



Commander (dpb)
First Coast Guard District
1 South Street
Battery Park Building
New York, NY 10004-1466

August 19, 2014

PUBLIC NOTICE 1-140

Subject: PROPOSED MODIFICATION OF THE MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA) COMMUTER RAIL BRIDGE OVER THE MERRIMACK RIVER AT HAVERHILL, ESSEX COUNTY, MASSACHUSETTS

All interested parties are notified that the Commander, First Coast Guard District, has received an application from the MBTA for approval of the location and plans for modification of a fixed railroad bridge over a navigable waterway of the United States.

WATERWAY AND LOCATION: - Merrimack River, approximately 19.9 miles above the mouth of the waterway.

CHARACTER OF WORK: The character of the work is to rehabilitate, repair and strengthen a 711 foot long steel truss bridge over the Merrimack River using the Design-Build contract delivery method. The project will be comprised of two phases. Superstructure repairs include replacement of deteriorating steel elements and strengthening to achieve a higher level of load capacity. The substructure repairs and modifications include pier rehabilitation and installation of scour countermeasure walls. The substructure work and subsequent installation of scour walls will reduce the navigational channel horizontal clearance from 120 feet to 87 feet. More detailed dimension changes between all in-water piers are indicated on the plan sheets attached to this public notice. The modified truss bridge will continue to consist of five spans, carrying two rails with an out-to-out width of 34.75 feet.

MINIMUM NAVIGATIONAL CLEARANCES:

	<u>Existing</u>	<u>Proposed</u>
Horizontal: (normal to axis of the channel)	120 feet	87 feet
Vertical: (above MHW)	31 feet	31 feet

ENVIRONMENTAL CONSIDERATION:

The Federal Transit Administration (FTA) is the lead federal agency for satisfying the requirements of the National Environment Policy Act (NEPA). This project has been classified as a categorical exclusion under regulations implementing NEPA because it involves modification of an existing bridge on essentially the same alignment and location.

The project is not considered an encroachment on the 100-year floodplain. The proposed superstructure will clear the 100-year flood elevation of +23.0 feet (NAVD88).

A Water Quality Certification from the Massachusetts Department of Environmental Protection in accordance with Section 401 of the Clean Water Act, as amended, certifying that reasonable assurance has been furnished that the project will be conducted in compliance with water quality standards of the Commonwealth of Massachusetts has been applied for.

The applicant certifies that the proposed project is consistent with the Massachusetts Coastal Zone Management Plan. The Massachusetts Coastal Zone Management Office determined on March 14, 2014 that this project falls outside the geographical boundaries of the Massachusetts Coastal Zone and therefore not subject to federal consistency review.

No impacts to wetlands are anticipated in the project vicinity. Approximately 3500 cubic yards of dredging would occur as a result of the scour wall construction process for pier and abutment modifications. Dredging and required mitigation, if necessary, will be permitted by the Army Corps of Engineers, New England Division and the Massachusetts Department of Environmental Protection.

The proposed project will have an adverse effect on two historic resources. The existing MBTA Railroad (Merrimack River) Bridge is eligible for listing in the National Register of Historic Places (NRHP). The Washington Street Shoe District is listed on the NRHP. FTA, as lead federal agency, MBTA and the Massachusetts Historical Commission have executed a Memorandum of Agreement to implement mitigation measures for this undertaking. The Haverhill Washington Street Historic District Commission also signed this MOA as a concurring signatory.

The proposed project is not in a non-attainment or maintenance area for any of the criteria or precursor pollutants pursuant to the Clean Air Act of 1990, as amended (CAA). Therefore, conformity as defined by the CAA regulations is not required. Air emissions from anticipated construction equipment will be investigated and emissions commensurate with “green” construction methodologies will be required.

The applicant has initiated the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Their initial

determination is that the proposed action would not have a substantial adverse impact on EFH or federally-managed fisheries in the northeast region. The final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

Based upon environmental documentation submitted for this project, it appears that the proposed bridge project will have no adverse environmental justice impacts upon minority and low-income populations. Factual information and data contrary to this no adverse impact position should be submitted in response to this notice.

SOLICITATION OF COMMENTS:

The decision as to whether to grant approval of the location and plans for the proposed action rests primarily on the effect it has on navigation. We will forward comments of an environmental nature such as those regarding: wildlife refuges, waterfowl refuges, public parks, historic sites, wetlands, floodplain issues, air and water quality, etc., to the Federal Transit Administration for appropriate handling.

Boat owners in the project vicinity are requested to provide information about their vessels including type of vessel, length overall, draft, beam, and height from the waterline to the highest fixed point and to appurtenant structures (e.g. tuna towers, flying bridges, fixed antennas and radar units).

Interested parties are requested to express their views in writing on the proposed bridge project, giving sufficient detail to establish a clear understanding of their reasons for support of or opposition to the proposed work. Comments will be received at the office of the Commander (dpb), First Coast Guard District, Battery Park Building, 1 South Street, New York, NY 10004-1466 through September 18, 2014.

It is requested that this information be brought to the attention of any person having an interest in this who may not have received a copy of this public notice.

Plans of the proposed project are included in this public notice.

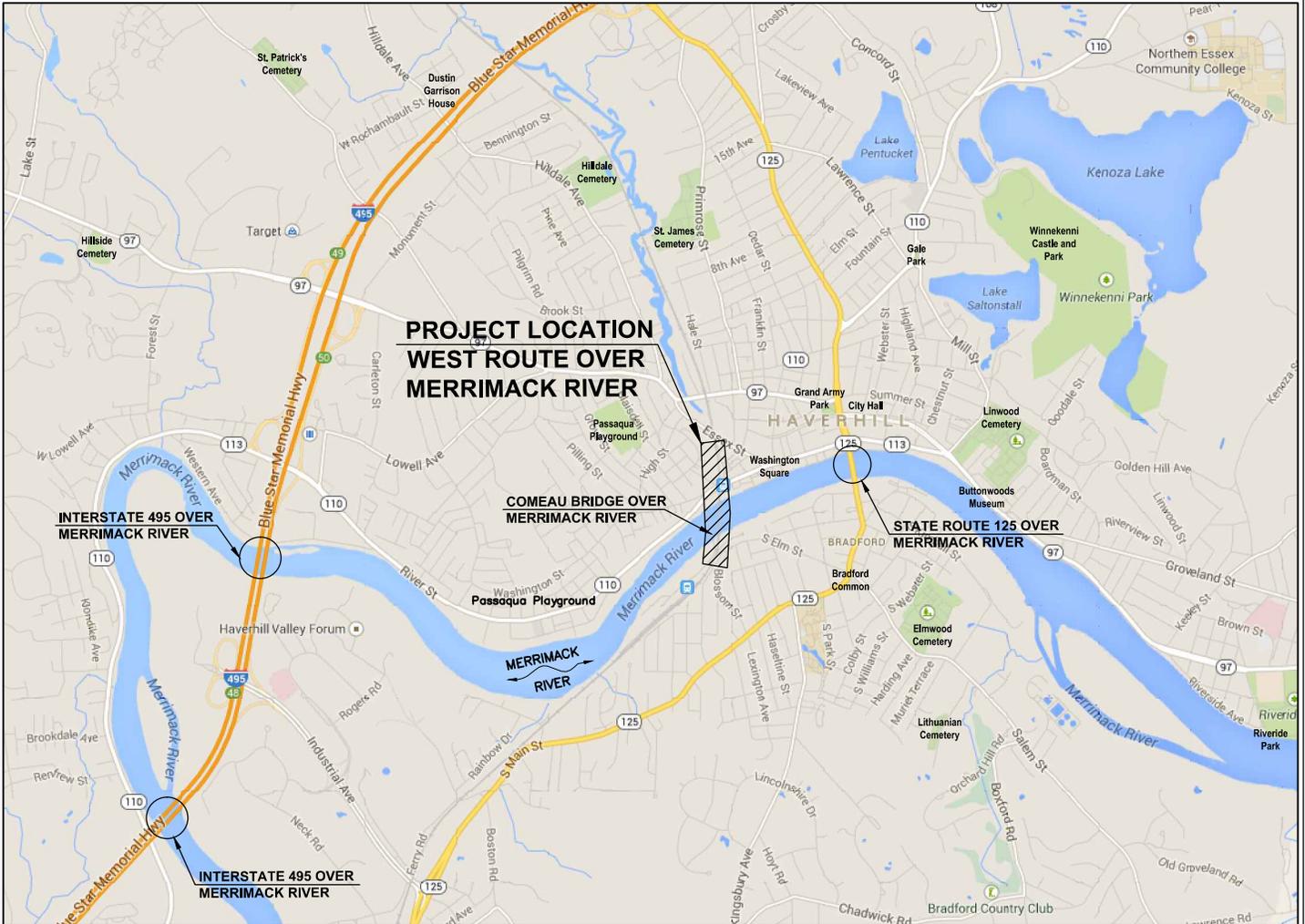
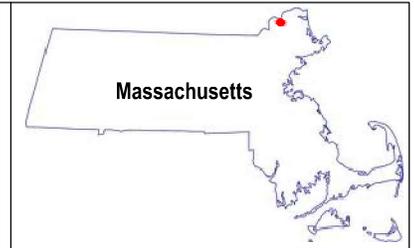
FOR THE DISTRICT COMMANDER:

//s//

C. J. Bisignano
Supervisory Bridge Management Specialist
By direction

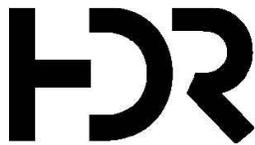


Massachusetts Bay
Transportation Authority



VICINITY MAP

Rehabilitation of Merrimack River Bridge Piers
Haverhill, Essex County, Massachusetts
River Mile Post 19.9
MBTA Contract No. B64CN02



HDR, INC.

695 ATLANTIC AVENUE, 2nd FL
BOSTON, MASSACHUSETTS 02111-2626
(617) 357-7700

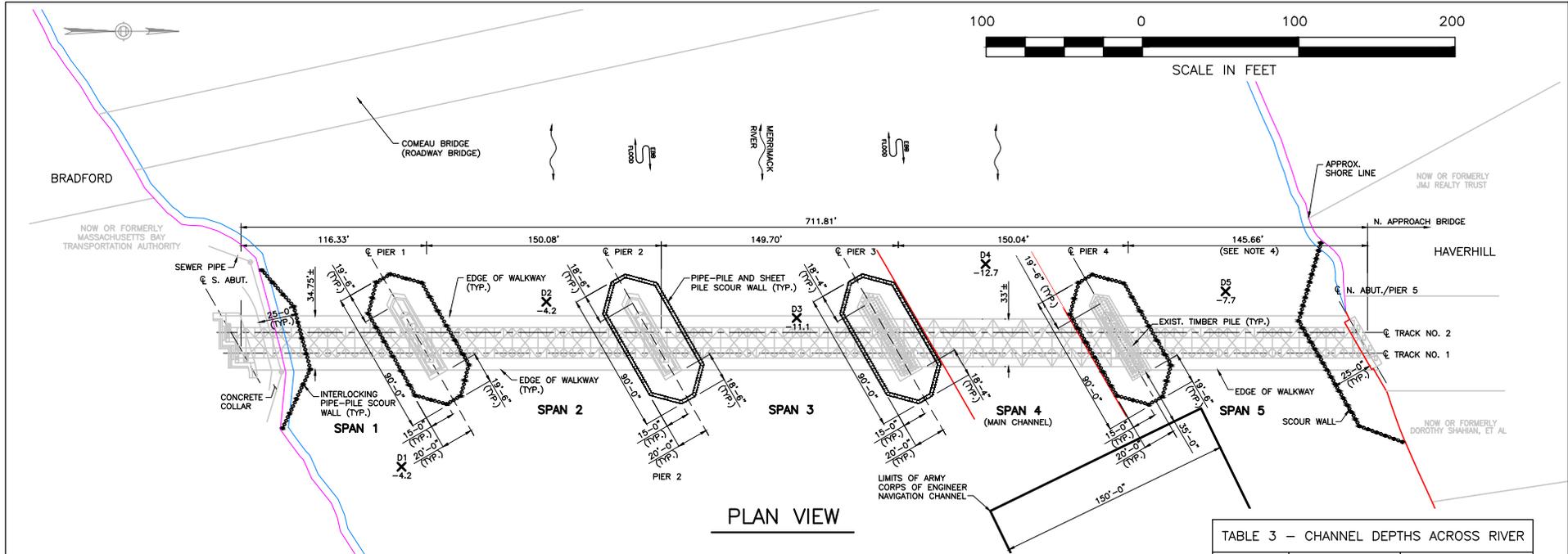
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SCALE IN FEET

July 2014

Sheet 1 of 5



PLAN VIEW

TABLE 3 - CHANNEL DEPTHS ACROSS RIVER

LOCATION (D#)	LOW POINT OF RIVER BED (HYDROGRAPHIC SURVEY)	DEPTH TO WATER (AT MEAN LOW WATER EL. = -1.29)
D1	-4.2	2.9
D2	-4.2	2.9
D3	-11.1	9.8
D4	-12.7	11.4
D5	-7.7	6.4

(MEAN HIGH WATER EL. = 4.42)

SPAN	LOCATION	EXISTING HORIZONTAL CLEARANCE	PROPOSED HORIZONTAL CLEARANCE*	EXISTING VERTICAL CLEARANCE**	PROPOSED VERTICAL CLEARANCE**
SPAN 1	SOUTH ABUTMENT TO PIER 1	80 FT	38 FT	19 FT	19 FT
SPAN 2	PIER 1 TO PIER 2	120 FT	90 FT	19 FT	19 FT
SPAN 3	PIER 2 TO PIER 3	120 FT	90 FT	19 FT	19 FT
SPAN 4	PIER 3 TO PIER 4	120 FT	87 FT	31 FT	31 FT
SPAN 5	PIER 4 TO PIER 5	125 FT	84 FT	19 FT	19 FT

* = HORIZONTAL CLEARANCE BETWEEN SCOUR WALL. ABOVE WALLS CLEARANCE UNCHANGED.
 ** = VERTICAL CLEARANCE MEASURED ABOVE MEAN HIGH WATER.

LOCATION	BOTTOM OF EXISTING FOOTING/PILE CAP	TOP OF PROPOSED SCOUR WALL
SOUTH ABUTMENT	-4.0*	-2.0
PIER 1	-3.9	-0.9
PIER 2	-5.4	-2.4
PIER 3	-7.8	-4.8
PIER 4	-5.2	-2.2
PIER 5/N. ABUT.	-4.0*	-3.0

* = ASSUMED

NOTES:

1. TIES AND TRACKS NOT SHOWN FOR CLARITY.
2. THE VERTICAL DATUM IS NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988.
3. TOE ELEVATION AT PIER 2 = EL. -26± AND TOE ELEVATION AT PIER 3 = EL. -26.4.
4. PROPOSED DREDGING IS APPROXIMATELY 3500CY INSIDE SCOUR WALLS. (SHALL NOT EXCEED 5000CY) APPROXIMATELY 650CY AT RIVER PIERS, 500CY AT PIER 5/N. ABUT. AND 400CY AT S. ABUT.
6. 100-YR FLOOD ELEVATION = EL. 23.

LEGEND:

- Water flow in Merrimack River
- * ELEVATION SHOWN IS LOWEST DEPTH IN CHANNEL FOR SPAN
- Shoreline at bulkhead (North Abutment and Northeast Retaining Wall)
- Shoreline (at low tide)
- Shoreline (at high tide)
- PIPE PILE (PIERS 2 AND 3) DRILLED TO TOE ELEVATION (SEE NOTE 9)
- PIPE PILE (ABUTMENTS AND PIERS 1 AND 4) INSTALLED TO 2FT BELOW 500-Y SCOUR EL.
- PIPE PILE (ABUTMENTS AND PIERS 1 AND 4) FULL LENGTH

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

REHABILITATION OF MERRIMACK RIVER BRIDGE PIERS
 MBTA CONTRACT NO. B64CN02
 HAVERHILL, ESSEX COUNTY, MA - MILE POST 19.9

**MERRIMACK RIVER BRIDGE
 SCOUR COUNTERMEASURES
 BRIDGE PLAN VIEW**

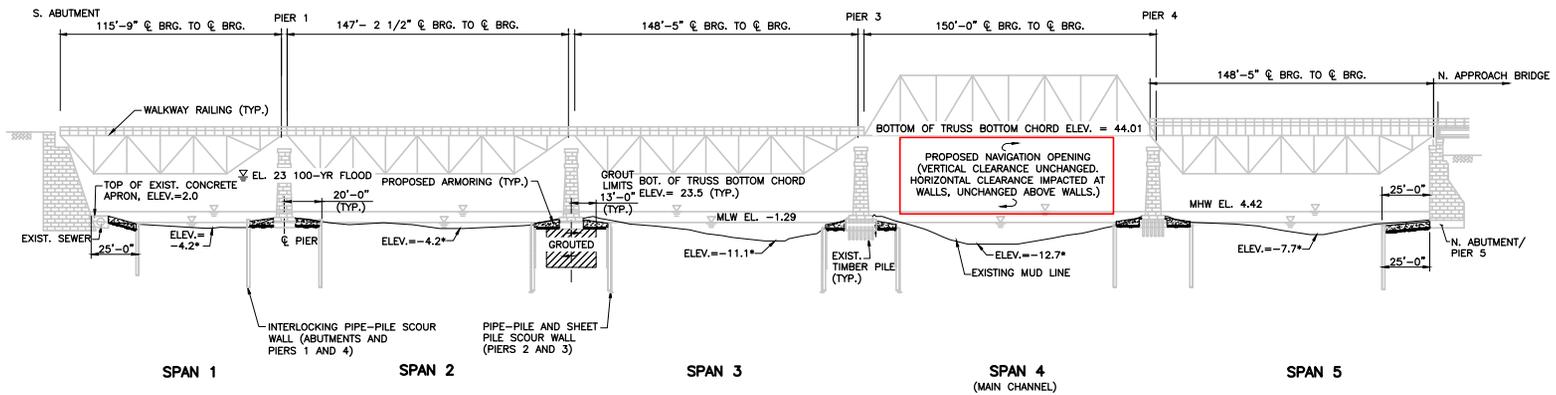
HR ENGINEERING, INC
 695 ATLANTIC AVENUE
 BOSTON MA, 02111
 (617) 357-7700

MASS. BAY TRANSPORTATION AUTHORITY

SCALE: 1"=100'-0" DESIGN BY: RXU DRAWN BY: DJM CHECK BY: RXU

DATE: JULY 2014

Sheet 2 of 5



ELEVATION

TABLE 1 - CLEARANCE TABLE

SPAN	LOCATION	EXISTING HORIZONTAL CLEARANCE	PROPOSED HORIZONTAL CLEARANCE*	EXISTING VERTICAL CLEARANCE**	PROPOSED VERTICAL CLEARANCE**
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SPAN 5	PIER 4 TO PIER 5	125 FT	84 FT	19 FT	19 FT

* = HORIZONTAL CLEARANCE BETWEEN SCOUR WALL. ABOVE WALLS CLEARANCE UNCHANGED.

** = VERTICAL CLEARANCE MEASURED ABOVE MEAN HIGH WATER.

TABLE 3 - CHANNEL DEPTHS ACROSS RIVER

LOCATION (D#)	LOW POINT OF RIVER BED (HYDROGRAPHIC SURVEY)	DEPTH TO WATER (AT MEAN LOW WATER EL. = -1.29)
D1	-4.2	2.9
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D4	-12.7	11.4
D5	-7.7	6.4

(MEAN HIGH WATER EL. = 4.42)

NOTES:

- TIES AND TRACKS NOT SHOWN FOR CLARITY.
- THE VERTICAL DATUM IS NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988.
- TOE ELEVATION AT PIER 2 = EL. -26± AND TOE ELEVATION AT PIER 3 = EL. -26.4.
- PROPOSED DREDGING IS APPROXIMATELY 3500CY INSIDE SCOUR WALLS. (SHALL NOT EXCEED 5000CY) APPROXIMATELY 650CY AT RIVER PIERS, 500CY AT PIER 5/N. ABUT. AND 400CY AT S. ABUT.
- 100-YR FLOOD ELEVATION = EL. 23.

LEGEND:

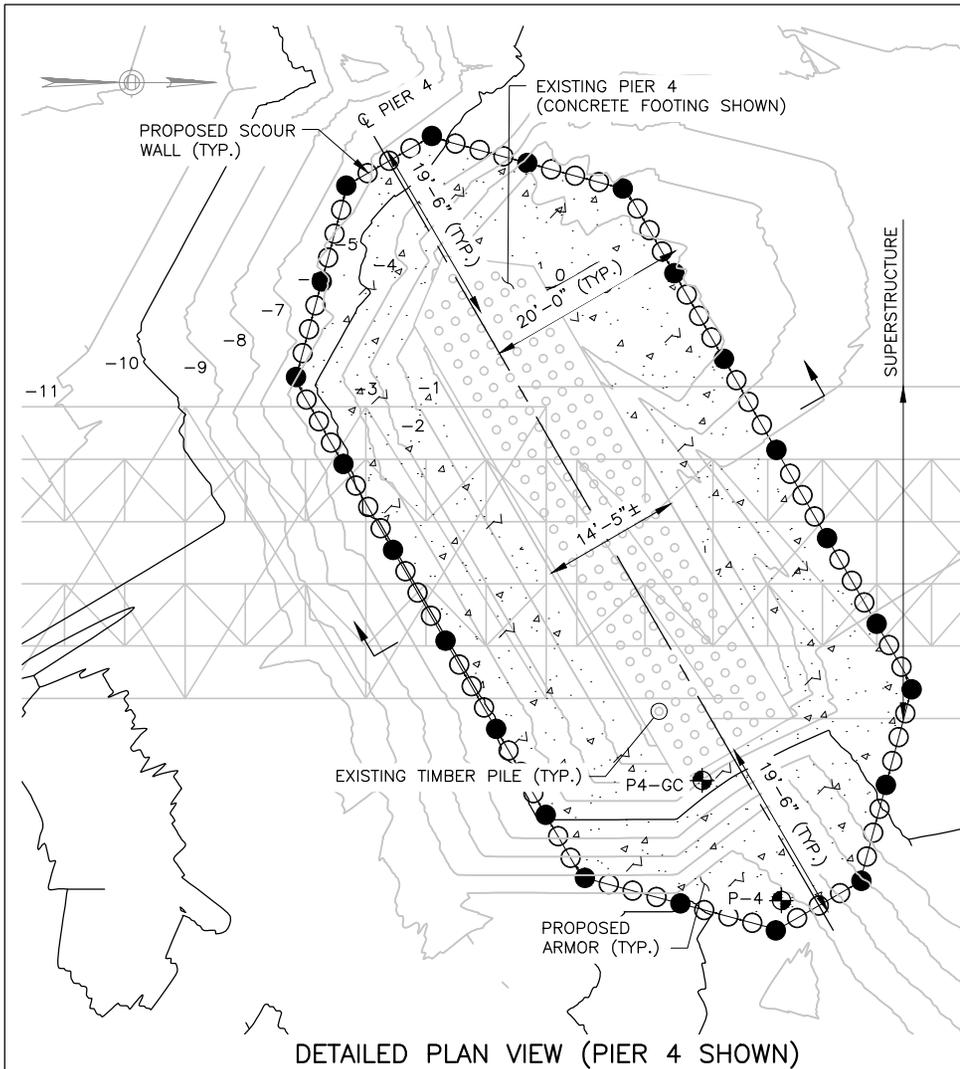
- WATER TABLE
- WATER FLOW IN MERRIMACK RIVER
- * ELEVATION SHOWN IS LOWEST DEPTH IN CHANNEL FOR SPAN
- PROPOSED NAVIGATION OPENING
- PIPE PILE (PIERS 2 AND 3) DRILLED TO TOE ELEVATION (SEE NOTE 9)
- PIPE PILE (ABUTMENTS AND PIERS 1 AND 4) INSTALLED TO 2FT BELOW 500-Y SCOUR EL.
- PIPE PILE (ABUTMENTS AND PIERS 1 AND 4) FULL LENGTH

TABLE 2 - COUNTERMEASURES ELEVATIONS

LOCATION	BOTTOM OF EXISTING FOOTING/PILE CAP	TOP OF PROPOSED SCOUR WALL
SOUTH ABUTMENT	-4.0*	-2.0
PIER 1	-3.9	-0.9
PIER 2	-5.4	-2.4
PIER 3	-7.8	-4.8
PIER 4	-5.2	-2.2
PIER 5/N. ABUT.	-4.0*	-3.0

* = ASSUMED

	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY		
	REHABILITATION OF MERRIMACK RIVER BRIDGE PIERS MBTA CONTRACT NO. B64CN02 HAVERHILL, ESSEX COUNTY, MA - MILE POST 19.9		
MERRIMACK RIVER BRIDGE SCOUR COUNTERMEASURES BRIDGE ELEVATION			
	ENGINEERING, INC 695 ATLANTIC AVENUE BOSTON MA, 02111 (617) 357-7700		MASS. BAY TRANSPORTATION AUTHORITY
	SCALE: 1"=100'-0"	DESIGN BY: RXU	DRAWN BY: DJM
DATE: JULY 2014		Sheet 3 of 5	



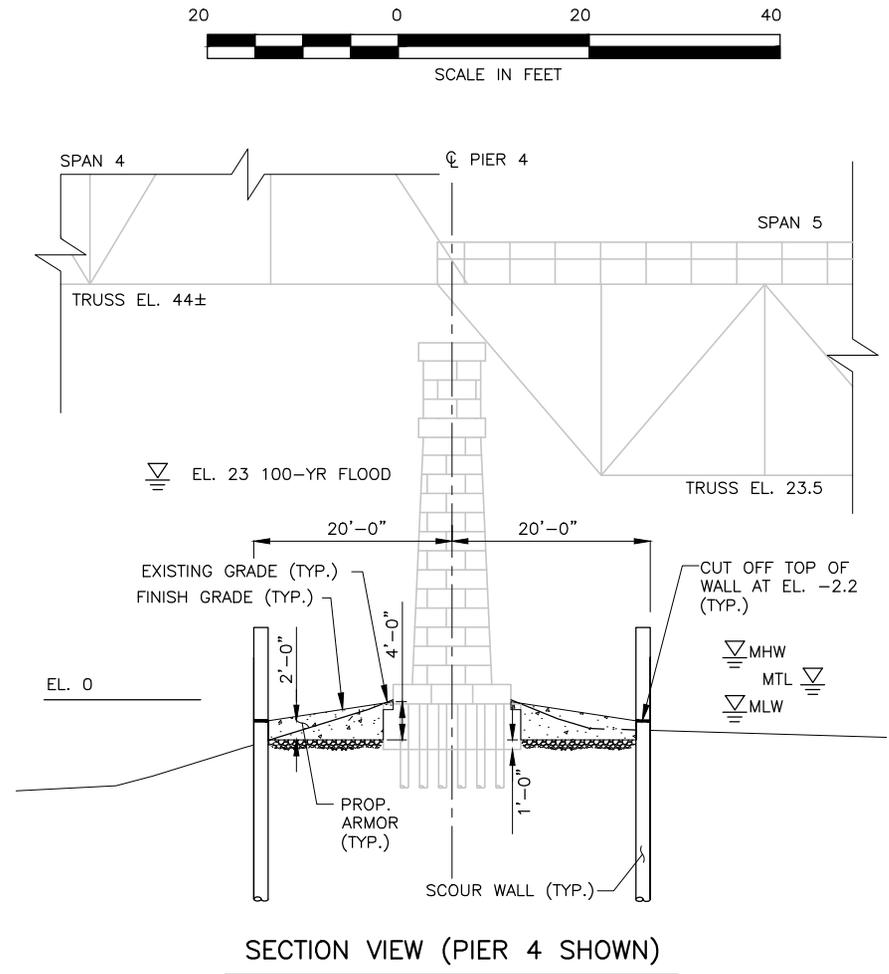
DETAILED PLAN VIEW (PIER 4 SHOWN)

NOTES:

1. REPOINT EXISTING GRANITE ABUTMENTS, WINGWALLS, AND RIVER PIERS FROM MEAN HIGH WATER AND BELOW.
2. PROPOSED ARMOR SHALL CONSIST OF PRECAST CONCRETE PLANKS OR APPROPRIATELY SIZED RIP-RAP.
3. SCOUR WALL SHALL CONSIST OF A CANTILEVER PIPE-PIPE COMBINED WALL SYSTEM. WALL ELEMENTS SHALL BE DRILLED IN AND EACH PIPE SHALL BE BACKFILLED WITH 4,000 PSI CONCRETE. FULL LENGTH PIPE PILES SHALL BE INSTALLED TO EL. -40 OR DEEPER.
4. ALL WORK ZONES IN THE RIVER MUST BE ENCLOSED WITHIN A FUNCTIONING TURBIDITY BARRIER.
5. EXISTING FOUNDATION DIMENSIONS ARE APPROXIMATE AND SUBJECT TO CONFIRMATION BY THE DESIGN-BUILDER.

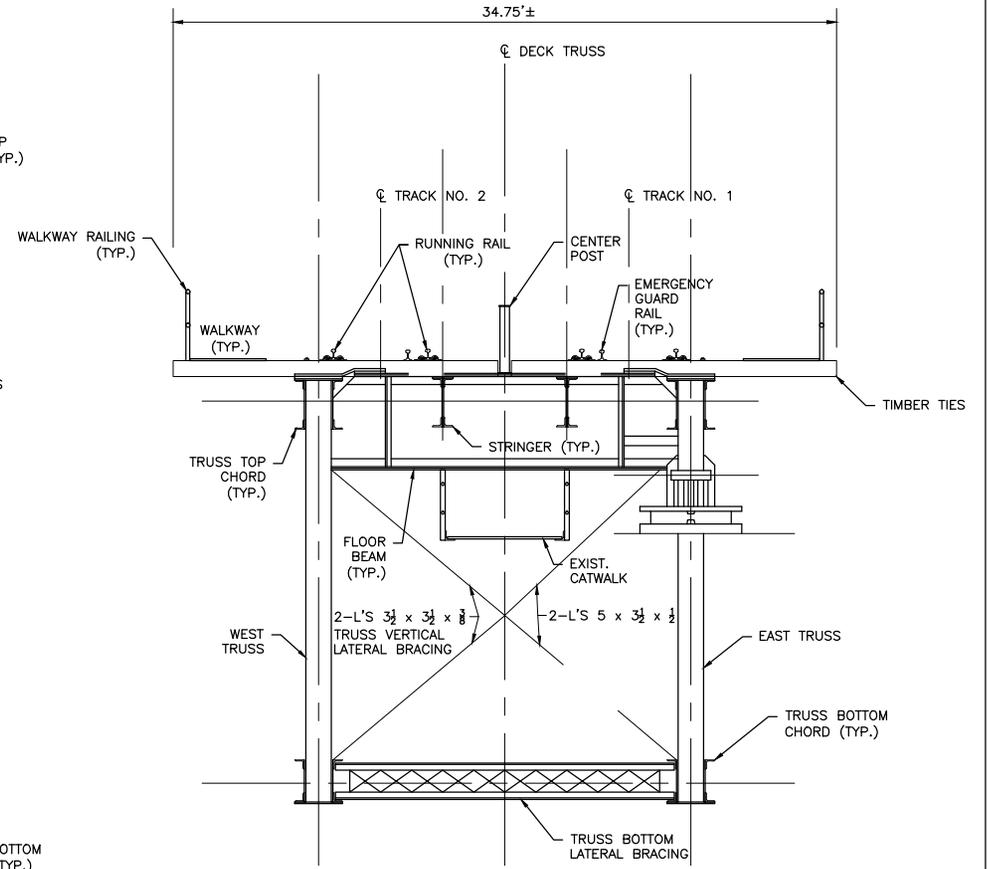
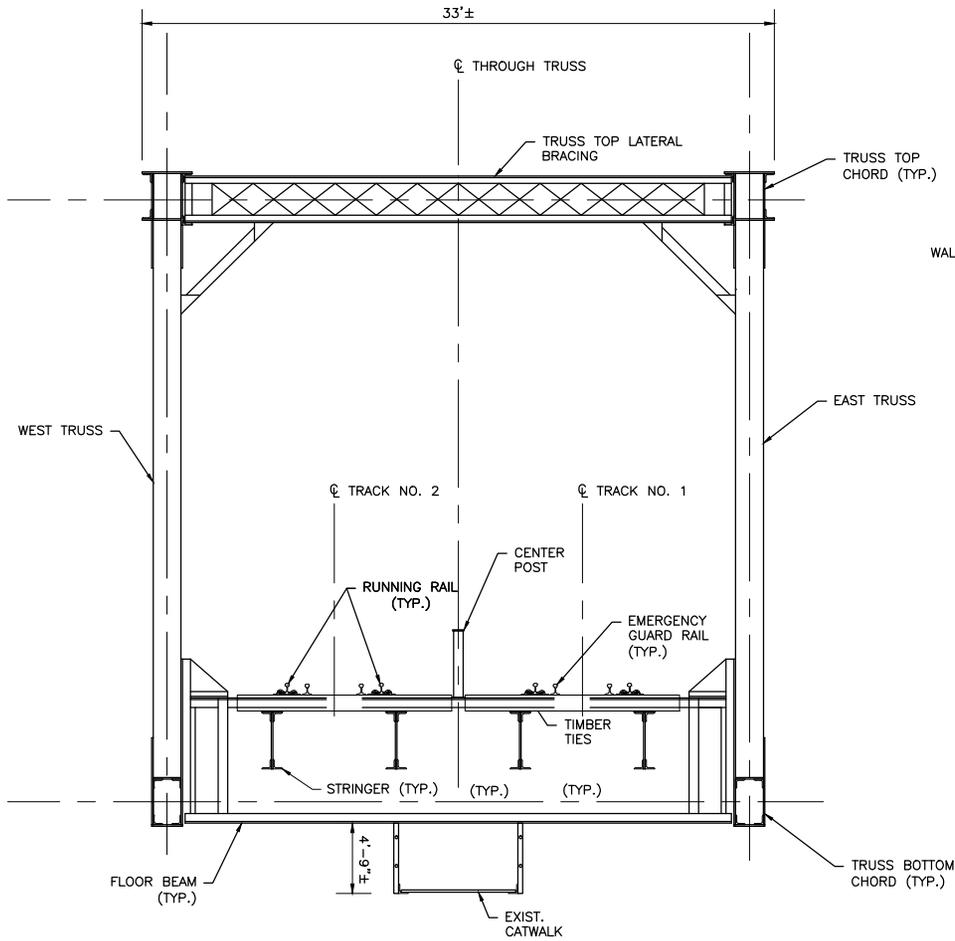
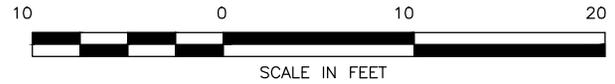
LEGEND:

- ▽ MHW (MEAN HIGH WATER) ELEV. = 4.42
- ▽ MTL (MEAN TIDE LEVEL) ELEV. = 1.57
- ▽ MLW (MEAN LOW WATER) ELEV. = -1.29
- PIPE PILE (NORTH ABUTMENT/PIER 5, SOUTH ABUTMENT, PIER 1 AND PIER 4) INSTALLED TO 2FT BELOW 500-Y SCOUR EL.
- PIPE PILE (NORTH ABUTMENT/PIER 5, SOUTH ABUTMENT, PIER 1 AND PIER 4) FULL LENGTH



SECTION VIEW (PIER 4 SHOWN)

T	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY		
	REHABILITATION OF MERRIMACK RIVER BRIDGE PIERS MBTA CONTRACT NO. B64CN02 HAVERHILL, ESSEX COUNTY, MA - MILE POST 19.9		
MERRIMACK RIVER BRIDGE SCOUR COUNTERMEASURES SECTION VIEW			
HR	ENGINEERING, INC 695 ATLANTIC AVENUE BOSTON MA, 02111 (617) 357-7700		MASS. BAY TRANSPORTATION AUTHORITY
	SCALE: 1"=20'-0"	DESIGN BY: RXU	DRAWN BY: DJM
DATE: JULY 2014	RXU	DJM	RXU
			Sheet 4 of 5



BRIDGE SUPERSTRUCTURE SECTIONS

NOTES:

1. SECTIONS SHOWN ARE FOR THE THRU TRUSS (SPAN 4) AND FOR THE DECK TRUSSES (SPANS 1, 2, 3 AND 5). SEE SHEET 3 (ELEVATION) FOR TRUSS LOCATION.
2. DECK TRUSS BOTTOM ELEVATION = 23±
 THRU TRUSS BOTTOM ELEVATION = 44±
 MEAN HIGH WATER ELEVATION = 4.42
 MEAN LOW WATER ELEVATION = -1.29

	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
	REHABILITATION OF MERRIMACK RIVER BRIDGE PIERS MBTA CONTRACT NO. B64CN02
	HAVERHILL, ESSEX COUNTY, MA - MILE POST 19.9

**MERRIMACK RIVER BRIDGE
SCOUR COUNTERMEASURES
SUPERSTRUCTURE SECTION VIEW**

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SCALE: 1"=10'-0"	DESIGN BY: RXU	DRAWN BY: DJM	CHECK BY: RXU	Sheet 5 of 5
DATE: JULY 2014				