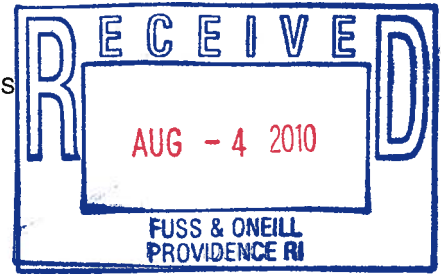




REPLY TO
ATTENTION OF

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

August 2, 2010



Regulatory Division
CENAE-R-PEB
Permit Number: NAE-2010-814

Wood-Pawcatuck Watershed Association
Malcolm J. Grant, WPWA President
203B Arcadia Road
Hope Valley, Rhode Island 02832

Dear Mr. Grant:

We have reviewed your association's application to construct the Horseshoe Falls Dam Fish Passage Restoration project. The fish passage project will install a denil fish ladder at the left abutment for anadromous fish and eel passage. Also, repairs and modifications to the existing spillway and raceway will be performed. Project partners on this ARRA funded project include RIDEM (FWS), NOAA NMFS Restoration Center, USFWS, RI-CRMC and others. Work includes installing: a fish entrance at the downstream channel, turning and resting pools, in-channel baffles, grating for maintenance access, channels, riprap, temporary cofferdams and other work. The project is shown on the attached plans titled "Pawcatuck River Fish Passage Restoration" dated "April 2010."

Based on the information you have provided, we have determined that the proposed activity, which includes a discharge of dredged or fill material into waters or wetlands, will have only minimal individual or cumulative impacts on waters of the United States, including wetlands. Therefore, this work is authorized as a Category 2 activity under the attached Federal permit known as the Rhode Island Programmatic General Permit (PGP). This work must be performed in accordance with the terms and conditions of the PGP and the following special condition.

There will be a Memorandum of Agreement (MOA) between the RI-HPHC (RI-SHPO) and NOAA Restoration Center. The MOA is not finalized. When that MOA is finished and signed it will be made a special condition of this permit.

You are responsible for complying with all of the PGP's requirements. Please review the attached PGP carefully, in particular the PGP conditions beginning on Page 7, to familiarize yourself with its contents. You should ensure that whoever does the work fully understands the requirements and that a copy of the permit document and this authorization letter are at the project site throughout the time the work is underway.

This authorization expires on February 13, 2012, unless the PGP is modified, suspended or revoked. You must complete the work authorized herein by February 13, 2012. If you do not, you must contact this office to determine the need for further authorization before continuing the activity. We recommend you contact us before this permit expires to discuss a time extension or permit reissuance.

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

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

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

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

Please contact Michael Elliott of my staff, at (978) 318-8131 if you have any questions.

Sincerely,



Diane M. Ray
Chief, Permits & Enforcement Branch
Regulatory Division

Attachments
Copy Furnished:
SAS

Nils Wiberg, P.E.
Fuss & O'Neill
317 Iron Horse Way, Suite 204
Providence, Rhode Island 02908

Andy Manca
Office of Customer and Technical Assistance
RI Dept of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908-5767

James Turek
NOAA Restoration Center
28 Tarzwell Drive
Narragansett, Rhode Island 02882

PAWCATUCK RIVER FISH PASSAGE RESTORATION

SHANNOCK VILLAGE · RHODE ISLAND

PRELIMINARY DRAWING SET

HORSESHOE FALLS DAM FISH LADDER

APRIL 2010

PROJECT TEAM

CONTRACT OWNER
WOOD-PAWCATUCK WATERSHED ASSOCIATION
203B ARCADIA ROAD
HOPE VALLEY, RI 02832
P: 401-539-9017

DESIGN ENGINEER
FUSS & O'NEILL, INC.
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
P: 401-861-3070

PERMITTING BIOLOGIST
NATURAL RESOURCE SERVICES, INC.
P.O. BOX 311
HARRISVILLE, RI 02830
P: 401-568-7390

LAND SURVEYOR
NATIONAL SURVEYORS DEVELOPERS, INC.
42 HAMLET AVENUE
WOONSOCKET, RI 02895
P: 401-769-7779

PROJECT PARTNERS
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RESTORATION CENTER
28 TARKZWEIL DRIVE
NARRAGANSETT, RI 02882
P: 401-782-3338; F: 401-782-3301

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DEPARTMENT OF FISH & GAME
250 PROMENADE STREET
PROVIDENCE, RI 02908
P: 401-222-3961; F: 401-222-3564

NATURAL RESOURCES CONSERVATION SERVICE
RHODE ISLAND NRCS STATE OFFICE
60 QUAKER LANE
WARWICK, RI 02886
P: 401-428-1300; F: 401-428-0433

U.S. FISH & WILDLIFE SERVICE
NORTH ATTLEBORO NATIONAL FISH HATCHERY
144 BUNGAY ROAD
NORTH ATTLEBORO, MA 02760
P: 508-695-5002; F: 508-695-5098



LOCATION MAP
SCALE 1" = 200'

PREPARED FOR
WOOD-PAWCATUCK
WATERSHED ASSOCIATION
203B ARCADIA ROAD
HOPE VALLEY, RI 02832

PREPARED BY



FUSS & O'NEILL
Disciplines to Deliver
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
P: 401-861-3070

SHEET INDEX

SHEET No.	SHEET TITLE
01-001	COVER SHEET
02-001	GENERAL NOTES AND LEGEND
CS-101	200-FOOT RADIUS MAP
CS-102	SITE ACCESS AND RESOURCE AREA PLAN
CS-103	EXISTING CONDITIONS PLAN
CS-104	DEMOLITION AND EROSION CONTROL PLAN
CS-105	SITE LAYOUT AND GRADING PLAN
CS-106	WATER CONTROL AND CONSTRUCTION SEQUENCING PLAN
CL-101	SITE LANDSCAPE PLAN
CT-101	TRAFFIC MANAGEMENT PLAN
CD-501	DETAILS
SS-101	STRUCTURAL SHEETING LAYOUT PLAN
SB-501	STRUCTURAL SECTIONS
SB-502	STRUCTURAL SECTIONS AND DETAILS

PROJECT NO. 2007001A-13
DATE: JUNE 2010

GI-001


1 OF 14

[illegible]

PROPERTY LINE	200' RADIUS	LIMIT OF DISTURBANCE

PRELIMINARY - NOT FOR CONSTRUCTION

WOOD-PAWCATUCK WATERSHED ASSOCIATION
200-FOOT RADIUS MAP
HORSESHOE FALLS DAM FISH LADDER
RHODE ISLAND
SHANNOCK VILLAGE

 **FUSS & ONEILL**
Disciplines to Deliver

317 NEW HURSE WAY SUITE 204 PROSPERITY, MO 65058 401.851.3070
WWW.FUSO.COM

SCALE: _____

HORIZ. F. 20
VERT. _____

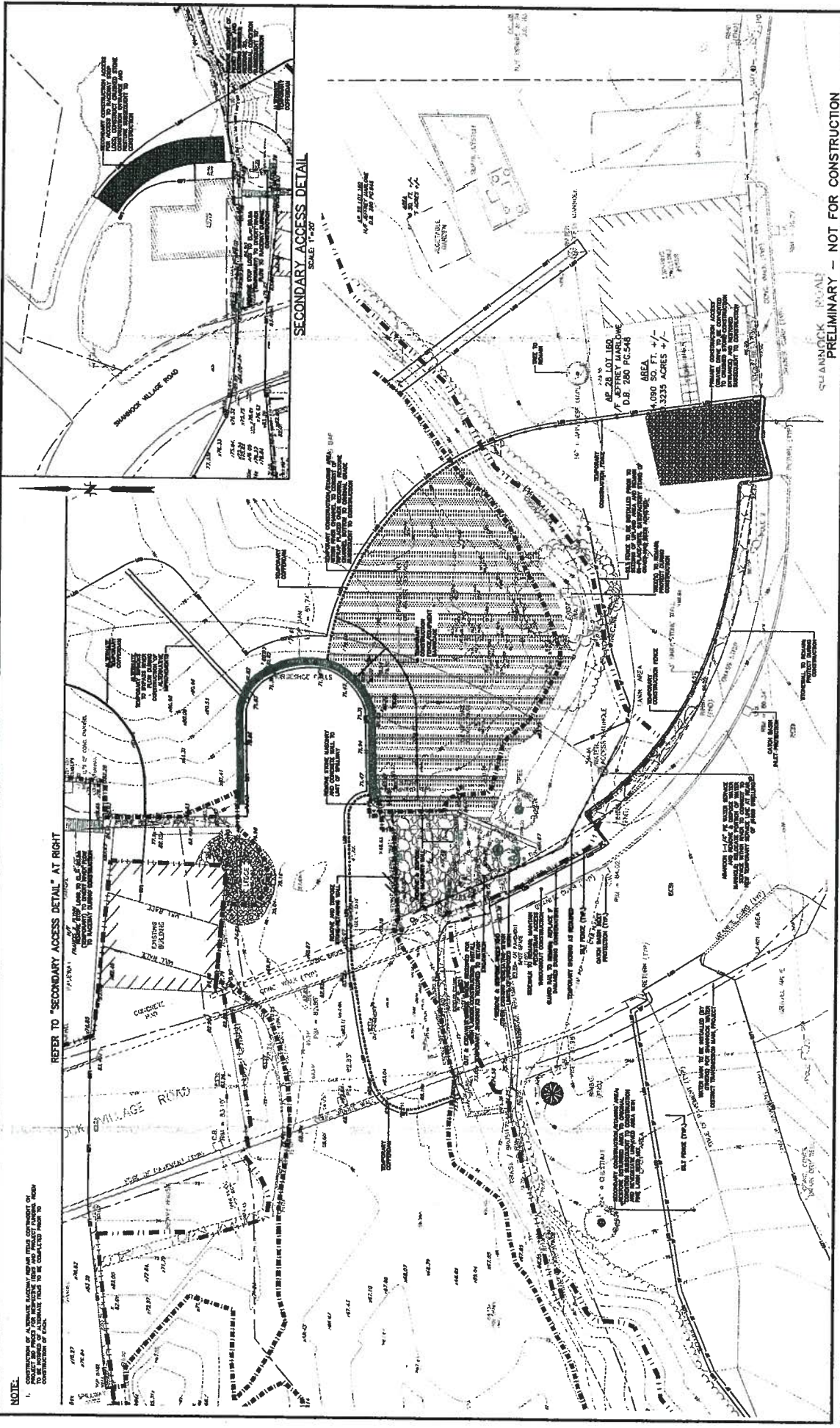
NATURE: _____

HORIZ. MAGN. _____
VERT. MAGN. _____

40 20 0 40
GRAPHIC SCALE

[illegible]

PROJ No.: 20080784JA10
DATE APRIL 2018



NOTE:

1. CONSTRUCTION OF A TENSILE RAILWAY ASHES FILL CONDUIT OF 18" DIAMETER SHALL BE INSTALLED IN THE CENTER OF THE CONDUIT TO PROVIDE FOR THE CONSTRUCTION OF EACH.

<p>SCALE: 1"=10' HORIZONTAL 1"=10' VERTICAL</p> <p>DATE: 10/10/10 DESIGNED BY: JMM CHECKED BY: JMM GRAPHIC SCALE</p>		<p>PROJECT MANAGER: JMM DATE: 10/10/10 REVISIONS:</p>		<p>317 FOX HOLE HWY. SITE 204, PRINCEDALE IN CORO 401.861.070</p>		<p>WOOD-FACCATUCK WATERSHED ASSOCIATION DEMOLITION AND EROSION CONTROL PLAN HORSESHOE FALLS DAM FISH LADDER SEANNOCK VILLAGE BRIDGE ISLAND</p>	
<p>CS-104 6 OF 14</p>		<p>FUSS & ONEILL Disciplines to Deliver</p>		<p>WWW.FUSSONEILL.COM</p>		<p>PRELIMINARY - NOT FOR CONSTRUCTION</p>	

[illegible][illegible]

1. CONSTRUCTION OF ALTERNATE BACKWATER REPAIR ITEMS CONTINGENT ON PROJECT BID PRICES FOR RESPECTIVE ITEMS AND PROJECT FUNDING. NEED TO BE NOTIFIED OF ALTERNATE ITEMS TO BE COMPLETED PRIOR TO CONSTRUCTION OF EACH.

FUSS & O'NEILL
Disciplines to Deliver

317 BORN HORSE WAY SUITE 204 PROMENADE IN 02903 401.861.3070

SCALE: HORIZ: 1"=30'
VERT: 1"=30'

DATE: HORIZ: NA000
VERT: NA000

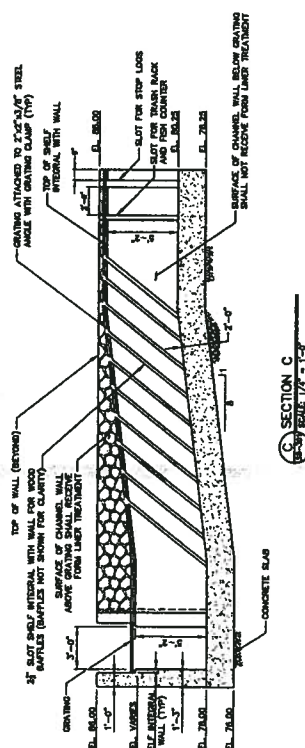
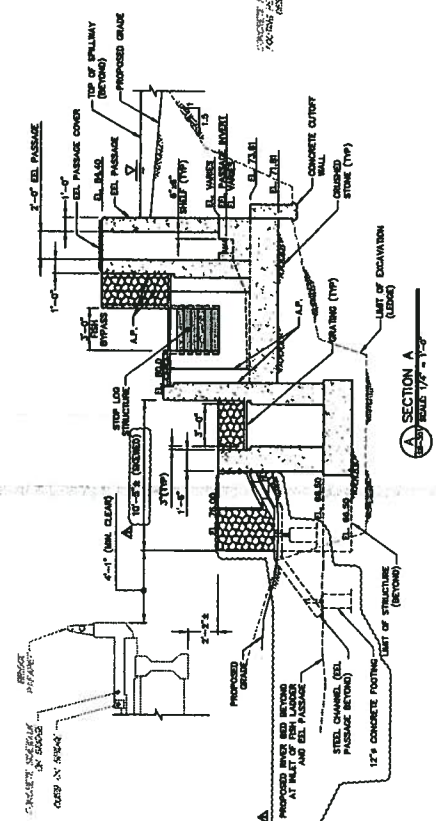
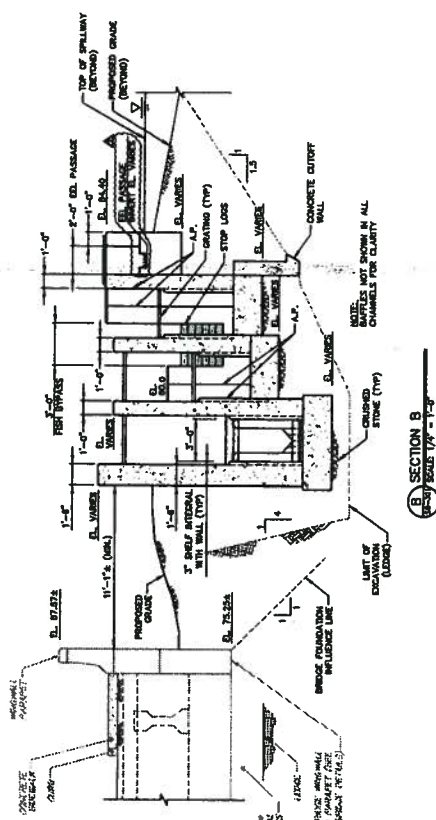
20 10 0 10 20
GRAPHIC SCALE



PHILIP M. DREESCH
No. 7428
REGISTERED
PROFESSIONAL ENGINEER
(CIVIL)

[illegible]

SHANNOCK VILLAGE



DATE: _____

MOORE: AIR MOTTED
VENT: _____

VENTURE: _____

MOORE: MANDS
VENT: MANDS

10 5 0 10

CRASH SPILL

DATE _____

WORTH: All MOTTED
VARY:

NAME _____

VERZ: MANDU

[illegible]

CLASSIFICATION

100

www.FandO.com

TYPE

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104 304 1000

WPC/BR106

WOOD-PAWCATUCK WATERSHED ASSOCIATION

STRUCTURAL SECTIONS

THE

THE 1990S

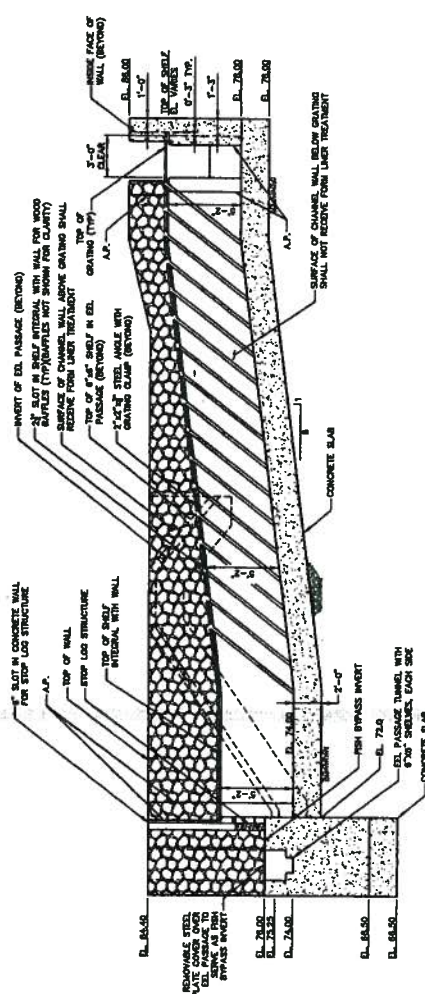
HORSESHOE FALLS DAM FISH LADDER

PROJ. No.: 20080794-A 10
DATE: APRIL 2010

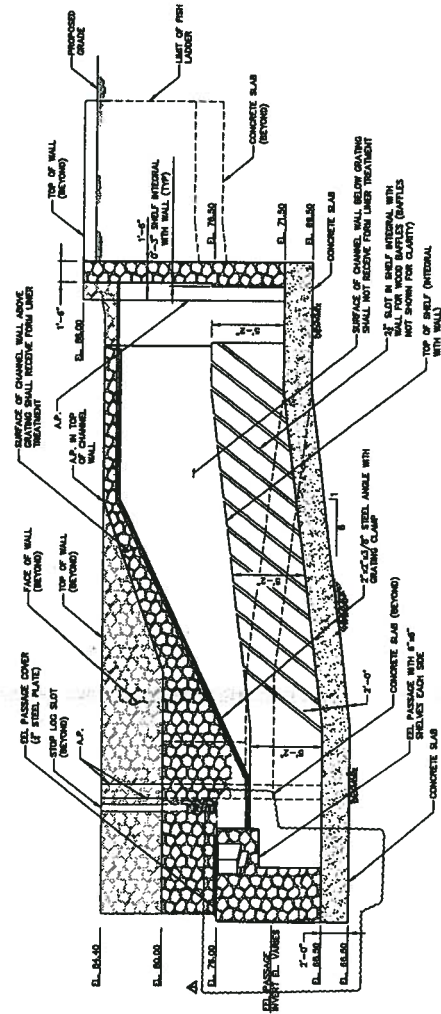
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SB-301

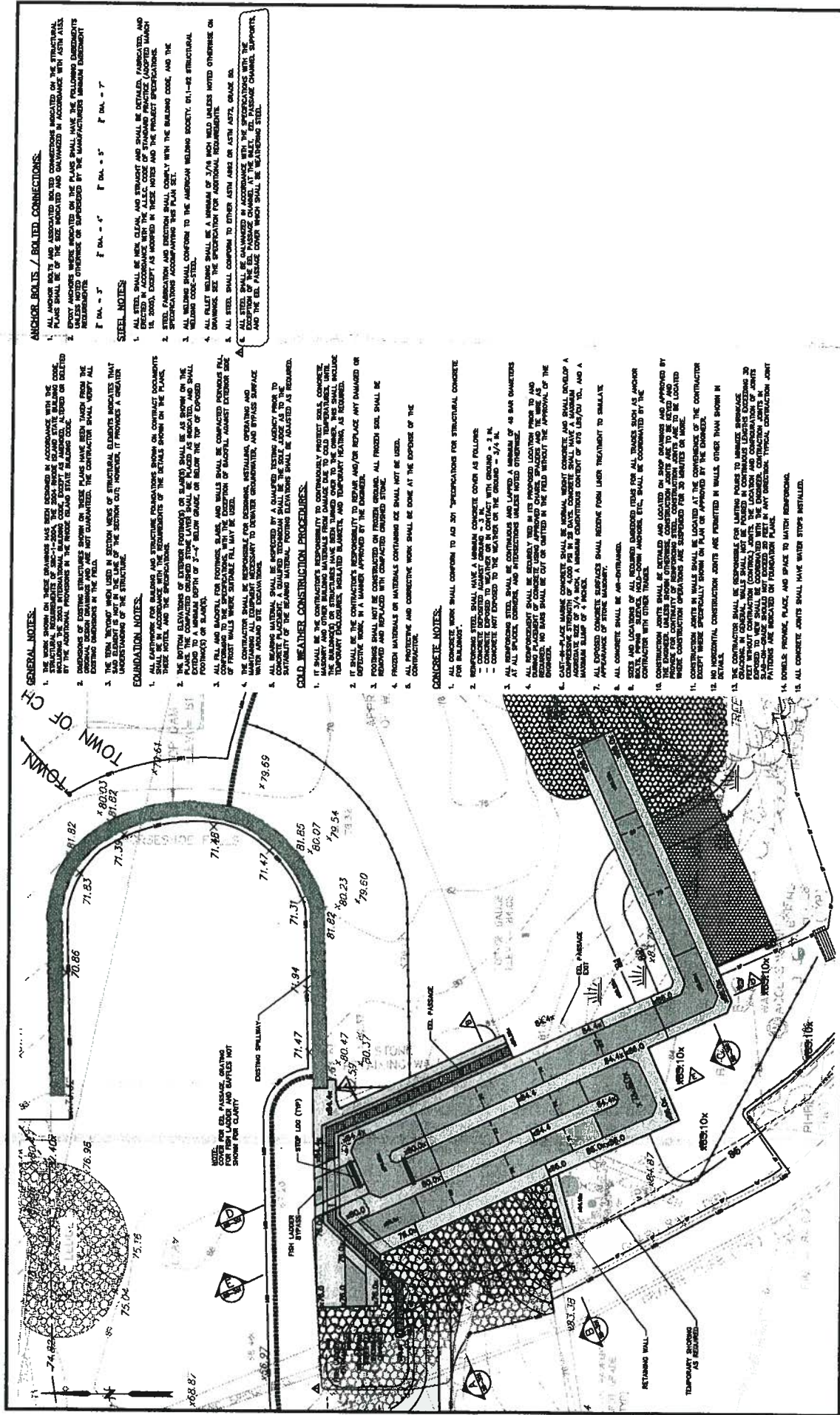


SECTION D
SCALE 1" = 2'-0"



SECTION E
SCALE 1" = 2'-0"

PROJECT NO. 1000000000 DATE: 10/01/2010		SB-302 14 OF 14	
WOOD-PAWCATUCK WATERSHED ASSOCIATION STRUCTURAL SECTIONS AND DETAILS HORSEBROOK FALLS DAM FISH LADDER SEANNOCK VILLAGE			
WWS/Pawcatuck.com FUSS & ONEILL <i>Disciplines to Deliver</i> 317 800 HIDE HWY. SUITE 204 MIDWICH, CT 06457-1070		SCALE: HORIZ. AS NOTED VERTIC. 1" = 2'-0" GRAPHIC SCALE: 1" = 2'-0"	
PROJECT NO. 1000000000 DATE: 10/01/2010 PROJECT NO. 1000000000 DATE: 10/01/2010 PROJECT NO. 1000000000 DATE: 10/01/2010			





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

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

* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Policy Analysis/Technical Support Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

Corps of Engineers Permit No. 2010-814 was issued to the Wood-Pawcatuck Watershed Association. The project is called the Horseshoe Falls Dam Fish Passage Restoration. It involves installing a denil fish ladder on the on the Upper Shannock Dam aka Horseshoe Dam. Work includes installing: a fish entrance at the downstream channel, turning and resting pools, in-channel baffles, grating for maintenance access, channels, riprap, temporary cofferdams and other work.

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

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Telephone Numbers: () _____ () _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee/Agent Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Date Permit Issued: August 2, 2010 **Date Permit Expires:** February 13, 2012

FOR USE BY THE CORPS OF ENGINEERS

PM: Mike Elliott **Submittals Required:** _____

Inspection Recommendation: _____



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

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

COMPLIANCE CERTIFICATION FORM

USACE Project Number: NAE-2010-814

Name of Permittee: Wood-Pawcatuck Watershed Association

Permit Issuance Date: August 2, 2010

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

* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Policy Analysis/Technical Support Branch, ATTN: Marie Farese *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

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

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

Signature of Permittee

Date

Printed Name

Date of Work Completion

Telephone Number () _____