



# PUBLIC NOTICE

US Army Corps  
of Engineers®  
New England District

696 Virginia Road  
Concord, MA 01742-2751

**Date:** September 8, 2009  
**Comment Period Ends:** October 8, 2009  
**File Number:** NAE-2006-325  
**In Reply Refer To:** Susan K. Lee  
**Or by e-mail:** susan.k.lee@usace.army.mil

The District Engineer has received a permit application from the applicant below to **conduct work in waters of the United States** as described below.

**APPLICANT:** National Railroad Passenger Corporation (AMTRAK), 30<sup>TH</sup> Street Station, 4<sup>th</sup> Floor South, 30<sup>th</sup> & Market Street, Philadelphia, PA 19104

**ACTIVITY:** Place fill below high tide line (HTL) and perform dredging below mean high water in the Niantic River in association with the off-line (to south of existing bridge) replacement of the existing Niantic River Railroad Bridge over the Niantic River in East Lyme and Waterford, Connecticut. A detailed description and plans of other work associated with the bridge replacement project are attached.

## WATERWAY AND LOCATION OF THE PROPOSED WORK

This work is proposed in the Niantic River at the Niantic River Railroad Bridge and along the shoreline of Niantic Bay to the west of the railroad bridge in East Lyme and Waterford, Connecticut. The proposed location on the USGS East Lyme, CONN. quadrangle sheet is at 041.322° N, 072.177° W.

## AUTHORITY

Permits are required pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899
- Section 404 of the Clean Water Act
- Section 103 of the Marine Protection, Research and Sanctuaries Act).

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other

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public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Where the activity involves the discharge of dredged or fill material into waters of the United States or the transportation of dredged material for the purpose of disposing it in ocean waters, the evaluation of the impact of the activity in the public interest will also include application of the guidelines promulgated by the Administrator, U.S Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act, and/or Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 as amended.

**ESSENTIAL FISH HABITAT**

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires all federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH).

This project will have an adverse effect on Essential Fish Habitat (EFH) for the species and its life stages as listed on the attached 'Summary of Essential Fish Habitat (EFH) Designation' (2 sheets). This habitat consists of sandy river bottom of the Niantic River and sand and cobble intertidal areas of the Niantic Bay shoreline. In addition, eelgrass habitat may be present in the area. Loss of this habitat may adversely affect the listed species as a result of in-river construction which includes channel dredging to widen the navigation channel, excavation/backfill and grading associated with bridge pier construction and demolition and submarine cable installation, and for beach fill and stone groin construction affecting the Niantic Bay intertidal shoreline and tidal waters.

The proposed bridge replacement project, which includes dredging below MHW in the Niantic River for federal channel widening, will impact approximately 26,400 SF of the Niantic River in the vicinity of the bridge. The proposed beach creation/replenishment activities along the Niantic Bay shoreline to the west of the bridge will require approximately 75,500 CY of sand fill over approximately 3.8 acres of Niantic Bay tidal shoreline area below HTL. Beach materials will include onsite dredged materials from the Niantic River and from offsite sand sources. The proposed terminal stone groin extending beyond MHW into Niantic Bay will displace approximately 10,500 SF of Niantic Bay shoreline and waters. The Niantic River bottom sediments at the bridge location are predominantly sand sediments with 14-20% fines. The Niantic Bay shoreline to the west of the bridge is a mix of sand and cobble beach shoreline subject to erosion.

The District Engineer has made a preliminary determination that site-specific impacts may be substantial. Accordingly, the Corps of Engineers will submit an expanded EFH assessment to National Marine Fisheries Service, who in turn will provide conservation recommendations to the Corps. The Corps will coordinate with the applicant regarding implementation of these recommendations. The EFH consultation will be concluded prior to the final decision.

**SECTION 106 COORDINATION**

Based on his initial review, the District Engineer has determined that the proposed work may impact properties listed in, or eligible for listing in, the National Register of Historic Places. Additional review and consultation

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to fulfil requirements under Section 106 of the National Historic Preservation Act of 1966, as amended, will be ongoing as part of the permit review process.

The States of Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island have approved **Coastal Zone Management Programs**. Where applicable the applicant states that any proposed activity will comply with and will be conducted in a manner that is consistent with the approved Coastal Zone Management Program. By this Public Notice, we are requesting the State concurrence or objection to the applicant's consistency statement.

The following authorizations have been applied for, or have been, or will be obtained:

- (X) Permit, License or Assent from State.
- (X) Permit from Local Wetland Agency or Conservation Commission.
- (X ) Water Quality Certification in accordance with Section 401 of the Clean Water Act.

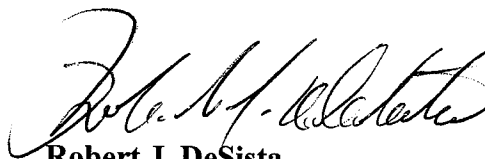
In order to properly evaluate the proposal, we are seeking public comment. Anyone wishing to comment is encouraged to do so. **Comments should be submitted in writing by the above date.** If you have any questions, please contact Susan Lee at (978) 318-8494 or (800) 343-4789, (800) 362-4367 (if calling from within Massachusetts).

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The Corps holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

The initial determinations made herein will be reviewed in light of facts submitted in response to this notice. All comments will be considered a matter of public record. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

For more information on the New England District Corps of Engineers programs, visit our website at <http://www.nae.usace.army.mil>.

**THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.**



**Robert J. DeSista**  
**Chief, Permits and Enforcement Branch**  
**Regulatory Division**

If you would prefer not to continue receiving Public Notices, please contact Ms. Tina Chaisson at (978) 318-8058 or e-mail her at [bettina.m.chaisson@usace.army.mil](mailto:bettina.m.chaisson@usace.army.mil). You may also check here ( ) and return this portion of the Public Notice to: Bettina Chaisson, Regulatory Division, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751.

NAME:

ADDRESS:

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**PROPOSED WORK AND PURPOSE**

The proposed bridge replacement project includes the discharge of dredged and fill material below HTL in the Niantic River and Niantic Bay, and dredging below MHW in the Niantic River as follows:

- Dredge below MHW approximately 26,400 SF (various areas) of the Niantic River to elevations ranging from 8.0 to 14.0 feet below mean lower low water (MLLW) for the widening of the federal navigation channel in the vicinity of the new bridge crossing and for submarine cable installation, and to elevations of approximately 36.0 feet below mean low water (MLW) for construction of new bridge piers. The proposed dredging for channel widening will result in increasing the existing 45.0-foot channel width to 100.0 feet at the new bridge crossing. Approximately 8,000 CY of dredged materials will be disposed of onsite for beach replenishment, for fill in the new rail embankment, or disposed of at an approved upland disposal site if unsuitable for beach or embankment fill. The amount of material to be dredged is computed based on soundings within the area to be dredged and depths required for navigation in the vicinity of the widened bridge crossing. Examination of the material indicated that the dredged sediments are predominantly sand with only 14-20% fines. The receiving beach has similar grain size characteristics so the suitability of the dredged materials for beach nourishment has been demonstrated.
- Place fill/backfill below HTL in the Niantic River in association with installation of submarine cables (signal and communications and power) to replace existing submarine cables. The existing submarine cables will be removed.
- Place fill (including dredged materials) below HTL along shoreline areas of Niantic Bay to the west and east of the new bridge for the reconstruction of approximately 5,520 LF of realigned track on the westerly approach to the new bridge and approximately 2,100 LF of realigned track on the eastern approach to the new bridge.
- Place fill (including dredged materials) below HTL in association with reconstruction of approximately 2500 LF of boardwalk extending along the Niantic Bay shoreline along the south side of the realigned westerly approach tracks; portions of the new boardwalk will be incorporated into the south side railroad embankment/retaining wall of the realigned westerly approach rail line; this boardwalk replaces the existing pile and timber boardwalk structure which will be deconstructed/demolished to accommodate the realigned westerly approach tracks.
- Place fill consisting of armor stone and riprap revetment fill below HTL to provide erosion/scour protection at the toe of the south side rail embankment/retaining wall along the westerly approach tracks.
- Place sand and dredged material fill below HTL in approximately 3.8 acres of Niantic Bay along 2500 LF of shoreline of Niantic Bay for the purpose of beach creation/replenishment. Initial placement of approximately 75,500 CY of sand fill will create approximately 2500 LF of 25-75 feet wide beach adjacent to the scour protection/retaining wall; the beach project recreates/replenishes the existing Niantic Bay shoreline beach area that will be displaced by the realigned westerly approach rail line.
- Construct and maintain a stone groin extending approximately 200 LF beyond mean high water into

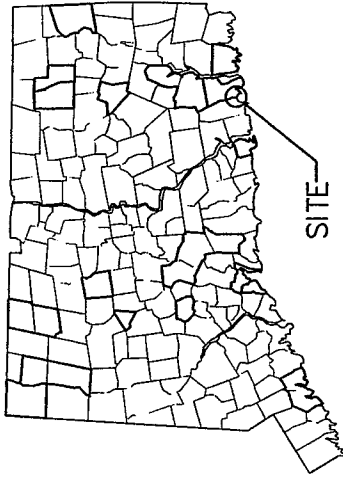
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Niantic Bay for the purpose of retaining the newly created/replenished beach. The groin will occupy approximately 10,500 SF of Niantic Bay waters.

The purpose of the bridge project is maintenance of an existing rail bridge which is part of AMTRAK's Northeast Railroad Corridor system. The purpose of the boardwalk and beach projects is to replace/enhance an existing boardwalk and beach shoreline that will be displaced by the bridge project. The purpose of the groin is to retain the new beach.

The work is described and shown on the enclosed plans entitled "REPLACEMENT OF NIAN TIC RIVER RAILROAD BRIDGE" on forty-three (43) sheets, all sheets dated "5/15/09".

**MITIGATION** - The applicant has avoided and minimized impacts to the extent practicable. Offline replacement of the bridge is required to maintain operation of the rail service. During construction, potential impacts to finfish populations will result from dredging and heavy construction in-river and associated noise. These impacts will be mitigated through restriction of construction during anadromous fish migration periods. In-river construction will be confined with cofferdam containment systems; turbidity curtains will be installed to minimize water quality impacts during dredging and in-river bridge construction and demolition activities. The boardwalk and beach creation/replenishment projects compensate for temporary and permanent loss of an existing boardwalk amenity and associated beach areas that will be displaced by the realigned westerly approach rail and embankment. The stone armor and riprap revetment along the base of the retaining wall that supports the rail embankment and new boardwalk will provide protection against current scour erosion occurring along the existing Niantic Bay beach shoreline to the west of the bridge. The groin structure design is such that it will provide public access.



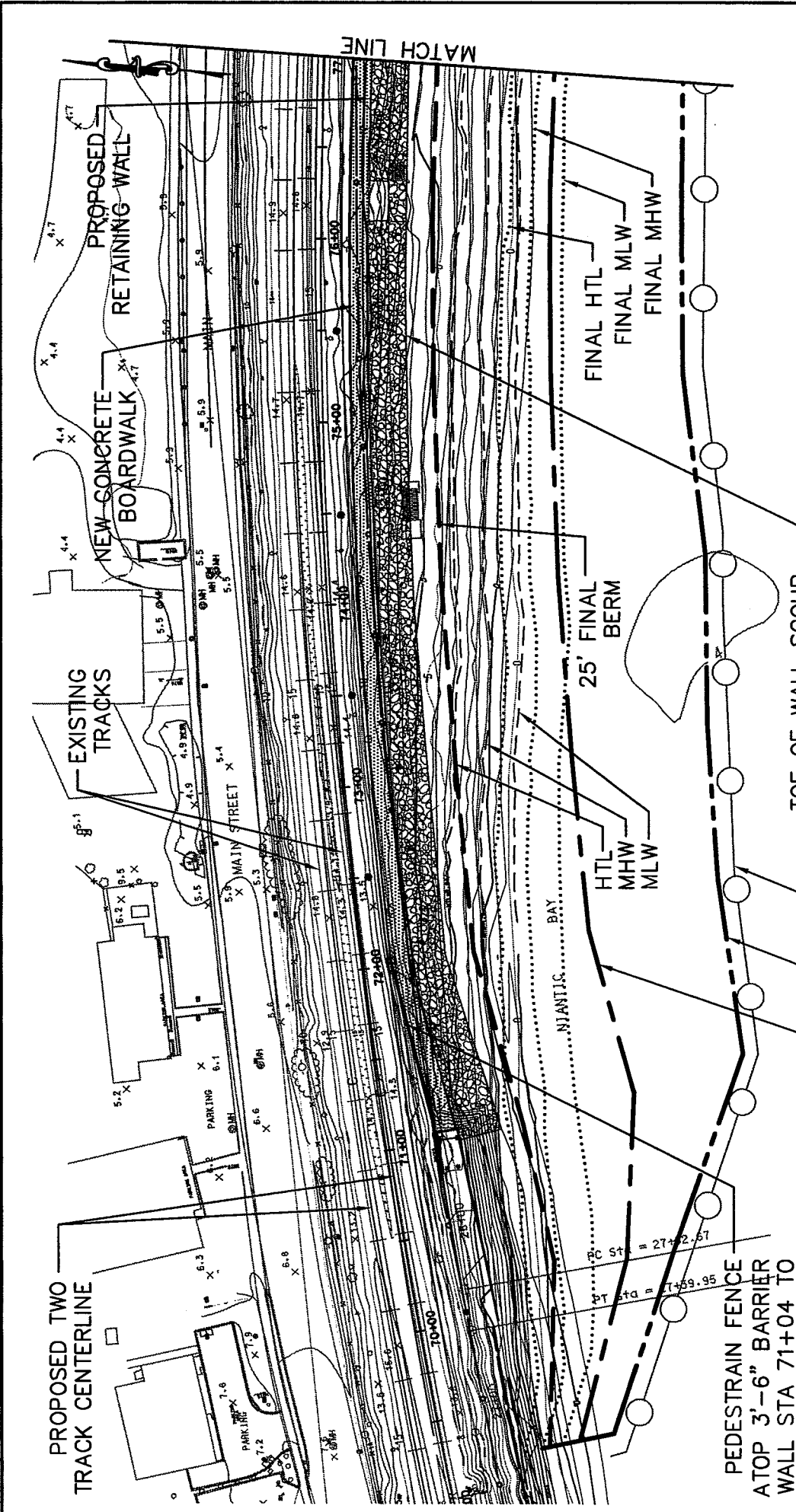
**PROJECT LOCATION**  
SCALE: N.T.S.



**PROJECT VICINITY**  
SCALE 1" = 2,000'  
0 500' 1,000' 2,000'

<b>LOCATION AND VICINITY</b>	
REPLACEMENT OF NIAN TIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 1





**DETAILED SITE PLAN-1**

**REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE**

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

DATE: 5/15/09

SHEET 3

TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

EXCEPT AS NOTED  
 HTL, MHW, AND MLW ARE  
 THE SAME IN EXISTING AND  
 PROPOSED CONDITIONS

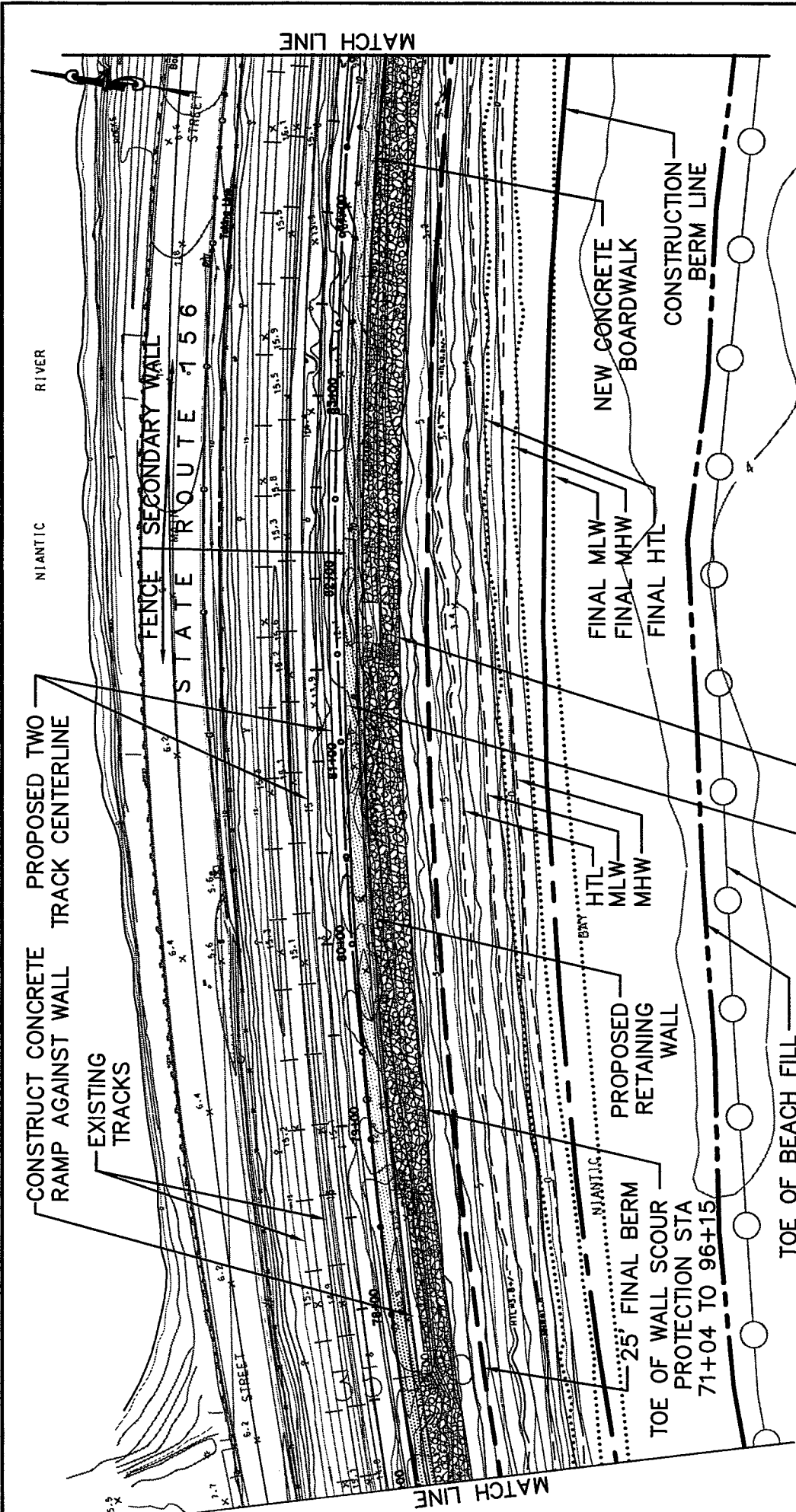
**PLAN VIEW**  
 SCALE 1"=80'

TOE OF WALL SCOUR PROTECTION STA 71+04 TO 96+15

LONG ISLAND SOUND

PEDESTRAIN FENCE ATOP 3'-6" BARRIER WALL STA 71+04 TO 82+22

MATCH LINE



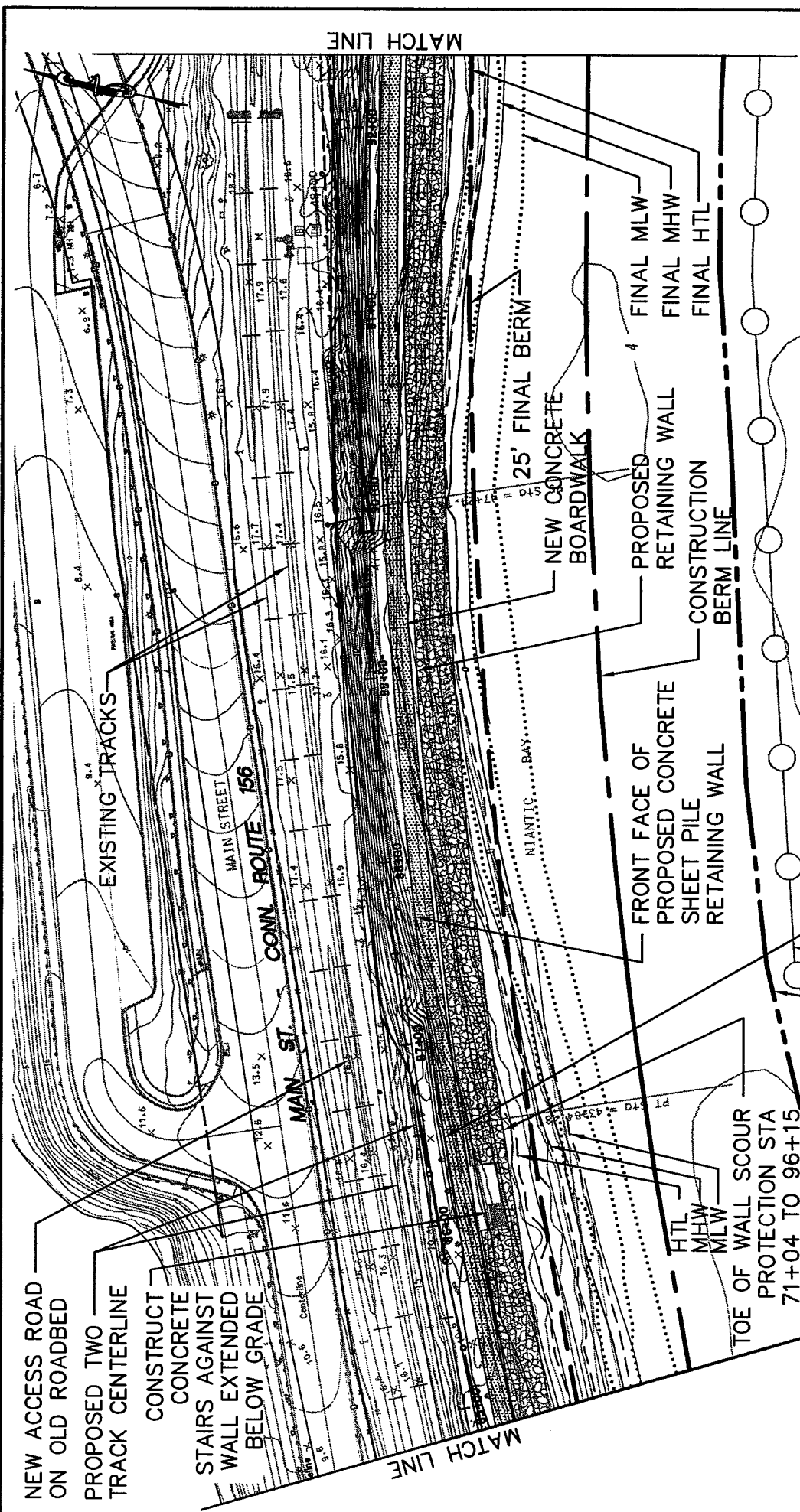
DETAILED SITE PLAN-2  
 REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE  
 East Lyme and Waterford, Connecticut  
 National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

LONG ISLAND SOUND  
 TIDAL DATUM (NGVD 1929)  
 H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

EXCEPT AS NOTED  
 HTL, MHW, AND MLW ARE  
 THE SAME IN EXISTING AND  
 PROPOSED CONDITIONS

PLAN VIEW  
 SCALE 1"=80'  
 0 20 40 80

DATE: 5/15/09  
 SHEET 4



DETAILED SITE PLAN-3

REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE  
 East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

DATE: 5/15/09

SHEET 5

TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

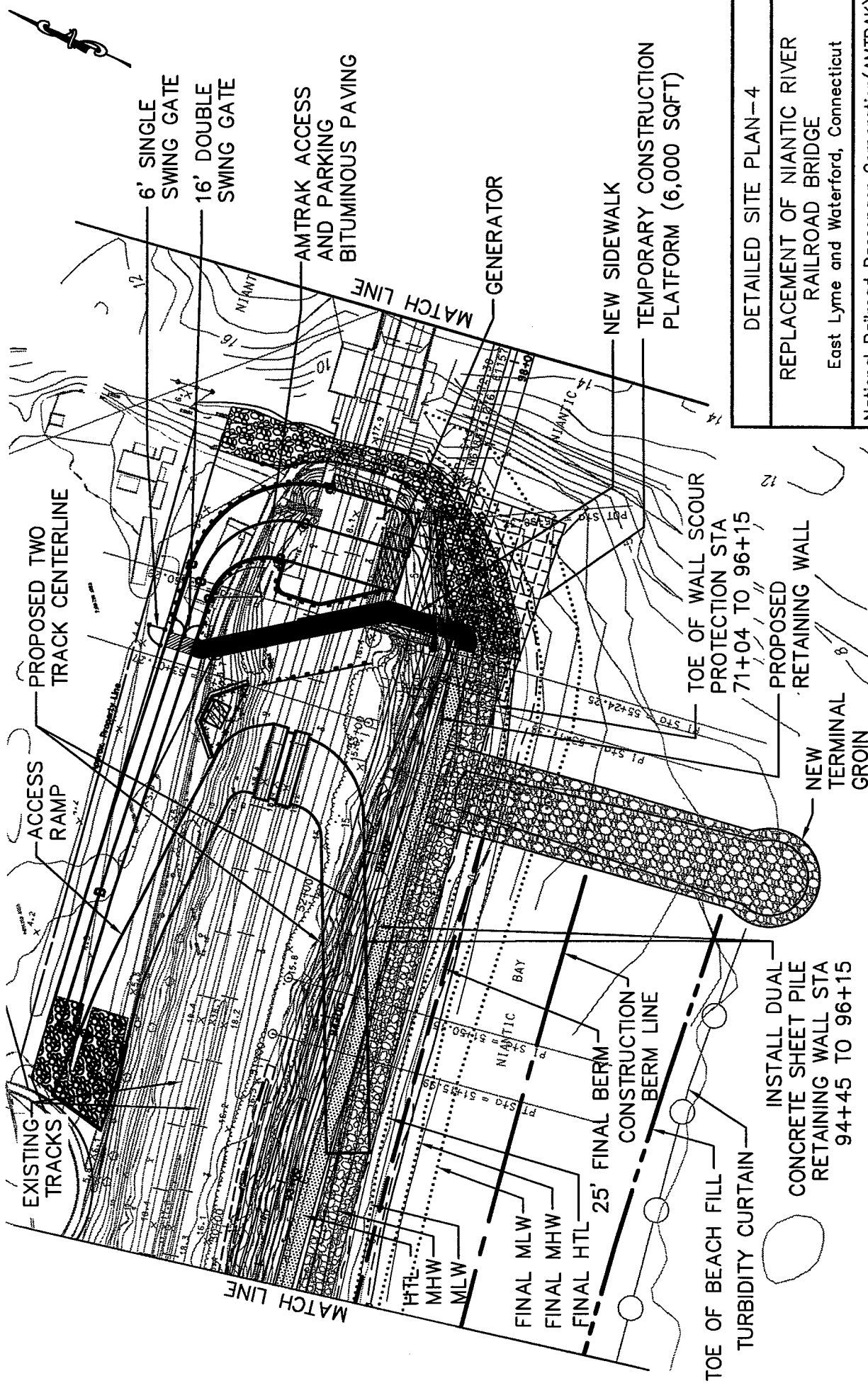
EXCEPT AS NOTED  
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 PROPOSED CONDITIONS

PLAN VIEW  
 SCALE 1"=80'

INSTALL SECONDARY PRECAST MODULAR RETAINING WALL 15' FROM CENTERLINE OF TRACK 2 (TYP.) STA 82+22 TO 94+45

MATCH LINE

MATCH LINE



TIDAL DATUM (NGVD 1929)  
 H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

EXCEPT AS NOTED  
 HTL, MHW, AND MLW ARE  
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 PROPOSED CONDITIONS

PLAN VIEW  
 SCALE 1"=80'

DETAILED SITE PLAN--4
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104
DATE: 5/15/09
SHEET 6

NORTH RIGHT OF WAY LINE  
LIMIT OF ACCESS AND  
CONSTRUCTION

CONSTRUCTION  
ENTRANCE

SILT FENCE  
(STA. 103+00  
TO 111+50)

SILT FENCE  
(STA. 101+50 TO  
112+25)

EXISTING  
TRACKS  
PROPOSED TWO  
TRACK CENTERLINE

IC RIVER

MHW  
MLW

RIPRAP ON SLOPE  
TEMPORARY  
CONSTRUCTION  
PLATFORM (6,400 SQFT)

SLOPE PROTECTION LIMITS  
(STA. 100+00 TO 100+20)

TEMPORARY  
CONSTRUCTION  
ACCESS

SLOPE PROTECTION  
LIMITS (STA. 100+00  
TO 103+20)



SOUTH RIGHT OF WAY LINE  
OUTSIDE OF DELINEATED WETLAND  
LIMIT OF ACCESS AND  
CONSTRUCTION



MATCH LINE

MATCH LINE

KEY

-  SLOPE PROTECTION
-  TEMPORARY ACCESS

PLAN VIEW  
SCALE 1"=80'



EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
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TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
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DETAILED SITE PLAN-5

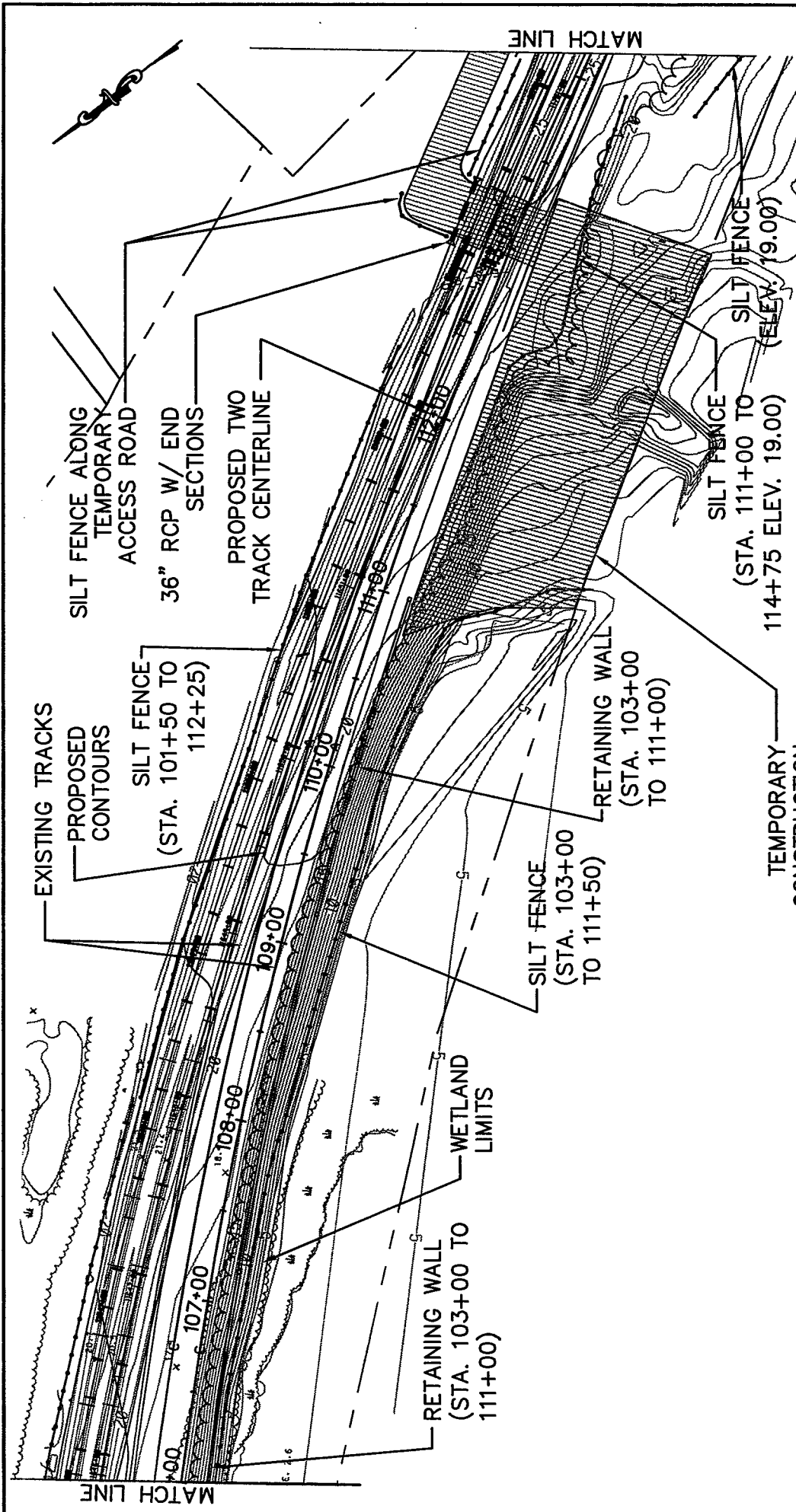
REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 7



DETAILED SITE PLAN-6	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 8

TIDAL DATUM (NGVD 1929)  
 H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

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 PROPOSED CONDITIONS

PLAN VIEW  
 SCALE 1" = 80'  
 0 20 40 80

KEY  
 TEMPORARY ACCESS

TEMPORARY CONSTRUCTION ACCESS ROAD  
 DESIGN BY CONTRACTOR  
 SUBMIT GRADING PLAN AND  
 OBTAIN ALL PERMITS

MAXIMUM ALLOWABLE VEHICLE:  
 AASHTO WB40 SEMI-TRAILER  
 LENGTH 45.5'  
 TURNING RADIUS 36.03'

ALL TRACKED EQUIPMENT PERMITTED

CONSTRUCTION  
 ENTRANCE

TEMPORARY GATE AT CUL-DE-SAC  
 TEMPORARY RAMP AT CURB  
 RESTORE AFTER CONSTRUCTION TO  
 ORIGINAL CONDITION

NORTH RIGHT OF  
 WAY/PROPERTY LINE  
 NORTH LIMIT OF ACCESS  
 AND CONSTRUCTION

MATCH LINE

PROPOSED  
 CONTOURS

PROPOSED TWO  
 TRACK CENTERLINE

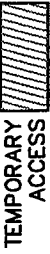
EXISTING TRACKS  
 SILT FENCE ALONG  
 TEMPORARY ACCESS  
 ROAD

SOUTH RIGHT OF WAY LINE  
 SOUTH LIMIT OF ACCESS AND  
 CONSTRUCTION

PLAN VIEW  
 SCALE 1"=80'



KEY



TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8  
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DETAILED SITE PLAN-7

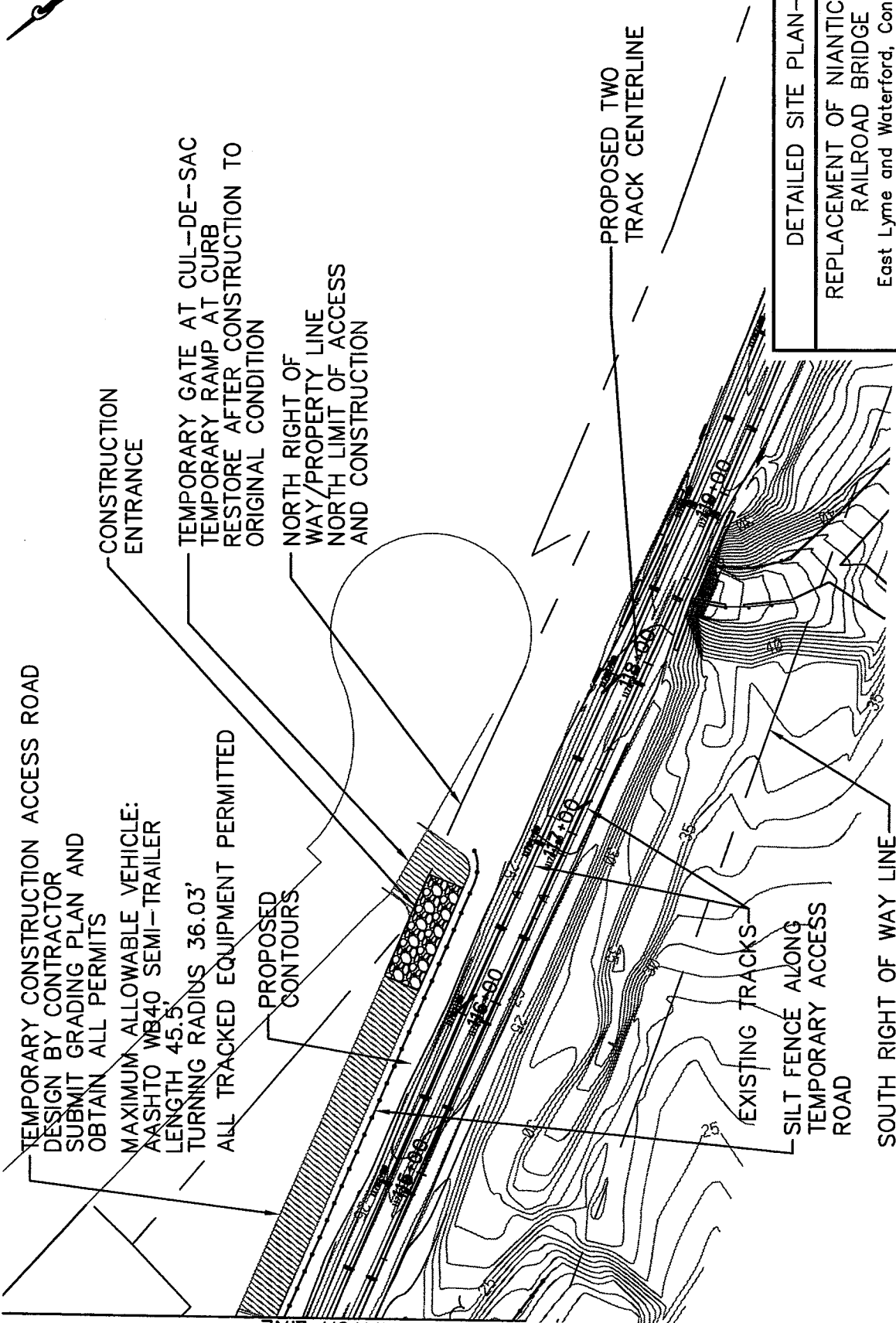
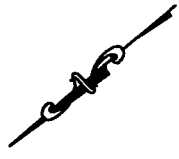
REPLACEMENT OF NIANTIC RIVER  
 RAILROAD BRIDGE

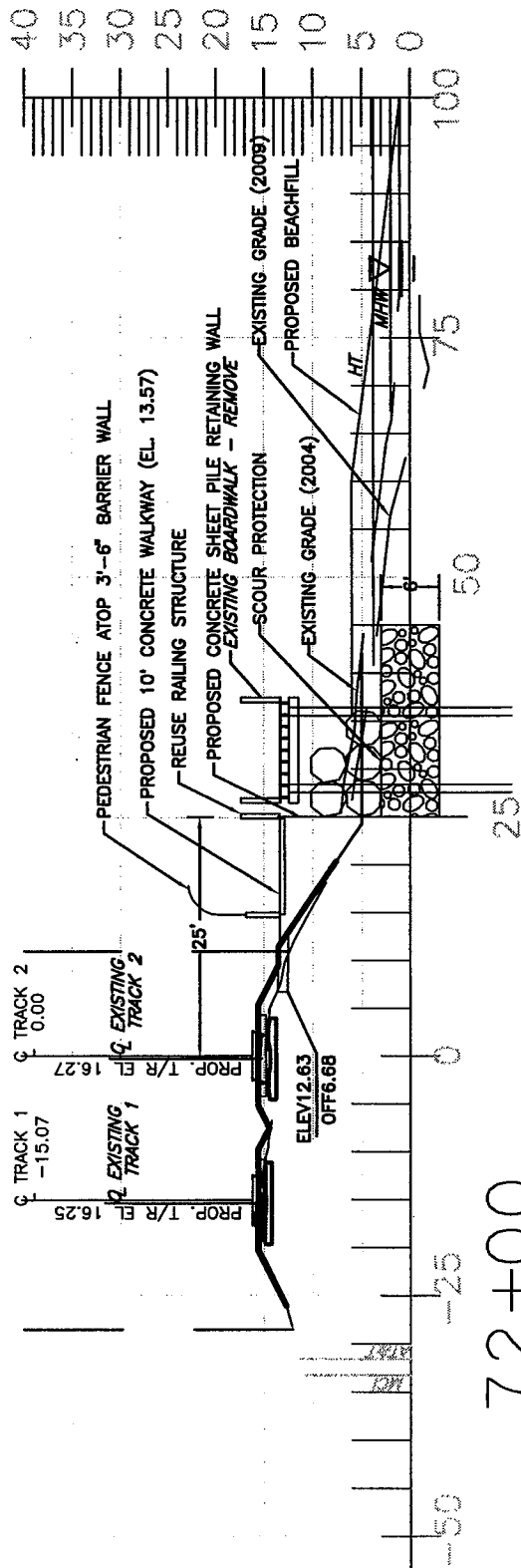
East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

DATE: 5/15/09

SHEET 9





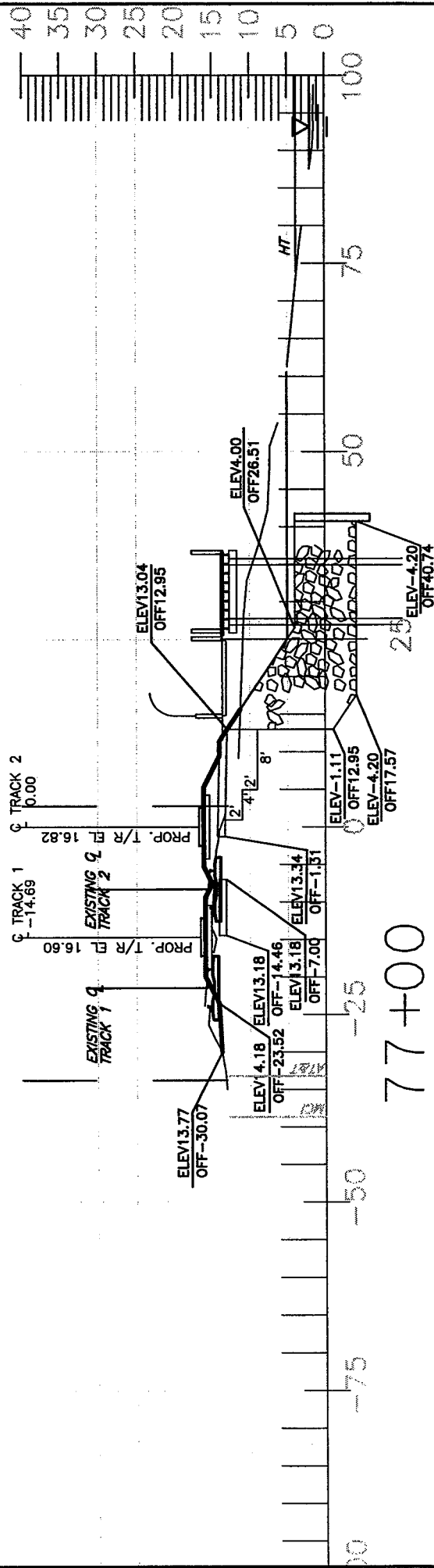
SCALE 1"=20'

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TYPICAL EMBANKMENT /W BOARDWALK	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 10

TRACK STATION 100+00 TO 103+20



SCALE 1" = 20'

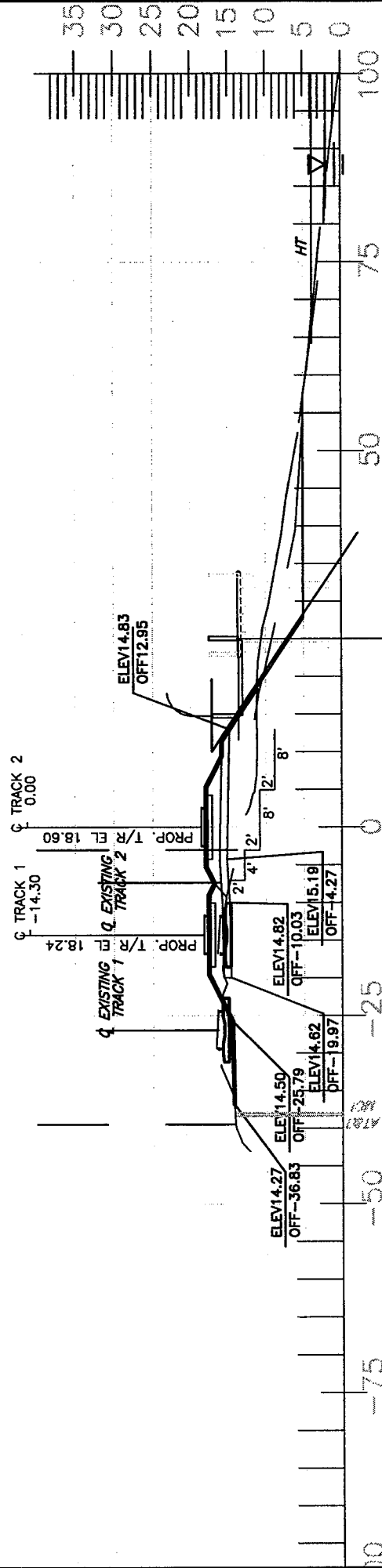


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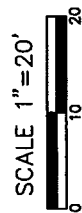
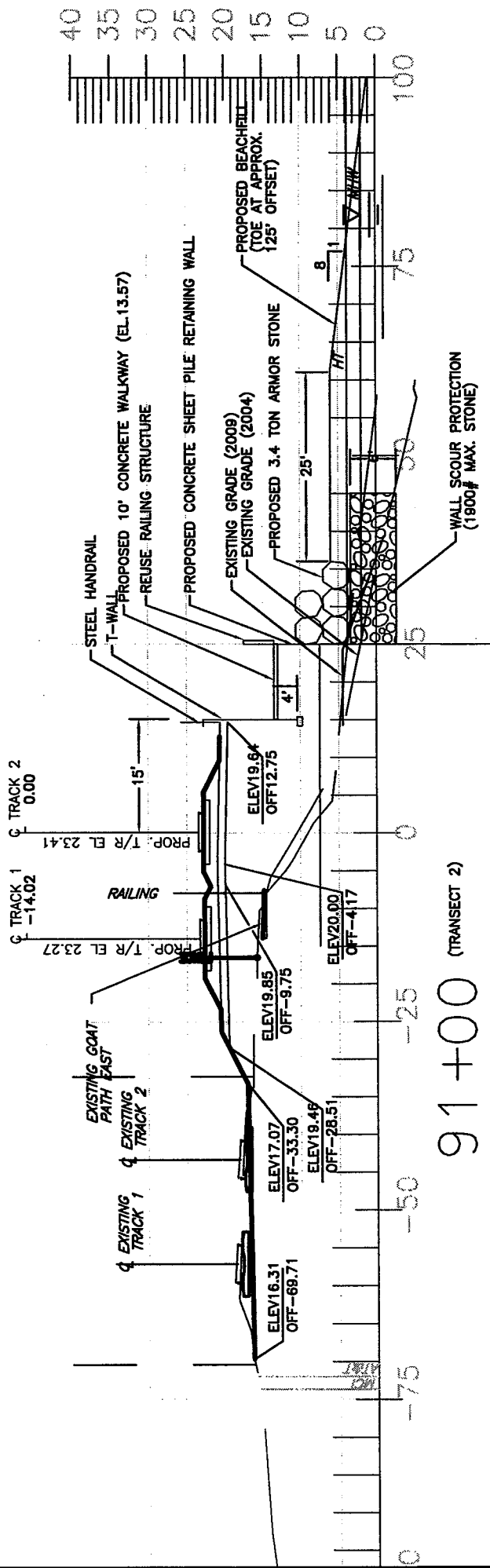
82+00



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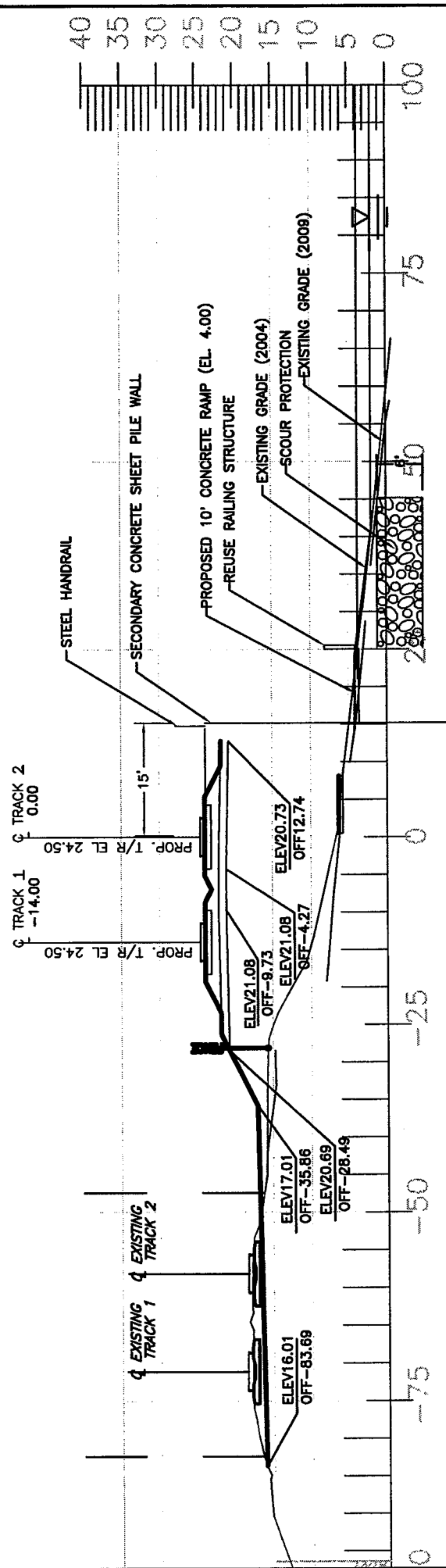
TYPICAL EMBANKMENT /W BOARDWALK	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
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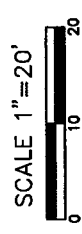
TYPICAL EMBANKMENT / W BOARDWALK	
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DATE: 5/15/09	SHEET 13

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M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0



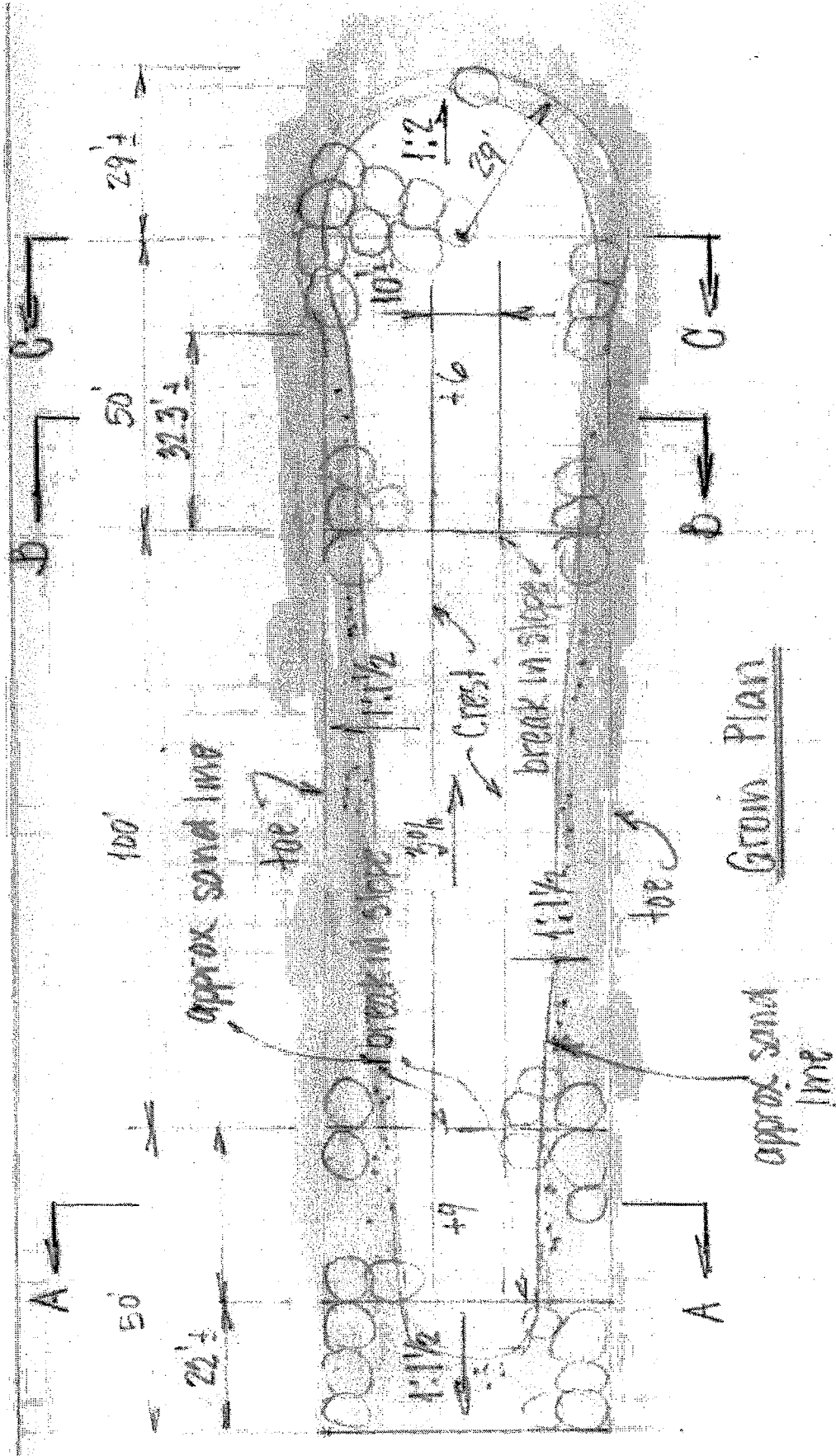
96+00



TYPICAL EMBANKMENT /W BOARDWALK	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK)	
30th Street Station, 4th Floor South	
30th & Market Streets	
Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 14

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

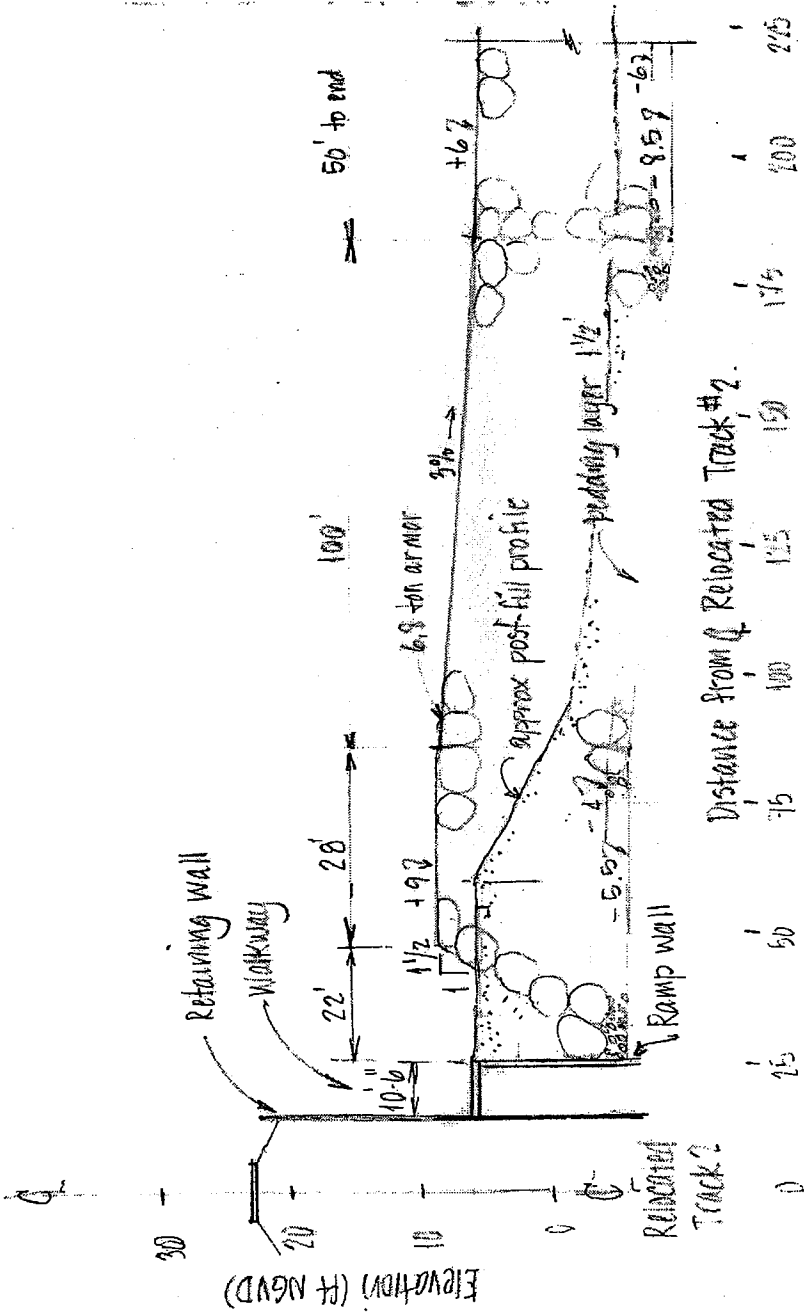
TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0



TERMINAL GROIN PLAN	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 15

TIDAL DATUM (NGVD 1929)
H.T.L. = ELEV. +3.8
M.H.W. = ELEV. +1.96
M.L.W. = ELEV. -0.61
100 YR FLOOD ELEV. = +11.0

Groin @ Sta 95+50



GROIN PROFILE	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK)	
30th Street Station, 4th Floor South	
30th & Market Streets	
Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 16

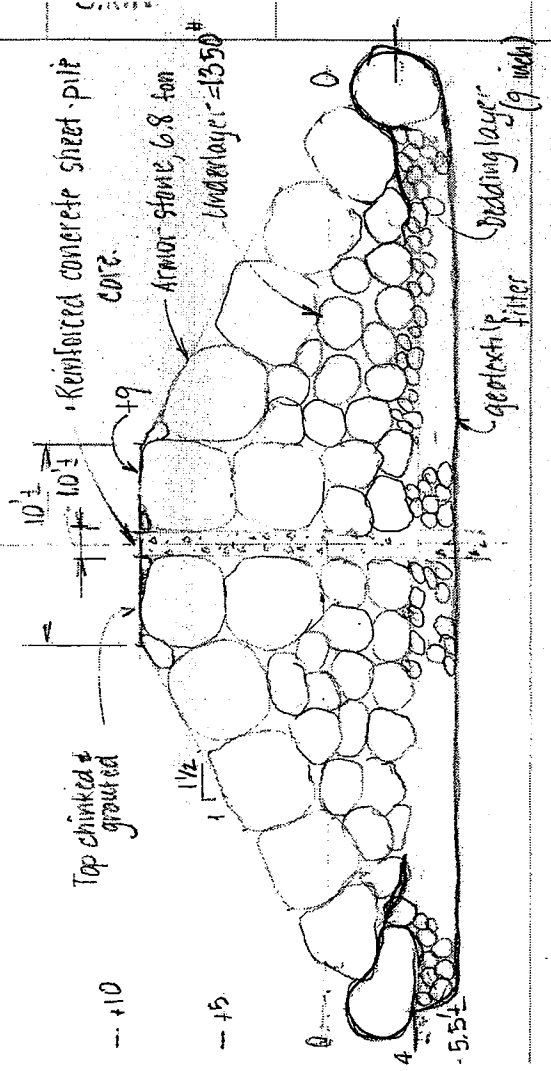
TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8
M.H.W. = ELEV. +1.96
M.L.W. = ELEV. -0.61
100 YR FLOOD ELEV. = +11.0

SECTION A-A

19 Apr 09

1 in = 5 ft



SECTION A-A

REPLACEMENT OF NIANTIC RIVER  
 RAILROAD BRIDGE  
 East Lyme and Waterford, Connecticut

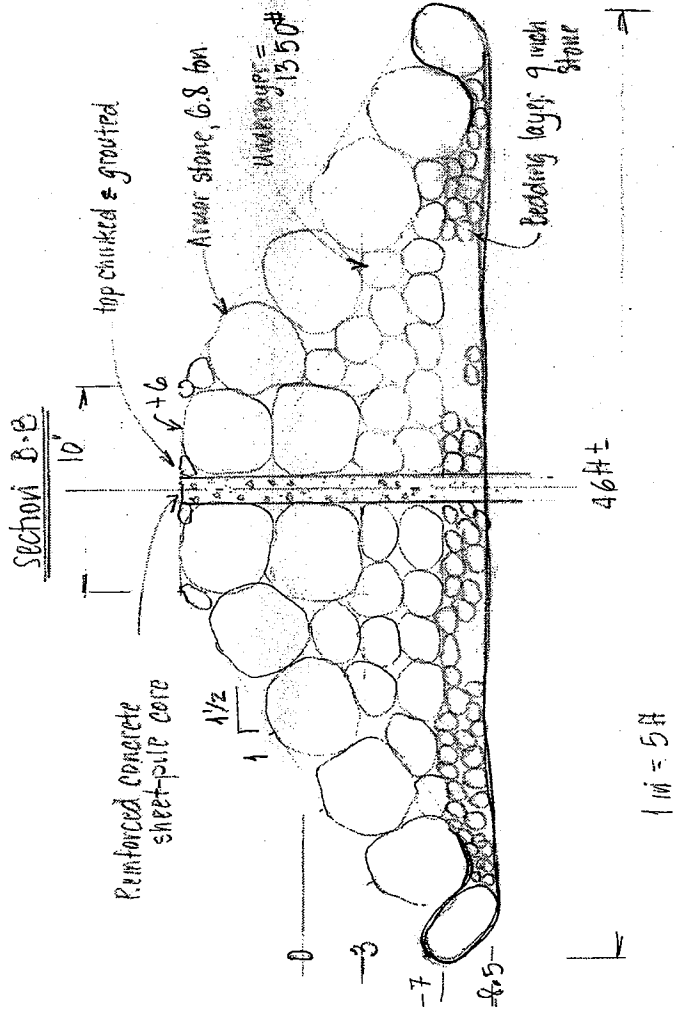
National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

DATE: 5/15/09

SHEET 17

TIDAL DATUM (NGVD 1929)

- H.T.L. = ELEV. +3.8
- M.H.W. = ELEV. +1.96
- M.L.W. = ELEV. -0.61
- 100 YR FLOOD ELEV. = +11.0



SECTION B-B

REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE  
East Lyme and Waterford, Connecticut

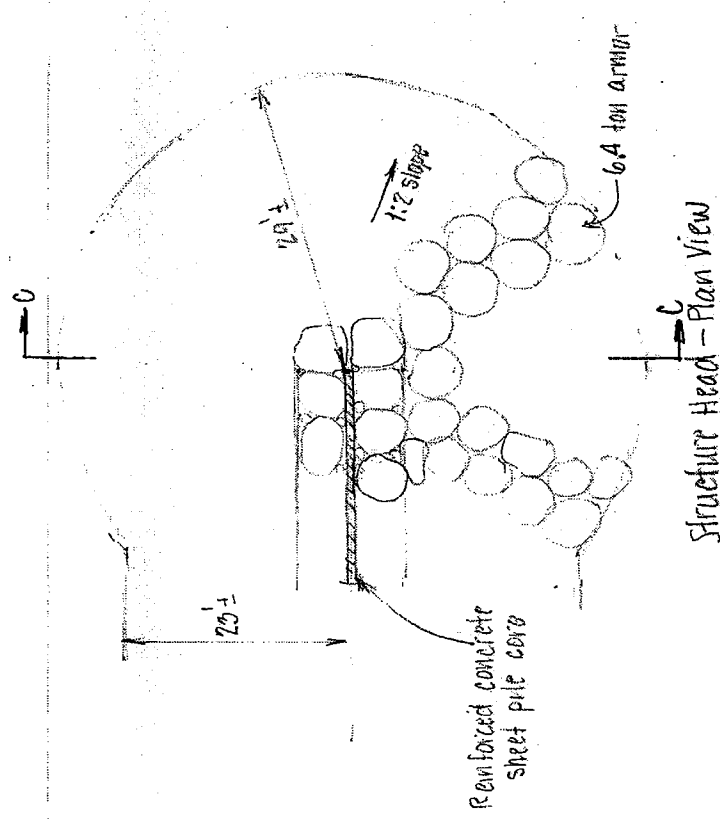
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30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 18

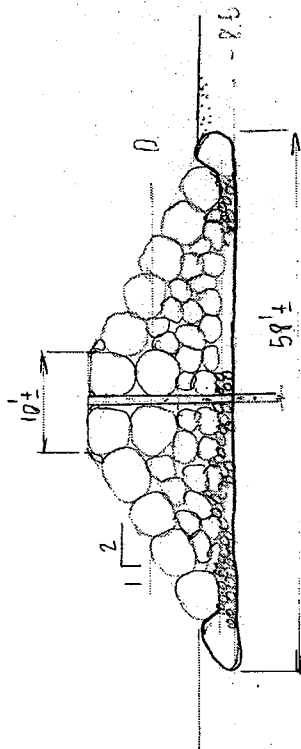
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- H.T.L. = ELEV. +3.8
- M.H.W. = ELEV. +1.96
- M.L.W. = ELEV. -0.61
- 100 YR FLOOD ELEV. = +11.0



TIDAL DATUM (NGVD 1929)  
 H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

STRUCTURE HEAD PLAN	
REPLACEMENT OF NIAN TIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 19



1 in = 10 ft

Section C-C

Structure Head - Profile

TIDAL DATUM (NGVD 1929)

- H.T.L. = ELEV. +3.8
- M.H.W. = ELEV. +1.96
- M.L.W. = ELEV. -0.61
- 100 YR FLOOD ELEV. = +11.0

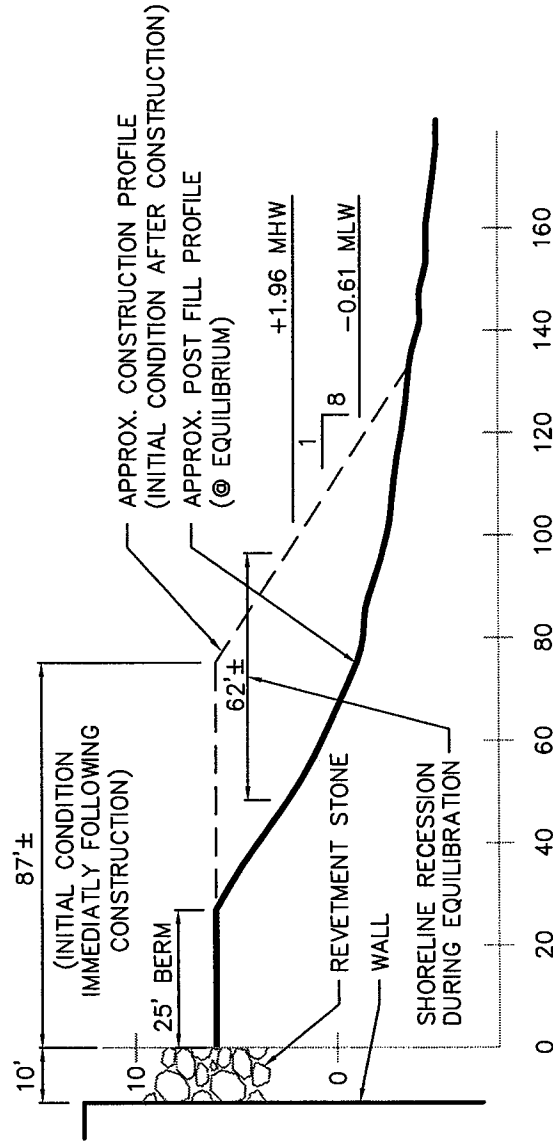
SECTION C-C

REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE  
East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 20

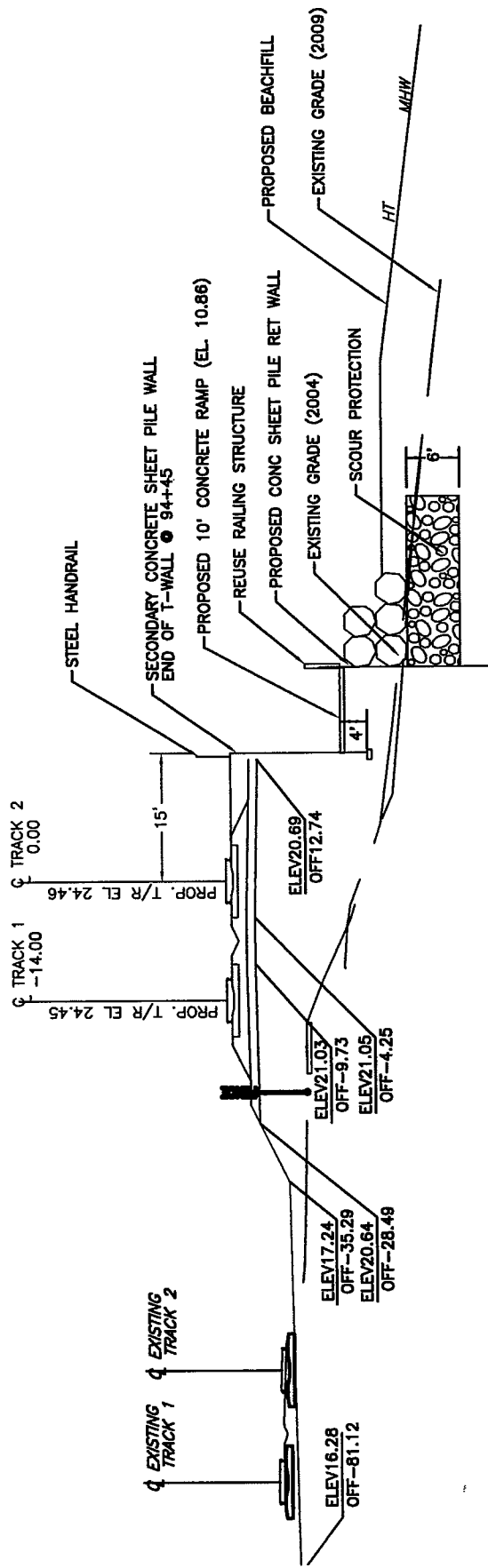


**BEACH FILL CONSTRUCTION PROFILE**  
SCALE: N.T.S.

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

BEACH FILL CONSTRUCTION PROFILE	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 21



TYPICAL EMBANKMENT WITH BOARDWALK
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104
DATE: 5/15/09
SHEET 22

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

TRACK STATION 56+50 TO 62+50 AND 89+90 TO 96+15  
(W/O ELEVATED BOARDWALK)  
AND TRACK STATION 71+50 TO 89+80 (W/ ELEVATED BOARDWALK)

## EROSION AND SEDIMENTATION CONTROL PLAN NOTES

- A. EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE GENERAL SITE DISTURBANCE WITHIN THE TRIBUTARY AREAS OF THOSE CONTROLS.
- B. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED.
- C. ROCK FILTER DAMS WILL BE REMOVED WHEN CLOGGED WITH SEDIMENT. MATERIALS MUST BE WASHED COMPLETELY FREE OF ALL FOREIGN MATERIALS OR NEW ROCK USED TO REBUILD THE FILTER OR TRAP.
- D. EROSION AND SEDIMENTATION CONTROLS MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES.
- E. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.
- F. THE CONTRACTOR MUST DEVELOP, AND HAVE APPROVED BY THE BUREAU OF LAND AND WATER CONSERVATION, A SEPARATE EROSION AND SEDIMENTATION CONTROL PLAN FOR EACH SPILL, BORROW, OR OTHER WORK AREA NOT DETAILED IN THE PERMITTED PLAN, WHETHER LOCATED WITHIN OR OUTSIDE OF THE CONSTRUCTION LIMITS.
- G. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMMEDIATELY IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE ALL SUCH PROBLEMS.
- H. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RESETTING, MUST BE PERFORMED IMMEDIATELY.

EROSION AND SEDIMENTATION CONTROL NOTES

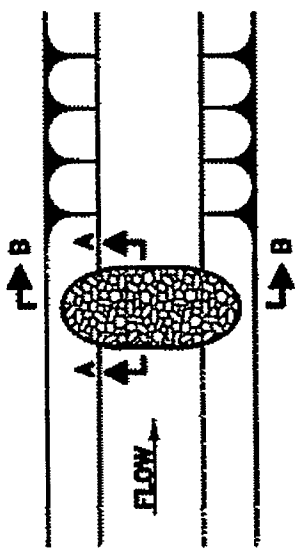
REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

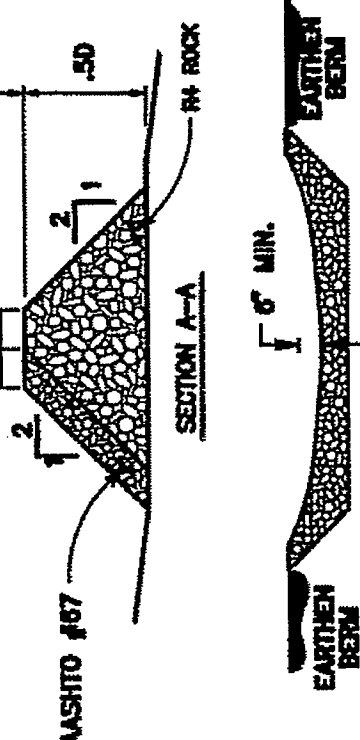
SHEET 23



PLAN VIEW

TOP OF BANK

D = DEPTH OF WATER AT CHANNEL CAPACITY 1' 1"



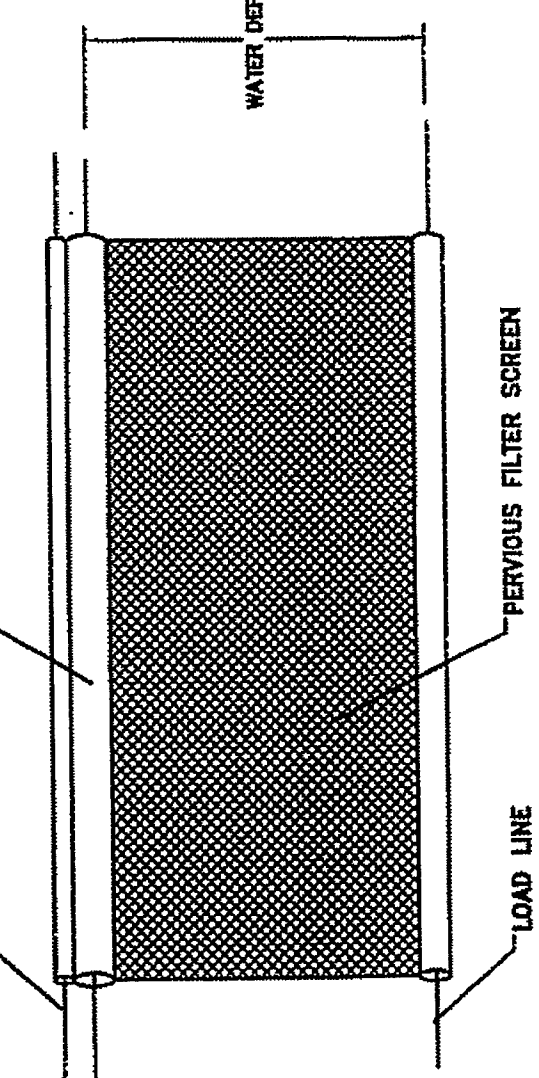
SECTION A-A

SECTION B-B

**ROCK FILTER DAM**

TENSION MEMBER

FLOTATION DEVICE

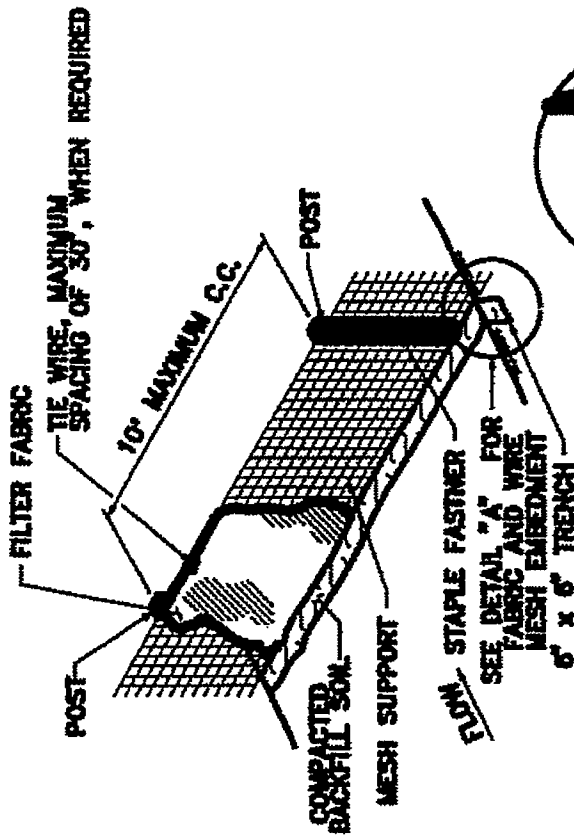


**TURBIDITY CURTAIN (TYP.)**

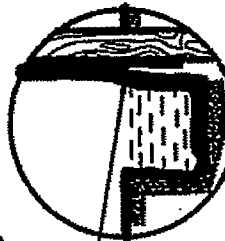
NO SCALE

TURBIDITY CURTAIN TO MEET CONNECTICUT DEP CLASS IV STANDARDS

EROSION & SEDIMENT CONTROL DETAILS	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 24

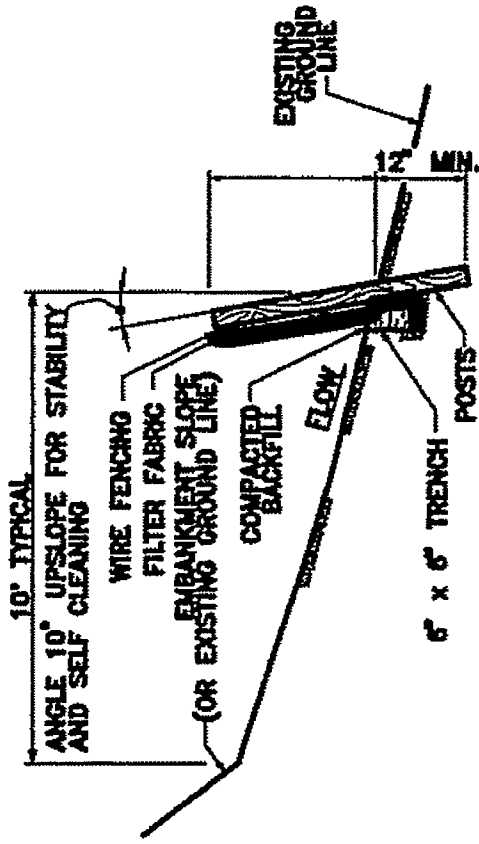


EXTEND FILTER FABRIC 6" INTO EXCAVATED TRENCH. EXTEND WIRE MESH A MINIMUM OF 2" INTO TRENCH.



DETAIL "A"

SEE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002) FOR ADDITIONAL FILTER FENCE REQUIREMENTS.



NOTES:

1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

PHYSICAL PROPERTY

FILTERING EFFICIENCY  
TENSILE STRENGTH AT  
20% (MAX.) ELONGATION  
FLOW RATE

REQUIREMENTS

75% (MIN.)  
EXTRA STRENGTH - 50 lbs./lin. in. (MIN.)  
STANDARD STRENGTH - 30 lbs./lin. in. (MIN.)  
0.3 gal./sq. ft./ (MIN.)

2. PROVIDE FILTER FABRIC ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.

**EROSION CONTROL FENCE DETAILS**

N.T.S.

EROSION CONTROL FENCE DETAILS

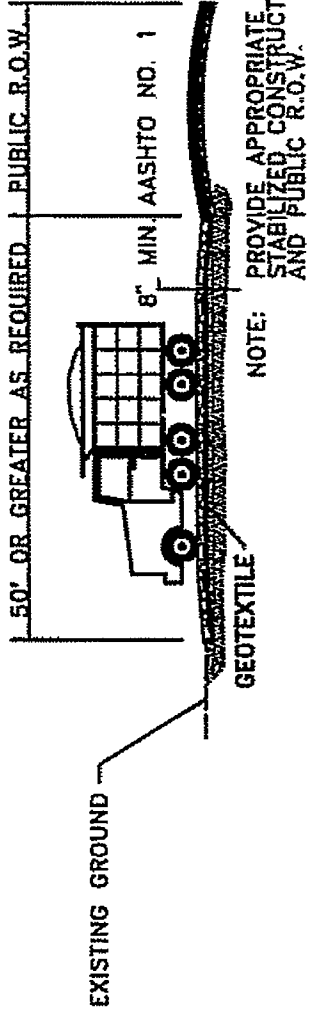
REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE

East Lyme and Waterford, Connecticut

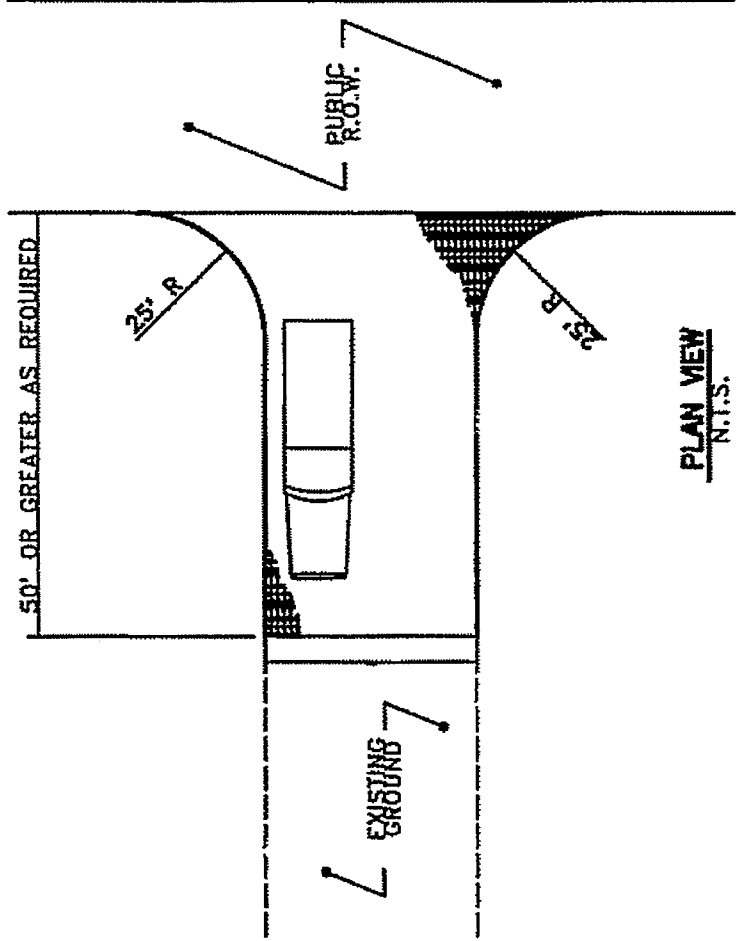
National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 25



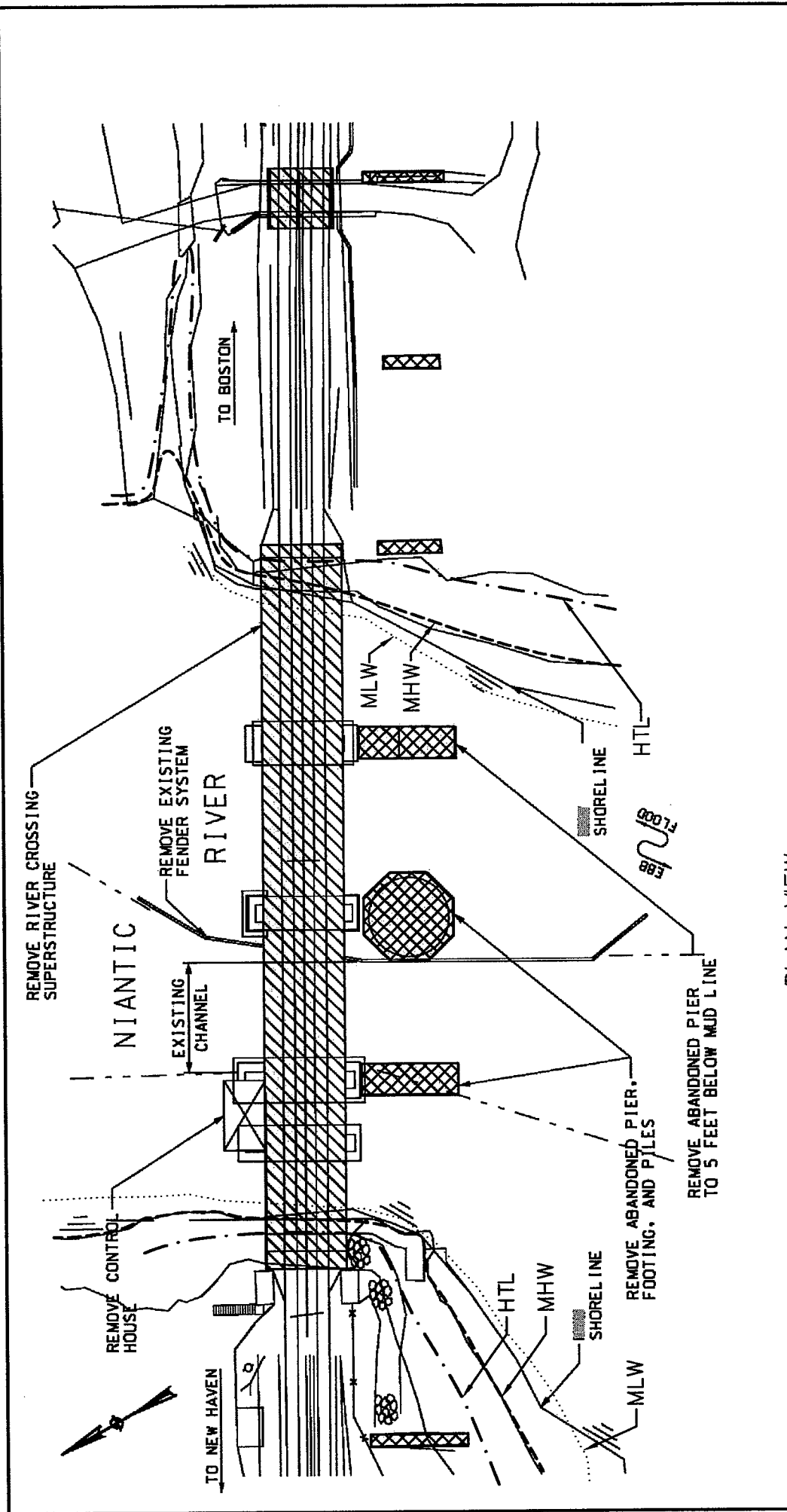
PROFILE  
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE  
N.T.S.

LOCATIONS: WEST APPROACH GRADE KING  
 NEW WEST APPROACH ACCESS ROAD  
 U.G. BRIDGE 116.79  
 MILLSTONE ROAD TEMP ACCESS

STABILIZED CONSTRUCTION ENTRANCE	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 26



PLAN VIEW  
SCALE 1"=60'



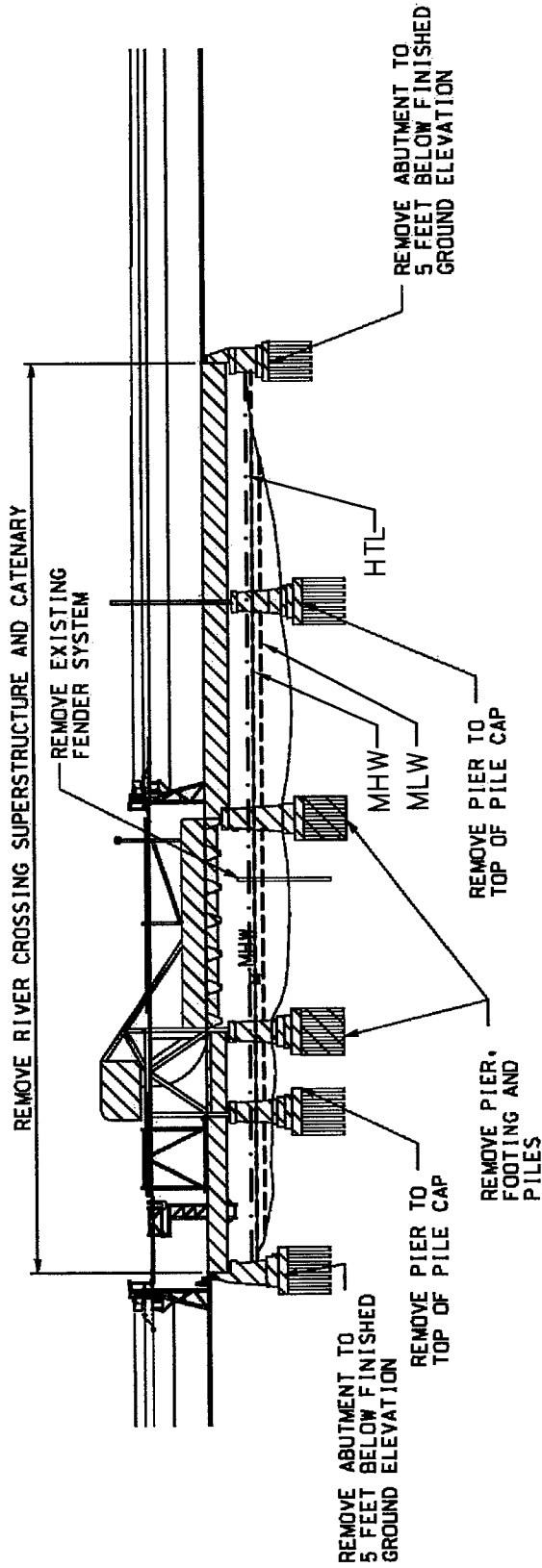
KEY

- ABANDONED BRIDGE PIERS
- EXISTING BRIDGE

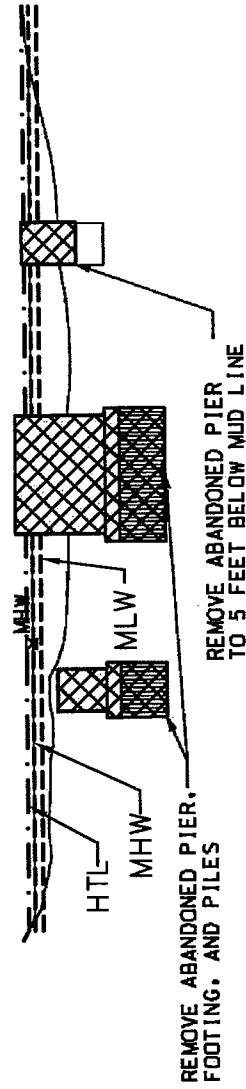
EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

EXISTING BRIDGE DEMO PLAN
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104
DATE: 5/15/09      SHEET 27



EXISTING BRIDGE ELEVATION  
SCALE 1"=60'



EXISTING ABANDONED PIER ELEVATION  
SCALE 1"=60'

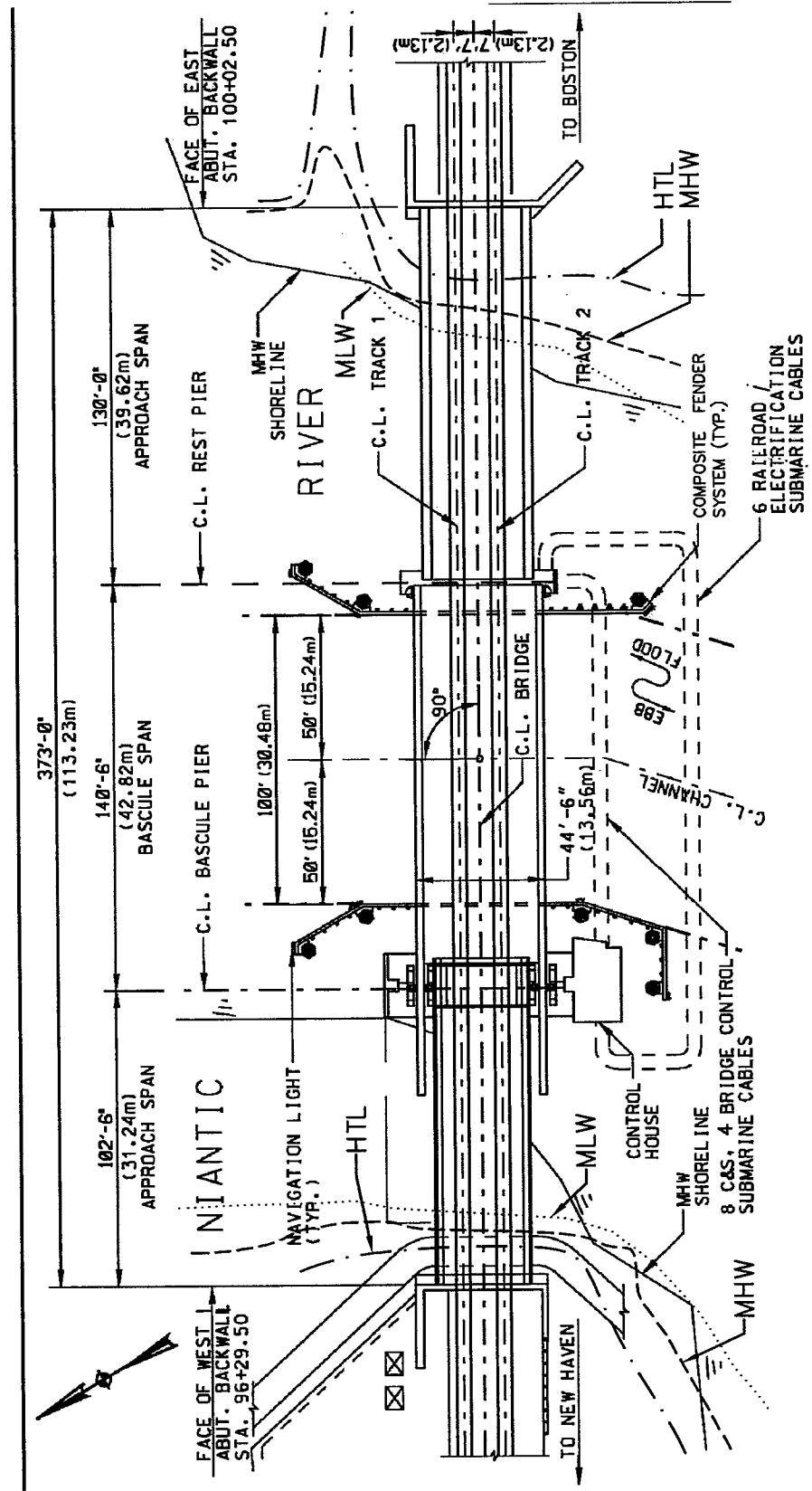
EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
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PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

KEY

- ABANDONED BRIDGE PIERS
- EXISTING BRIDGE

EXISTING BRIDGE DEMO ELEVATIONS	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 28

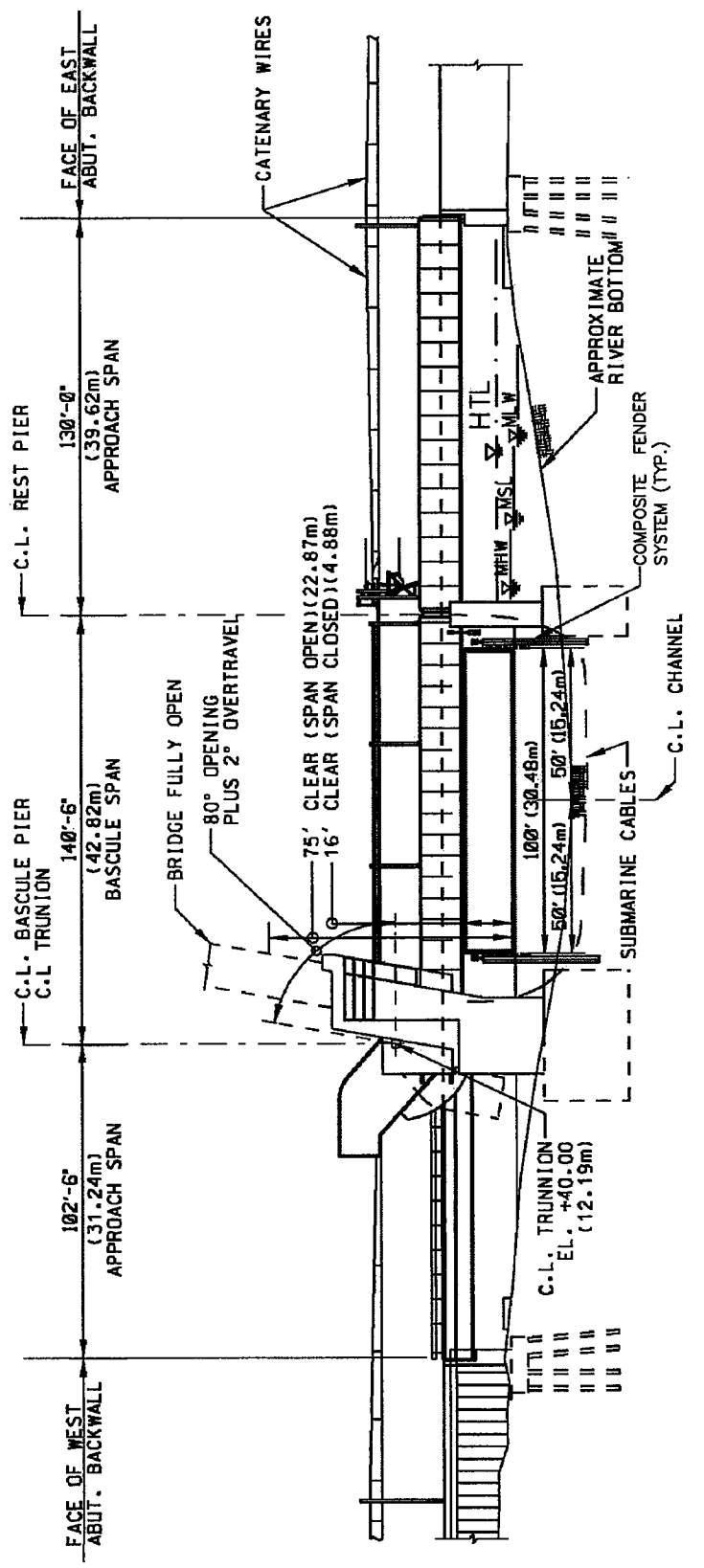


PLAN VIEW  
SCALE 1" = 60'

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

PROPOSED BRIDGE PLAN	
REPLACEMENT OF NIAN TIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK)	
30th Street Station, 4th Floor South	
30th & Market Streets	
Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 29

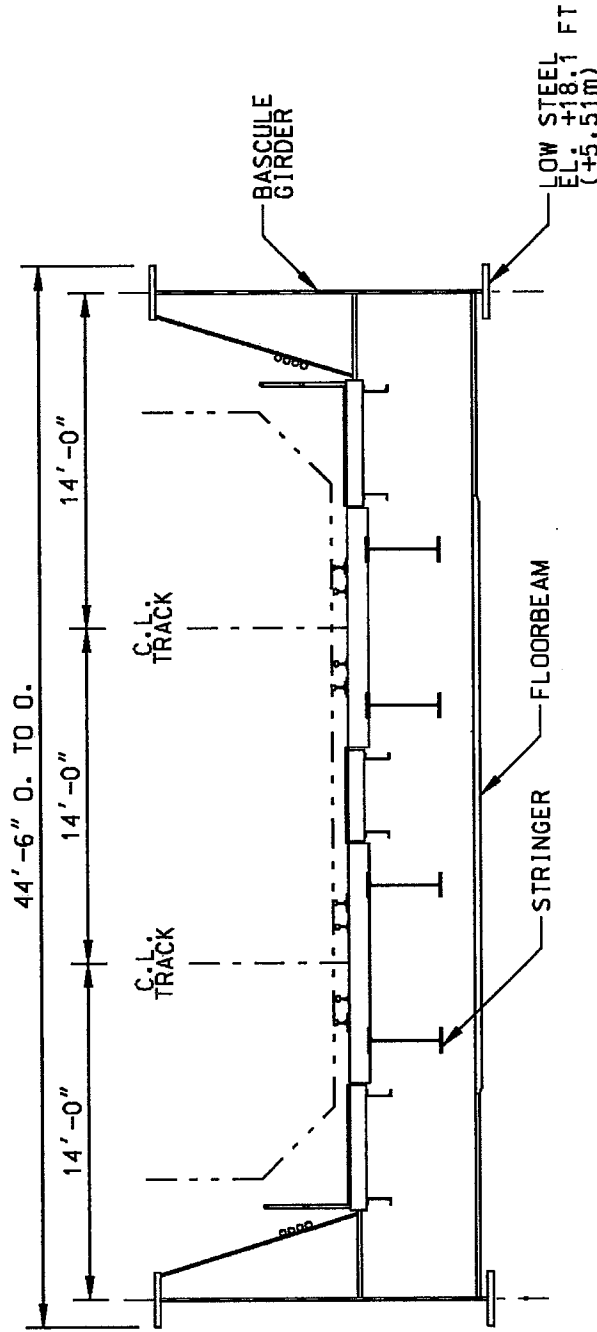


**ELEVATION**  
 SCALE 1"=60'  
 0 15 30 60

EXCEPT AS NOTED  
 HTL, MHW, AND MLW ARE  
 THE SAME IN EXISTING AND  
 PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
 H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

<b>PROPOSED BRIDGE ELEVATIONS</b>	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 30



**BRIDGE CROSS SECTION**  
SCALE 1/8" = 1'-0"

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8

M.H.W. = ELEV. +1.96

M.L.W. = ELEV. -0.61

100 YR FLOOD ELEV. = +11.0

**PROPOSED BRIDGE SECTION**

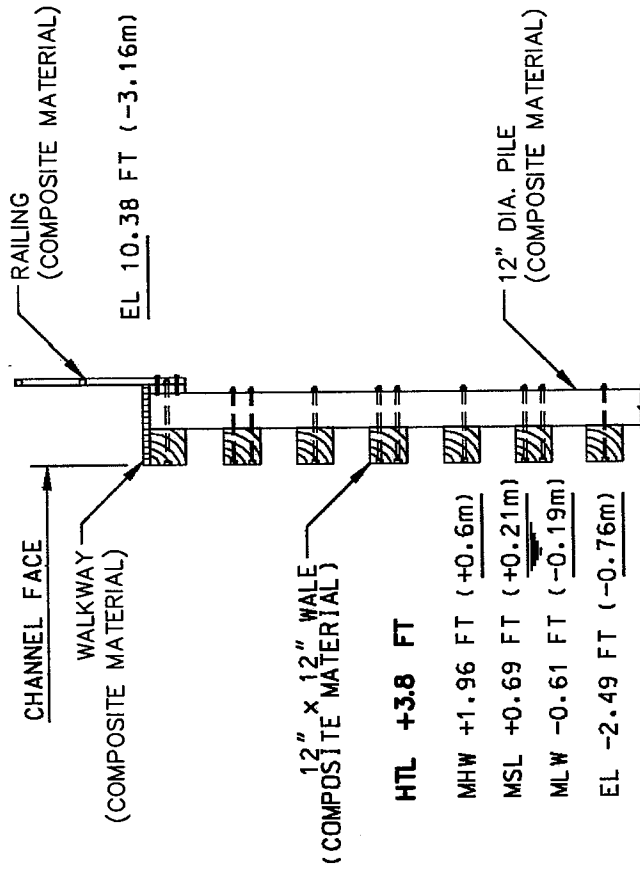
REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 31



FENDER SYSTEM  
SCALE 1/8"=1'-0"

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

FENDER DETAIL

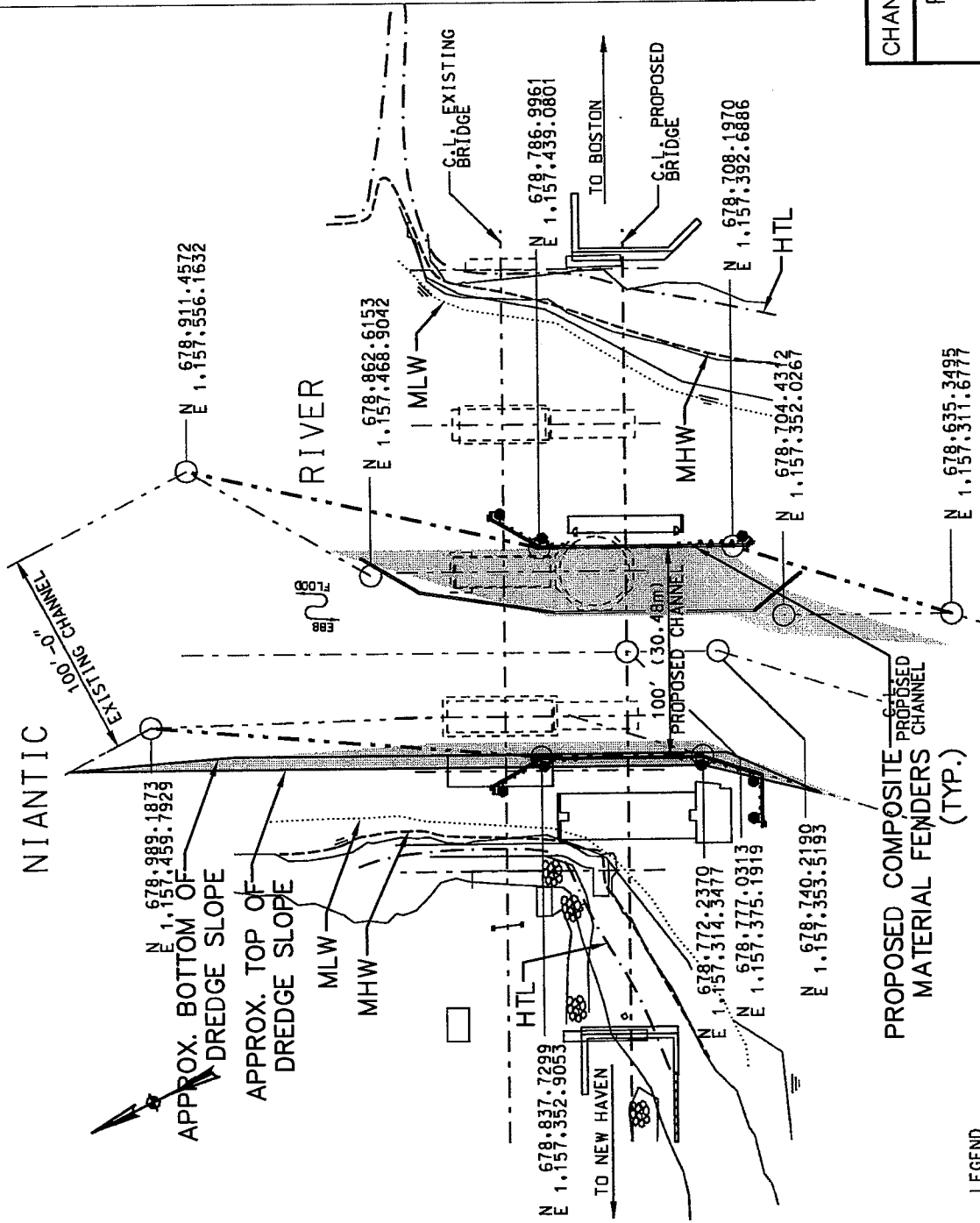
REPLACEMENT OF NIAN TIC RIVER  
RAILROAD BRIDGE  
East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 32

# NIANTIC RIVER



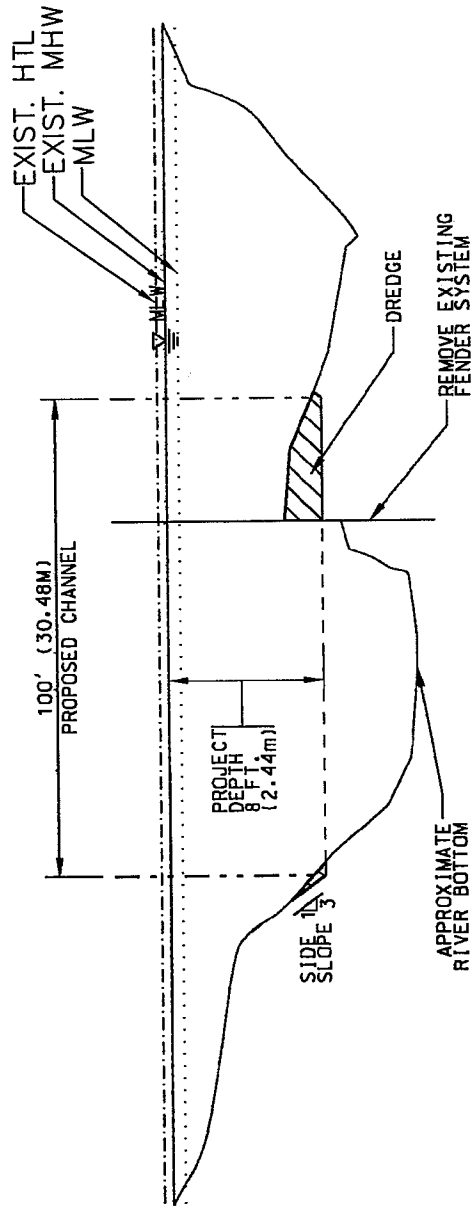
EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

CHANNEL REALIGNMENT, AND DREDGING PLAN	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE	
East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 33

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

PLAN VIEW  
SCALE 1" = 80'

LEGEND  
 --- EXISTING CHANNEL  
 - - - PROPOSED CHANNEL  
 [Hatched Area] PROPOSED DREDGING



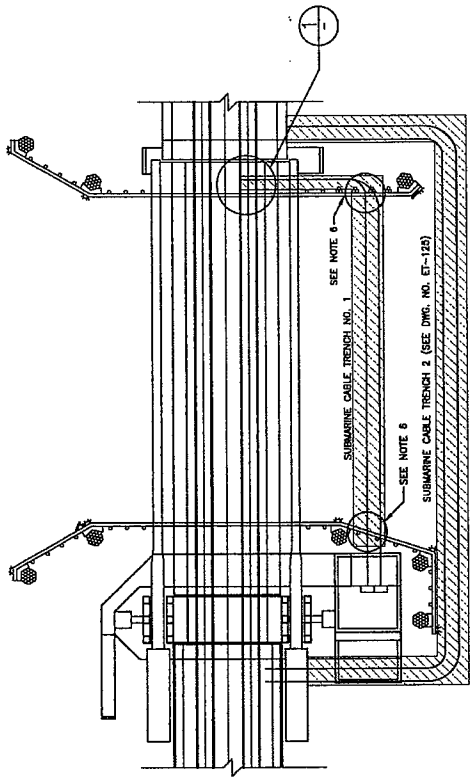
CHANNEL DREDGING  
TYPICAL SECTION

PLAN VIEW  
SCALE 1" = 40'

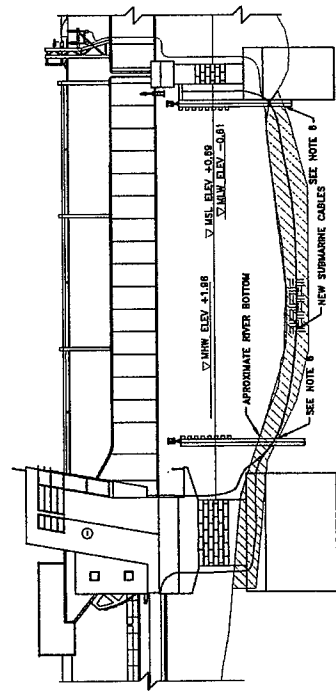
EXCEPT AS NOTED  
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TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

CHANNEL DREDGING SECTION	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 34

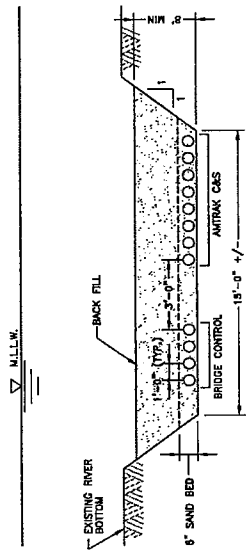
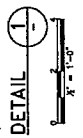


**GENERAL PLAN**  
 SIZE OF TRENCH NOT SHOWN TO SCALE  
 1/4" = 1'-0"



**GENERAL ELEVATION**  
 SIZE OF TRENCH NOT SHOWN TO SCALE

- NOTES:**
1. TO ENSURE PROPER CIRCUIT CONNECTIONS ACROSS THE CHANNEL, THE FOLLOWING ARMORED CABLES SHALL BE INSTALLED UNDER WATERS:
    - A) TWO CONTROL SUBMARINE CABLES
    - B) TWO AMTRAK CAS SUBMARINE CABLES
    - C) EIGHT AMTRAK CAS SUBMARINE CABLES
    - D) TWO 500 MCM ELECTRIFICATION SUBMARINE CABLES
    - E) FOUR 750 MCM ELECTRIFICATION SUBMARINE CABLES
  2. EXCAVATE TRENCH TO DEPTH THAT ALLOWS SIDE OF THE TRENCH TO STAND AT ITS NATURAL SLOPE
  3. THE CABLE TRENCH SHALL BE SLOPED UPWARD UNTIL IT MEETS THE EXISTING RIVER BOTTOM OUTSIDE OF THE CHANNEL, BETWEEN THE PIERBAYS AND THE PIERS.
  4. ACROSS THE NAVIGABLE CHANNEL, THE SUBMARINE CABLES ARE TO BE BURIED NOT LESS THAN 8 FEET BELOW THE NATURAL RIVER BOTTOM, WHICHEVER IS LOWER.
  5. THE CONTRACTOR SHALL REFER TO THE ELECTRIFICATION DRAWINGS FOR DETAILS OF THE SUBMARINE CABLES, TRENCH REQUIREMENTS AND ROUTING REQUIRED FOR ELECTRIFICATION SUBMARINE CABLES.
  6. THE INSTALLATION OF THE NEW SUBMARINE CABLES SHALL BE COORDINATED WITH THE INSTALLATION OF THE NEW FENDER SYSTEM.
  7. ALL WORK SHOWN SHALL BE COORDINATED WITH THE LOCATION OF THE EXISTING AT&T SUBMARINE CABLE. THE CONTRACTOR IS REQUIRED TO PROTECT AT ALL TIMES DURING CONSTRUCTION.



**SUBMARINE CABLE TRENCH NO. 1 SECTION**  
 NOT TO SCALE

**SUBMARINE CABLE PLAN & SECTIONS**

**REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE**

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

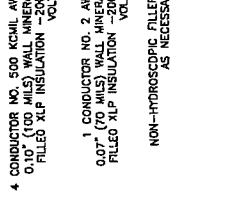
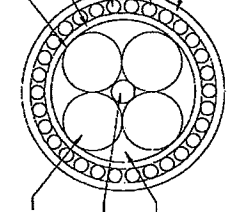
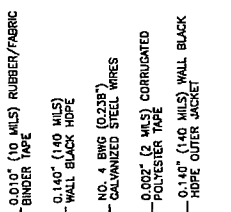
DATE: 5/15/09

SHEET 35

EXCEPT AS NOTED  
 HTL, MHW, AND MLW ARE  
 THE SAME IN EXISTING AND  
 PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)

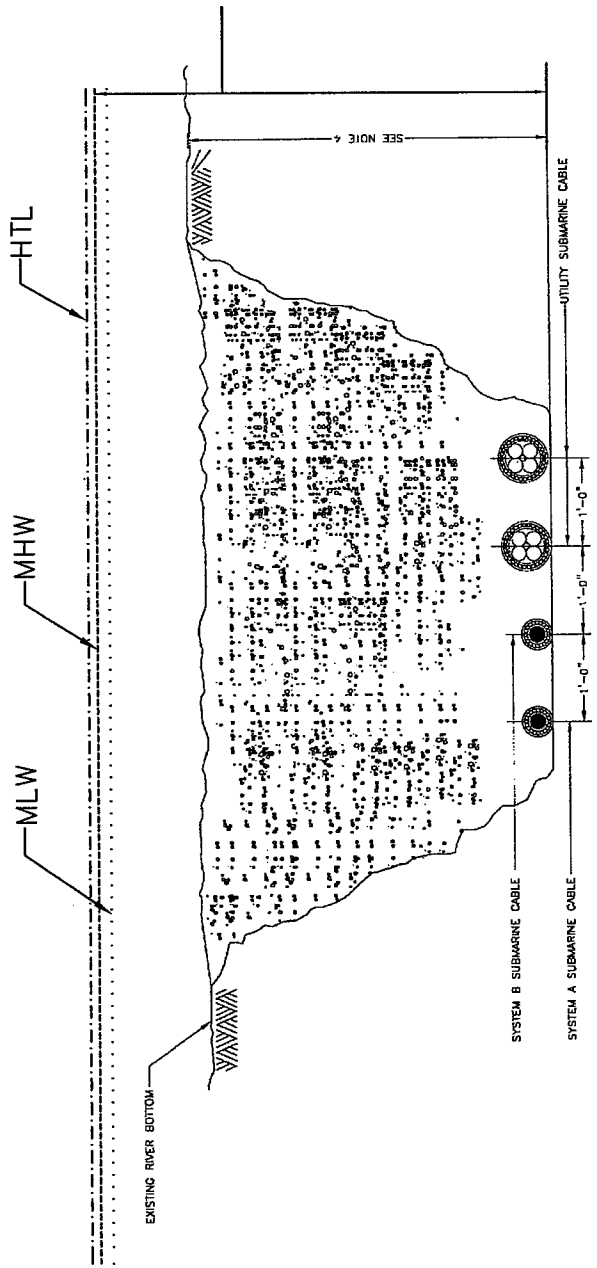
H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0



UTILITY SUBMARINE CABLE 1 & 2

SYSTEM 2 SUBMARINE CABLE

SYSTEM 1 SUBMARINE CABLE



WITHIN CHANNEL: THE DEEPER OF 18' OR 7' BELOW EXISTING BOTTOM OF CHANNEL

NOTES:

- TO ENSURE PROPER CIRCUT CONNECTIONS ACROSS THE CHANNEL, THE FOLLOWING ARMORED CABLES SHALL BE INSTALLED UNDER WATER:
  - A) TWO CONTROL SUBMARINE CABLES
  - B) ONE ELECTRICAL POWER UTILITY CABLE
  - C) AMTRAK C&S SUBMARINE CABLES
  - D) TWO 500 MCM ELECTRIFICATION SUBMARINE CABLES
  - E) FOUR 750 MCM ELECTRIFICATION SUBMARINE CABLES
- EXCAVATE TRENCH TO DEPTH THAT ALLOWS SIDE OF THE TRENCH TO STAND AT ITS NATURAL SLOPE
- THE CABLE TRENCH SHALL BE SLOPED UPWARD UNTIL IT MEETS THE EXISTING RIVER BOTTOM OUTSIDE OF THE CHANNEL BETWEEN THE FENDERS AND THE PIERS.
- ACROSS THE NAVIGABLE CHANNEL THE SUBMARINE CABLES ARE TO BE BURIED NOT LESS THAN 7 FEET BELOW THE ARMY CORPS OF ENGINEERS MAXIMUM DREDGE LIMIT (-10 FEET BELOW M.L.W.) OR 7 FEET BELOW THE EXISTING RIVER BOTTOM, WHICHEVER IS LOWER.
- SEE DWG ET-100 FOR ELECTRIFICATION SUBMARINE CABLE ROUTING.
- C&S SUBMARINE CABLES SHALL BE ROUTED IN THE SAME TRENCH AS THE BRIDGE CONTROL CABLES IN A SIMILAR ARRANGEMENT AS SHOWN ON THIS DRAWING.

NEW SUBMARINE CABLE TRENCH DETAIL

AMTRAK C&S AND ELECTRIFICATION SUBMARINE CABLES NOT SHOWN

EXCEPT AS NOTED HTL, MHW, AND MLW ARE THE SAME IN EXISTING AND PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
 H.T.L. = ELEV. +3.8  
 M.H.W. = ELEV. +1.96  
 M.L.W. = ELEV. -0.61  
 100 YR FLOOD ELEV. = +11.0

**SUBMARINE CABLE TYPICAL SECTION**

**REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE**

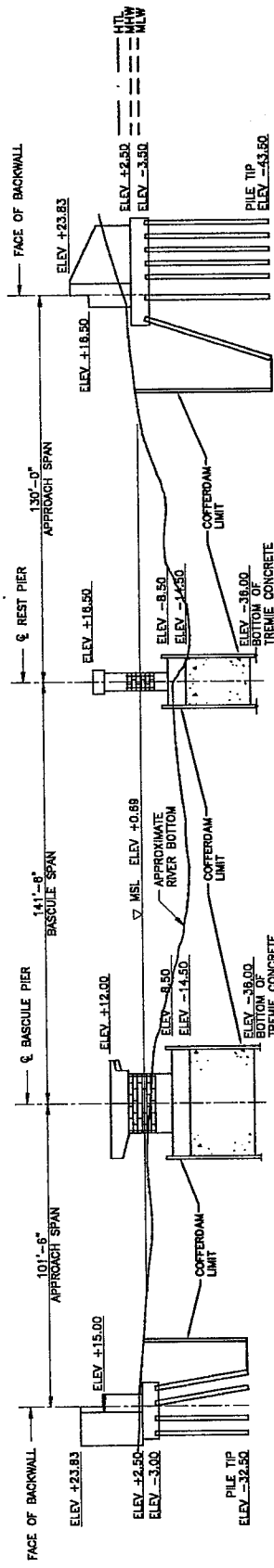
East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
 30th Street Station, 4th Floor South  
 30th & Market Streets  
 Philadelphia, PA 19104

DATE: 5/15/09

SHEET 36





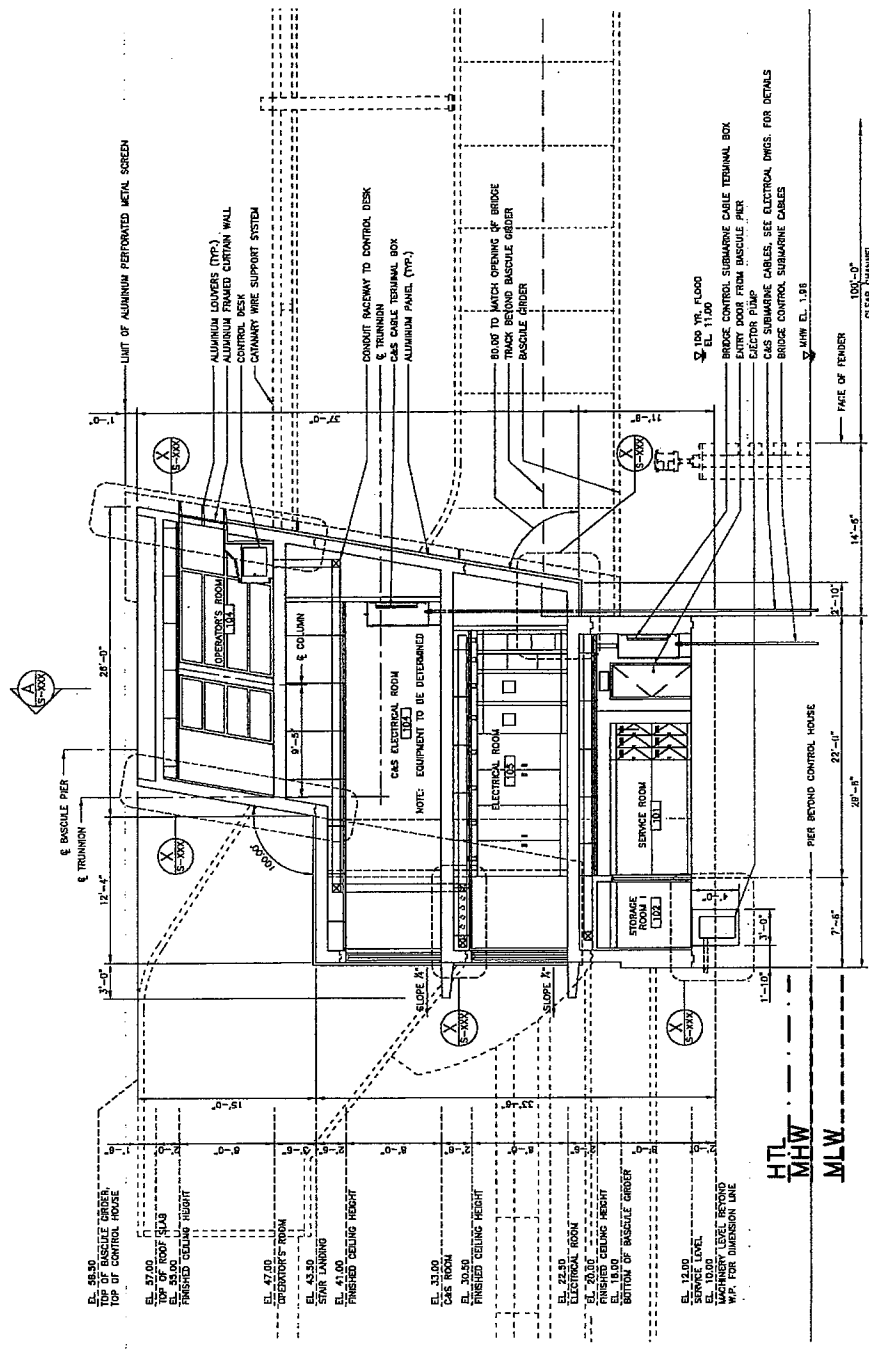
**FOUNDATION ELEVATION  
(LOOKING NORTH)**



EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

BRIDGE FOOTING ELEVATION	
REPLACEMENT OF NIANTIC RIVER RAILROAD BRIDGE East Lyme and Waterford, Connecticut	
National Railroad Passenger Corporation (AMTRAK) 30th Street Station, 4th Floor South 30th & Market Streets Philadelphia, PA 19104	
DATE: 5/15/09	SHEET 38



SCALE 1/16" = 1'-0"

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

**CONTROL HOUSE SECTION 1**

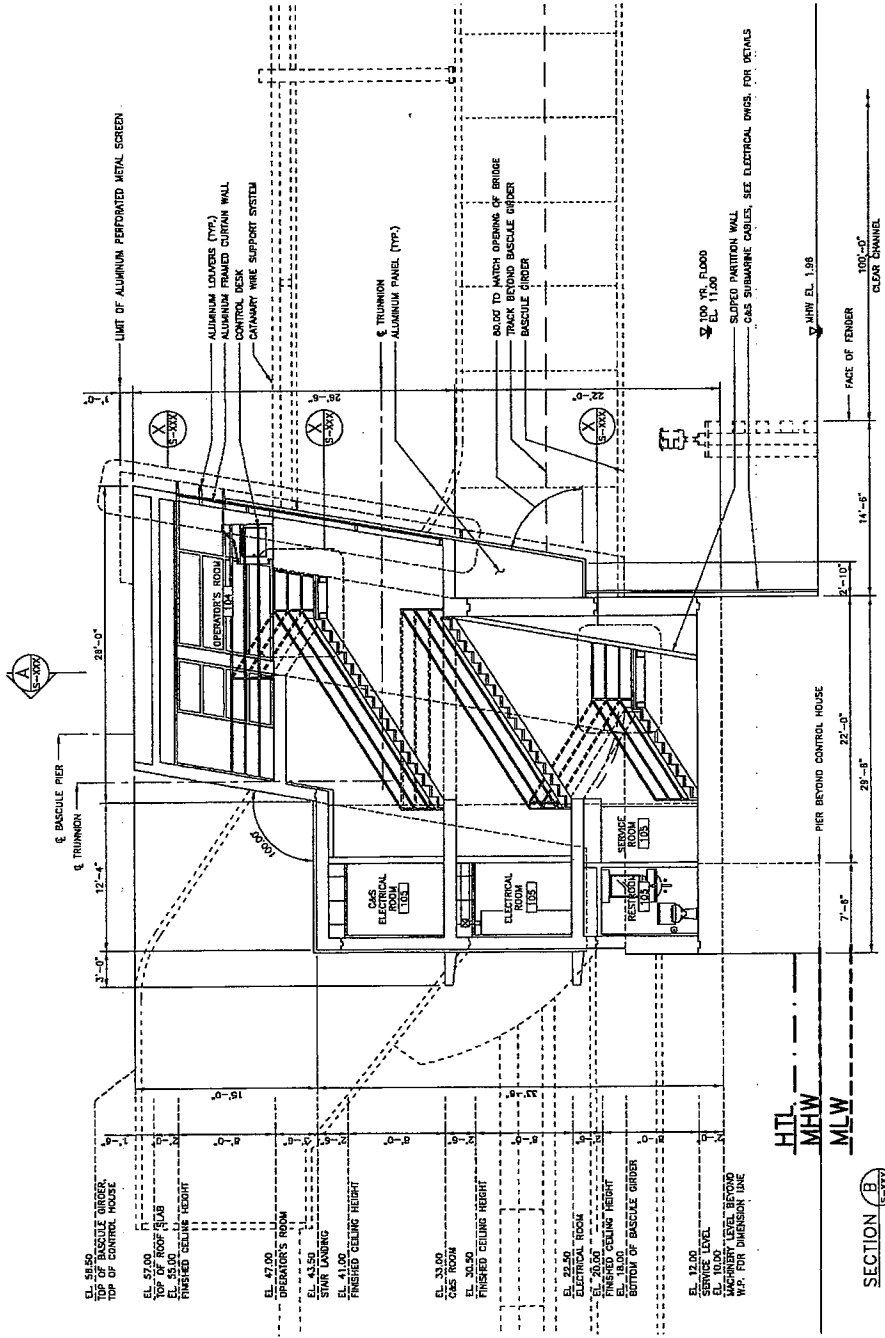
**REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE**

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 39

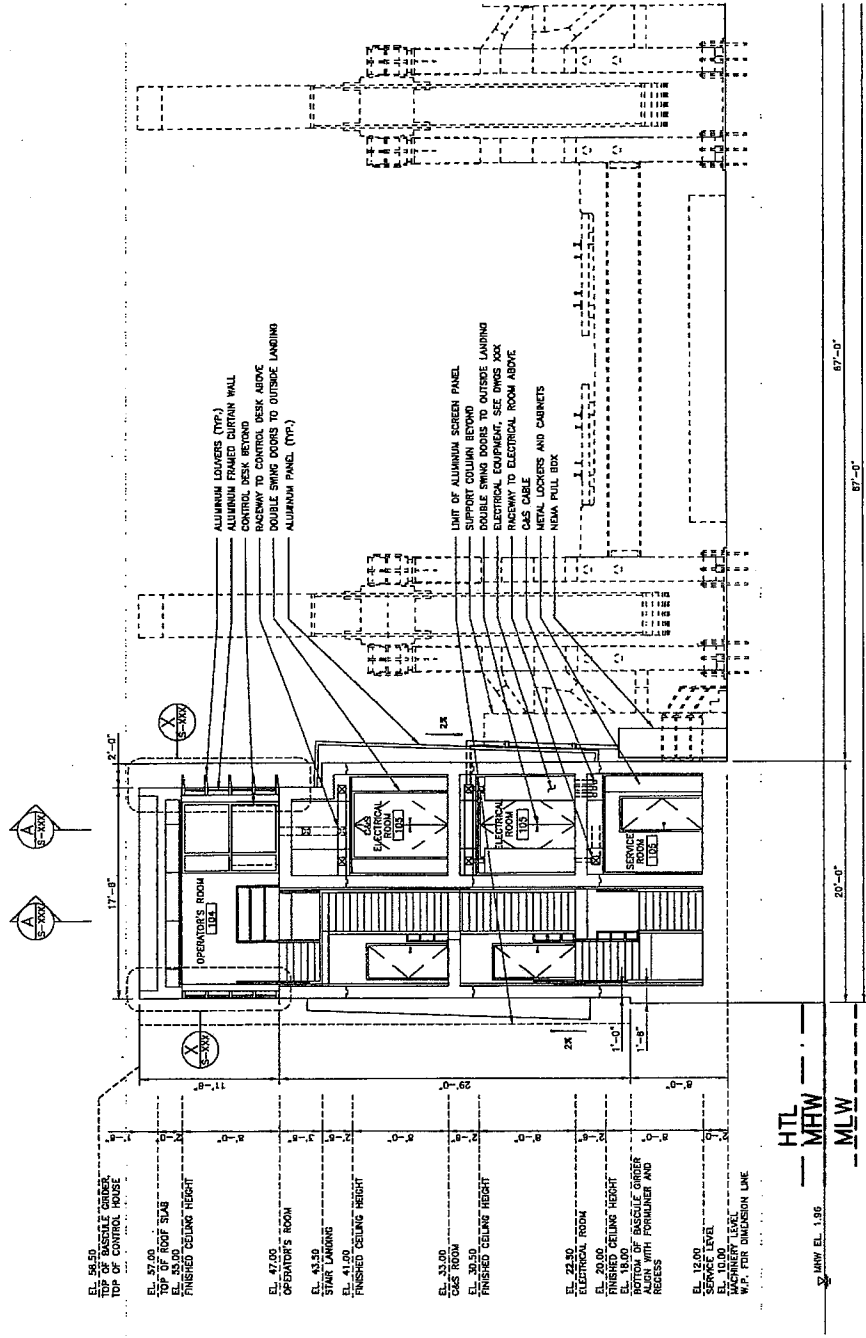


SCALE 1/16" = 1' - 0"

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

**CONTROL HOUSE SECTION 2**  
**REPLACEMENT OF NIAN TIC RIVER RAILROAD BRIDGE**  
East Lyme and Waterford, Connecticut  
National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104  
DATE: 5/15/09  
SHEET 40

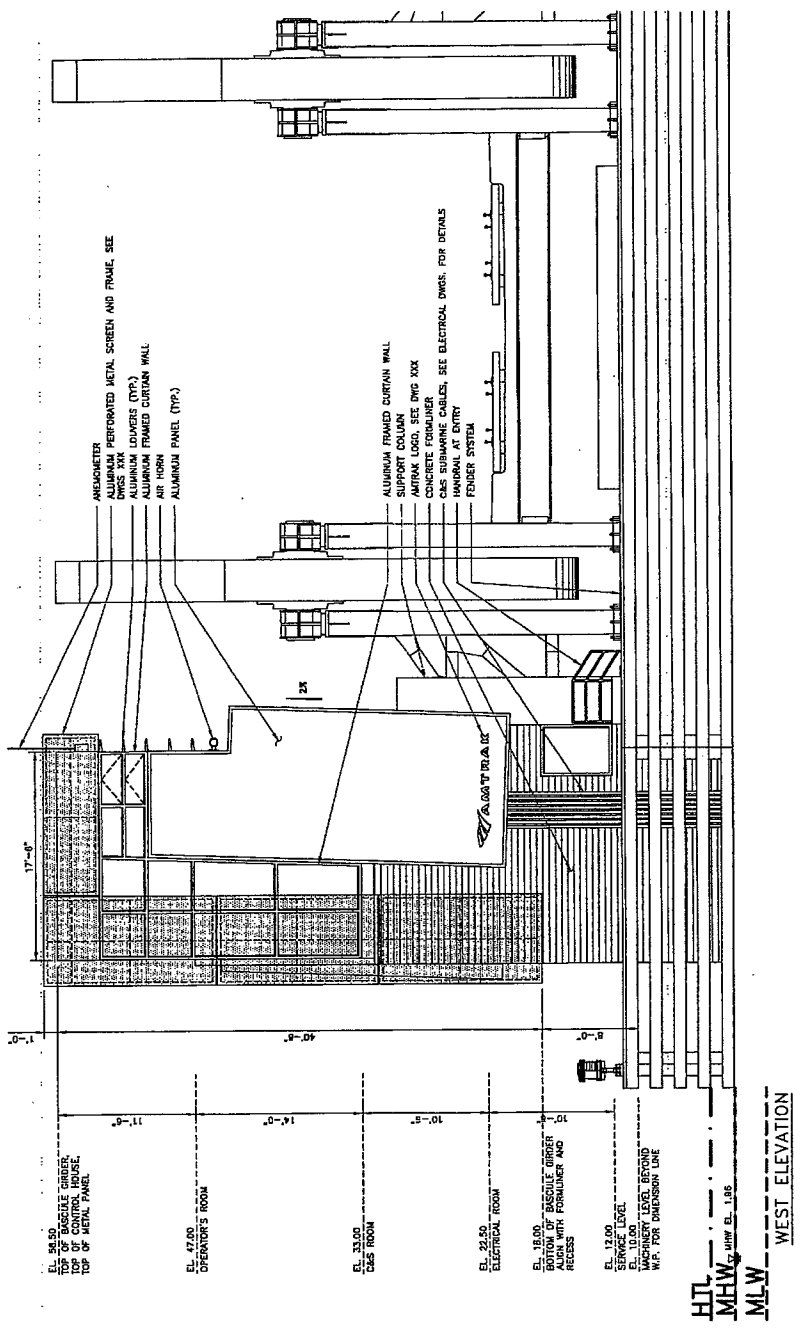


SCALE 1/16" = 1' - 0"

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)  
H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0

**CONTROL HOUSE SECTION 3**  
**REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE**  
East Lyme and Waterford, Connecticut  
National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104  
DATE: 5/15/09 SHEET 41



SCALE 1/16" = 1'-0"

**CONTROL HOUSE WEST ELEVATION**

REPLACEMENT OF NIANTIC RIVER  
RAILROAD BRIDGE

East Lyme and Waterford, Connecticut

National Railroad Passenger Corporation (AMTRAK)  
30th Street Station, 4th Floor South  
30th & Market Streets  
Philadelphia, PA 19104

DATE: 5/15/09

SHEET 42

EXCEPT AS NOTED  
HTL, MHW, AND MLW ARE  
THE SAME IN EXISTING AND  
PROPOSED CONDITIONS

TIDAL DATUM (NGVD 1929)

H.T.L. = ELEV. +3.8  
M.H.W. = ELEV. +1.96  
M.L.W. = ELEV. -0.61  
100 YR FLOOD ELEV. = +11.0



**Summary of Essential Fish Habitat (EFH) Designation****10' x 10' Square Coordinates:**

Boundary	North	East	South	West
Coordinate	41° 20.0' N	72° 10.0' W	41° 10.0' N	72° 20.0' W

**Square Description (i.e. habitat, landmarks, coastline markers):** The waters within the square within the Connecticut River estuary affecting the following: from Poverty Point of Old Lyme, CT., to Millstone Point east of Niantic Bay, and waters south of the following Connecticut towns: Old Lyme, Lyme, Black Hall, Sound View. These waters also affect the following: Niantic Bay, the opening to the Black Hall River, the opening to the Pataguansett River, Black Point, Hatchett Point, and Griswold Point, and Eastern Great Island. Also affected is Plum Island, which is U. S. Government owned and closed to the public, along with other small reefs and islands including the following: Hatchett Reef, N. Brother, S. Brother, Black Buoys, Little Rock, White Rock, Waterford I., Black Rock, Three Foot Rock, and Wigwam Rock.

Species	Eggs	Larvae	Juveniles	Adults
Atlantic salmon ( <i>Salmo salar</i> )			X	X
Atlantic cod ( <i>Gadus morhua</i> )				
haddock ( <i>Melanogrammus aeglefinus</i> )				
pollock ( <i>Pollachius virens</i> )			X	X
whiting ( <i>Merluccius bilinearis</i> )				
offshore hake ( <i>Merluccius albidus</i> )				
red hake ( <i>Urophycis chuss</i> )	X	X	X	X
white hake ( <i>Urophycis tenuis</i> )				
redfish ( <i>Sebastes fasciatus</i> )	n/a			
witch flounder ( <i>Glyptocephalus cynoglossus</i> )				
winter flounder ( <i>Pleuronectes americanus</i> )	X	X	X	X
yellowtail flounder ( <i>Pleuronectes ferruginea</i> )				
windowpane flounder ( <i>Scopthalmus aquosus</i> )	X	X	X	X
American plaice ( <i>Hippoglossoides platessoides</i> )				

ocean pout ( <i>Macrozoarces americanus</i> )				
Atlantic halibut ( <i>Hippoglossus hippoglossus</i> )				
Atlantic sea scallop ( <i>Placopecten magellanicus</i> )				
Atlantic sea herring ( <i>Clupea harengus</i> )			X	X
monkfish ( <i>Lophius americanus</i> )				
bluefish ( <i>Pomatomus saltatrix</i> )			X	X
long finned squid ( <i>Loligo pealei</i> )	n/a	n/a		
short finned squid ( <i>Illex illecebrosus</i> )	n/a	n/a		
Atlantic butterfish ( <i>Peprilus triacanthus</i> )				
Atlantic mackerel ( <i>Scomber scombrus</i> )				
summer flounder ( <i>Paralichthys dentatus</i> )				
scup ( <i>Stenotomus chrysops</i> )	n/a	n/a		
black sea bass ( <i>Centropristus striata</i> )	n/a			
surf clam ( <i>Spisula solidissima</i> )	n/a	n/a		
ocean quahog ( <i>Artica islandica</i> )	n/a	n/a		
spiny dogfish ( <i>Squalus acanthias</i> )	n/a	n/a		
tilefish ( <i>Lopholatilus chamaeleonticeps</i> )				
king mackerel ( <i>Scomberomorus cavalla</i> )	X	X	X	X
Spanish mackerel ( <i>Scomberomorus maculatus</i> )	X	X	X	X
cobia ( <i>Rachycentron canadum</i> )	X	X	X	X
sand tiger shark ( <i>Odontaspis taurus</i> )		X		