



**US Army Corps
of Engineers** ®
New England District
696 Virginia Road
Concord, MA 01742-2751

PUBLIC NOTICE

Comment Period Begins: August 20, 2013
Comment Period Ends: September 19, 2013
File Number: NAE-2011-01520
In Reply Refer To: Karen Adams
Phone: (978) 318-8828
E-mail: karen.k.adams@usace.army.mil

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

APPLICANT

Massachusetts Department of Transportation – Highway Division (“MassDOT”), 10 Park Plaza, Boston, Massachusetts 02116

ACTIVITY

MassDOT is proposing to discharge fill material into approximately 0.74 acres (32,065 square feet) of waters of the United States, including wetlands, associated with the replacement of the Woods Memorial Bridge (No. E-12-004 = M-12-018) conveying Revere Beach Parkway (Route 16) over the Malden River in Everett and Medford, Massachusetts. The work includes the replacement of the existing bascule bridge with a new, wider, three-span fixed bridge, installation of a shared-use path under the bridge, approach work and associated fills, and dredging associated with the installation of bridge piers and rip-rap. The project also includes reconstruction of approximately 2,600 linear feet of Revere Beach Parkway and replacement of the bridge (No. M-12-017) conveying Revere Beach Parkway over River’s Edge Drive and the MBTA Commuter Rail and Orange Line track. While the bridge opening will become wider, the applicant is not proposing any changes to the limits of the Malden River Federal Navigation Project. [NOTE: The applicant has applied for a bridge permit from the United States Coast Guard for the Woods Memorial Bridge portion of the project. The United States Coast Guard is the permitting authority for the bridge structures and work associated with the Woods Memorial Bridge.] A detailed description and plans of the activity are attached.

WATERWAY AND LOCATION OF THE PROPOSED WORK

This work is proposed in the Malden River at Revere Beach Parkway (Route 16), Everett and Medford, Massachusetts. The site coordinates are: Latitude 42.403791° Longitude -71.072595°.

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,

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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.

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).

MassDOT, on behalf of the lead federal agency (Federal Highway Administration), coordinated with the National Marine Fisheries Service, who indicated there is no EFH present onsite.

NATIONAL HISTORIC PRESERVATION ACT

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 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.

ENDANGERED SPECIES CONSULTATION

The New England District, Army Corps of Engineers has reviewed the list of species protected under the Endangered Species Act of 1973, as amended, which might occur at the project site. It is our preliminary determination that the proposed activity for which authorization is being sought is designed, situated or will be operated/used in such a manner that it is not likely to adversely affect any Federally listed endangered or threatened species or their designated critical habitat. By this Public Notice, we are requesting that the appropriate Federal Agency concur with our determination.

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.

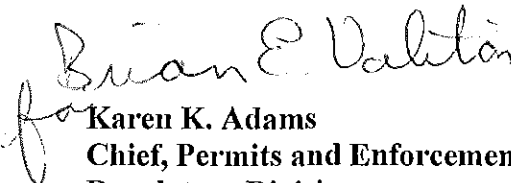
The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine 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 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.

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 Karen Adams at (978) 318-8828, (800) 343-4789 or (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.

THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.


for **Karen K. Adams**
Chief, Permits and Enforcement Branch
Regulatory Division

If you would prefer not to continue receiving Public Notices by email, please contact Ms. Tina Chaisson at (978) 318-8058 or e-mail her at 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: _____
PHONE: _____

PROPOSED WORK AND PURPOSE

The work includes the discharge of fill material into approximately 0.74 acres (32,065 square feet) of waters of the United States, including wetlands, associated with the replacement of the Woods Memorial Bridge (No. E-12-004 = M-12-018) conveying Revere Beach Parkway (Route 16) over the Malden River in Everett and Medford, Massachusetts. Of the total impact, approximately 0.13 acres (5,700 square feet) will be permanent impacts within vegetated wetlands, 0.04 acres (1,900 square feet) will be permanent impacts below Ordinary High Water (OHW), and 0.56 acres (24,465 square feet) will be temporary impacts below OHW. The purpose of the work is to replace a structurally deficient and functionally obsolete bridge with a new bridge, increase the safety of the bridge and its approaches, and enhance multimodal transportation accommodation on Revere Beach Parkway (Route 16). The existing three-span bascule bridge has not been operated in approximately 30 years and is considered structurally deficient. The proposed work would replace the existing bascule bridge in its entirety with a new, wider, three-span fixed bridge with concrete piers supported on concrete-filled drilled shafts. The work includes approach work, including widening, associated grading, rip-rap placement, and shared use path construction, stormwater improvements, and construction of new bridge components, including concrete-filled bridge support piles and decking. Existing piers would be removed to two feet below the mud line, and the existing submarine cable would be abandoned. Dredging of approximately 2,200 cubic yards of material below Ordinary High Water is proposed to facilitate shaft drilling, pier installation, and rip-rap placement. Turbidity curtains are proposed surrounding the shaft drilling and rip-rap placement areas to limit sedimentation. Dredged material would be disposed of at an upland disposal site. The project also includes reconstruction of approximately 2,600 linear feet of Revere Beach Parkway and replacement of the bridge (No. M-12-017) conveying Revere Beach Parkway over River's Edge Drive and the MBTA Commuter Rail and Orange Line track. While the bridge opening will become wider, the applicant is not proposing any changes to the limits of the Malden River Federal Navigation Project.

[NOTE: The applicant has applied for a bridge permit from the United States Coast Guard for the Woods Memorial Bridge portion of the project. The United States Coast Guard is the permitting authority for the bridge structures and work associated with the Woods Memorial Bridge.]

The work is described on the enclosed plans entitled "WOODS MEMORIAL BRIDGE REPLACEMENT AND TRANSPORTATION IMPROVEMENTS, MEDFORD & EVERETT, MASSACHUSETTS" on 18 sheets, and dated "APRIL 19, 2013".

MITIGATION

In developing plans for replacing the Woods Memorial Bridge, MassDOT considered ways to avoid and minimize impacts to waters of the United States, including wetlands. Steps to avoid and minimize impacts to wetlands and waterways include rejecting alternative bridge designs that would have greater impacts, installing hay bale-backed silt fence between the work area and wetlands/waterways, and using silt curtains. In order to mitigate for unavoidable, permanent impacts to jurisdictional wetland areas, MassDOT proposes to construct approximately 0.22 acres (9,710 square feet) of new emergent and scrub-shrub vegetated wetlands offsite adjacent to an existing wetland mitigation site on the Rivers Edge property, approximately 0.6 miles north of the bridge along the Malden River and Little Creek in Medford, Massachusetts.

GENERAL NOTES:

1. ALL ELEVATIONS ARE REFERENCED TO NAVD88.
2. APPROXIMATE OHW AT 0.0'.
3. APPROXIMATE 100-YEAR BASE FLOOD ELEVATION (BFE) AT 4.0'
4. APPROXIMATE FEDERAL CHANNEL LINE FROM 1939 HARBOR LINES PLAN.
5. PROPOSED LAND UNDER WATER (LUW) IMPACTS PERTAIN TO RIVER RELATED IMPACTS BELOW OHW.

COMPENSATION AREA PLAN AND UTILITY NOTES:

1. THIS BASE MAP IS FROM AN ACTUAL-ON-THE-GROUND TOPOGRAPHIC AND BOUNDARY LINE SURVEY PERFORMED BY GREEN INTERNATIONAL AFFILIATES, INC. PERFORMED BETWEEN OCTOBER 22, 2012 AND NOVEMBER 12, 2012.
2. HORIZONTAL CONTROLS ARE BASED ON THE NORTH AMERICAN DATUM (NAD 83) ENGLISH UNITS. VERTICAL CONTROLS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
3. PARCELS SHOWN ON THIS PLAN WERE BASED ON A PLAN ENTITLED "RIVERS EDGE SUBDIVISION PLAN MEDFORD/EVERETT, MA (MIDDLESEX COUNTY)" BY PRECISION LAND SURVEYING, INC. DATED APR. 4, 2008 AND RECORDED IN MIDDLESEX SOUTH REGISTRY OF DEEDS AS PLAN NO. 420 OF 2008.
4. WETLAND FLAGS WERE DELINEATED BY WETLANDS & WILDLIFE, INC. AND LOCATED BY GREEN INTERNATIONAL AFFILIATES, INC. IN OCTOBER, 2012.
5. ALL UNDERGROUND UTILITIES AS SHOWN WERE COMPILED UTILIZING FIELD SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION.
6. RECORD UTILITY INFORMATION FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES, ARE APPROXIMATE ONLY AND ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.
7. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS) PRIOR TO DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING OR REPAVING.
8. THE LOCATION OF EXISTING PIPES OR OTHER UNDERGROUND STRUCTURES OR PROPERTY LINES ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL CALL "DIG SAFE" (1-888-344-7233) 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO ANY EXCAVATION TO OBTAIN ACCURATE UTILITY LOCATIONS.

PLAN NOTES:

1. THE BASE MAP IS COMPILED FROM A TOPOGRAPHIC AERIAL MAPPING PERFORMED BY AXIS GEOSPATIAL, LLC (SEE AERIAL MAPPING NOTES) AND TOPOGRAPHIC SURVEY PERFORMED BY RICHARD F. KAMINSKI ASSOCIATES INC. IN MAY 2006 AND AN ACTUAL-ON-THE-GROUND TOPOGRAPHIC SURVEY PERFORMED BY GREEN INTERNATIONAL AFFILIATES, INC. PERFORMED BETWEEN JULY 15, 2010 AND JULY 8, 2011.
2. THE KAMINSKI SURVEY IS CENTERED AT THE BRIDGE OVER THE MALDEN RIVER AND INCLUDES THE BRIDGE GRID SURVEY AND THE BRIDGE DETAIL SURVEY. IT ALSO INCLUDES TOPOGRAPHY IMMEDIATELY ADJACENT TO THE BRIDGE ABUTMENTS AND 500' EAST AND WEST OF THE BRIDGE, WHICH HAS BEEN CONFIRMED BY GREEN INTERNATIONAL AFFILIATES, INC. ON JULY 2011.
3. HORIZONTAL CONTROLS ARE BASED ON THE NORTH AMERICAN DATUM (NAD 83) ENGLISH UNITS. VERTICAL CONTROLS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).
4. WETLAND RESOURCE AREAS WERE DELINEATED BY WETLANDS & WILDLIFE, INC. AND LOCATED BY GREEN INTERNATIONAL AFFILIATES, INC. IN NOVEMBER, 2010.
5. TITLE TO THE BED OF THE MALDEN RIVER BELOW MEAN LOW WATER IS HELD IN TRUST FOR THE PUBLIC BY THE COMMONWEALTH OF MASSACHUSETTS AS DICTATED BY THE COLONIAL ORDINANCES OF 1641-1647.
6. EXISTING GRANITE CURB & EDGING, SUITABLE FOR REUSE WITHIN THE PROJECT, SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER. RESET CURB SHALL BE SET IN AS LONG A RUN AS POSSIBLE TO BEST MATCH THE COLORS BETWEEN NEW & EXISTING CURB.
7. UNLESS OTHERWISE NOTED, ALL EXISTING GUARDRAIL WITHIN THE LIMITS OF WORK IS TO BE REMOVED AND DISCARDED.

AERIAL MAPPING NOTES:

1. THE INFORMATION DEPICTED ON THE MAP REPRESENTS THE RESULTS OF AERIAL MAPPING AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING ON THE DATE OF PHOTOGRAPHY.
2. MAPPING COMPILED BY AXIS GEOSPATIAL, LLC USING PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPHY FLOWN JULY 17, 2010.

UTILITY NOTES:

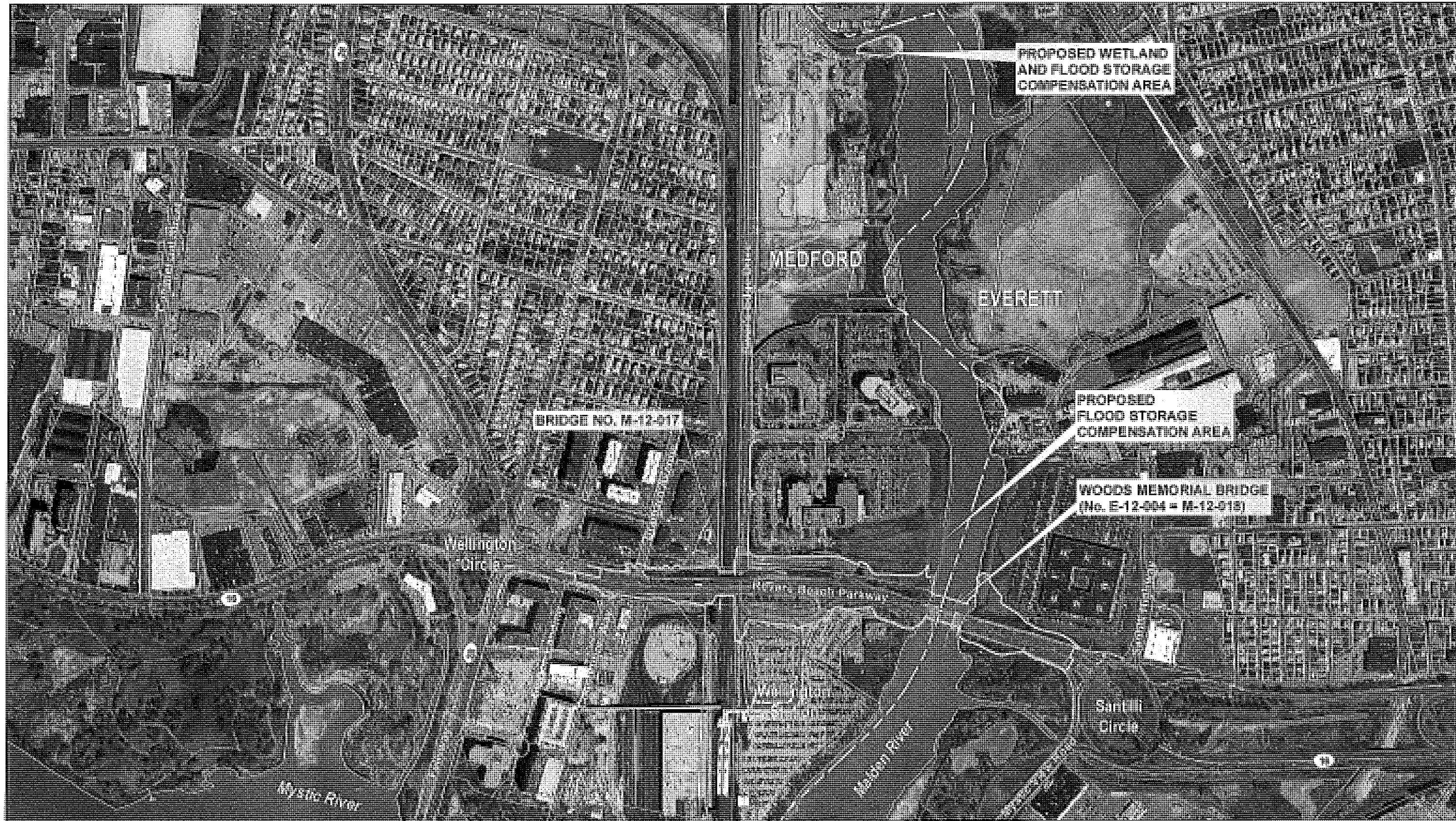
1. ALL UNDERGROUND UTILITIES AS SHOWN WERE COMPILED UTILIZING FIELD SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION.
2. RECORD UTILITY INFORMATION FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES, ARE APPROXIMATE ONLY AND ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.
3. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THE PLAN, (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS) PRIOR TO DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING OR REPAVING.
4. THE LOCATION OF EXISTING PIPES OR OTHER UNDERGROUND STRUCTURES OR PROPERTY LINES ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL CALL "DIG SAFE" (1-888-344-7233) 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO ANY EXCAVATION TO OBTAIN ACCURATE UTILITY LOCATIONS.
5. CONTRACTOR TO COORDINATE OPERATIONS WITH UTILITY COMPANY TO ENSURE MAINTENANCE OF STREETLIGHTING TO REMAIN & REMOVAL OF REMAINING INFRASTRUCTURE.

DEP 401 WQC / ACOE 404 PERMIT APPLICATION



WOODS MEMORIAL BRIDGE REPLACEMENT AND TRANSPORTATION IMPROVEMENTS MEDFORD & EVERETT, MASSACHUSETTS

GENERAL NOTES



MAP SOURCES: Office of Geographic and Environmental Information (MassGIS),
Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs.
MAP DATE: April 19, 2013

Legend	
	Limits of Proposed Work
	DEP Wetlands
	Municipal Boundaries
	Parcel Boundaries
	Flood Compensation Area

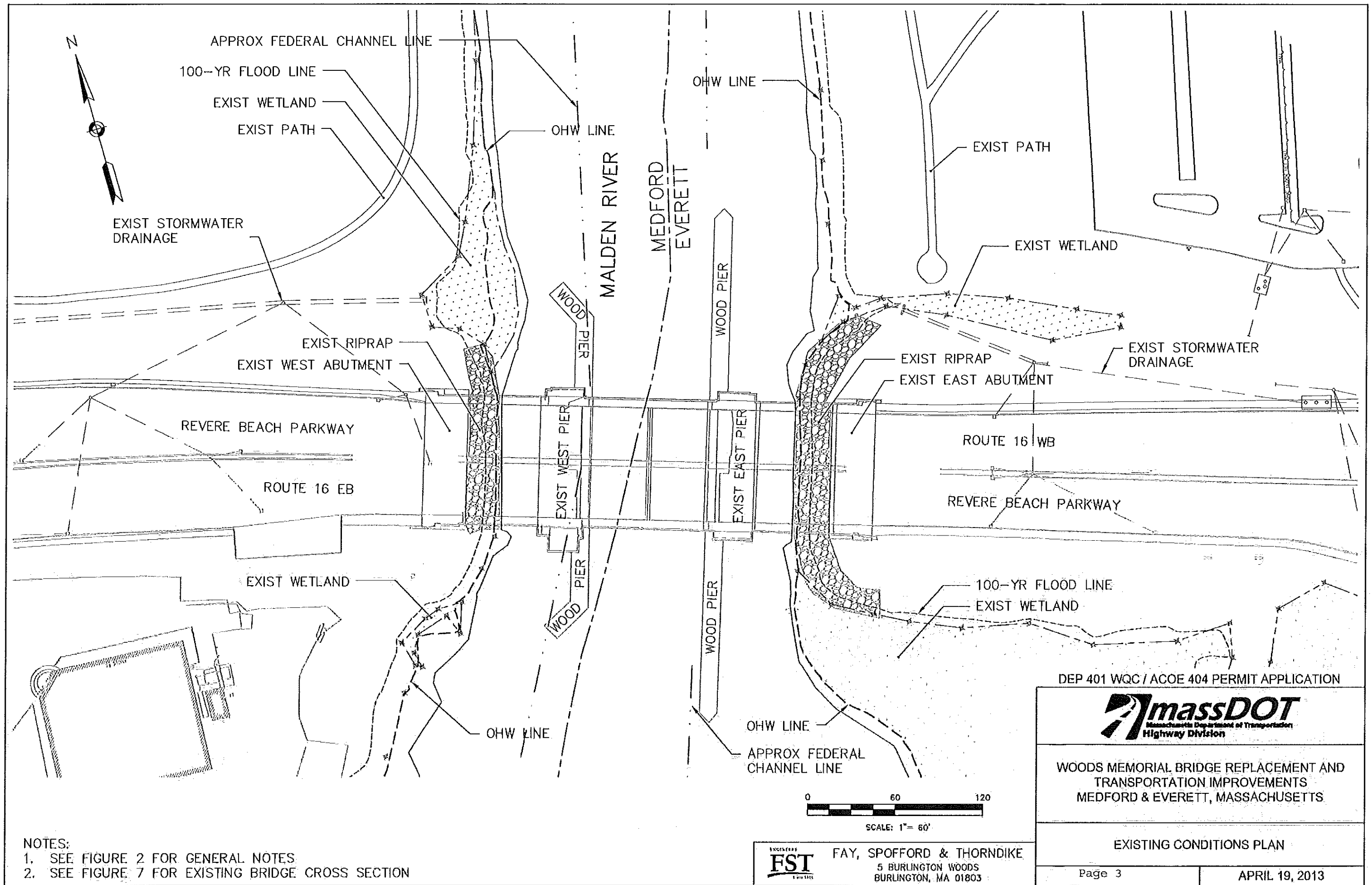
NOTE: No ORW, ACEC or NHESP Habitats were identified in the map extents.

Scale: 0 250 500 Feet



FIGURE 3: ENVIRONMENTAL CONSTRAINTS

WOODS MEMORIAL BRIDGE REPLACEMENT
AND TRANSPORTATION IMPROVEMENTS
Everett & Medford, Massachusetts
Project File No. 604660



- NOTES:
 1. SEE FIGURE 2 FOR GENERAL NOTES.
 2. SEE FIGURE 7 FOR EXISTING BRIDGE CROSS SECTION

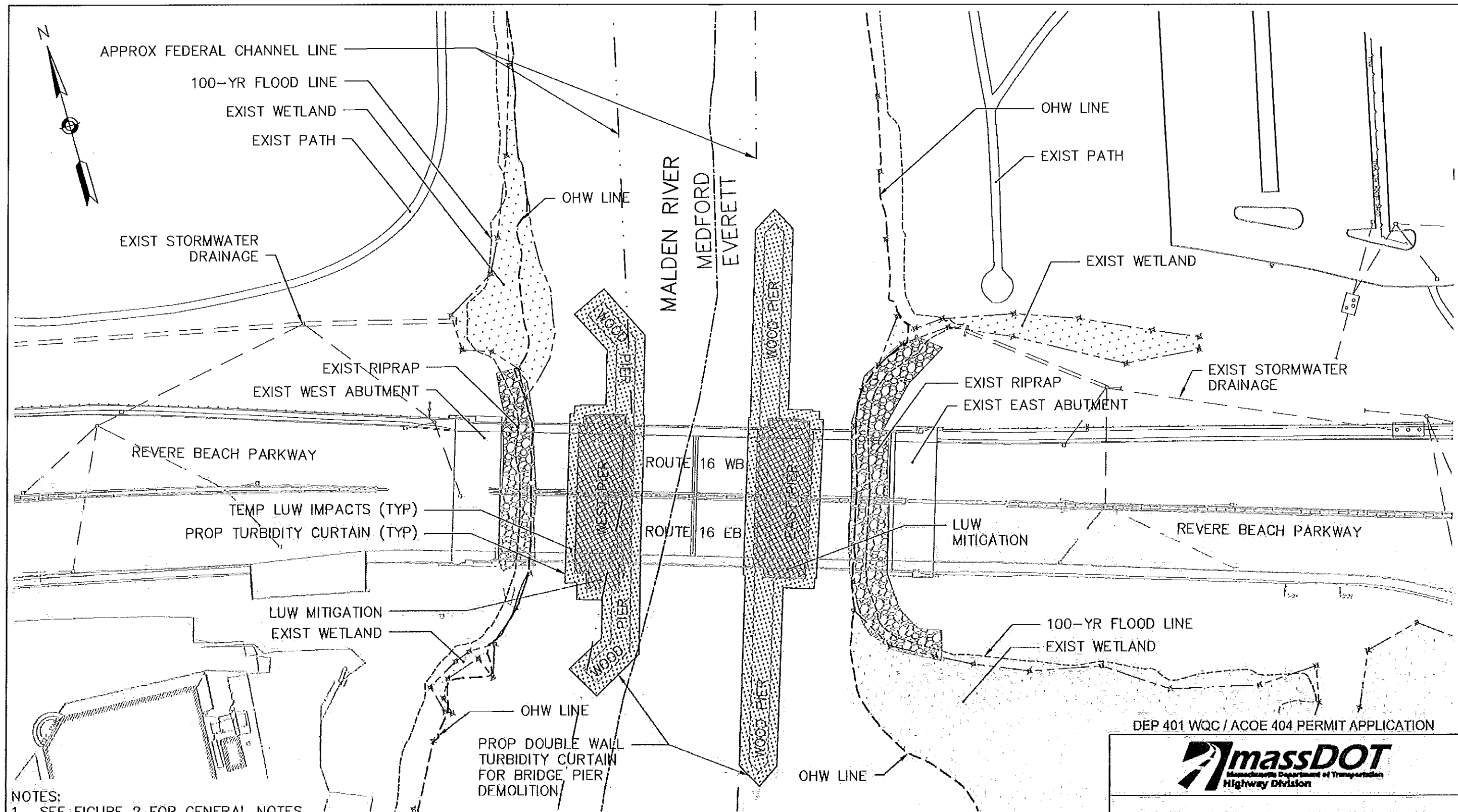
FST FAY, SPOFFORD & THORNDIKE
 5 BURLINGTON WOODS
 BURLINGTON, MA 01803

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WOODS MEMORIAL BRIDGE REPLACEMENT AND
 TRANSPORTATION IMPROVEMENTS
 MEDFORD & EVERETT, MASSACHUSETTS



EXISTING CONDITIONS PLAN

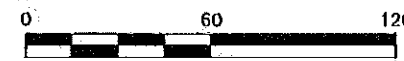


NOTES:

1. SEE FIGURE 2 FOR GENERAL NOTES
2. EXISTING BRIDGE DEMOLITION WILL OCCUR IN STAGES. THIS FIGURE AND IDENTIFIED IMPACT QUANTITIES REFLECT ALL LUW IMPACTS ASSOCIATED WITH EXISTING BRIDGE DEMOLITION.
3. SEE FIGURE 17 FOR EROSION & SEDIMENTATION CONTROL PLAN
4. SEE FIGURE 19 FOR PROPOSED DREDGE AREAS
5. SEE FIGURES 20 & 21 FOR FILL & DREDGE TYPICAL SECTIONS
6. PROPOSED LAND UNDER WATER (LUW) IMPACTS PERTAIN TO RIVER RELATED IMPACTS BELOW OHW.

LEGEND:

PROP IMPACTS TO LUW/WATERS OF THE U.S. FOR BRIDGE DEMOLITION		TEMPORARY (14,285 SF)
		MITIGATION (7,260 SF)



SCALE: 1" = 60'



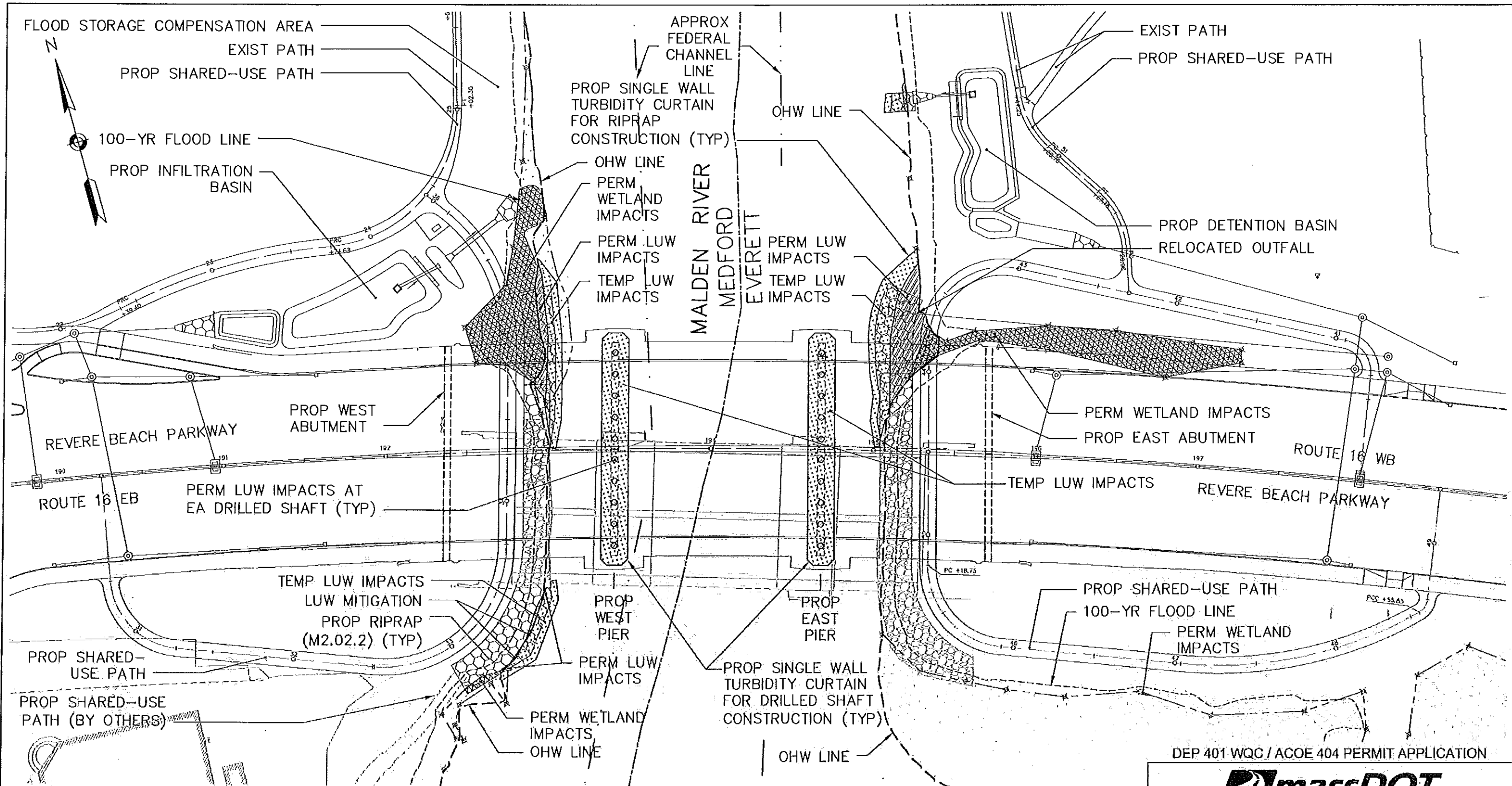
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WOODS MEMORIAL BRIDGE REPLACEMENT AND
TRANSPORTATION IMPROVEMENTS
MEDFORD & EVERETT, MASSACHUSETTS

CONSTRUCTION IMPACT PLANS
EXISTING BRIDGE DEMOLITION



NOTES:

1. SEE FIGURE 2 FOR GENERAL NOTES
2. PROPOSED BRIDGE CONSTRUCTION WILL OCCUR IN STAGES. THIS FIGURE AND IDENTIFIED IMPACT QUANTITIES REFLECT ALL LUW AND WETLAND IMPACTS ASSOCIATED WITH PROPOSED BRIDGE CONSTRUCTION.
3. SEE FIGURE 17 FOR EROSION & SEDIMENTATION CONTROL PLAN
4. SEE FIGURE 19 FOR PROPOSED DREDGE AREAS
5. SEE FIGURE 20 & 21 FOR FILL & DREDGE TYPICAL SECTIONS
6. PROPOSED LAND UNDER WATER (LUW) IMPACTS PERTAIN TO RIVER RELATED IMPACTS BELOW OHW.

LEGEND:

IMPACTS TO LUW/WATERS OF THE U.S. BRIDGE CONSTRUCTION		PERMANENT (1,900 SF)
		TEMPORARY (10,180 SF)
PROP WETLAND IMPACTS FOR BRIDGE CONSTRUCTION		PERMANENT (5,700 SF)



SCALE: 1" = 60'

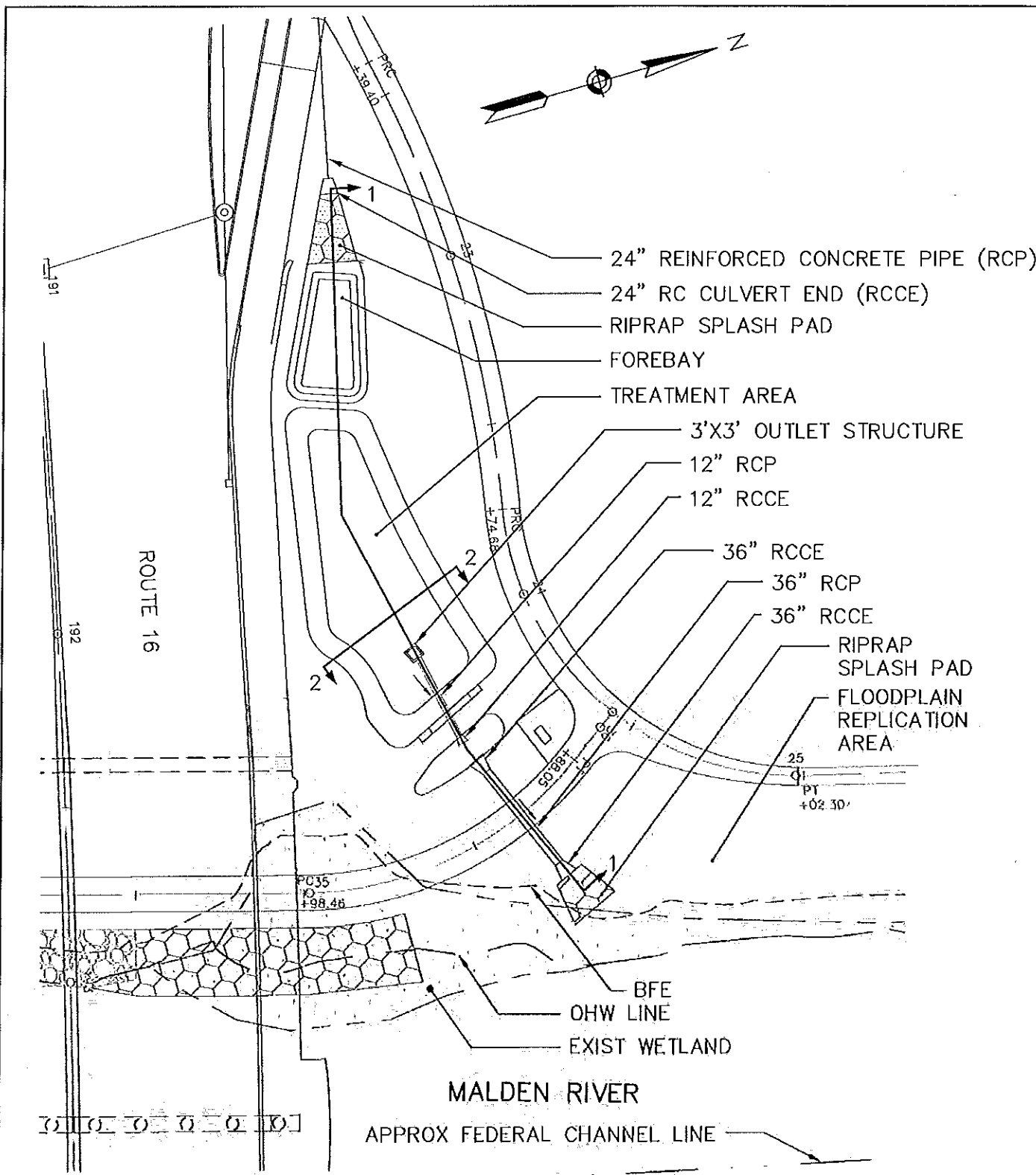
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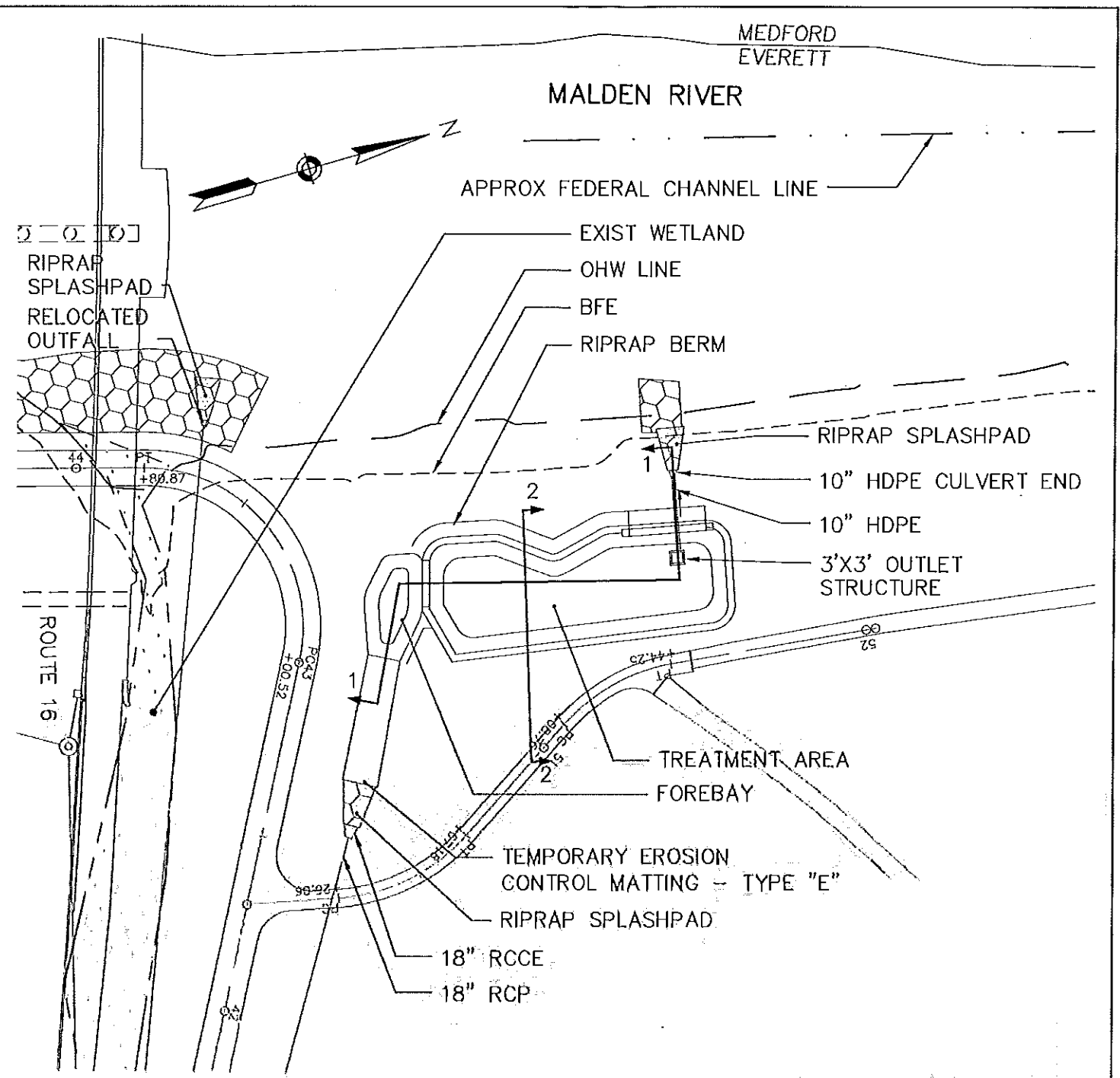
WOODS MEMORIAL BRIDGE REPLACEMENT AND TRANSPORTATION IMPROVEMENTS
MEDFORD & EVERETT, MASSACHUSETTS

CONSTRUCTION IMPACT PLANS
PROPOSED BRIDGE CONSTRUCTION

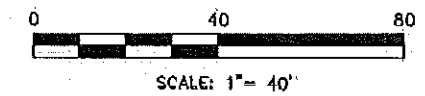


INFILTRATION BASIN (MEDFORD)

- NOTES:
 1. SEE FIGURE 2 FOR GENERAL NOTES
 2. INFILTRATION BASIN SECTIONS ON FIGURE 14
 3. DETENTION BASIN SECTIONS ON FIGURE 15
 4. GENERAL STORMWATER DETAILS ON FIGURE 16



DETENTION BASIN (EVERETT)



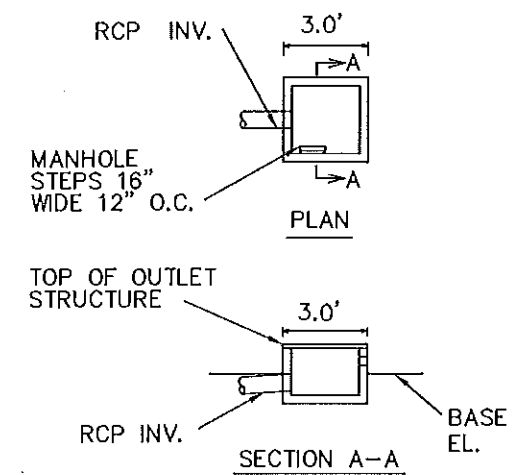
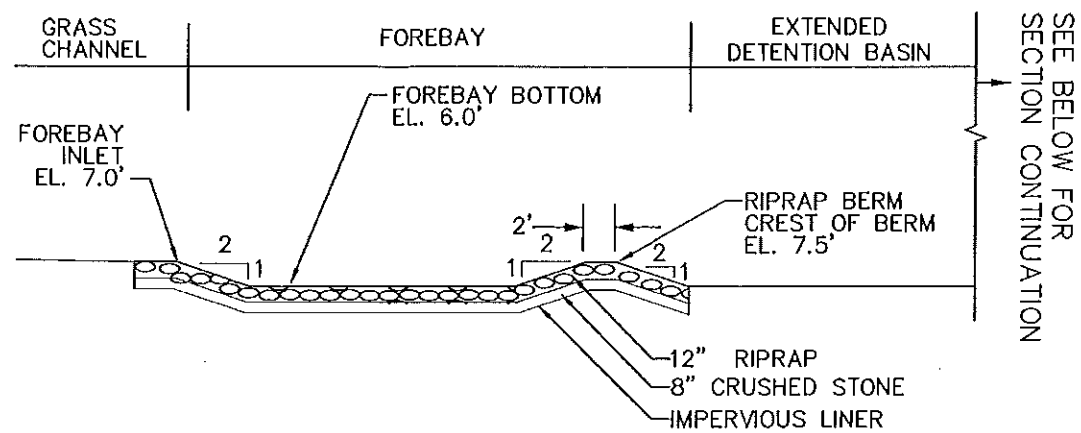
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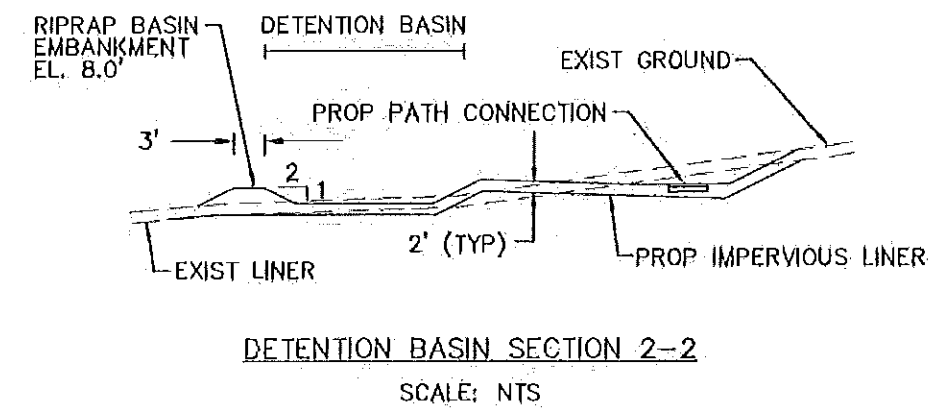
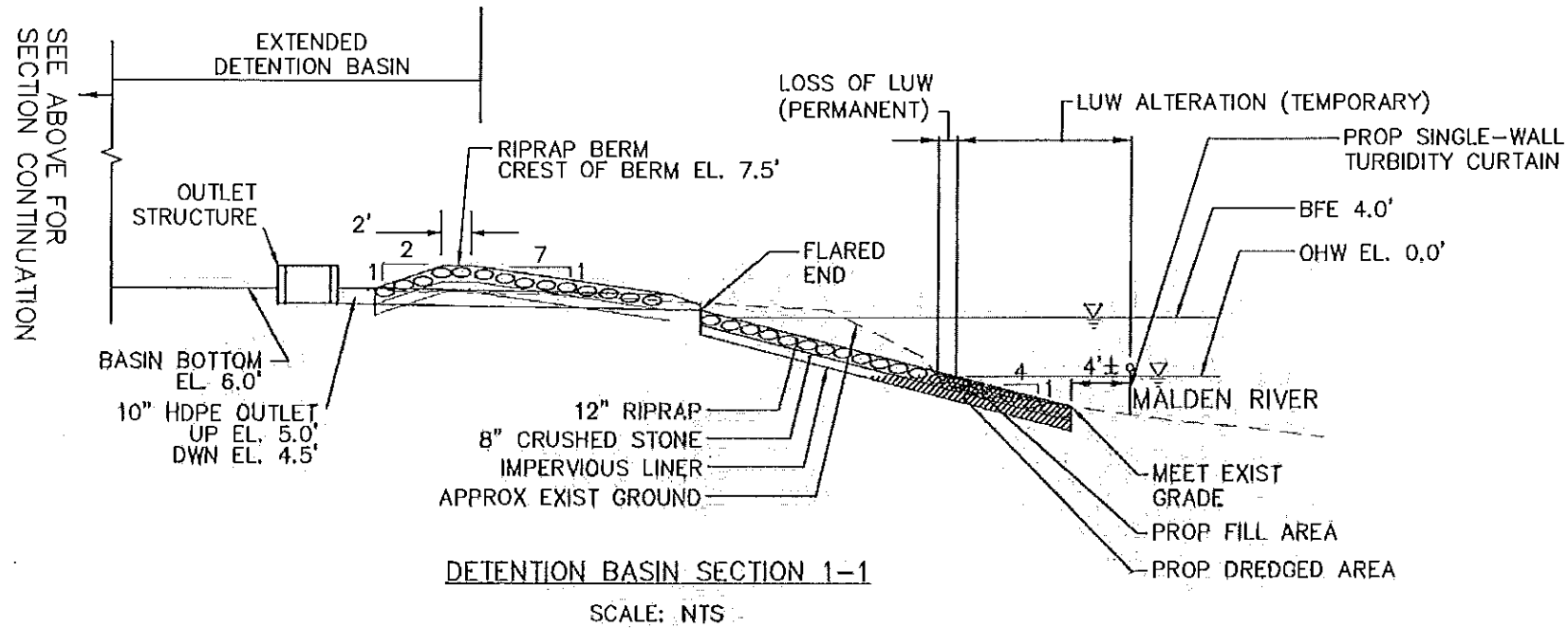


WOODS MEMORIAL BRIDGE REPLACEMENT AND
 TRANSPORTATION IMPROVEMENTS
 MEDFORD & EVERETT, MASSACHUSETTS

STORMWATER BASIN PLANS



TYP OUTLET STRUCTURE
SCALE: NTS



- NOTES:
1. SEE FIGURE 2 FOR GENERAL NOTES
 2. DETENTION BASIN PLANS ON FIGURE 13
 3. GENERAL STORMWATER DETAILS ON FIGURE 16

DÉP 401 WQC / ACOE 404 PERMIT APPLICATION

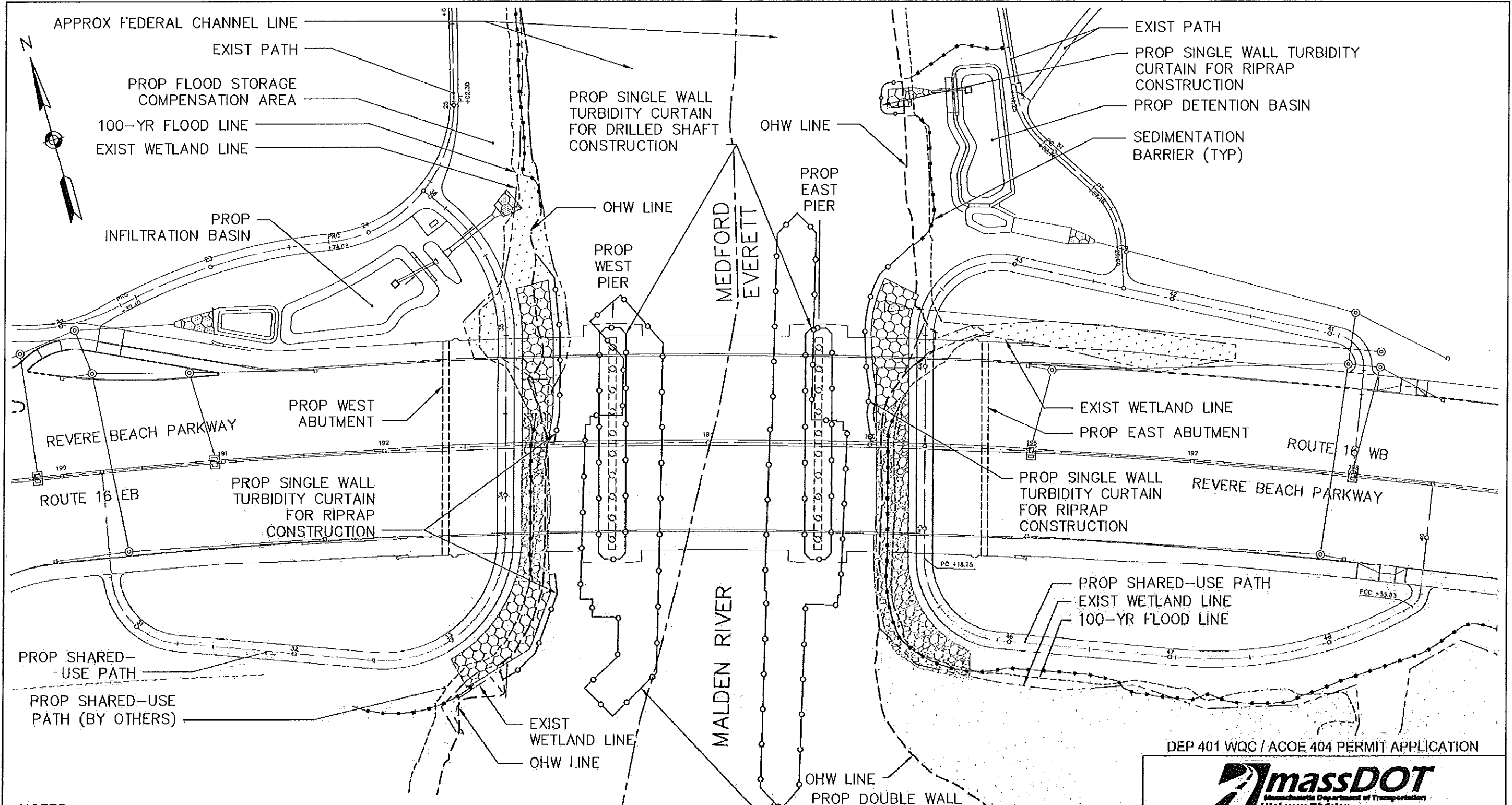


WOODS MEMORIAL BRIDGE REPLACEMENT AND
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MEDFORD & EVERETT, MASSACHUSETTS

DETENTION BASIN SECTIONS (EVERETT)

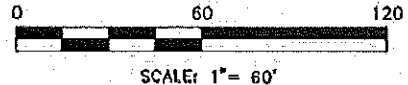


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NOTES:

1. SEE FIGURE 2 FOR GENERAL NOTES
2. EROSION AND SEDIMENTATION CONTROLS WILL BE ADJUSTED BASED ON CONSTRUCTION STAGE / ACTIVITIES
3. STANDARD FLOATING SHIELDS WILL BE USED DURING BRIDGE DEMOLITION TO ENSURE THAT DEBRIS IS NOT RELEASED INTO THE RIVER
4. COMPOST FILTER TUBES WILL BE INSTALLED UPGRADIENT OF WETLAND RESOURCE AREAS ON THE RIVER BANKS
5. SILT SACKS WILL BE INSTALLED AT EXISTING CATCH BASINS AND DROP INLETS



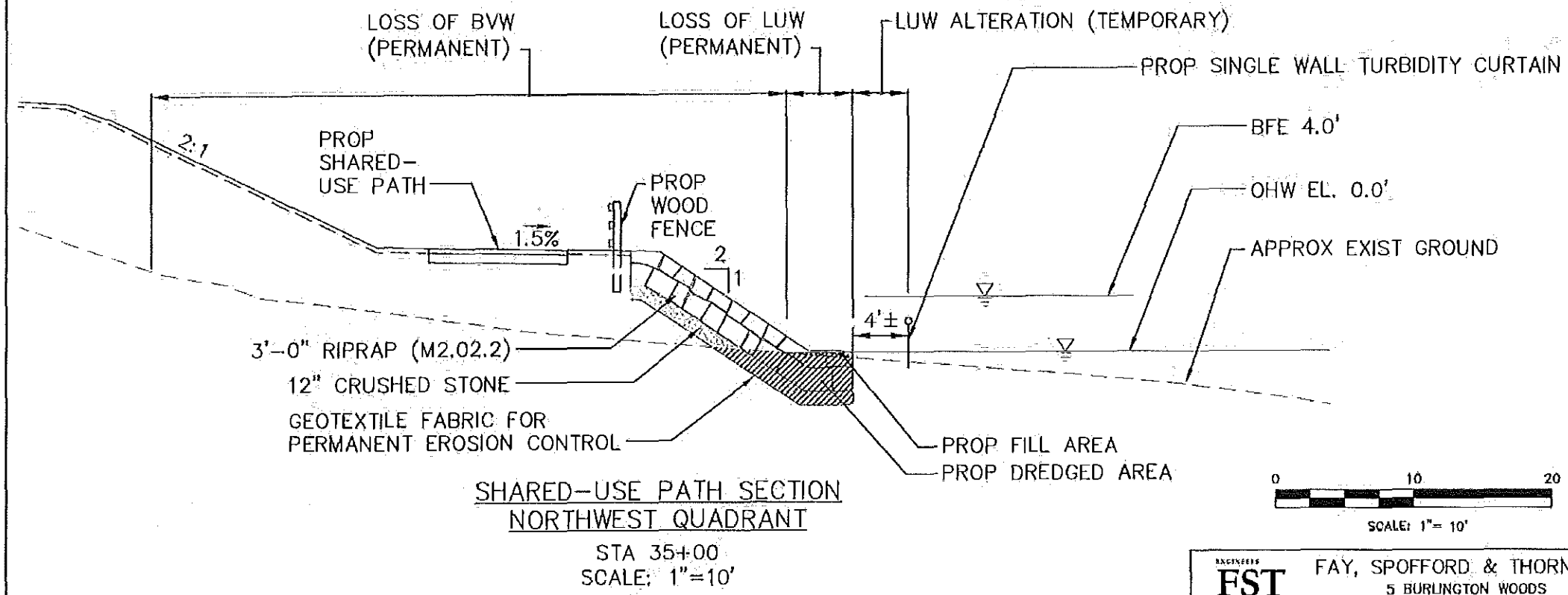
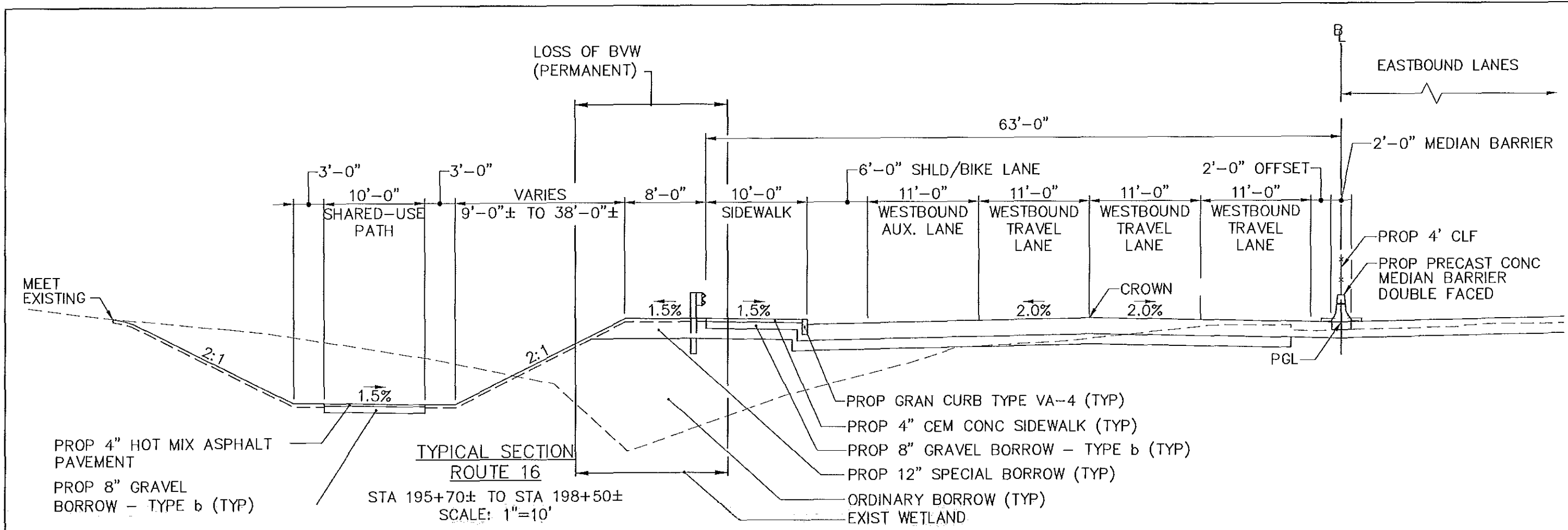
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WOODS MEMORIAL BRIDGE REPLACEMENT AND
TRANSPORTATION IMPROVEMENTS
MEDFORD & EVERETT, MASSACHUSETTS

EROSION AND SEDIMENTATION CONTROL PLAN



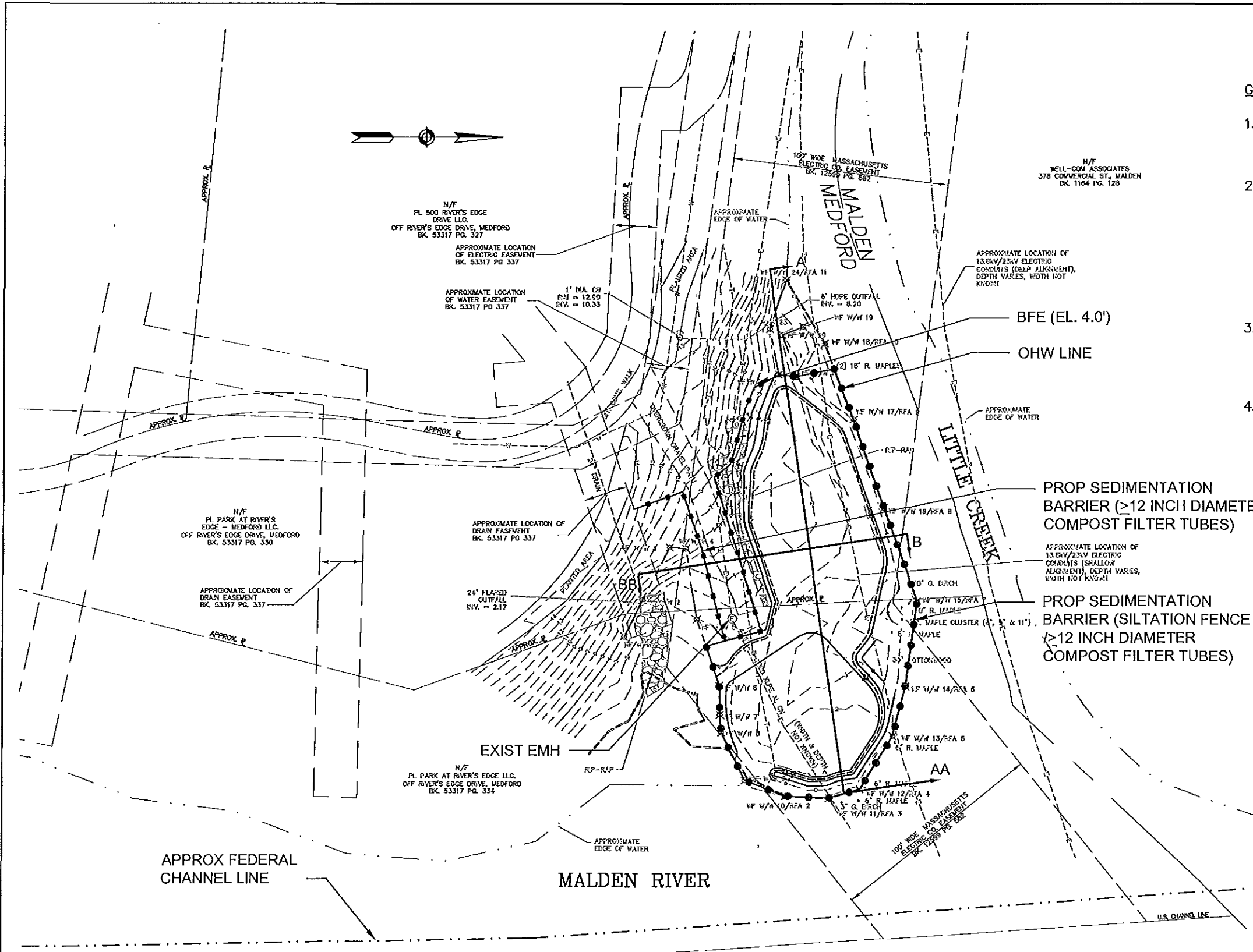
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WOODS MEMORIAL BRIDGE REPLACEMENT AND TRANSPORTATION IMPROVEMENTS
MEDFORD & EVERETT, MASSACHUSETTS

DREDGING AND FILL SECTIONS



- NOTES:
1. SEE FIGURE 1 FOR LOCUS MAP
 2. SEE FIGURE 24 FOR PLANTING PLAN
 3. SEE FIGURE 25 FOR SECTIONS

GENERAL COMPENSATION AREA GRADING NOTES

1. CLEAR AND REMOVE EXISTING VEGETATION WITHIN THE COMPENSATION AREA UNLESS OTHERWISE NOTED.
2. OVER-EXCAVATE COMPENSATION AREA AND ADJACENT SIDE SLOPES BY 12 INCHES, CONSISTENT WITH THE APPROVED GRADING PLAN. EXCAVATION WILL CONFORM TO ALL ELEVATION REQUIREMENTS DESIGNATED ON THE APPROVED GRADING PLAN, EXCEPT WHERE ADJUSTMENTS ARE DETERMINED TO BE WARRANTED BY THE GENERAL CONTRACTOR'S WETLAND SCIENTIST.
3. REMOVE EXCAVATED MATERIALS TO A LOCATION OUTSIDE THE REGULATED 100-FOOT BUFFER ZONE ASSOCIATED WITH THE COMPENSATION AREA AND ADJACENT WETLANDS.
4. BACK-FILL COMPENSATION AREA AND ADJACENT SIDE SLOPES WITH 12 INCHES OF ORGANIC-RICH SOILS WITH AN ORGANIC MATTER CONTENT OF AT LEAST 30% (DRY WEIGHT BASIS). THESE SOILS, ANTICIPATED TO CONSIST OF MANMADE/MANUFACTURED OR OTHER APPROVED ORGANIC-RICH SOILS CONSISTING OF LOAM WITH EQUAL VOLUMES OF ORGANIC AND MINERAL MATERIALS, SHALL BE PLACED WITHIN THE OVER-EXCAVATED PORTION OF THE COMPENSATION AREA AND SIDE SLOPES TO ATTAIN FINAL GRADES AS INDICATED ON THE APPROVED GRADING PLAN. CLEAN LEAF COMPOST OR OTHER SOIL AMENDMENT(S) MAY BE USED TO MEET THE REQUISITE ORGANIC CARBON/ORGANIC MATTER CONTENT. THE USE OF ORGANIC RICH SOILS SALVAGED FROM BRIDGE RECONSTRUCTION IS PRECLUDED.

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WOODS MEMORIAL BRIDGE REPLACEMENT AND TRANSPORTATION IMPROVEMENTS
MEDFORD & EVERETT, MASSACHUSETTS

WETLAND AND FLOOD COMPENSATION AREA GRADING PLAN

ENGINEERS
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BURLINGTON, MA 01803

[W24_9] -- April 18, 2013 -- 4:35pm -- C:\PROJECTS\1\proj\temp\LOCALS\1\Temp\AcPub\h_4832\604550_1002_23-25 Compensation Area.dwg [COEP AREA GRAD]

WETLAND SEED MIX

BOTANICAL NAME	COMMON NAME	IND.
CAREX VULPINOIDEA	FOX SEDGE	OBL
CAREX LURIDA	LURID SEDGE	OBL
CAREX SCOPARIA	BLUNT BROOM SEDGE	FACW
VERBENA HASTATA	BLUE VERVAIN	FACY
SCIRPUS ATROVIRENS	GREEN BULRUSH	OBL
CAREX LUPULINA	HOP SEDGE	OBL
BIDENS CERNUA	NODDING BUR MARIGOLD	OBL
CAREX COMOSA	BRISTLY/COSMOS SEDGE	OBL
CAREX CRINITA	FRINGED SEDGE	OBL
JUNCUS EFFUSUS	SOFT RUSH	FACW+
SCIRPUS CYPERINUS	WOOL GRASS	FACY
GLYCERIA GRANDIS	AMERICAN MANNA GRASS	OBL
EUPATORIUM MACULATUM	SPOTTED JOE PYE WEED	FACY
EUPATORIUM PERFOLIATUM	BONESET	FACY
ALISMA SUBCORDATUM	MUD PLANTAIN	OBL
ASTER PUNICEUS	PURPLE STEMMED ASTER	OBL
GLYCERIA CANADENSIS	RATTLESNAKE GRASS	OBL
SCIRPUS VALIDUS	SOFT STEM BULRUSH	OBL
ASCLEPIAS INCARNATA	SWAMP MILKWEED	OBL
MIMULUS RINGENS	SQUARE STEMMED MONKEY FLOWER	OBL





CONSERVATION/WILDLIFE MIX

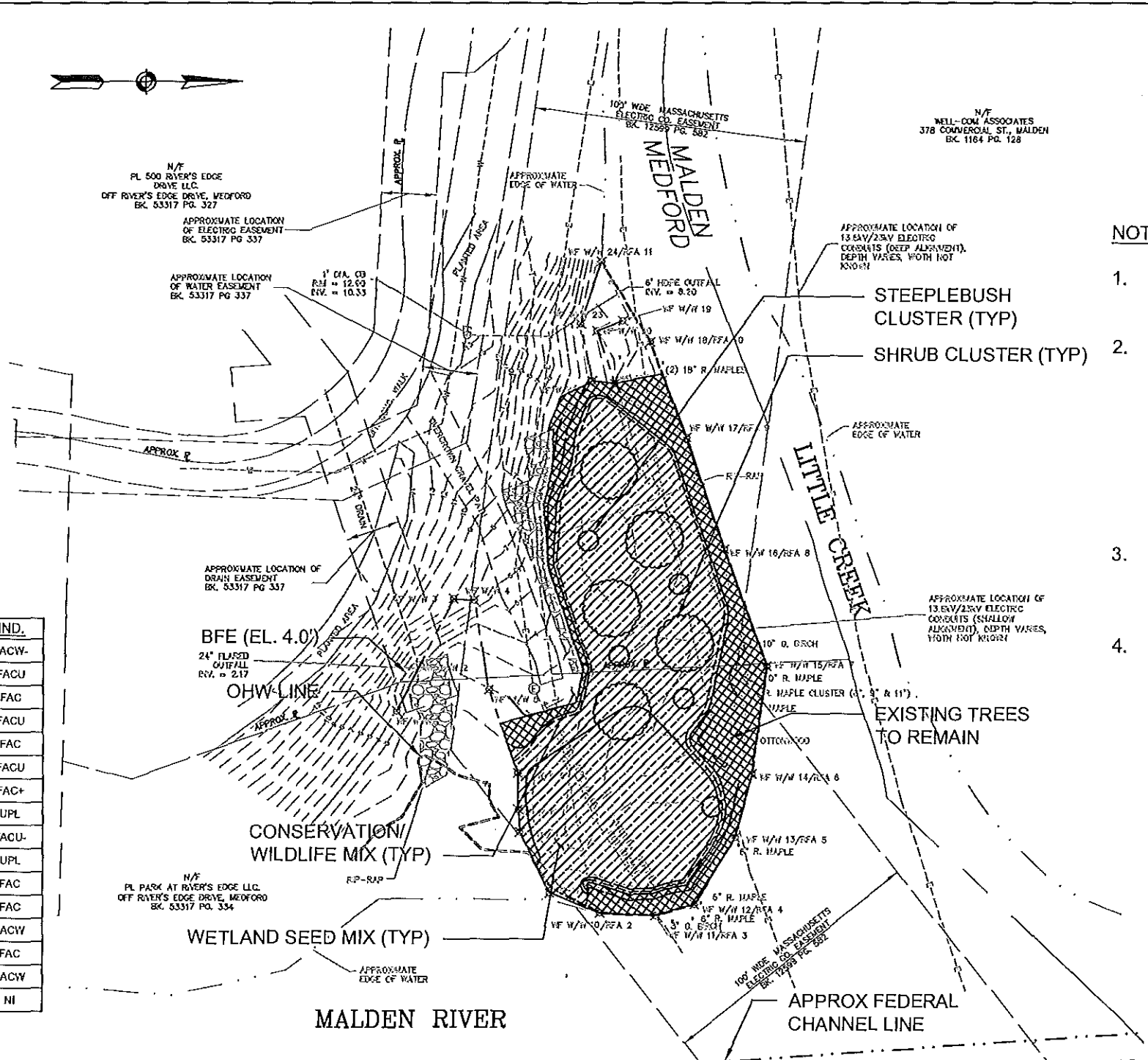
BOTANICAL NAME	COMMON NAME	IND.
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	FACW-
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
ANDROPOGON GERARDII	BIG BLUESTEM	FAC
FESTUCA RUBRA	CREeping RED FESCUE	FACU
PANICUM VIRGATUM	SWITCH GRASS	FAC
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	FACU
PANICUM CLANDESTINUM	DEER TONGUE	FAC+
SORGHASTRUM NUTANS	INDIAN GRASS	UPL
ASCLEPIAS SYRIACA	COMMON MILKWEED	FACU-
HELIOPSIS HELIANTHOIDES	OX EYE SUNFLOWER	UPL
EUPATORIUM PURPUREUM	PURPLE JOE PYE WEED	FAC
EUTHAMIA GRAMINIFOLIA	GRASS LEAVED GOLDENROD	FAC
VERBENA HASTATA	BLUE VERVAIN	FACW
ZIZIA AUREA	GOLDEN ALEXANDERS	FAC
ASTER UMBELLATUS	FLAT TOPPED UMBRELLA ASTER	FACY
SOLIDAGO JUNCEA	EARLY GOLDENROD	NI

WETLAND COMPENSATION SITE PLANT SPECIES

COMMON NAME	SCIENTIFIC NAME	SIZE (MINIMUM)	NUMBER OF SHRUBS
RED CHOKEBERRY	ARONIA ARBUTIFOLIA	3'	10
SILKY DOGWOOD	CORNUS AMOMUM	3'	10
RED-OSIER DOGWOOD	CORNUS SERICEA	3'	10
WINTERBERRY	ILEX VERTICILLATA	3'	10
SPICEBUSH	LINDERA BENZOIN	3'	10
SWAMP AZALEA	RHODODENDRON VISCOSUM	3'	10
SWAMP ROSE	ROSA PALUSTRIS	3'	10
PUSSY WILLOW	SALIX DISCOLOR	3'	10
ELDERBERRY	SAMBUCUS CANADENSIS	3'	10
STEEPLEBUSH	SPIRAEA TOMENTOSA	18"	50
WILD RAISIN	VIBURNUM CASSINOIDES	3'	10

LEGEND

-  WETLAND SEED MIX
-  CONSERVATION/ WILDLIFE MIX (SEE NOTE 4, THIS SHEET)
-  SHRUB CLUSTER
-  STEEPLEBUSH CLUSTER



NOTES:

1. WETLANDS TO BE RESTORED / REPLICATED EQUALS 9,710 SF. FLOOD STORAGE EQUALS 650 CY.
2. ALL SHRUBS SHALL BE PLANTED IN CLUSTERS, WITH EACH OF THE FIVE (5) PROPOSED CLUSTERS TO CONTAIN TWENTY (20) INDIVIDUALS CONSISTING OF AT LEAST THREE (3) SPECIES PLANTED ON FIVE (5) FOOT CENTERS, EXCLUDING STEEPLEBUSH (SPIRAEA TOMENTOSA), WITH THE ACTUAL NUMBER OF EACH SPECIES TO BE DETERMINED BY THE CONTRACTOR'S WETLAND SCIENTIST.
3. AN ADDITIONAL FIVE (5) CLUSTERS WILL CONSIST EXCLUSIVELY OF TEN (10) INDIVIDUAL STEEPLEBUSH PLANTED ON ONE (1) FOOT CENTERS.
4. CONSERVATION / WILDLIFE MIX TO BE APPLIED ONLY TO DISTURBED UPLAND AREAS.

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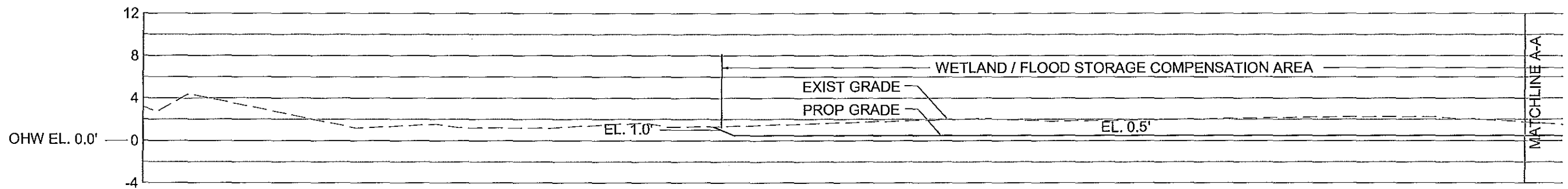


WOODS MEMORIAL BRIDGE REPLACEMENT AND TRANSPORTATION IMPROVEMENTS
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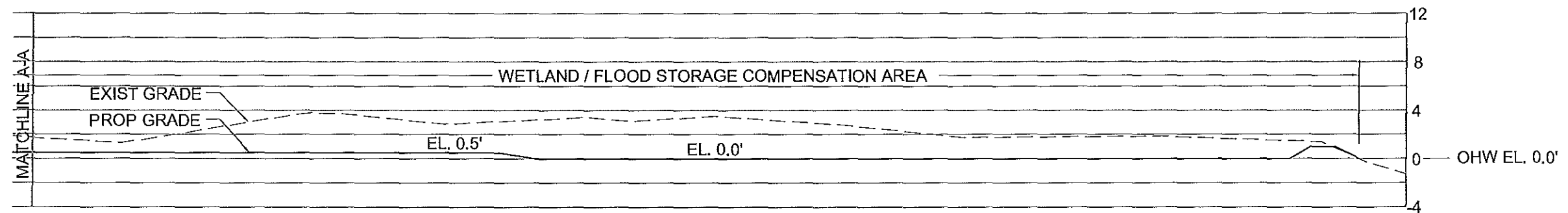
WETLAND AND FLOOD COMPENSATION AREA
PLANTING PLAN

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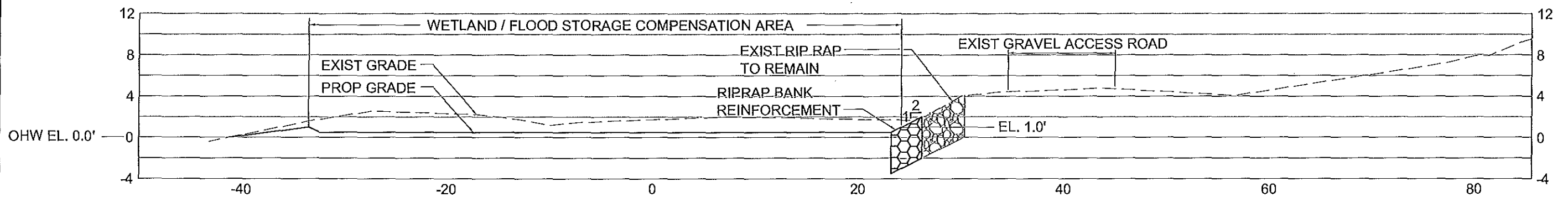
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SECTION A-AA

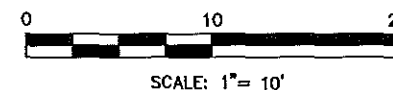


SECTION A-AA (CONT'D)



SECTION B-BB

NOTE:
1. SEE FIGURE 23 FOR GRADING NOTES



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WETLAND AND FLOOD COMPENSATION AREA
SECTIONS