bypassed into a 48 inch temporary pipe. As presently designed, this cofferdam will completely block upstream passage of anadromous fish if in place during the March 1 to June 30 migratory period. It is requested that the water handling plan be revised such that the main stream channel is not completely blocked. Perhaps a plan, which alternates bypass flow between the two 10 ft. wide concrete culverts, should be investigated.

(2) A seasonal timeframe prohibition is recommended to protect anadromous fish migrations that shall prohibit all "unconfined" instream work from March 1 to June 30, inclusive. The purpose of this prohibition is to prevent interference with anadromous fish migrations from elevated suspended sediment levels.

(3) Noise levels associated with underwater pile driving can be transmitted across the width of a stream resulting in the alteration or deterrence of upstream migration. Migratory delays may have deleterious effects on spawning success and ultimately, population levels. It is recommended that driving of any Steel H-piles within cofferdams shall be limited to no more than 12 hours per day during the March 1 to June 30 migratory period. This temporal restriction will ensure for periods of undisturbed migration past the project area.

Albeit there currently is a very narrow and limited vegetated riparian zone along Great Brook, plans do not show the reestablishment of vegetation along the edges of Great Brook. It is recommended that a planting plan be developed for the site involving the installation of native shrubs and trees along riparian areas disturbed by construction activities.

CC. P. Aarrestad
S. Gephard

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Natural Resources
Wildlife Division
79 Elm Street, Sixth Floor
Hartford, CT 06106
Natural Diversity Data Base

September 30, 2010

Mr. Mark W. Alexander
DOT, Environmental Planning
2800 Berlin Turnpike
Newington, CT 06131

Re: Proposed Project No. 26-118, Replacement of Bridge No. 02695, Route 148 over Great Brook, Chester, CT

Dear Mr. Alexander:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for proposed Project No. 26-118, replacement of bridge no. 02695, Route 148 over Great Brook, Chester, CT. According to our information, there are no extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur on this property.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Environmental Protection's Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3011. Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Elaine Hinsch

Elaine Hinsch
Program Specialist II
Cc: NDDB File # 18050

DMM/hpw

Bridge No.	**02695**	**Inspected by:**	**MARK SILVERIO**
Town:	**CHESTER**	**Inspected by:**	**ERIC FINN**
Feature Carried:	**ROUTE 148**	**Date Inspected:**	**4/27/10**
Feature Crossed:	**GREAT BROOK**	**Project No.:**	

Photo # 1 : General View, Wearing surface.

Photo # 2 : General View, Abutment # 1.

Bridge No.	**02695**	**Inspected by:**	**MARK SILVERIO**
Town:	**CHESTER**	**Inspected by:**	**ERIC FINN**
Feature Carried:	**ROUTE 148**	**Date Inspected:**	**4/27/10**
Feature Crossed:	**GREAT BROOK**	**Project No.:**	

Photo # 3 : General View, Abutment # 2.

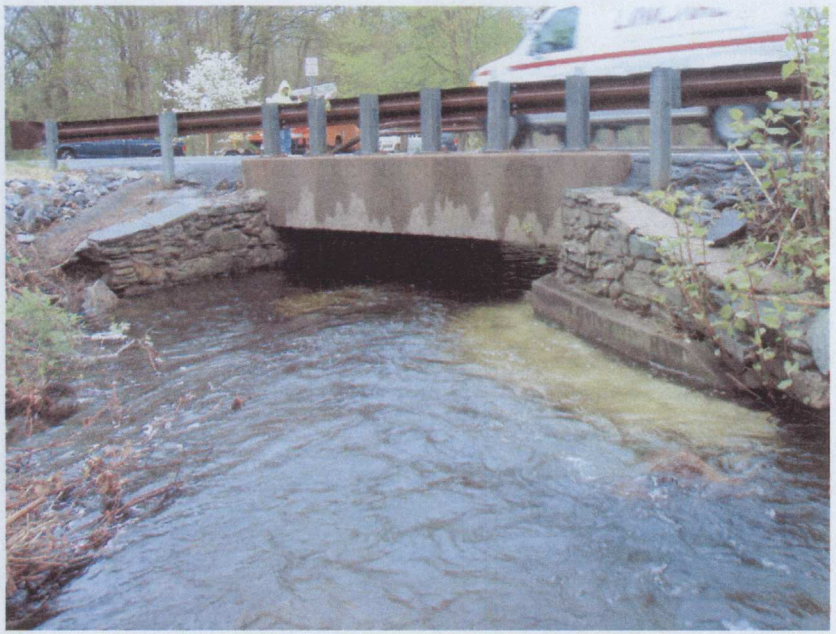


Photo # 4 : General View, Inlet elevation. (North)

Bridge No.	**02695**	**Inspected by:**	**MARK SILVERIO**
Town:	**CHESTER**	**Inspected by:**	**ERIC FINN**
Feature Carried:	**ROUTE 148**	**Date Inspected:**	**4/27/10**
Feature Crossed:	**GREAT BROOK**	**Project No.:**	

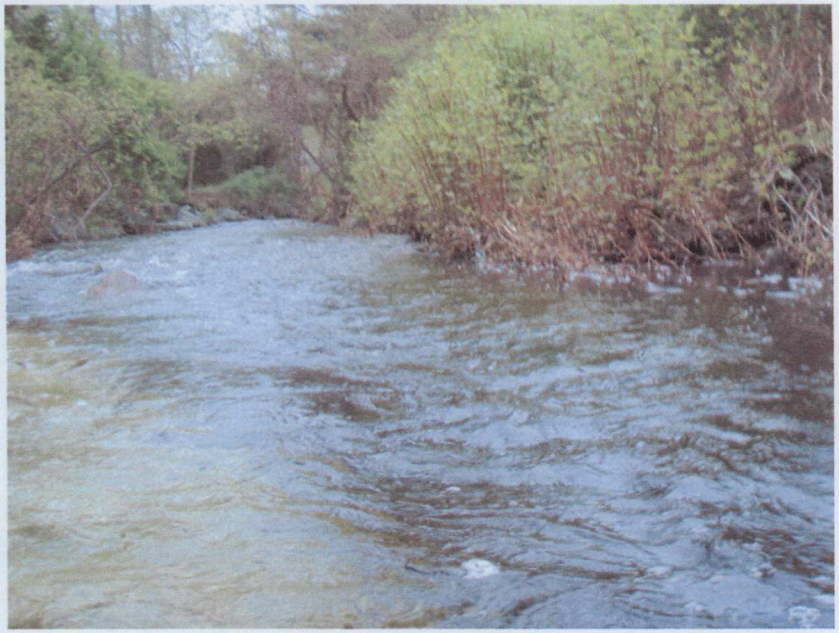


Photo # 5 : General View, Looking upstream from the inlet.

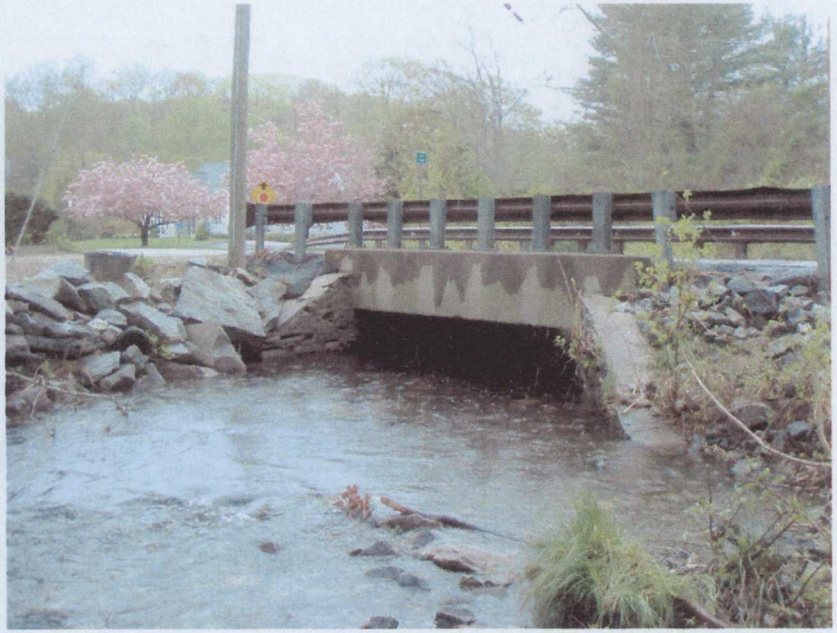


Photo # 6 : General View, Outlet elevation. (South)

Bridge No.	**02695**	**Inspected by:**	**MARK SILVERIO**
Town:	**CHESTER**	**Inspected by:**	**ERIC FINN**
Feature Carried:	**ROUTE 148**	**Date Inspected:**	**4/27/10**
Feature Crossed:	**GREAT BROOK**	**Project No.:**	

Photo # 7 : General View, Looking downstream from the outlet.

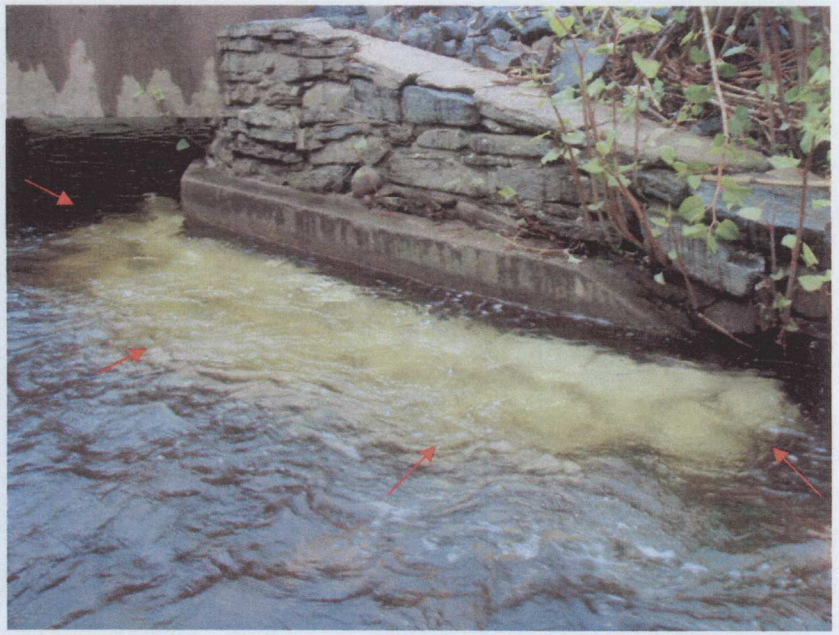


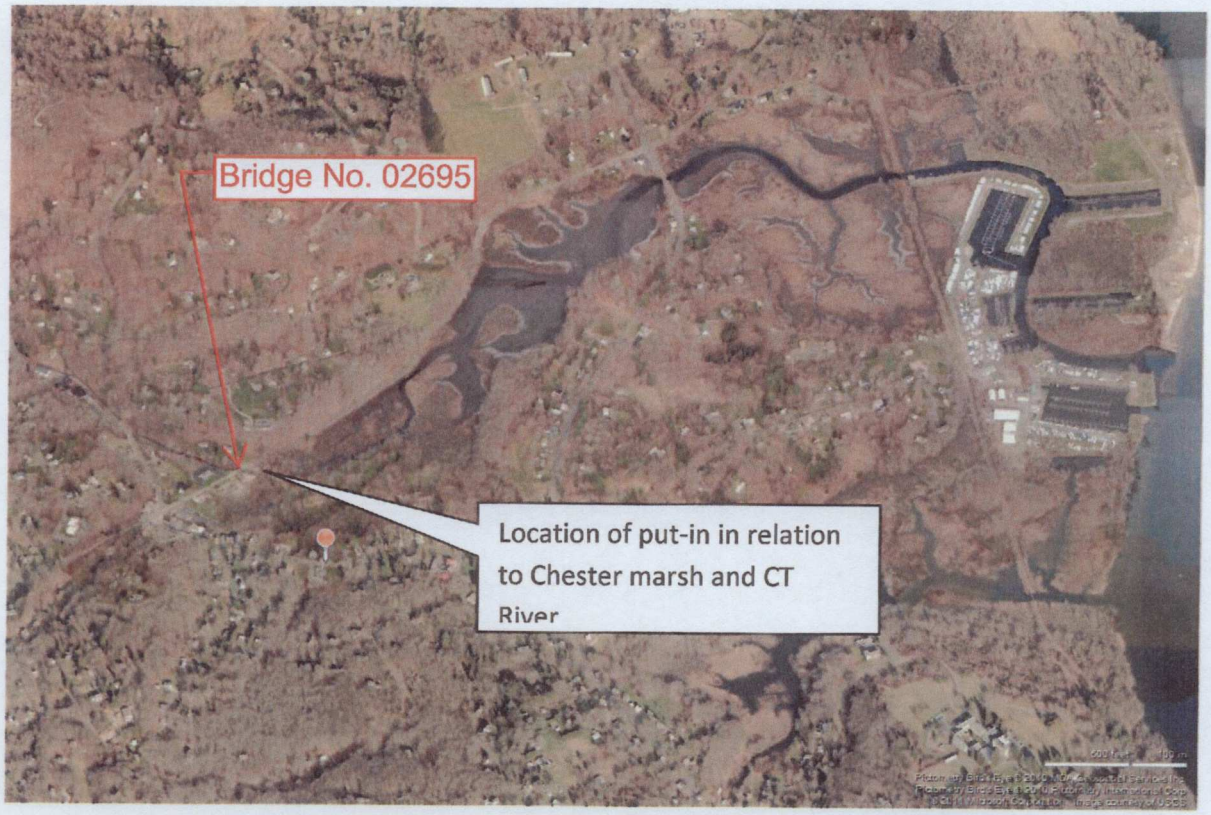
Photo # 8 : Repairs made to the northwest wingwall.

Bridge No.	**02695**	**Inspected by:**	**MARK SILVERIO**
Town:	**CHESTER**	**Inspected by:**	**ERIC FINN**
Feature Carried:	**ROUTE 148**	**Date Inspected:**	**4/27/10**
Feature Crossed:	**GREAT BROOK**	**Project No.:**	

Photo # 9 : General View, Looking eastbound from the west approach.

Photo # 10 : General View, Looking westbound from the east approach.


Bridge No. 02695
Limited parking adjacent to sign for conservation area
Put-in along Chester Creek, near picnic table


Bridge No. 02695
Location of put-in in relation to Chester marsh and CT River

General Decision Number: CT100001 10/14/2011 CT1

Superseded General Decision Number: CT20080001

State: Connecticut

Construction Type: Highway

Counties: Fairfield, Litchfield, Middlesex, New Haven, Tolland and Windham Counties in Connecticut.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/23/2010
2	04/30/2010
3	05/07/2010
4	06/04/2010
5	07/02/2010
6	07/16/2010
7	07/23/2010
8	07/30/2010
9	08/20/2010
10	10/08/2010
11	11/05/2010
12	04/22/2011
13	06/03/2011
14	06/10/2011
15	06/17/2011
16	07/08/2011
17	10/07/2011
18	10/14/2011

BRCT0001-004 10/03/2011

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, PLASTERERS AND STONE MASONS	$ 32.50	23.55

CARP0024-006 05/02/2011

LITCHFIELD COUNTY
Harwinton, Plymouth, Thomaston, Watertown
MIDDLESEX COUNTY
NEW HAVEN COUNTY
Beacon Falls, Bethany, Branford, Cheshire, East Haven, Guilford, Hamden. Madison, Meriden, Middlebury, Naugatuck, New Haven, North Branford, North Haven, Orange (east of Orange Center Road and north of Route 1, and north of Route 1 and east of the Oyster River), Prospect, Southbury, Wallingford, Waterbury, West Haven, Wolcott, Woodbridge
TOLLAND COUNTY
Andover, Columbia, Coventry, Hebron, Mansfield, Union, Willington
WINDHAM COUNTY

	Rates	Fringes
Carpenters:		
Carpenters, Piledrivers	$ 29.11	20.29
Diver Tenders	$ 29.11	20.29
Divers	$ 37.57	20.29

CARP0043-004 05/02/2011

	Rates	Fringes
Carpenters: (TOLLAND COUNTY Bolton, Ellington, Somers, Tolland, Vernon)		
CARPENTERS, PILEDRIVERS	$ 29.11	20.29
DIVER TENDERS	$ 29.11	20.29
DIVERS	$ 37.57	20.29

CARP0210-002 05/02/2011

	Rates	Fringes
Carpenters:		
CARPENTERS, PILEDRIVERS	$ 29.11	20.29
DIVER TENDERS	$ 29.11	20.29
DIVERS	$ 37.57	20.29

FAIRFIELD COUNTY

Bethel, Bridgeport, Brookfield, Danbury, Darien, Easton, Fairfield, Greenwich, Monroe, New Canaan, New Fairfield, Newtown, Norwalk, Redding, Ridgefield, Shelton, Sherman, Stamford, Stratford, Trumbull, Weston, Westport, Wilton;

LITCHFIELD COUNTY

Barkhamstead, Bethlehem, Bridgewater, Canaan, Colebrook, Cornwall, Goshen, Kent, Litchfield, Morris, New Hartford, New Milford, Norfolk, North Canaan, Roxbury, Salisbury, Sharon, Torrington, Warren, Washington, Winchester, Woodbury;

NEW HAVEN COUNTY

Ansonia, Derby, Milford, Orange (west of Orange Center Road and south of Route 1 and west of the Oyster River), Oxford, Seymour;

ELEC0003-002 05/08/2008

	Rates	Fringes
Electricians		
FAIRFIELD COUNTY		
Darien, Greenwich, New Canaan, Stamford	$ 44.75	30.42

ELEC0035-001 06/01/2011

	Rates	Fringes
Electricians:		
MIDDLESEX COUNTY (Cromwell, Middlefield, Middleton and Portland); TOLLAND COUNTY; WINDHAM COUNTY	$ 36.40	21.31

ELEC0090-002 06/01/2011

	Rates	Fringes
Electricians:	$ 35.70	21.52

LITCHFIELD COUNTY

Plymouth Township;

MIIDDLESEX COUNTY

Chester, Clinton, Deep River, Durham, East Haddam, East Hampton, Essex, Haddam, Killingworth, Old Saybrook, Westbrook;

NEW HAVEN COUNTY

All Townships excluding Beacon Falls, Middlebury,Milford, Naugatuck, Oxford, Prospect, Seymour, Southbury, Waterbury and Wolcott.

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* ELEC0488-002 06/01/2011

	Rates	Fringes
Electricians	$ 35.10	22.26

FAIRFIELD COUNTY

Bethel, Bridgeport, Brookfield, Danbury, Easton, Fairfield, Monroe, New Fairfield, Newtown, Norwalk, Redding, Ridgefield, Shelton, Sherman, Stratford, Trumbull, Weston, Westport and Wilton.

LITCHFIELD COUNTY

Except Plymouth;

NEW HAVEN COUNTY

Beacon Falls, Middlebury, Milford, Naugatuck, Oxford, Prospect, Seymour, Southbury, Waterbury and Wolcott

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ENGI0478-001 05/07/2011

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 35.05	19.40
GROUP 2	$ 34.73	19.40
GROUP 3	$ 33.99	19.40
GROUP 4	$ 33.60	19.40
GROUP 5	$ 33.01	19.40
GROUP 6	$ 32.70	19.40
GROUP 7	$ 32.36	19.40
GROUP 8	$ 31.96	19.40
GROUP 9	$ 31.53	19.40
GROUP 10	$ 29.49	19.40
GROUP 11	$ 29.49	19.40
GROUP 12	$ 29.43	19.40
GROUP 13	$ 30.96	19.40
GROUP 14	$ 28.85	19.40
GROUP 15	$ 28.54	19.40
GROUP 16	$ 27.71	19.40
GROUP 17	$ 27.30	19.40
GROUP 18	$ 26.65	19.40

Hazardous waste premium $3.00 per hour over classified rate.

Crane with boom, including jib, 150 feet - $1.50 extra.
Crane with boom, including jib, 200 feet - $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), work boat 26 ft. and over.

GROUP 2: Cranes (100 ton capacity & over), Excavator over 2 cubic yards, piledriver ($3.00 premium when operator controls hammer).

GROUP 3: Excavator, cranes (under 100 ton rated capacity), gradall, master mechanic, hoisting engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power or operation) Rubber Tire Excavator (drott 1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.)

GROUP 4: Trenching machines, lighter derrick, concrete finishing machine, CMI machine or similar, Koehring Loader (skooper).

GROUP 5: Specialty railroad equipment, asphalt spreader, asphalt reclaiming machine, line grider, concrete pumps, drills with self contained power units, boring machine, post hole digger, auger, pounder, well digger, milling machine (over 24' mandrel), side boom, combination hoe and loader, directional driller.

GROUP 6: Front end loader (3 cu. yds. up to 7 cu. yards), bulldozer (Rough grade dozer) .

GROUP 7: Asphalt roller, concrete saws and cutters (ride on types), Vermeer concrete cutter, stump grinder, scraper,

snooper, skidder, milling machine (24" and under Mandrel).

GROUP 8: Mechanic, grease truck operator, hydoblaster, barrier mover, power stone spreader, welder, work boat under 26 ft. transfer machine.

GROUP 9: Front end loader (under 3 cubic yards), skid steer loader (regardless of attachments), bobcat or similar, forklift, power chipper, landscape equipment (including hydroseeder).

GROUP 10: Vibratory hammer,ice machine, diesel & air, hammer, etc.

GROUP 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.

GROUP 12: Wellpoint operator.

GROUP 13: Portable asphalt plant operator, portable concrete plant operator, portable crusher plant operator.

GROUP 14: Compressor battery operator.

GROUP 15: Power Safety boat, Vacuum truck, Zim mixer, Sweeper; (Minimum for any job requiring a CDL license) .

GROUP 16: Elevator operator, tow motor operator (solid tire no rough terrain).

GROUP 17: Generator operator, compressor operator, pump operator,welding machine operator; Heater operator.

GROUP 18: Maintenance engineer.

IRON0015-002 06/28/2010

	Rates	Fringes
Ironworkers: (Reinforcing, Structural and Precast Concrete Erection)	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-003 04/03/2011

	Rates	Fringes
Laborers:		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-001 06/01/2011

	Rates	Fringes
Painters:		
Blast and Spray	$ 32.17	16.35
Brush and Roll	$ 29.17	16.35
Tanks, Towers, Swing	$ 31.17	16.35

PAIN0011-003 06/01/2011

	Rates	Fringes
Painters: (BRIDGE CONSTRUCTION)		
Brush, Roller, Blasting (Sand, Water, etc.) Spray	$ 41.35	16.35

TEAM0064-001 04/03/2011

	Rates	Fringes
Truck drivers:		
2 Axle Ready Mix	$ 27.98	15.71+a
2 Axle	$ 27.88	15.71+a
3 Axle Ready Mix	$ 28.03	15.71+a
3 Axle	$ 27.98	15.71+a
4 Axle Ready Mix	$ 28.13	15.71+a
4 Axle	$ 28.08	15.71+a
Heavy Duty Trailer 40 tons and over	$ 28.33	15.71+a
Heavy Duty Trailer up to 40 tons	$ 28.08	15.71+a
Specialized (Earth moving equipment other than conventional type on-the-road trucks and semi-trailers, including Euclids)	$ 28.13	15.71+a

Hazardous waste removal work receives additional $1.25 per hour.

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour

Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

General Decision Number: CT100003 10/07/2011 CT3

Superseded General Decision Number: CT20080003

State: Connecticut

Construction Type: Highway

County: New London County in Connecticut.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/23/2010
2	04/30/2010
3	05/07/2010
4	06/04/2010
5	06/25/2010
6	07/02/2010
7	07/23/2010
8	07/30/2010
9	08/20/2010
10	10/08/2010
11	11/05/2010
12	04/22/2011
13	06/10/2011
14	06/17/2011
15	07/08/2011
16	08/26/2011
17	10/07/2011

* BRCT0001-003 10/03/2011

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, PLASTERERS, STONE MASONS	$ 32.50	23.55

CARP0024-002 05/02/2011

	Rates	Fringes
Carpenters:		
Carpenters, Piledrivers	$ 29.11	20.29
Diver Tenders	$ 29.11	20.29
Divers	$ 37.57	20.29

ELEC0035-003 06/01/2011

	Rates	Fringes
Electricians:		
Bozrah, Colchester, Franklin, Griswold, Lebanon, Ledyard, Lisbon, Montville, North Stonington, Norwich, Preston, Salem, Sprague, Stonington and Voluntown	$ 36.40	21.31

ELEC0090-003 06/01/2010

East Lyme, Groton, New London, Old Lyme, Waterford, plus the part of Ledyard wherein the property of the Submarine Base is located

	Rates	Fringes
ELECTRICIAN	$ 35.20	20.51

ENGI0478-002 05/07/2011

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 35.05	19.40+a

GROUP 2	$ 34.73	19.40+a
GROUP 3	$ 33.99	19.40+a
GROUP 4	$ 33.60	19.40+a
GROUP 5	$ 33.01	19.40+a
GROUP 6	$ 32.70	19.40+a
GROUP 7	$ 32.36	19.40+a
GROUP 8	$ 31.96	19.40+a
GROUP 9	$ 31.53	19.40+a
GROUP 10	$ 29.49	19.40+a
GROUP 11	$ 29.49	19.40+a
GROUP 12	$ 29.43	19.40+a
GROUP 13	$ 30.96	19.40+a
GROUP 14	$ 28.85	19.40+a
GROUP 15	$ 28.54	19.40+a
GROUP 16	$ 27.71	19.40+a
GROUP 17	$ 27.30	19.40+a
GROUP 18	$ 26.65	19.40+a

Hazardous waste premium $3.00 per hour over classified rate.

Crane with 150 ft. boom (including jib): $1.50 extra.
Crane with 200 ft. boom (including jib): $2.50 extra.
Crane with 250 ft. boom (including jib): $5.00 extra.
Crane with 300 ft. boom (including jib): $7.00 extra.
Crane with 400 ft. boom (including jib); $10.00 extra.

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Crane Handling or Erecting Structural Steel or tone; Hoisting Engineer (2 drums or over); Front End Loader (7 cubic yards or over) Work Boat 26 ft. & over.

GROUP 2: Cranes (100 ton rated capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer).

GROUP 3: Excavator; Cranes (under 100 ton rated capacity), Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes. shaping, laser or GPS, etc.)

GROUP 4: Trenching machines; Lighter Derrick; Concrete Finishing Machine, cmi Machine or Similar; Koehring Loader Skooper).

GROUP 5: Specialty Railroad Equipment; Asphalt Spreader; Asphalt Reclaiming achine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell); Side Boom; Combination Hoe and Loader; Directional Driller.

GROUP 6: Front End Loader (3 cu. yds. up to 7 cubic yards); Bulldozer (Rough grade dozer).

GROUP 7: Asphalt Roller; Concrete Saws and Cutters (Ride on Types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and Under Mandrel).

GROUP 8: Mechanic; Grease Truck Operator; Hydroblaster; Barrier Mover; Power Stone Spreader; Welder; Work Boat Under 26 ft.; Transfer Machine.

GROUP 9: Front End Loader (under 3 cubic yards); Skid Steer Loader (regardless of attachments); (Bobcat or similar); Fork Lift; Power Chipper; Landscape Equipment (including Hydroseeder).

GROUP 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.

GROUP 11: Conveyor; Earth Roller; Power Pavement Breaker

(Whiphammer); Robot Demolition Equipment.

GROUP 12: Wellpoint Operator.

GROUP 13: Portable Asphalt Plant Operator; Portable Concrete Plant Operator; Portable Crusher Plant Operator.

GROUP 14: Compressor Battery Operator.

GROUP 15: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (Minimum for any job requiring a CDL License)

GROUP 16: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).

GROUP 17: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater operator.

GROUP 18: Maintenance Engineer.

IRON0015-003 06/28/2010

	Rates	Fringes
Ironworkers: (Reinforcing & Structural)	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-003 04/03/2011

	Rates	Fringes
Laborers:		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-002 06/01/2011

	Rates	Fringes
Painters:		
Blast and Spray	$ 32.17	16.35
Brush and Roll	$ 29.17	16.35
Tanks, Towers, Swing	$ 31.17	16.35

PAIN0011-003 06/01/2011

	Rates	Fringes
Painters: (BRIDGE CONSTRUCTION)		
Brush, Roller, Blasting (Sand, Water, etc.) Spray	$ 41.35	16.35

TEAM0064-003 04/03/2011

	Rates	Fringes
Truck drivers:		
2 Axle Ready Mix	$ 27.98	15.71+a
2 Axle	$ 27.88	15.71+a
3 Axle Ready Mix	$ 28.03	15.71+a
3 Axle	$ 27.98	15.71+a
4 Axle Ready Mix	$ 28.13	15.71+a
4 Axle	$ 28.08	15.71+a
Heavy Duty Trailer 40 tons and over	$ 28.33	15.71+a
Heavy Duty Trailer up to 40 tons	$ 28.08	15.71+a
Specialized (Earth moving equipment other than conventional type on-the-road trucks and semi-trailers, including Euclids)	$ 28.13	15.71+a

Hazardous waste removal work receives additional $1.25 per hour.

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
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Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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U.S. Department of Labor
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Washington, DC 20210

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3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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Washington, DC 20210

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END OF GENERAL DECISION

General Decision Number: CT100004 10/14/2011 CT4

Superseded General Decision Number: CT20080004

State: Connecticut

Construction Type: Highway

County: Hartford County in Connecticut.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/23/2010
2	04/30/2010
3	05/07/2010
4	06/04/2010
5	06/25/2010
6	07/02/2010
7	07/23/2010
8	07/30/2010
9	08/20/2010
10	10/08/2010
11	11/05/2010
12	04/22/2011
13	06/10/2011
14	06/17/2011
15	07/08/2011
16	10/07/2011
17	10/14/2011

BRCT0001-003 10/03/2011

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, PLASTERERS, STONE MASONS	$ 32.50	23.55

CARP0024-005 05/02/2011

	Rates	Fringes
Carpenters: (Berlin, Bristol, Burlington,Canton, Marlborough, New Britain, Newington, Plainville, Southington)		
CARPENTERS; PILEDRIVERS	$ 29.11	20.29
DIVER TENDERS	$ 29.11	20.29
DIVERS	$ 37.57	20.29

CARP0043-003 05/02/2011

	Rates	Fringes
Carpenters: (Avon, Bloomfied, East Granby, East Hartford, East Windsor, Enfield, Farmington, Glastonbury, Granby, Hartford, hartland, Manchester, Rocky Hill, Simsbury, South Windsor, Suffield, West Hartford, Wethersfield, Windsor, Windsor Locks)		
CARPENTERS; PILEDRIVERS	$ 29.11	20.29
DIVER TENDERS	$ 29.11	20.29
DIVERS	$ 37.57	20.29

ELEC0035-002 06/01/2011

	Rates	Fringes
Electricians:		
Entire County, excluding Berlin, Bristol, Hartland, New Britain, Newington,		

Plainville and Southington..$ 36.40 21.31

ELEC0090-001 06/01/2010

	Rates	Fringes
Electricians:		
Berlin, Bristol, New Britain, Newington, Plainville, Southington	$ 35.20	20.51

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* ELEC0488-004 06/01/2011

	Rates	Fringes
Electricians:	$ 35.10	22.26

ENGI0478-002 05/07/2011

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 35.05	19.40+a
GROUP 2	$ 34.73	19.40+a
GROUP 3	$ 33.99	19.40+a
GROUP 4	$ 33.60	19.40+a
GROUP 5	$ 33.01	19.40+a
GROUP 6	$ 32.70	19.40+a
GROUP 7	$ 32.36	19.40+a
GROUP 8	$ 31.96	19.40+a
GROUP 9	$ 31.53	19.40+a
GROUP 10	$ 29.49	19.40+a
GROUP 11	$ 29.49	19.40+a
GROUP 12	$ 29.43	19.40+a
GROUP 13	$ 30.96	19.40+a
GROUP 14	$ 28.85	19.40+a
GROUP 15	$ 28.54	19.40+a
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GROUP 17	$ 27.30	19.40+a
GROUP 18	$ 26.65	19.40+a

Hazardous waste premium $3.00 per hour over classified rate.

Crane with 150 ft. boom (including jib): $1.50 extra.
Crane with 200 ft. boom (including jib): $2.50 extra.
Crane with 250 ft. boom (including jib): $5.00 extra.
Crane with 300 ft. boom (including jib): $7.00 extra.
Crane with 400 ft. boom (including jib); $10.00 extra.

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Crane Handling or Erecting Structural Steel or tone; Hoisting Engineer (2 drums or over); Front End Loader (7 cubic yards or over) Work Boat 26 ft. & over.

GROUP 2: Cranes (100 ton rated capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer).

GROUP 3: Excavator; Cranes (under 100 ton rated capacity), Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes. shaping, laser or GPS, etc.)

GROUP 4: Trenching machines; Lighter Derrick; Concrete Finishing Machine, cmi Machine or Similar; Koehring Loader Skooper).

GROUP 5: Specialty Railroad Equipment; Asphalt Spreader; Asphalt Reclaiming achine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling

Machine (over 24" Mandrell); Side Boom; Combination Hoe and Loader; Directional Driller.

GROUP 6: Front End Loader (3 cu. yds. up to 7 cubic yards); Bulldozer (Rough grade dozer).

GROUP 7: Asphalt Roller; Concrete Saws and Cutters (Ride on Types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and Under Mandrel).

GROUP 8: Mechanic; Grease Truck Operator; Hydroblaster; Barrier Mover; Power Stone Spreader; Welder; Work Boat Under 26 ft.; Transfer Machine.

GROUP 9: Front End Loader (under 3 cubic yards); Skid Steer Loader (regardless of attachments); (Bobcat or similar); Fork Lift; Power Chipper; Landscape Equipment (including Hydroseeder).

GROUP 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.

GROUP 11: Conveyor; Earth Roller; Power Pavement Breaker (Whiphammer); Robot Demolition Equipment.

GROUP 12: Wellpoint Operator.

GROUP 13: Portable Asphalt Plant Operator; Portable Concrete Plant Operator; Portable Crusher Plant Operator.

GROUP 14: Compressor Battery Operator.

GROUP 15: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (Minimum for any job requiring a CDL License)

GROUP 16: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).

GROUP 17: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater operator.

GROUP 18: Maintenance Engineer.

IRON0015-002 06/28/2010

	Rates	Fringes
Ironworkers: (Reinforcing, Structural and Precast Concrete Erection)	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-003 04/03/2011

	Rates	Fringes
Laborers:		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-003 06/01/2011

	Rates	Fringes
Painters: (BRIDGE CONSTRUCTION)		
Brush, Roller, Blasting (Sand, Water, etc.) Spray	$ 41.35	16.35

PAIN0011-004 06/01/2011

	Rates	Fringes
Painters:		
Blast and Spray	$ 32.17	16.35
Brush and Roll	$ 29.17	16.35
Tanks, Towers, Swing	$ 31.17	16.35

TEAM0064-005 04/03/2011

	Rates	Fringes
Truck drivers:		
2 Axle Ready Mix	$ 27.98	15.71+a
2 Axle	$ 27.88	15.71+a
3 Axle Ready Mix	$ 28.03	15.71+a
3 Axle	$ 27.98	15.71+a
4 Axle Ready Mix	$ 28.13	15.71+a
4 Axle	$ 28.08	15.71+a
Heavy Duty Trailer 40 tons and over	$ 28.33	15.71+a
Heavy Duty Trailer up to 40 tons	$ 28.08	15.71+a
Specialized (Earth moving equipment other than conventional type on-the-road trucks and semi-trailers, including Euclids)	$ 28.13	15.71+a

Hazardous waste removal work receives additional $1.25 per hour.

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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Washington, DC 20210

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END OF GENERAL DECISION

General Decision Number: CT100007 03/12/2010 CT7

Superseded General Decision Number: CT20080007

State: Connecticut

Construction Types: Heavy Dredging

Counties: Fairfield, Middlesex, New Haven and New London Counties in Connecticut.

HOPPER DREDGING CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010

SUCT1993-001 05/20/1993

	Rates	Fringes
Self-Propelled Hopper Dredge Drag Tenders	$ 8.21	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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* a survey underlying a wage determination
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Wage and Hour Administrator

U.S. Department of Labor
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The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

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Washington, DC 20210

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END OF GENERAL DECISION

General Decision Number: CT100008 01/21/2011 CT8

Superseded General Decision Number: CT20080008

State: Connecticut

Construction Type: Heavy Dredging

Counties: Connecticut Statewide.

CONNECTICUT

ALL DREDGING, EXCEPT SELF-PROPELLED HOPPER DREDGES, ON THE ATLANTIC OCEAN AND TRIBUTARY WATERS EMPTYING INTO THE ATLANTIC OCEAN.

Modification Number	Publication Date
0	03/12/2010
1	07/16/2010
2	01/21/2011

* ENGI0025-001 10/01/2009

STATEWIDE

	Rates	Fringes
Dredging:		
CLASS A	$ 32.89	8.05+a+b
CLASS B1	$ 28.49	8.05+a+b
CLASS B2	$ 26.84	8.05+a+b
CLASS C1(a)	$ 25.55	8.05+a+b
CLASS C1	$ 26.14	8.05+a+b
CLASS C2	$ 25.29	8.05+a+b
CLASS D(a)	$ 20.43	8.05+a+b
CLASS D	$ 21.09	8.05+a+b

CLASSIFICATIONS:

CLASS A: Lead Dredgeman, Operator, Leverman, Licensed Tug Operator over 1000 HP
CLASS B1: Derrick Operator, Spider/Spill Barge Operator, Engineer, Electrician. Chief Welder, Cheif Mate, Fill Placer, Operator II, Maintenance Engineer, Licensed Boat Operator
CLASS B2: Licensed Boat Operator, Certified Welder.
CLASS C1: Mate, Drag Barge Operator, Steward, Assistant Fill Placer.
CLASS C1(a): Welder.

CLASS C2: Boat Operator
CLASS D: Shoreman, Deckhand, Rodman, Scowman, Cook, Messman, Porter/Janitor.
CLASS D(a) Oiler.

PREMIUMS: Additional 20% for hazardous material work

FOOTNOTES APPLICABLE TO ABOVE CRAFTS:

a. PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr.'s Birthday, Memorial Day, Good Friday, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day

b. VACATION: Eight percent (8%) of the straight time rate, multiplied by the total hours worked.

INCENTIVE PAY: (Add to Hourly Rate)

Operator (NCCCO License/Certification) $0.50 Licensed Tug Operator over 1000 HP (Assigned as Master) (USCG licensed Master of Towing Vessels (MOTV) $1.00;
Licensed Boat Operator (Assigned as lead boat captain) USCG licensed boat operator $0.50;
Engineer (QMED and Tankerman endorsement or licensed engineer (USCG) $0.50
Oiler (QMED and Tankerman endorsement (USCG) $0.50; All

classifications (Tankerman endorsement only) USCG $0.25; Deckhand or Mate (AB with Lifeboatman endorsement (USCG) $0.50; All classifications (lifeboatman endorsement only (USCG) $0.25; Welder (ABS certification) $0.50

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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* a conformance (additional classification and rate) ruling

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200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

General Decision Number: CT100015 10/14/2011 CT15

Superseded General Decision Number: CT20080015

State: Connecticut

Construction Type: Heavy

County: Fairfield County in Connecticut.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/30/2010
2	05/07/2010
3	06/04/2010
4	07/02/2010
5	07/16/2010
6	07/23/2010
7	07/30/2010
8	10/08/2010
9	11/05/2010
10	04/22/2011
11	06/17/2011
12	10/07/2011
13	10/14/2011

BRCT0001-011 10/03/2011

	Rates	Fringes
BRICKLAYER	$ 32.50	23.55

BRCT0001-012 10/03/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.50	23.55

CARP0210-005 05/02/2011

	Rates	Fringes
CARPENTER	$ 29.11	20.29

ELEC0003-004 05/06/2010

Darien, Greenwich, New Canaan, Stamford and the portion of Norwalk lying West of Five Mile River

	Rates	Fringes
ELECTRICIAN	$ 47.75	34.84

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* ELEC0488-006 06/01/2011

Bethel, Bridgeport, Brookfield, Danbury, Easton, Fairfield, Monroe, New Fairfield, Newtown, Norwalk, Redding, Ridgefield, Shelton, Sherman, Stratford, Trumball, Weston, Westport and Wilton Townships

	Rates	Fringes
ELECTRICIAN	$ 35.10	22.26

ENGI0478-007 05/07/2011

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Asphalt Paver	$ 33.01	19.40+a
Asphalt Roller	$ 32.36	19.40+a
Asphalt Spreader	$ 33.01	19.40+a
Backhoe/Excavator 2 cubic yards and over	$ 34.73	19.40+a
Backhoe/Excavator under 2 cubic yards	$ 33.99	19.40+a

Bulldozer (Rough Grade Dozer)	$ 32.70	19.40+a
Bulldozer Fine Grade(includes slopes, shaping, laser or gps)	$ 33.99	19.40+a
Crane handling or erecting structural steel or stone	$ 35.05	19.40+a
Cranes (100 ton capacity & over)	$ 34.73	19.40+a
Cranes (under 100 ton rated capacity)	$ 33.99	19.40+a
Drills with self contained power units; Directional driller	$ 33.01	19.40+a
Earth Roller	$ 29.49	19.40+a
Forklift	$ 31.53	19.40+a
Front End Loader (3 cubic yards up to 7 cubic yards)	$ 32.70	19.40+a
Front End Loader (7 cubic yards or over)	$ 35.05	19.40+a
Front End Loader (under 3 cubic yards)	$ 31.53	19.40+a
Grader/Blade	$ 33.99	19.40+a
Maintenance Engineer/Oiler	$ 26.65	19.40+a
Mechanic	$ 31.96	19.40+a
Rubber Tire Backhoe/Excavator	$ 33.99	19.40+a

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

b. Crane with boom, including jib, 150 feet - $1.50 extra .
Crane with boom, including jib, 200 feet- $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra.

IRON0015-005 06/28/2010

	Rates	Fringes
IRONWORKER, REINFORCING	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-005 04/03/2011

	Rates	Fringes
LABORERS		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-013 06/01/2010

	Rates	Fringes
PAINTER		
Brush and Roller	$ 28.47	15.40
Spray Only	$ 31.47	15.40
Steel Only	$ 30.47	15.40

SUCT2002-008 12/16/2008

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 28.62	10.84

TEAM0064-006 04/03/2011

	Rates	Fringes
TRUCK DRIVER: 4 Axle Truck	$ 28.08	15.71+a

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

General Decision Number: CT100016 10/14/2011 CT16

Superseded General Decision Number: CT20080016

State: Connecticut

Construction Type: Heavy

County: Hartford County in Connecticut.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/30/2010
2	05/07/2010
3	06/04/2010
4	07/02/2010
5	07/23/2010
6	07/30/2010
7	10/08/2010
8	11/05/2010
9	04/22/2011
10	06/03/2011
11	06/17/2011
12	07/08/2011
13	10/07/2011
14	10/14/2011

BRCT0001-012 10/03/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.50	23.55

CARP0024-014 05/02/2011

Berlin, Bristol, Burlington, Canton, Marlborough, New Britain, Newington, Plainville and Southington

	Rates	Fringes
CARPENTER, Includes Form Work	$ 29.11	20.29

CARP0043-005 05/02/2011

Avon, Bloomfield, East Branby, East Hartfod, East Windsor, Enfield, Farmington, Glastonbury, Granby, Hartford, Hartland, Manchester, Rocky Hill, Simsbury, South Windsor, Suffield, West Hartford, Wethersfield, Windsor, Windsor Locks

	Rates	Fringes
CARPENTER, Includes Form Work	$ 29.11	20.29

ELEC0035-006 06/01/2011

Entire County excluding Berlin, Bristol, Hartland, New Britain, Newington, Plainville and Southington Townships

	Rates	Fringes
ELECTRICIAN	$ 36.40	21.31

ELEC0090-005 06/01/2011

Berlin, Bristol, New Britain, Newington, Plainville, Southington Townships

	Rates	Fringes
ELECTRICIAN	$ 35.70	21.52

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* ELEC0488-005 06/01/2011

Hartland Township

	Rates	Fringes
ELECTRICIAN	$ 35.10	22.26

ENGI0478-010 05/07/2011

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Asphalt Paver	$ 33.01	19.40+a
Asphalt Roller	$ 32.36	19.40+a
Asphalt Spreader	$ 33.01	19.40+a
Bulldozer (Rough Grade Dozer)	$ 32.70	19.40+a
Bulldozer Fine Grade(includes slopes, shaping, laser or gps)	$ 33.99	19.40+a
Crane handling or erecting structural steel or stone	$ 35.05	19.40+a
Cranes (100 ton capacity & over)	$ 34.73	19.40+a
Cranes (under 100 ton rated capacity)	$ 33.99	19.40+a
Drills with self contained power units; Directional driller	$ 33.01	19.40+a
Earth Roller	$ 29.49	19.40+a
Excavator/Backhoe 2 cubic yards and over	$ 34.73	19.40+a
Excavator/Backhoe under 2 cubic yards	$ 33.99	19.40+a
Forklift	$ 31.53	19.40+a
Front End Loader (3 cubic yards up to 7 cubic yards)	$ 32.70	19.40+a
Front End Loader (7 cubic yards or over)	$ 35.05	19.40+a
Front End Loader (under 3 cubic yards)	$ 31.53	19.40+a
Grader/Blade	$ 33.99	19.40+a
Maintenance Engineer/Oiler	$ 26.65	19.40+a
Mechanic	$ 31.96	19.40+a

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

b. Crane with boom, including jib, 150 feet - $1.50 extra .
Crane with boom, including jib, 200 feet- $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra.

IRON0015-007 06/28/2010

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-006 04/03/2011

	Rates	Fringes
LABORERS		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete

specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-013 06/01/2010

	Rates	Fringes
PAINTER		
Brush and Roller	$ 28.47	15.40
Spray Only	$ 31.47	15.40
Steel Only	$ 30.47	15.40

SUCT2002-009 12/16/2008

	Rates	Fringes
IRONWORKER, REINFORCING	$ 27.13	13.57
LABORER: Common or General	$ 21.03	5.30
OPERATOR: Excavator	$ 27.77	7.60
TRUCK DRIVER: 3 Axle & Semi - Truck	$ 19.93	7.39

TEAM0064-006 04/03/2011

	Rates	Fringes
TRUCK DRIVER: 4 Axle Truck	$ 28.08	15.71+a

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on

a wage
determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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END OF GENERAL DECISION

General Decision Number: CT100017 07/08/2011 CT17

Superseded General Decision Number: CT20080017

State: Connecticut

Construction Type: Heavy

Counties: Middlesex and Tolland Counties in Connecticut.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	05/07/2010
2	06/04/2010
3	07/02/2010
4	07/23/2010
5	07/30/2010
6	11/05/2010
7	04/22/2011
8	06/03/2011
9	06/17/2011
10	07/08/2011

CARP0024-016 05/02/2011

MIDDLESEX COUNTY
TOLLAND COUNTY
Andover, Columbia, Coventry, Hebron, Mansfield, Union, Willington

	Rates	Fringes
CARPENTER, Includes Form Work	$ 29.11	20.29

CARP0043-006 05/02/2011

TOLLAND COUNTY
Bolton, Ellington, Somers, Tolland, Vernon

	Rates	Fringes
CARPENTER, Includes Form Work	$ 29.11	20.29

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* ELEC0035-004 06/01/2011

Cromwell, Middlefield, Middleton and Portland

	Rates	Fringes
ELECTRICIAN	$ 36.40	21.31

ELEC0090-006 06/01/2011

Chester, Clinton, Deep River, Durham, East Haddam, East Hampton, Essex, Haddam, Killingsworth, Old Saybrook, Westbrook

	Rates	Fringes
ELECTRICIAN	$ 35.70	21.52

ENGI0478-007 05/07/2011

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Asphalt Paver	$ 33.01	19.40+a
Asphalt Roller	$ 32.36	19.40+a
Asphalt Spreader	$ 33.01	19.40+a
Backhoe/Excavator 2 cubic yards and over	$ 34.73	19.40+a
Backhoe/Excavator under 2 cubic yards	$ 33.99	19.40+a
Bulldozer (Rough Grade Dozer)	$ 32.70	19.40+a
Bulldozer Fine		

Grade(includes slopes, shaping, laser or gps)	$ 33.99	19.40+a
Crane handling or erecting structural steel or stone	$ 35.05	19.40+a
Cranes (100 ton capacity & over)	$ 34.73	19.40+a
Cranes (under 100 ton rated capacity)	$ 33.99	19.40+a
Drills with self contained power units; Directional driller	$ 33.01	19.40+a
Earth Roller	$ 29.49	19.40+a
Forklift	$ 31.53	19.40+a
Front End Loader (3 cubic yards up to 7 cubic yards)	$ 32.70	19.40+a
Front End Loader (7 cubic yards or over)	$ 35.05	19.40+a
Front End Loader (under 3 cubic yards)	$ 31.53	19.40+a
Grader/Blade	$ 33.99	19.40+a
Maintenance Engineer/Oiler	$ 26.65	19.40+a
Mechanic	$ 31.96	19.40+a
Rubber Tire Backhoe/Excavator	$ 33.99	19.40+a

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

b. Crane with boom, including jib, 150 feet - $1.50 extra .
Crane with boom, including jib, 200 feet- $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra.

IRON0015-008 06/28/2010

	Rates	Fringes
IRONWORKER, REINFORCING AND STRUCTURAL	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-007 04/03/2011

	Rates	Fringes
LABORERS		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-013 06/01/2010

	Rates	Fringes
PAINTER		
Brush and Roller	$ 28.47	15.40
Spray Only	$ 31.47	15.40
Steel Only	$ 30.47	15.40

SUCT2002-010 12/16/2008

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 25.52	8.49
TRUCK DRIVER: 3 Axle & Semi - Truck	$ 19.93	7.39

TEAM0064-006 04/03/2011

	Rates	Fringes
TRUCK DRIVER: 4 Axle Truck	$ 28.08	15.71+a

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

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Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
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2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

General Decision Number: CT100018 10/14/2011 CT18

Superseded General Decision Number: CT20080018

State: Connecticut

Construction Type: Heavy

County: New Haven County in Connecticut.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/30/2010
2	05/07/2010
3	06/04/2010
4	07/02/2010
5	07/23/2010
6	07/30/2010
7	10/08/2010
8	11/05/2010
9	04/22/2011
10	06/03/2011
11	06/17/2011
12	10/07/2011
13	10/14/2011

BRCT0001-011 10/03/2011

	Rates	Fringes
BRICKLAYER	$ 32.50	23.55

BRCT0001-012 10/03/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.50	23.55

CARP0024-015 05/02/2011

Beacon Falls, Bethany, Branford, Cheshire, East Haven, Guilford, Hamden, Madison, Meriden, Middlebury, Naugatuck, New Haven, North Branford, North Haven, Orange (east of Orange Center Road and north of Route 1, and north of Route 1 and east of the Oyster River), Prospect, Southbury, Wallingford, Waterbury, West Haven, Wolcott, Woodbridge

	Rates	Fringes
CARPENTER	$ 29.11	20.29

CARP0210-006 05/02/2011

Ansonia, Derby, Milford, Orange (West of Orange Center Road and South of Route 1 and West of the Oyster River), Oxford, Seymour

	Rates	Fringes
CARPENTER	$ 29.11	20.29

ELEC0090-004 06/01/2011

Entire County excluding Beacon Falls, Middlebury, Milford, Naugatuck, Oxford, Prospect, Seymour, Southbury, Waterbury and Wolcott Townships

	Rates	Fringes
ELECTRICIAN	$ 35.70	21.52

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* ELEC0488-007 06/01/2011

Beacon Falls, Middlebury, Milford, Naugatuck, Oxford, Prospect, Seymour, Southbury, Waterbury and Wolcott Townships

	Rates	Fringes
ELECTRICIAN	$ 35.10	22.26

ENGI0478-011 05/07/2011

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Asphalt Paver	$ 33.01	19.40+a
Asphalt Roller	$ 32.36	19.40+a
Asphalt Spreader	$ 33.01	19.40+a
Backhoe/Excavator 2 cubic yards and over	$ 34.73	19.40+a
Backhoe/Excavator under 2 cubic yards	$ 33.99	19.40+a
Crane handling or erecting structural steel or stone	$ 35.05	19.40+a
Cranes (100 ton capacity & over)	$ 34.73	19.40+a
Cranes (under 100 ton rated capacity)	$ 33.99	19.40+a
Drills with self contained power units; Directional driller	$ 33.01	19.40+a
Earth Roller	$ 29.49	19.40+a
Forklift	$ 31.53	19.40+a
Front End Loader (3 cubic yards up to 7 cubic yards)	$ 32.70	19.40+a
Front End Loader (7 cubic yards or over)	$ 35.05	19.40+a
Front End Loader (under 3 cubic yards)	$ 31.53	19.40+a
Grader/Blade	$ 33.99	19.40+a
Maintenance Engineer/Oiler	$ 26.65	19.40+a
Mechanic	$ 31.96	19.40+a
Rubber Tire Backhoe/Excavator	$ 33.99	19.40+a

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

b. Crane with boom, including jib, 150 feet - $1.50 extra .
Crane with boom, including jib, 200 feet- $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra.

IRON0015-005 06/28/2010

	Rates	Fringes
IRONWORKER, REINFORCING	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-005 04/03/2011

	Rates	Fringes
LABORERS		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors,

pneumatic tool operators and powdermen.

GROUP 3: Pipelayers, Jackhammer/Pavement breaker (handheld), mason tenders/catch basin builders, asphalt rakers, air track operators, block paver and curb setter

GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-013 06/01/2010

	Rates	Fringes
PAINTER		
Brush and Roller	$ 28.47	15.40
Spray Only	$ 31.47	15.40
Steel Only	$ 30.47	15.40

SUCT2002-011 12/16/2008

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 24.85	13.83
OPERATOR: Bulldozer	$ 25.33	9.64

TEAM0064-006 04/03/2011

	Rates	Fringes
TRUCK DRIVER: 4 Axle Truck	$ 28.08	15.71+a

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
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which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

General Decision Number: CT100019 07/08/2011 CT19

Superseded General Decision Number: CT20080019

State: Connecticut

Construction Type: Heavy

County: New London County in Connecticut.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	05/07/2010
2	06/04/2010
3	07/02/2010
4	07/23/2010
5	07/30/2010
6	11/05/2010
7	04/22/2011
8	06/17/2011
9	07/08/2011

CARP0024-007 05/02/2011

	Rates	Fringes
CARPENTER, Includes Form Work	$ 29.11	20.29

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* ELEC0035-011 06/01/2011

Bozrah, Colchester, Franklin, Griswold, Lebanon, Ledyard, Lisbon, Montville, North Stonington, Norwich, Preston, Salem, Sprague, Stonington and Voluntown

	Rates	Fringes
ELECTRICIAN	$ 36.40	21.31

ELEC0090-003 06/01/2010

East Lyme, Groton, New London, Old Lyme, Waterford, plus the part of Ledyard wherein the property of the Submarine Base is located

	Rates	Fringes
ELECTRICIAN	$ 35.20	20.51

ENGI0478-008 05/07/2011

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Asphalt Paver	$ 33.01	19.40+a
Asphalt Roller	$ 32.36	19.40+a
Asphalt Spreader	$ 33.01	19.40+a
Backhoe/Excavator 2 cubic yards and over	$ 34.73	19.40+a
Backhoe/Excavator under 2 cubic yards	$ 33.99	19.40+a
Bulldozer (Rough Grade Dozer)	$ 32.70	19.40+a
Bulldozer Fine Grade(includes slopes, shaping, laser or gps)	$ 33.99	19.40+a
Crane handling or erecting structural steel or stone	$ 35.05	19.40+a
Cranes (100 ton capacity & over)	$ 34.73	19.40+a
Cranes (under 100 ton rated capacity)	$ 33.99	19.40+a
Drills with self contained power units; Directional driller	$ 33.01	19.40+a
Earth Roller	$ 29.49	19.40+a
Forklift	$ 31.53	19.40+a

Front End Loader (3 cubic yards up to 7 cubic yards)	$ 32.70	19.40+a
Front End Loader (7 cubic yards or over)	$ 35.05	19.40+a
Front End Loader (under 3 cubic yards)	$ 31.53	19.40+a
Grader/Blade	$ 33.99	19.40+a
Maintenance Engineer/Oiler	$ 26.65	19.40+a
Mechanic	$ 31.96	19.40+a
Rubber Tire Backhoe/Excavator	$ 33.99	19.40+a

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

b. Crane with boom, including jib, 150 feet - $1.50 extra .
Crane with boom, including jib, 200 feet- $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra.

IRON0015-008 06/28/2010

	Rates	Fringes
IRONWORKER, REINFORCING AND STRUCTURAL	$ 33.00	26.58+a

a. PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-007 04/03/2011

	Rates	Fringes
LABORERS		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
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GROUP 7	$ 16.00	15.60

LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

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GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-013 06/01/2010

	Rates	Fringes
PAINTER		
Brush and Roller	$ 28.47	15.40
Spray Only	$ 31.47	15.40
Steel Only	$ 30.47	15.40

SUCT2002-012 12/16/2008

	Rates	Fringes

CEMENT MASON/CONCRETE FINISHER...$ 25.52 8.49

TRUCK DRIVER: 3 Axle & Semi
- Truck.....$ 19.93 7.01

TEAM0064-006 04/03/2011

	Rates	Fringes
TRUCK DRIVER: 4 Axle Truck.....$	28.08	15.71+a

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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* a survey underlying a wage determination
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Wage and Hour Division
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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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END OF GENERAL DECISION

General Decision Number: CT100029 10/14/2011 CT29

Superseded General Decision Number: CT20080029

State: Connecticut

Construction Type: Heavy

Counties: Litchfield and Windham Counties in Connecticut.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	03/12/2010
1	04/23/2010
2	04/30/2010
3	05/07/2010
4	06/04/2010
5	07/02/2010
6	07/23/2010
7	07/30/2010
8	08/20/2010
9	09/03/2010
10	10/08/2010
11	11/05/2010
12	04/22/2011
13	05/13/2011
14	06/03/2011
15	06/10/2011
16	06/17/2011
17	07/08/2011
18	10/07/2011
19	10/14/2011

BRCT0001-015 10/03/2011

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, STONE MASONS	$ 32.50	23.55

CARP0024-011 05/02/2011

	Rates	Fringes
CARPENTER		
Carpenters, Piledrivers	$ 29.11	20.29
Diver Tenders	$ 29.11	20.29
Divers	$ 37.57	20.29
Millwrights	$ 30.01	20.18

ELEC0035-008 06/01/2011

WINDHAM COUNTY

	Rates	Fringes
ELECTRICIAN	$ 36.40	21.31

ELEC0042-001 08/30/2010

	Rates	Fringes
Line Construction: (Line Construction)		
Driver Groundmen	$ 30.92	6.5%+9.70
Groundmen	$ 22.67	6.5%+6.20
Heavy Equipment Operators	$ 37.10	6.5%+10.70
Linemen, Cable Splicers, Dynamite Men	$ 41.22	6.5%+12.20
Material Men, Tractor Trailer Drivers, Equipment Operators	$ 35.04	6.5%+10.45
Line Construction: (Railroad Construction and Maintenance)		
Driver Groundmen	$ 33.27	3%+13.70
Heavy Equipment Operators	$ 39.92	3%+13.70

Linemen, Cable Splicers,
Dynamite Men.....$ 44.36 3%+13.70
Material Men, Tractor
Trailer Drivers,
Equipment Operators.....$ 37.71 3%+13.70

ELEC0090-008 06/01/2011

LITCHFIELD COUNTY
Plymouth Township

	Rates	Fringes
ELECTRICIAN	$ 35.70	21.52

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* ELEC0488-011 06/01/2011

LITCHFIELD COUNTY (Excluding Plymouth Township)

	Rates	Fringes
ELECTRICIAN	$ 35.10	22.26

ENGI0478-001 05/07/2011

	Rates	Fringes
Power equipment operators:		
GROUP 1	$ 35.05	19.40
GROUP 2	$ 34.73	19.40
GROUP 3	$ 33.99	19.40
GROUP 4	$ 33.60	19.40
GROUP 5	$ 33.01	19.40
GROUP 6	$ 32.70	19.40
GROUP 7	$ 32.36	19.40
GROUP 8	$ 31.96	19.40
GROUP 9	$ 31.53	19.40
GROUP 10	$ 29.49	19.40
GROUP 11	$ 29.49	19.40
GROUP 12	$ 29.43	19.40
GROUP 13	$ 30.96	19.40
GROUP 14	$ 28.85	19.40
GROUP 15	$ 28.54	19.40
GROUP 16	$ 27.71	19.40
GROUP 17	$ 27.30	19.40
GROUP 18	$ 26.65	19.40

Hazardous waste premium $3.00 per hour over classified rate.

Crane with boom, including jib, 150 feet - $1.50 extra.
Crane with boom, including jib, 200 feet - $2.50 extra.
Crane with boom, including jib, 250 feet - $5.00 extra.
Crane with boom, including jib, 300 feet - $7.00 extra.
Crane with boom, including jib, 400 feet - $10.00 extra

a. PAID HOLIDAYS: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), work boat 26 ft. and over.

GROUP 2: Cranes (100 ton capacity & over), Excavator over 2 cubic yards, piledriver ($3.00 premium when operator controls hammer).

GROUP 3: Excavator, cranes (under 100 ton rated capacity), gradall, master mechanic, hoisting engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power or operation) Rubber Tire Excavator (drott 1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.)

GROUP 4: Trenching machines, lighter derrick, concrete finishing machine, CMI machine or similar, Koehring Loader

(skooper).

GROUP 5: Specialty railroad equipment, asphalt spreader, asphalt reclaiming machine, line grider, concrete pumps, drills with self contained power units, boring machine, post hole digger, auger, pounder, well digger, milling machine (over 24' mandrel), side boom, combination hoe and loader, directional driller.

GROUP 6: Front end loader (3 cu. yds. up to 7 cu. yards), bulldozer (Rough grade dozer) .

GROUP 7: Asphalt roller, concrete saws and cutters (ride on types), Vermeer concrete cutter, stump grinder, scraper, snooper, skidder, milling machine (24" and under Mandrel).

GROUP 8: Mechanic, grease truck operator, hydoblaster, barrier mover, power stone spreader, welder, work boat under 26 ft. transfer machine.

GROUP 9: Front end loader (under 3 cubic yards), skid steer loader (regardless of attachments), bobcat or similar, forklift, power chipper, landscape equipment (including hydroseeder).

GROUP 10: Vibratory hammer,ice machine, diesel & air, hammer, etc.

GROUP 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.

GROUP 12: Wellpoint operator.

GROUP 13: Portable asphalt plant operator, portable concrete plant operator, portable crusher plant operator.

GROUP 14: Compressor battery operator.

GROUP 15: Power Safety boat, Vacuum truck, Zim mixer, Sweeper; (Minimum for any job requiring a CDL license) .

GROUP 16: Elevator operator, tow motor operator (solid tire no rough terrain).

GROUP 17: Generator operator, compressor operator, pump operator,welding machine operator; Heater operator.

GROUP 18: Maintenance engineer.

IRON0015-001 06/28/2010

	Rates	Fringes
Ironworkers: (Ornamental, Reinforcing, Structural and Precast Concrete Erection)	$ 33.00	26.58+a

PAID HOLIDAY: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

LABO0056-004 04/03/2011

	Rates	Fringes
Laborers: (TUNNEL CONSTRUCTION)		
CLEANING, CONCRETE AND CAULKING TUNNEL:		
Concrete Workers, Form Movers and Strippers	$ 29.44	15.60
Form Erectors	$ 29.74	15.60
ROCK SHAFT, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:		
Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers	$ 29.44	15.60
Laborers Topside, Cage Tenders, Bellman	$ 29.33	15.60
Miners	$ 30.32	15.60
SHIELD DRIVE AND LINER		

PLATE TUNNELS IN FREE AIR:
Brakemen and Trackmen.....$ 29.44 15.60
Miners, Motormen, Mucking
Machine Operators,
Nozzlemen, Grout Men,
Shaft and Tunnel, Steel
and Rodmen, Shield and
Erector, Arm Operator,
Cable Tenders.....$ 30.32 15.60
TUNNELS, CAISSON AND
CYLINDER WORK IN
COMPRESSED AIR:
Blaster.....$ 35.213 15.60
Brakemen, Trackmen,
Groutman, Laborers,
Outside Lock Tender,
Gauge Tenders.....$ 35.036 15.60
Change House Attendants,
Powder Watchmen, Top on
Iron Bolts.....$ 33.268 15.60
Mucking Machine Operator...$ 35.745 15.60

a. PAID HOLIDAYS: On tunnel work only: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

LABO0056-013 04/03/2011

	Rates	Fringes
LABORER (HEAVY CONSTRUCTION)		
GROUP 1	$ 25.75	15.60
GROUP 2	$ 26.00	15.60
GROUP 3	$ 26.25	15.60
GROUP 4	$ 26.75	15.60
GROUP 5	$ 27.50	15.60
GROUP 6	$ 27.75	15.60
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LABORERS CLASSIFICATIONS

GROUP 1: Laborers (Unskilled), acetylene burner, concrete specialist

GROUP 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators and powdermen.

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GROUP 4: Asbestos/lead removal

GROUP 5: Blasters

GROUP 6: Toxic waste remover

GROUP 7: Traffic control signalman

PAIN0011-003 06/01/2011

	Rates	Fringes
Painters: (BRIDGE CONSTRUCTION)		
Brush, Roller, Blasting (Sand, Water, etc.) Spray	$ 41.35	16.35

PAIN0011-018 06/01/2010

	Rates	Fringes
PAINTER		
Blast and Spray	$ 31.47	15.40
Brush and Roll	$ 28.47	15.40
Tanks, Towers, Swing	$ 30.47	15.40

PLUM0777-002 06/01/2011

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 38.67	24.46

TEAM0064-001 04/03/2011

	Rates	Fringes
Truck drivers:		
2 Axle Ready Mix	$ 27.98	15.71+a
2 Axle	$ 27.88	15.71+a
3 Axle Ready Mix	$ 28.03	15.71+a
3 Axle	$ 27.98	15.71+a
4 Axle Ready Mix	$ 28.13	15.71+a
4 Axle	$ 28.08	15.71+a
Heavy Duty Trailer 40 tons and over	$ 28.33	15.71+a
Heavy Duty Trailer up to 40 tons	$ 28.08	15.71+a
Specialized (Earth moving equipment other than conventional type on-the-road trucks and semi-trailers, including Euclids)	$ 28.13	15.71+a

Hazardous waste removal work receives additional $1.25 per hour.

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

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initial contact is not satisfactory, then the process described
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U.S. Department of Labor
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The request should be accompanied by a full statement of the
interested
party's position and by any information (wage payment data,
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END OF GENERAL DECISION