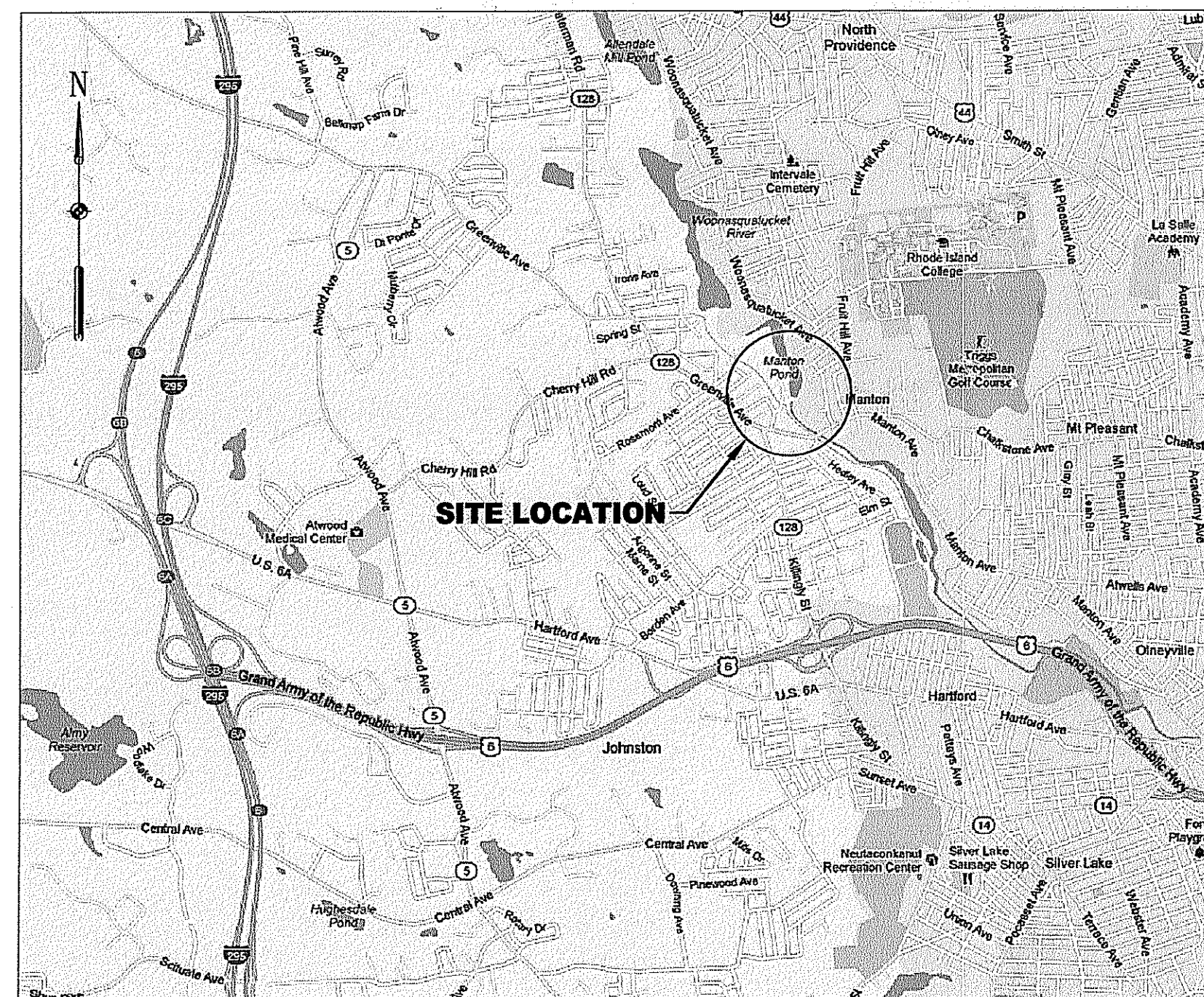


MANTON POND DAM NATURE-LIKE FISHWAY BYPASS

JOHNSTON, RHODE ISLAND

PREPARED FOR
PREFERRED EQUIPMENT, INC.

ON BEHALF OF
WOONASQUATUCKET RIVER
WATERSHED COUNCIL
FEBRUARY 2013



VICINITY MAP
1" = 1/2 MILE



WOONASQUATUCKET RIVER WATERSHED COUNCIL

27 Sims Avenue
Providence, Rhode Island 02909
Phone: (401) 861-9046
Fax: (401) 861-9038

PREPARED BY



EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY

2374 Post Road, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DRAWING NUMBER	SHEET NUMBER
T-1	1 OF 12
G-1	2 OF 12
C-1	3 OF 12
C-2	4 OF 12
C-3	5 OF 12
C-4	6 OF 12
C-5	7 OF 12
C-6	8 OF 12
C-7	9 OF 12
C-8	10 OF 12
C-9	11 OF 12
C-10	12 OF 12

DRAWING TITLE

TITLE SHEET
GENERAL NOTES AND LEGEND
EXISTING CONDITIONS PLAN
CONSTRUCTION ACCESS AND EROSION AND
SEDIMENT CONTROL PLAN
FISHWAY LAYOUT AND GRADING PLAN
FISHWAY PROFILE
FISHWAY WEIRS CROSS SECTIONS
FISHWAY POOLS CROSS SECTIONS
WATER CONTROL AND CONSTRUCTION
SEQUENCE PLAN
VEGETATIVE RESTORATION PLAN
CONSTRUCTION DETAILS
PEDESTRIAN BRIDGE DETAILS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 20 2013 FILE # 73-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles B. Hurd

NO.	DATE	BY	DESCRIPTION

FEB 15 2013

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND

TITLE SHEET

EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY

2374 Post Road, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DATE: FEBRUARY 2013

DESIGNED BY: MET

DRAWN BY: DPA

CHECKED BY: TCC

PROJECT MANAGER: AEH

PROJECT NUMBER: 62092.06

SCALE: AS SHOWN

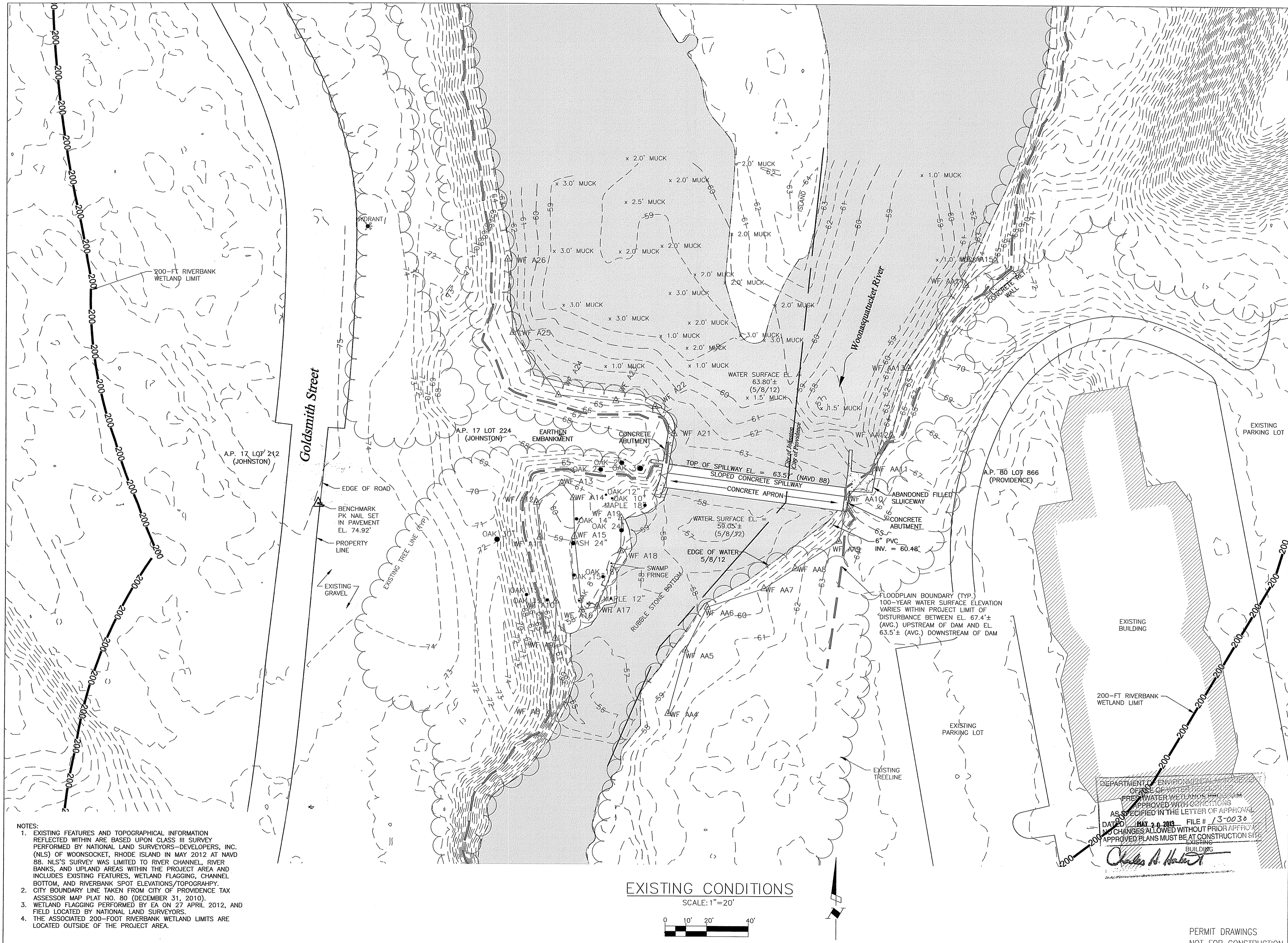
FILE NAME: TITLE SHEET

DRAWING NUMBER: T-1

SHEET NUMBER: 1 OF 12

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

App. No 13-0030
Greystone Enterprises, LLC



- NOTES:
- EXISTING FEATURES AND TOPOGRAPHICAL INFORMATION REFLECTED WITHIN ARE BASED UPON CLASS III SURVEY PERFORMED BY NATIONAL LAND SURVEYORS-DEVELOPERS, INC. (NLS) OF WOONSOCKET, RHODE ISLAND IN MAY 2012 AT NAVD 88. NLS'S SURVEY WAS LIMITED TO RIVER CHANNEL, RIVER BANKS, AND UPLAND AREAS WITHIN THE PROJECT AREA AND INCLUDES EXISTING FEATURES, WETLAND FLAGGING, CHANNEL BOTTOM, AND RIVERBANK SPOT ELEVATIONS/TOPOGRAPHY.
 - CITY BOUNDARY LINE TAKEN FROM CITY OF PROVIDENCE TAX ASSESSOR MAP PLAT NO. 80 (DECEMBER 31, 2010).
 - WETLAND FLAGGING PERFORMED BY EA ON 27 APRIL 2012, AND FIELD LOCATED BY NATIONAL LAND SURVEYORS.
 - THE ASSOCIATED 200-FOOT RIVERBANK WETLAND LIMITS ARE LOCATED OUTSIDE OF THE PROJECT AREA.

EXISTING CONDITIONS

SCALE: 1"=20'



NO.	DATE	BY	DESCRIPTION

FEB 15 2013

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND

EXISTING CONDITIONS

EXISTING BUILDING
EXISTING PARKING LOT
200-FT RIVERBANK WETLAND LIMIT

EA
EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY

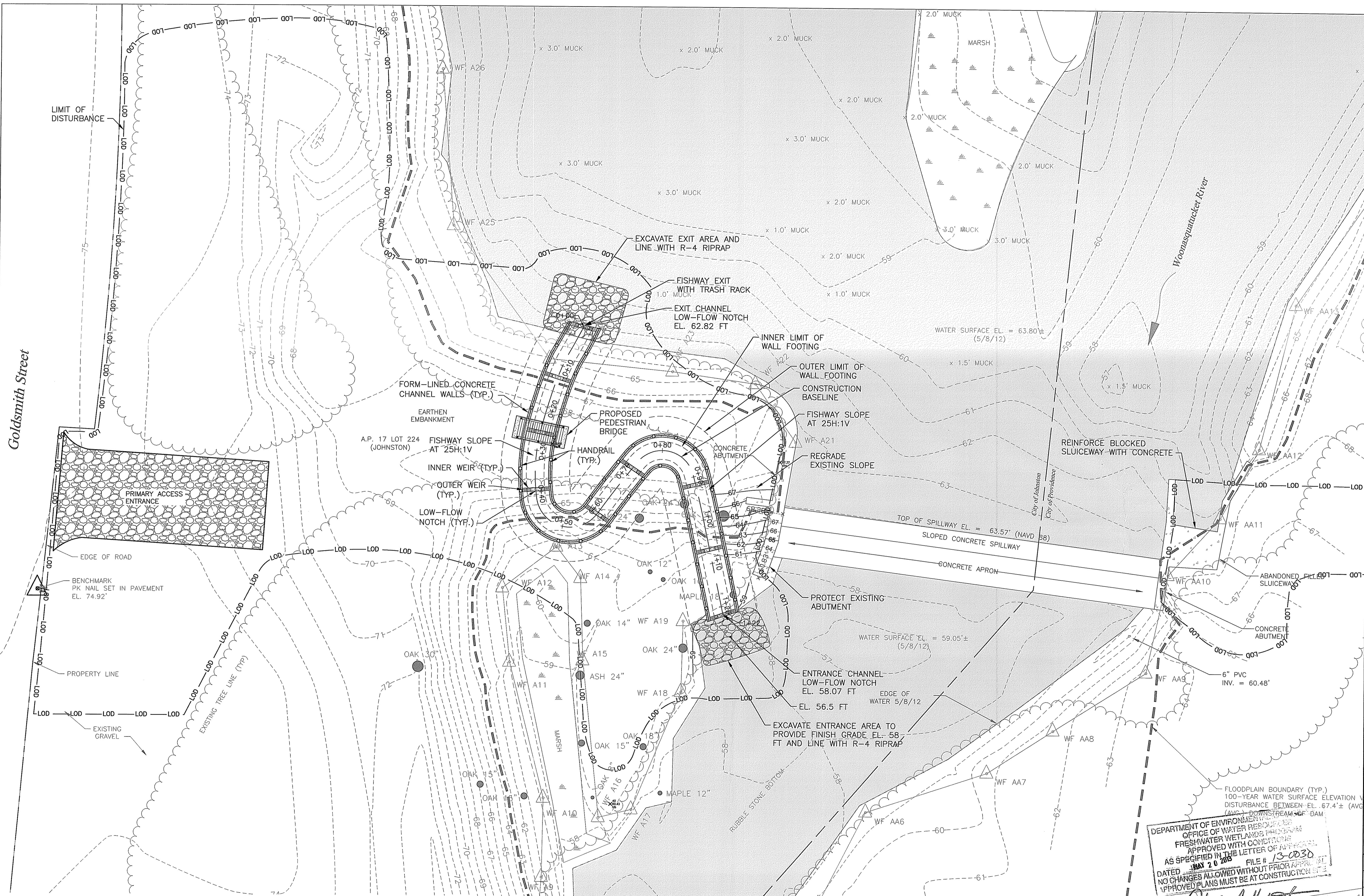
2374 Post Road, Suite 102
Worwick, Rhode Island 02886
(401) 736-3440

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WETLANDS
PREPARED WATER WETLANDS CONSULTATION
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 20 2013 FILE # 13-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hester

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

DATE	FEBRUARY 2013
DESIGNED BY	MET
DRAWN BY	DPA
CHECKED BY	TCC
PROJECT MANAGER	AEH
PROJECT NUMBER	62092.06
SCALE	1" = 20'
FILE NAME	EXISTING CONDITIONS
DRAWING NUMBER	C-1
SHEET NUMBER	3 OF 12



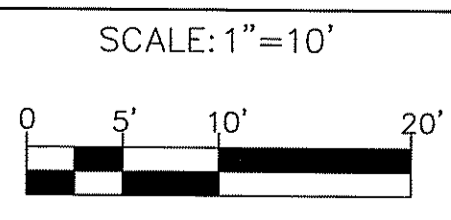
Goldsmith Street

NO.	DATE	BY	REVISIONS DESCRIPTION

MANITON POND DAM
 NATURE-LIKE FISHWAY BYPASS
 JOHNSTON, RHODE ISLAND

FISHWAY LAYOUT AND GRADING PLAN

FISHWAY LAYOUT AND GRADING PLAN

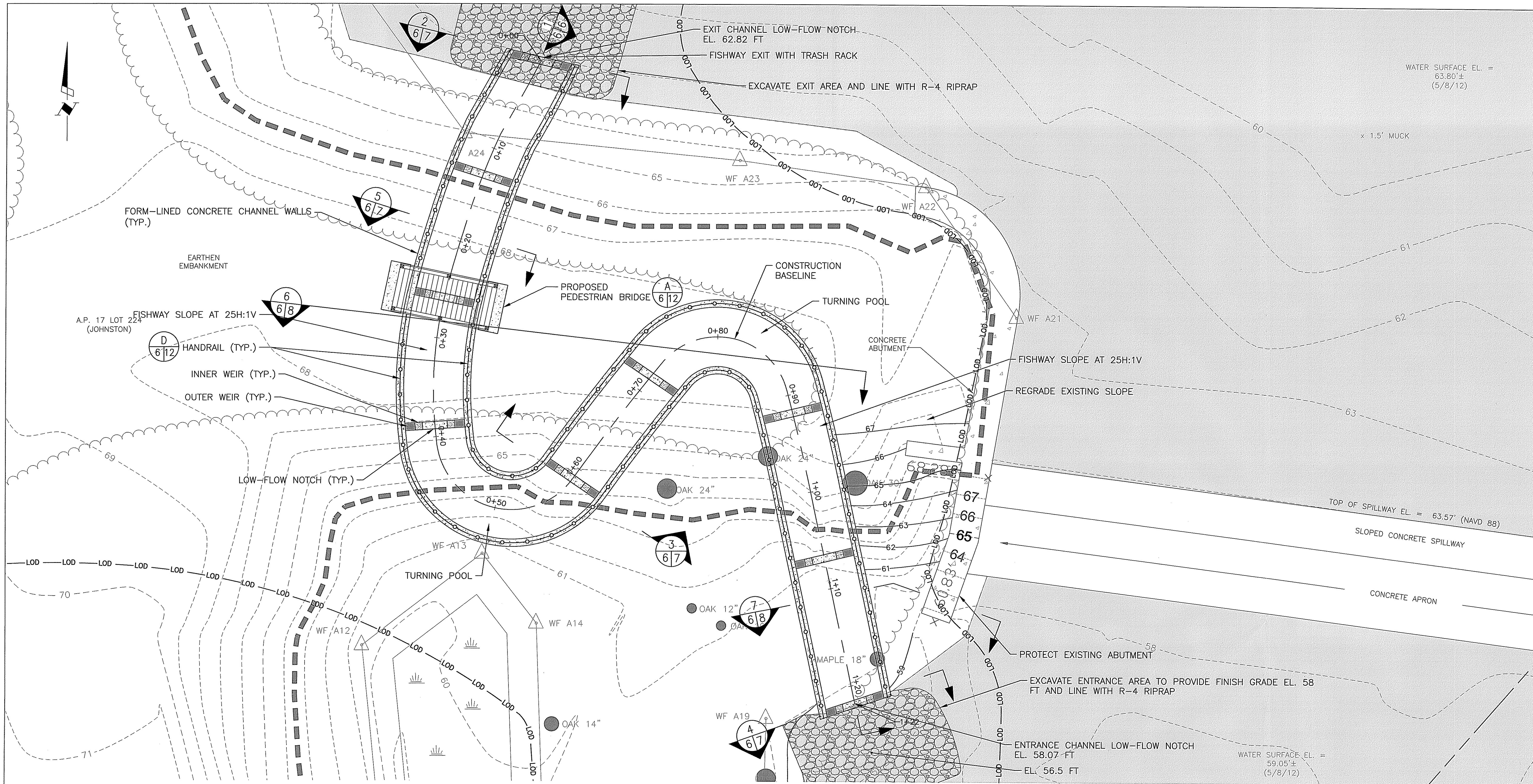


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED MAY 20 2013 FILE # 13-003D
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

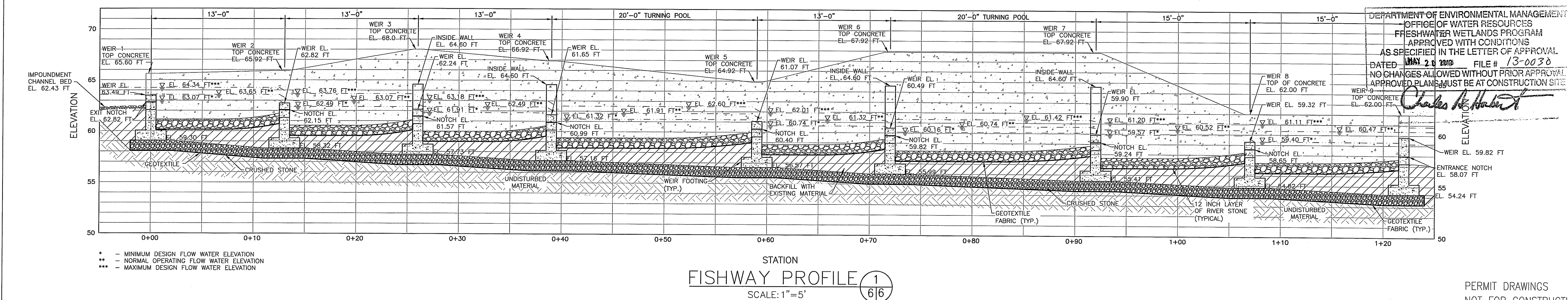
Charles A. Harkin

2374 Post Road, Suite 102 Warwick, Rhode Island 02886 (401) 736-3440	
DATE	FEBRUARY 2013
DESIGNED BY	MET
DRAWN BY	DPA
CHECKED BY	TCC
PROJECT MANAGER	AEH
PROJECT NUMBER	62092.06
SCALE	1" = 10'
FILE NAME	LAYOUT & GRADING PLAN
DRAWING NUMBER	C-3
SHEET NUMBER	5 OF 12

PERMIT DRAWINGS
 NOT FOR CONSTRUCTION



FISHWAY PLAN
SCALE: 1"=5'



FISHWAY PROFILE 1
SCALE: 1"=5'

NO.	DATE	BY	DESCRIPTION

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND

FISHWAY PROFILE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 21 2010 FILE # 13-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Hurd

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
2374 Post Road, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DATE: FEBRUARY 2013
DESIGNED BY: MET
DRAWN BY: DPA
CHECKED BY: TCC
PROJECT MANAGER: AEH
PROJECT NUMBER: 62092.06
SCALE: AS SHOWN
FILE NAME: FISHWAY PROFILE
DRAWING NUMBER: C-4
SHEET NUMBER: 6 OF 12

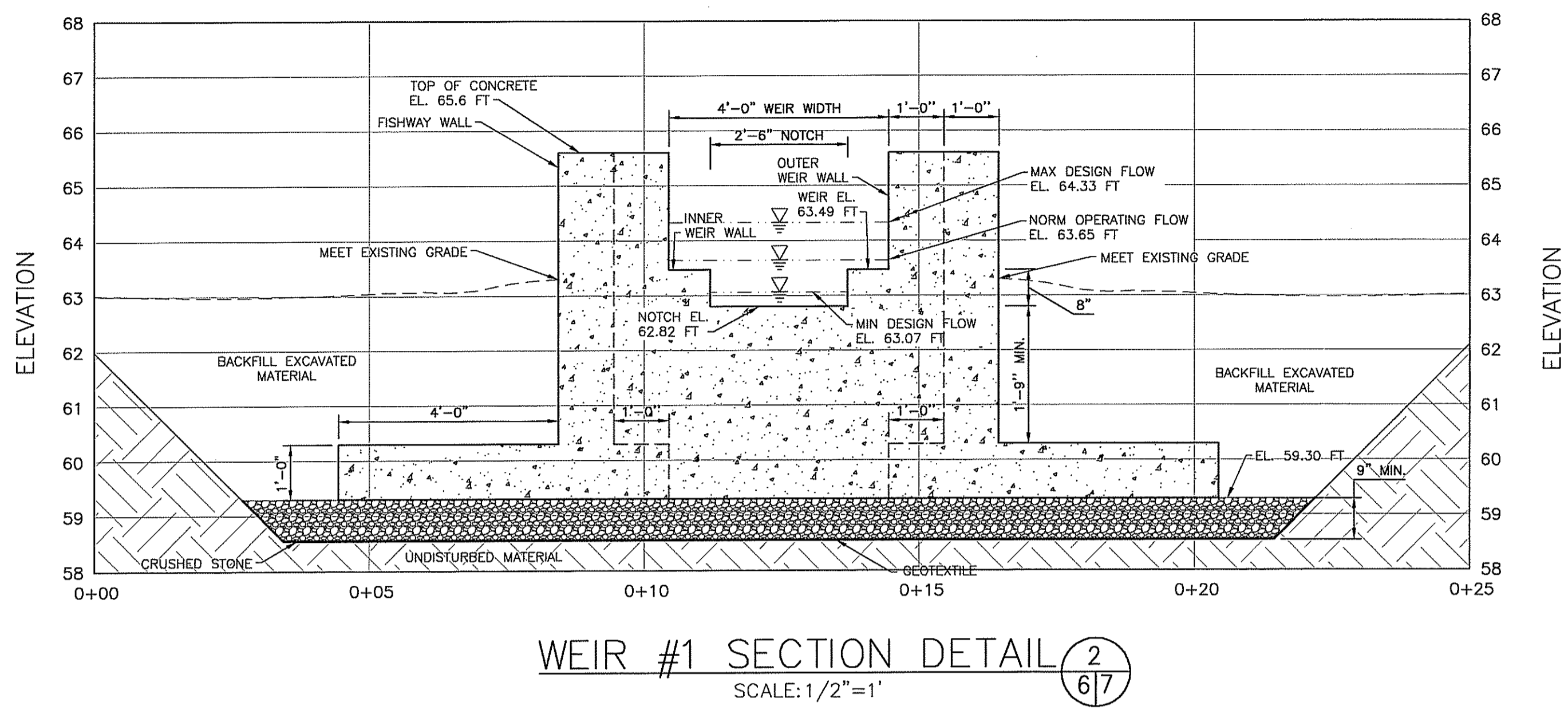
WATER SURFACE EL. = 63.80± (5/8/12)

WATER SURFACE EL. = 59.05± (5/8/12)

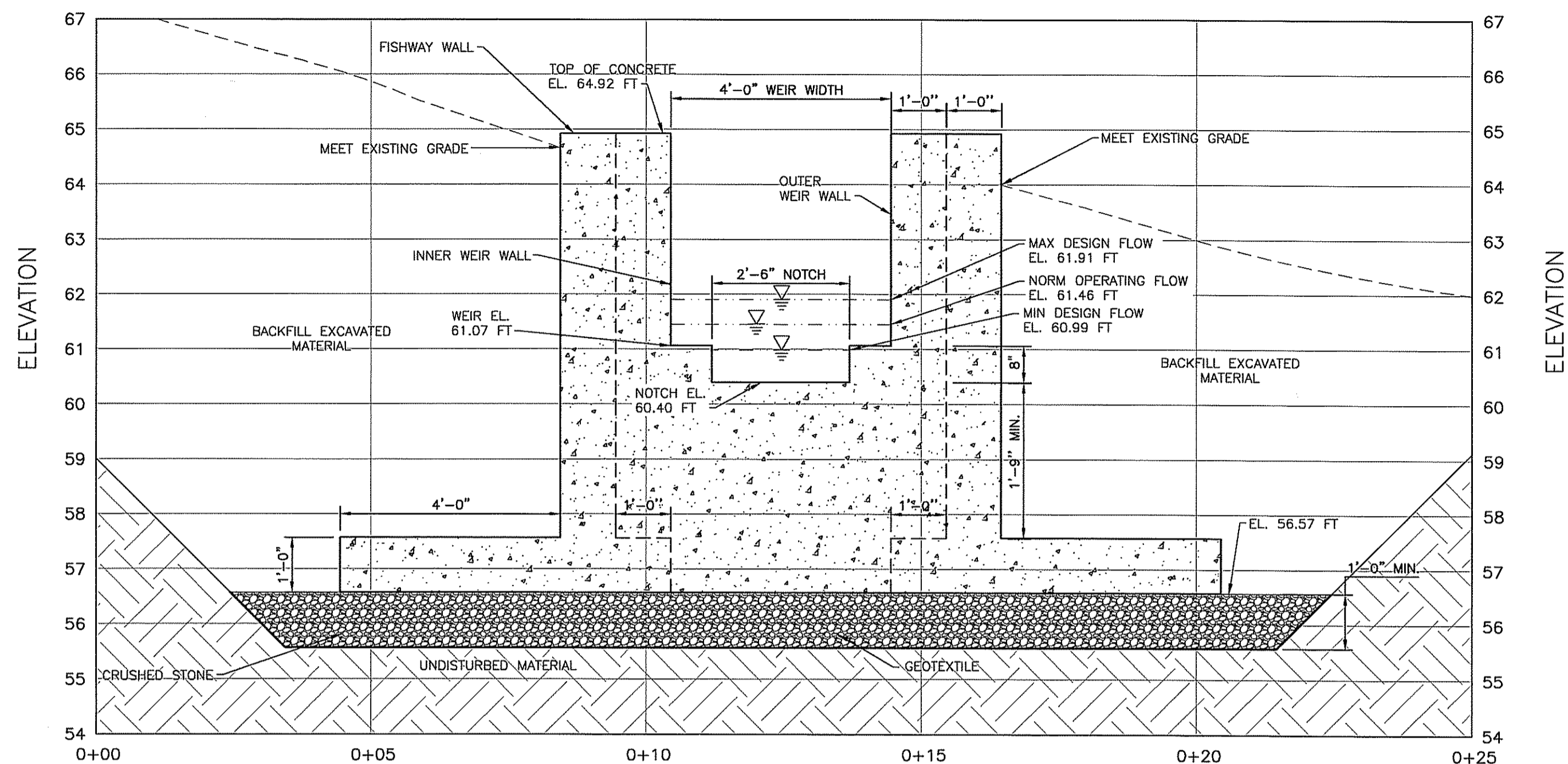
A.P. 17 LOT 254 (JOHNSTON)

- * - MINIMUM DESIGN FLOW WATER ELEVATION
- ** - NORMAL OPERATING FLOW WATER ELEVATION
- *** - MAXIMUM DESIGN FLOW WATER ELEVATION

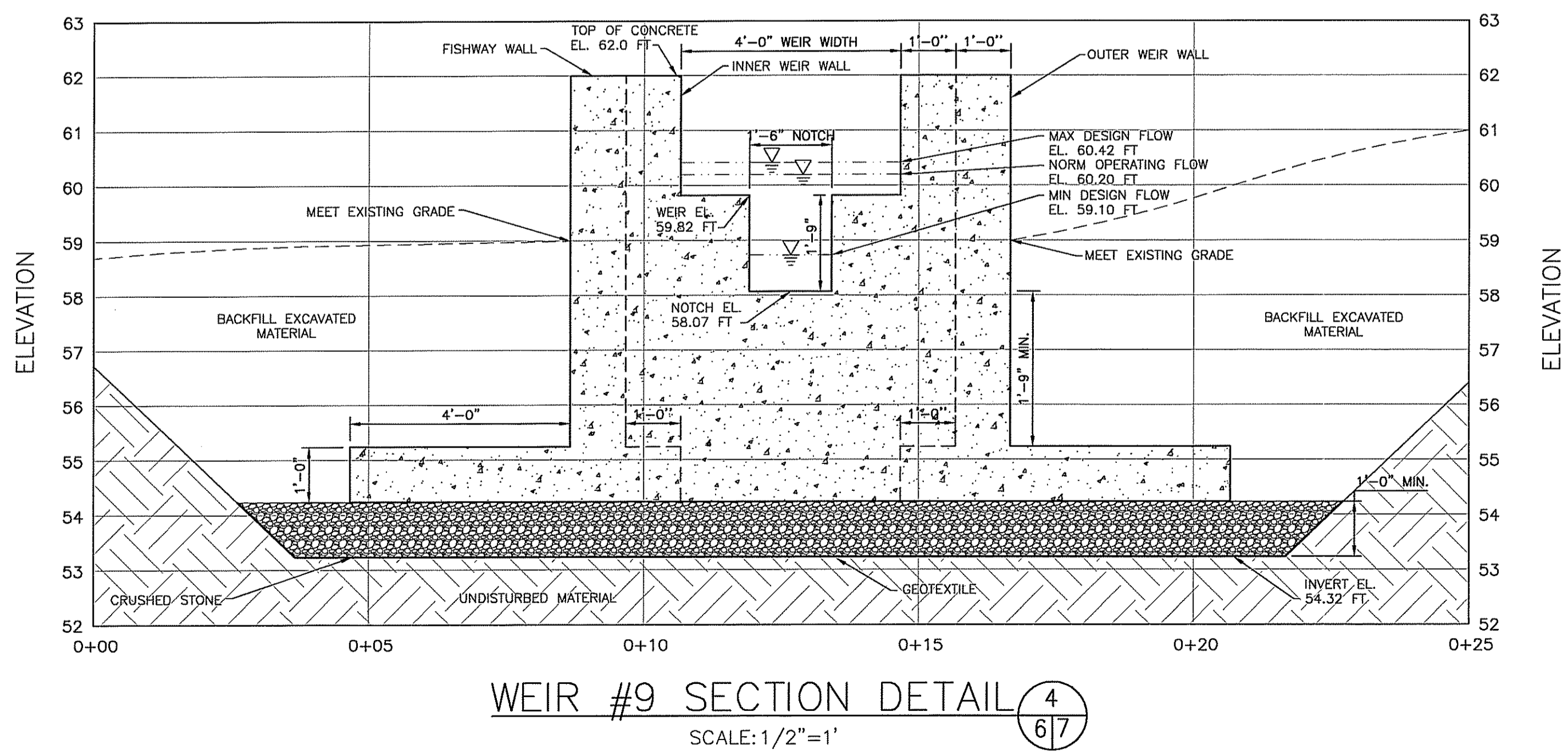
PERMIT DRAWINGS
NOT FOR CONSTRUCTION



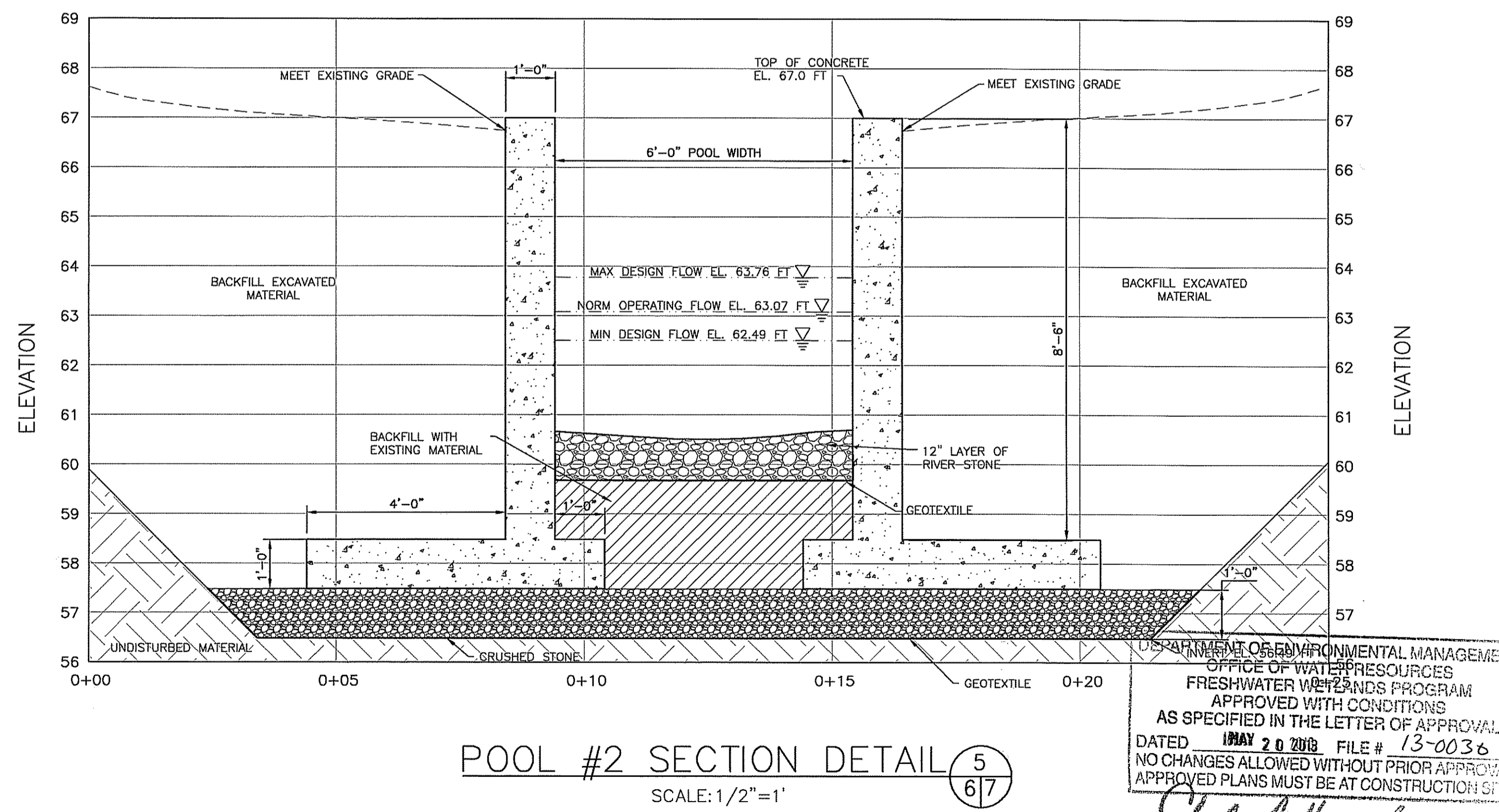
WEIR #1 SECTION DETAIL 2
SCALE: 1/2"=1' 6/7



WEIR #5 SECTION DETAIL 3
SCALE: 1/2"=1' 6/7



WEIR #9 SECTION DETAIL 4
SCALE: 1/2"=1' 6/7



POOL #2 SECTION DETAIL 5
SCALE: 1/2"=1' 6/7

DESIGNED BY MET
CHECKED BY TCC
PROJECT MANAGER AEH
PROJECT NUMBER 62092.06
SCALE AS SHOWN
FILE NAME WEIRS CROSS SECTIONS
DRAWING NUMBER C-5
SHEET NUMBER 7 OF 12

NO.	DATE	DESCRIPTION

FEB 15 2013

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND

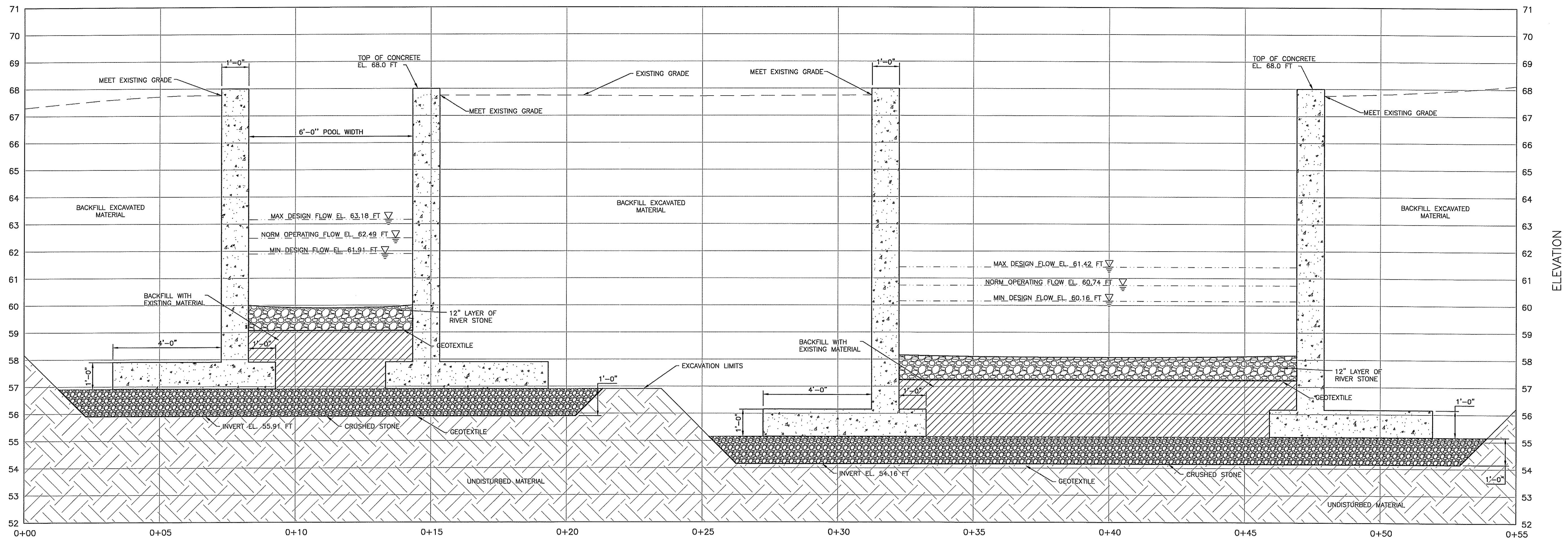
FISHWAY WEIRS
CROSS SECTIONS

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

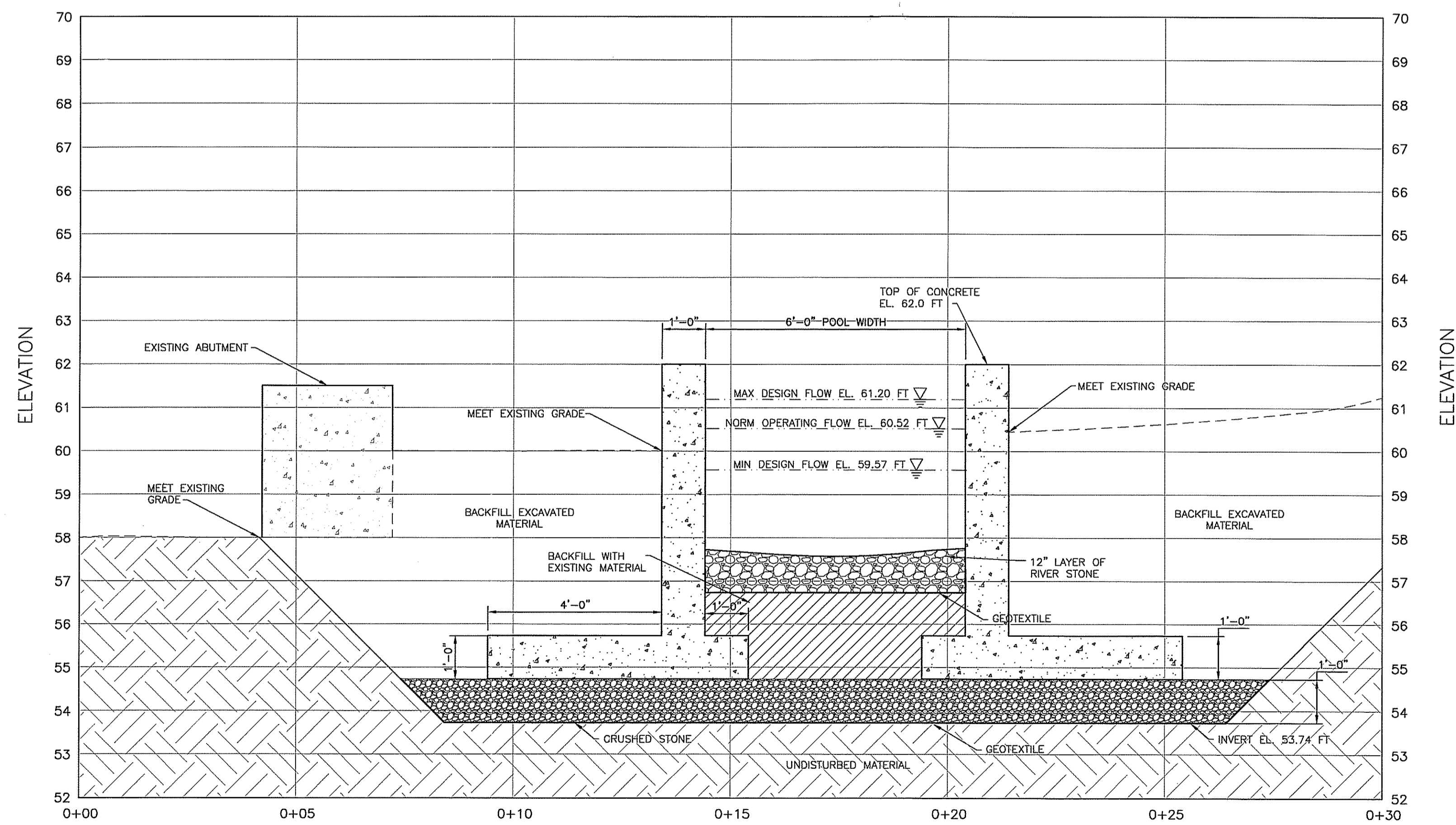
2374 Post Road, Suite 102
Worwick, Rhode Island 02886
(401) 736-3440

DATE FEBRUARY 2013
DESIGNED BY MET
CHECKED BY TCC
PROJECT MANAGER AEH
PROJECT NUMBER 62092.06
SCALE AS SHOWN
FILE NAME WEIRS CROSS SECTIONS
DRAWING NUMBER C-5
SHEET NUMBER 7 OF 12

PERMIT DRAWINGS
NOT FOR CONSTRUCTION



SECTION DETAIL THROUGH CENTER OF FISHWAY 6
SCALE: 1/2"=1'



POOL #7 SECTION DETAIL 7
SCALE: 1/2"=1'

NO.	DATE	DESCRIPTION

FEB 15 2013

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND

FISHWAY POOLS
CROSS SECTIONS

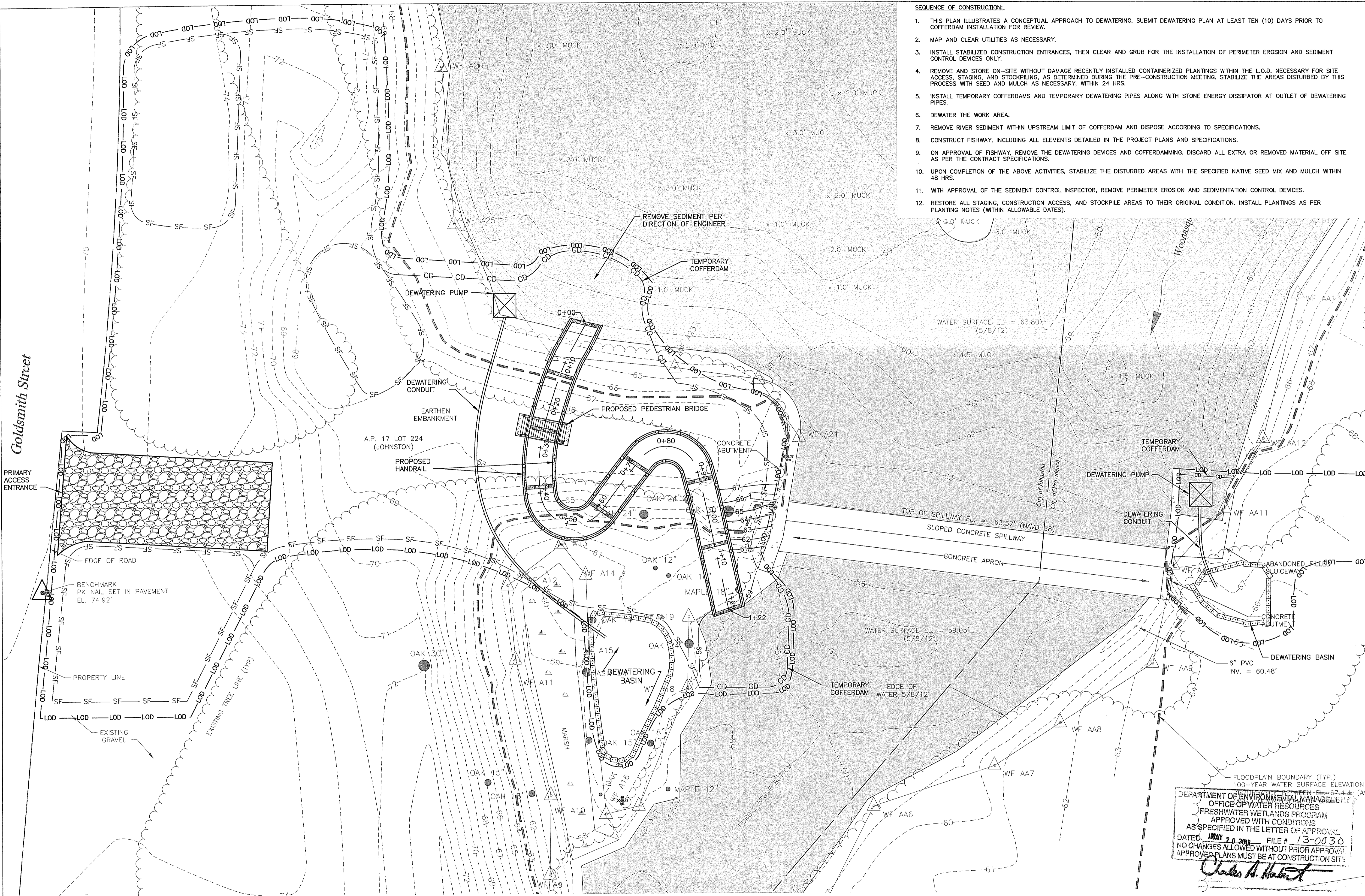
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLAND PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: **MAY 20 2013** FILE # **13-0030**
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Herbert



DATE	FEBRUARY 2013
DESIGNED BY	MET
DRAWN BY	DPA
CHECKED BY	TCC
PROJECT MANAGER	AEH
PROJECT NUMBER	62092.06
SCALE	AS SHOWN
FILE NAME	POOLS CROSS SECTIONS
DRAWING NUMBER	C-6
SHEET NUMBER	8 OF 12

PERMIT DRAWINGS
NOT FOR CONSTRUCTION



- SEQUENCE OF CONSTRUCTION:**
1. THIS PLAN ILLUSTRATES A CONCEPTUAL APPROACH TO DEWATERING. SUBMIT DEWATERING PLAN AT LEAST TEN (10) DAYS PRIOR TO COFFERDAM INSTALLATION FOR REVIEW.
 2. MAP AND CLEAR UTILITIES AS NECESSARY.
 3. INSTALL STABILIZED CONSTRUCTION ENTRANCES, THEN CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL DEVICES ONLY.
 4. REMOVE AND STORE ON-SITE WITHOUT DAMAGE RECENTLY INSTALLED CONTAINERIZED PLANTINGS WITHIN THE L.O.D. NECESSARY FOR SITE ACCESS, STAGING, AND STOCKPILING, AS DETERMINED DURING THE PRE-CONSTRUCTION MEETING. STABILIZE THE AREAS DISTURBED BY THIS PROCESS WITH SEED AND MULCH AS NECESSARY, WITHIN 24 HRS.
 5. INSTALL TEMPORARY COFFERDAMS AND TEMPORARY DEWATERING PIPES ALONG WITH STONE ENERGY DISSIPATOR AT OUTLET OF DEWATERING PIPES.
 6. DEWATER THE WORK AREA.
 7. REMOVE RIVER SEDIMENT WITHIN UPSTREAM LIMIT OF COFFERDAM AND DISPOSE ACCORDING TO SPECIFICATIONS.
 8. CONSTRUCT FISHWAY, INCLUDING ALL ELEMENTS DETAILED IN THE PROJECT PLANS AND SPECIFICATIONS.
 9. ON APPROVAL OF FISHWAY, REMOVE THE DEWATERING DEVICES AND COFFERDAMMING. DISCARD ALL EXTRA OR REMOVED MATERIAL OFF SITE AS PER THE CONTRACT SPECIFICATIONS.
 10. UPON COMPLETION OF THE ABOVE ACTIVITIES, STABILIZE THE DISTURBED AREAS WITH THE SPECIFIED NATIVE SEED MIX AND MULCH WITHIN 48 HRS.
 11. WITH APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROL DEVICES.
 12. RESTORE ALL STAGING, CONSTRUCTION ACCESS, AND STOCKPILE AREAS TO THEIR ORIGINAL CONDITION. INSTALL PLANTINGS AS PER PLANTING NOTES (WITHIN ALLOWABLE DATES).

NO.	DATE	BY	DESCRIPTION

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND

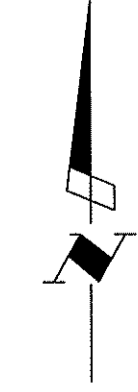
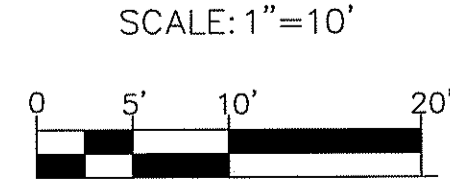
WATER CONTROL AND
CONSTRUCTION SEQUENCE PLAN

FLOODPLAIN BOUNDARY (TYP.)
100-YEAR WATER SURFACE ELEVATION V
67.44 ± (AVG
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAY 20 2013 FILE # 13-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

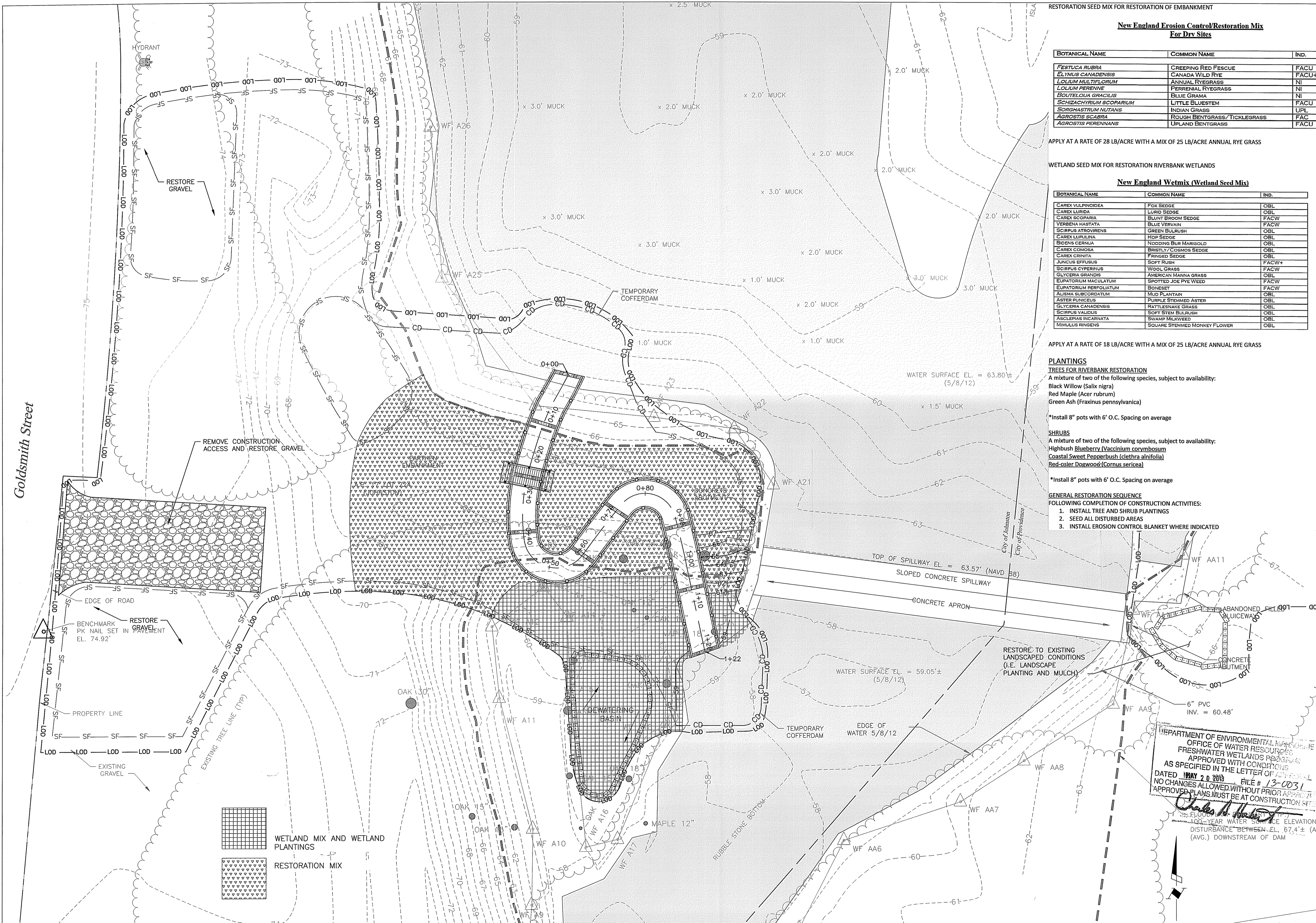
Charles A. Habert

EA EA ENGINEERING, SCIENCE AND TECHNOLOGY	
2374 Post Road, Suite 102 Warwick, Rhode Island 02886 (401) 736-3440	
DATE	FEBRUARY 2013
DESIGNED BY	MET
DRAWN BY	DPA
CHECKED BY	TCC
PROJECT MANAGER	AEH
PROJECT NUMBER	62092.06
SCALE	1" = 10'
FILE NAME	WATER CONTROL & CONSTR. SEQ.
DRAWING NUMBER	C-7
SHEET NUMBER	9 OF 12

**WATER CONTROL AND
CONSTRUCTION SEQUENCE PLAN**



PERMIT DRAWINGS
NOT FOR CONSTRUCTION



RESTORATION SEED MIX FOR RESTORATION OF EMBANKMENT

New England Erosion Control/Restoration Mix For Dry Sites

BOTANICAL NAME	COMMON NAME	IND.
<i>FESTUCA RUBRA</i>	CREeping RED FESCUE	FACU
<i>ELYMUS CANADENSIS</i>	CANADA WILD RYE	FACU+
<i>LOLIUM MULTIFLORUM</i>	ANNUAL RYEGRASS	NI
<i>LOLIUM PERENNE</i>	PERENNIAL RYEGRASS	NI
<i>BOULTELLOIA GRACILIS</i>	BLUE GRAMA	NI
<i>SCHIZACHYRIUM SCOPARIUM</i>	LITTLE BLUESTEM	FACU
<i>SORGHASTRUM NUTANS</i>	INDIAN GRASS	UPL
<i>AGROSTIS SCABRA</i>	ROUGH BENTGRASS/TICKLEGRASS	FAC
<i>AGROSTIS PERENNANS</i>	UPLAND BENTGRASS	FACU

WETLAND SEED MIX FOR RESTORATION RIVERBANK WETLANDS

New England Wetmix (Wetland Seed Mix)

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

APPLY AT A RATE OF 28 LB/ACRE WITH A MIX OF 25 LB/ACRE ANNUAL RYE GRASS

APPLY AT A RATE OF 18 LB/ACRE WITH A MIX OF 25 LB/ACRE ANNUAL RYE GRASS

PLANTINGS

TREES FOR RIVERBANK RESTORATION
 A mixture of two of the following species, subject to availability:
 Black Willow (*Salix nigra*)
 Red Maple (*Acer rubrum*)
 Green Ash (*Fraxinus pennsylvanica*)
 *Install 8" pots with 6' O.C. Spacing on average

SHRUBS
 A mixture of two of the following species, subject to availability:
 Highbush Blueberry (*Vaccinium corymbosum*)
 Coastal Sweet Pepperbush (*Clethra alnifolia*)
 Red-osier Dogwood (*Cornus sericea*)
 *Install 8" pots with 6' O.C. Spacing on average

GENERAL RESTORATION SEQUENCE
 FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES:
 1. INSTALL TREE AND SHRUB PLANTINGS
 2. SEED ALL DISTURBED AREAS
 3. INSTALL EROSION CONTROL BLANKET WHERE INDICATED

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED MAY 20 2013 FILE # 13-0231
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 100-YEAR WATER SURFACE ELEVATION
 DISTURBANCE BETWEEN EL. 67.4 ± (AVG.)
 (AVG.) DOWNSTREAM OF DAM

REVISIONS

NO.	DATE	BY	DESCRIPTION

SEAL

MANTON POND DAM
 NATURE-LIKE FISHWAY BYPASS
 JOHNSTON, RHODE ISLAND

VEGETATIVE RESTORATION PLAN

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

2374 Post Road, Suite 102
 Warwick, Rhode Island 02886
 (401) 736-3440

DATE: FEBRUARY 2013

DESIGNED BY: MET

DRAWN BY: DPA

CHECKED BY: TCC

PROJECT MANAGER: AEH

PROJECT NUMBER: 62092.06

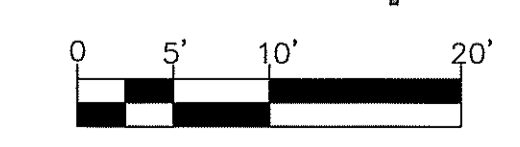
SCALE: 1" = 10'

FILE NAME: VEGETATIVE RESTORATION

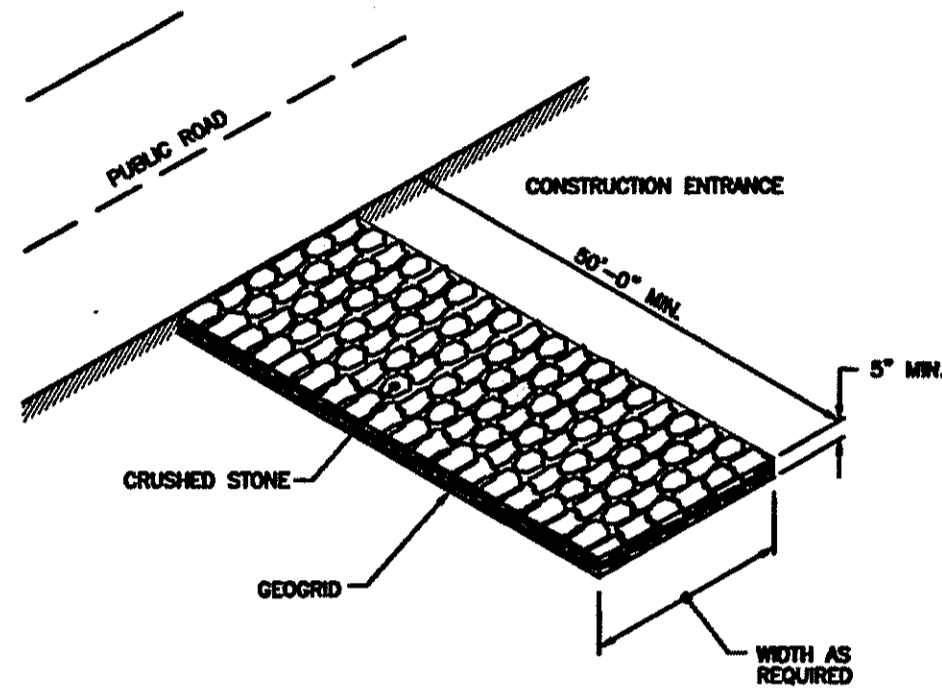
DRAWING NUMBER: C-8

SHEET NUMBER: 10 OF 12

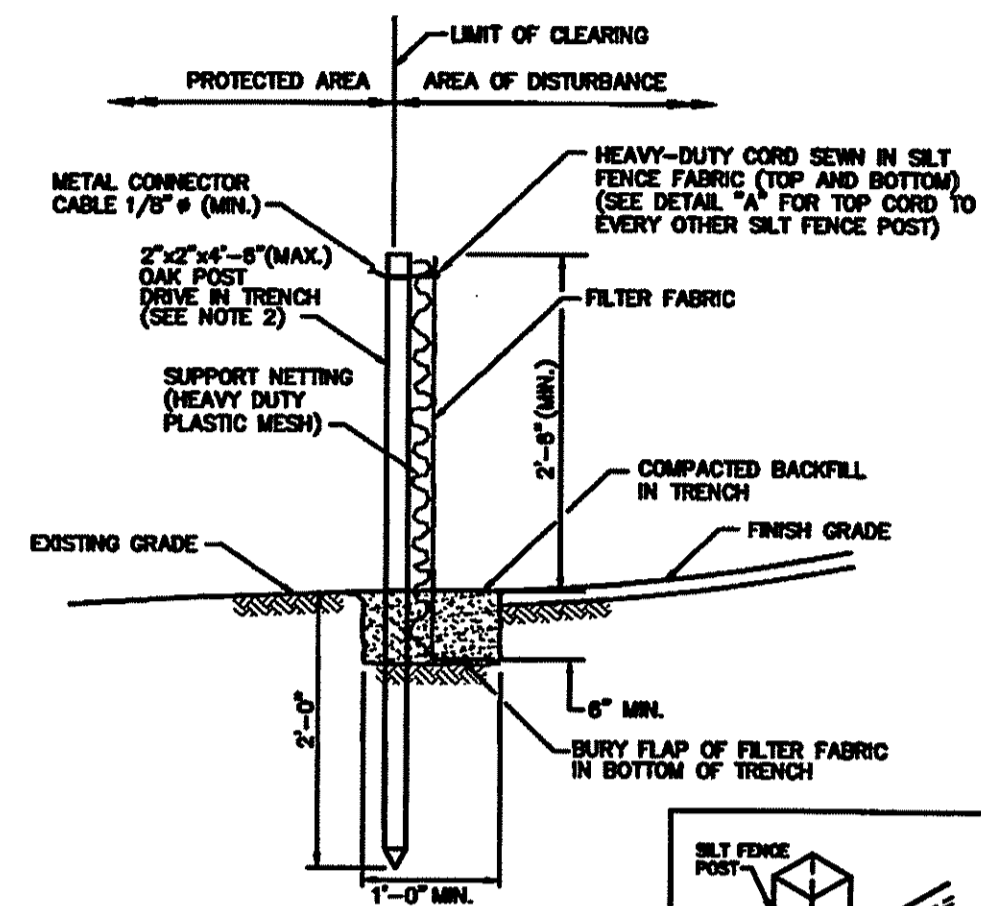
VEGETATIVE RESTORATION PLAN
 SCALE: 1"=10'



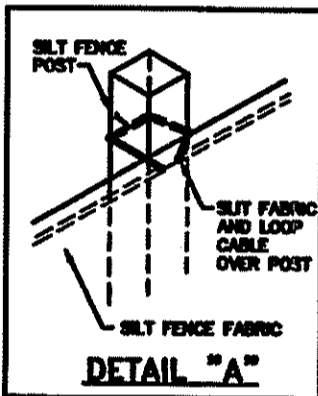
PERMIT DRAWINGS
 NOT FOR CONSTRUCTION



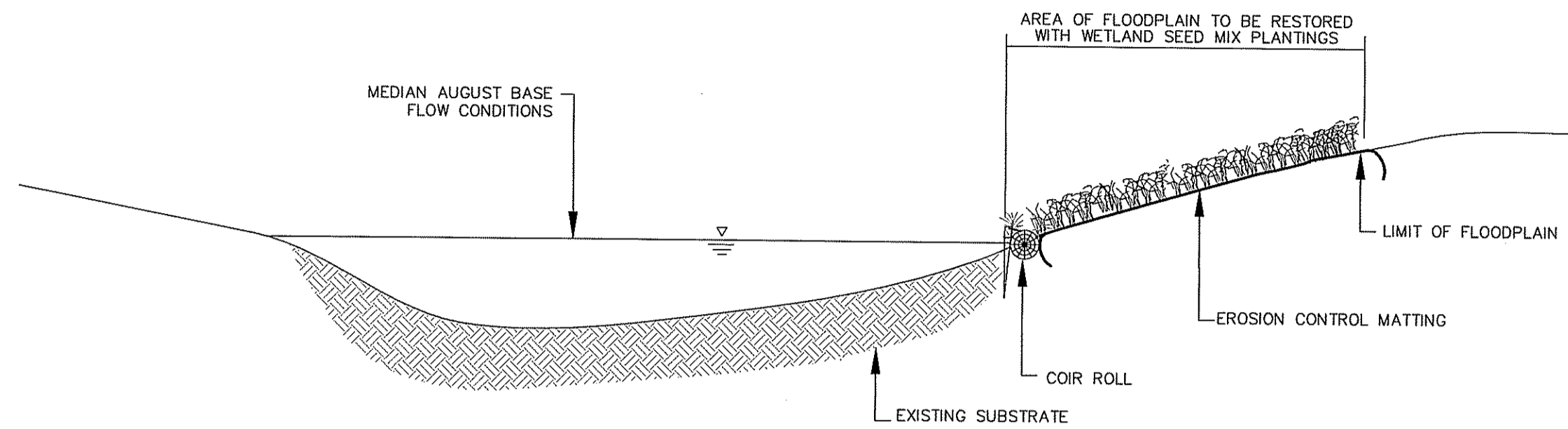
NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.
TEMPORARY CONSTRUCTION ACCESS
 (R.I. STD. 9.9.0)
 NOT TO SCALE



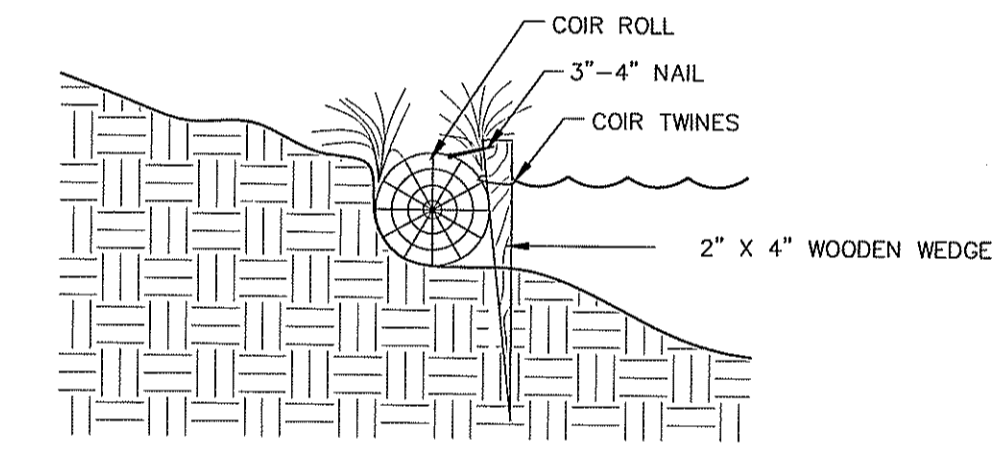
- NOTES:**
1. SHALL BE IN ACCORDANCE WITH SECTION 208 OF THE R.I. STANDARD SPECIFICATIONS.
 2. 2"x4"-8" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 3. 1"x4"-8" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



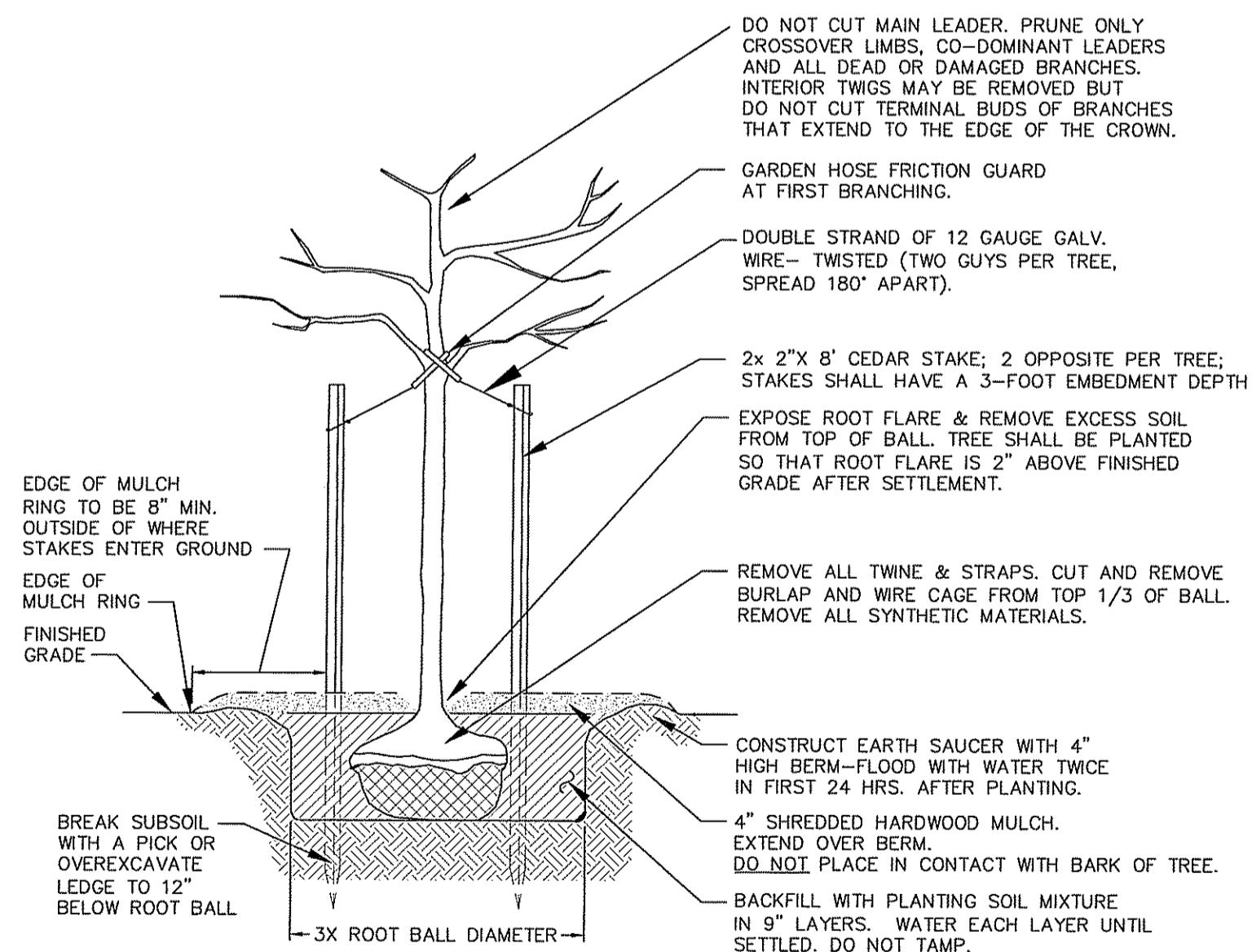
SILT FENCE DETAIL
 (R.I. STD. 9.2.0)
 NOT TO SCALE



TYPICAL BANK STABILIZATION PLANTING
CROSS-SECTION
 NOT TO SCALE

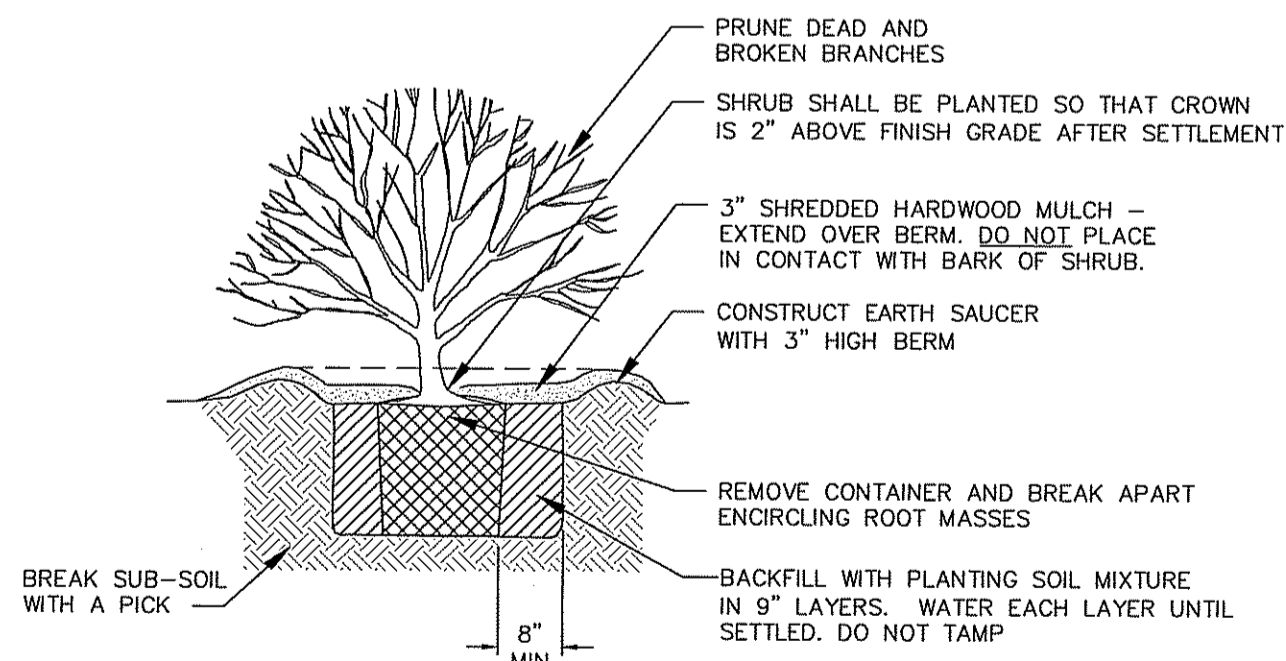


COIR ROLL PLACEMENT WITH BANK SUPPORT
TYPICAL INSTALLATION OF COIR ROLLS
 NOT TO SCALE



- NOTES:**
1. STAKES & GUYS SHALL BE REMOVED AT THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
 2. STAKES & GUYS ONLY REQUIRED FOR TREES GREATER THAN 24 INCHES TALL.
 3. SPRAY WITH ANTIDESICCANT IN ACCORDANCE WITH MFG'S INSTRUCTIONS IF FOLIAGE IS PRESENT.
 4. USE LOCAL NURSERY STOCK PLANT MATERIAL. MARK NORTH SIDE OF TREE IN THE FIELD BEFORE TRANSPLANTING AND ROTATE TREE TO FACE NORTH UPON INSTALLATION. TREE SHALL BE SET PLUMB.

PLANTING AND GUYING FOR TREES LESS THAN 3" CALIPER, BALLED & BURLAPPED
 NOT TO SCALE

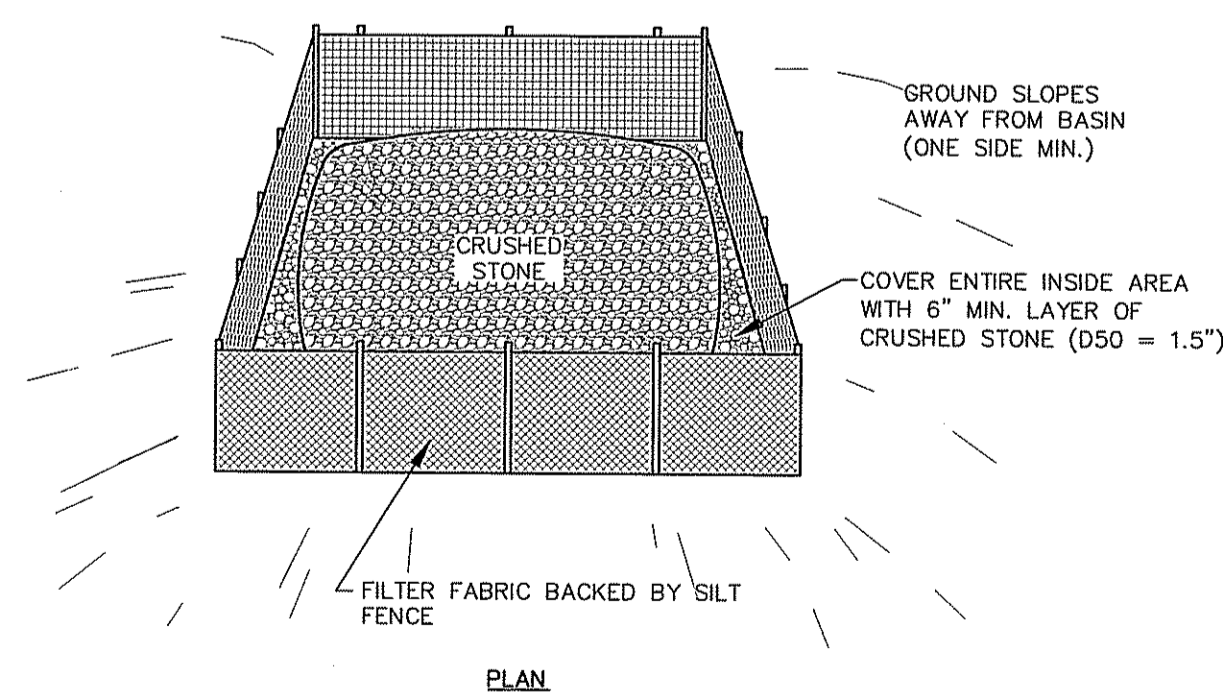


- NOTE:**
 SPRAY WITH ANTI DESICCANT IN ACCORDANCE WITH MFG.'S RECOMMENDATIONS IF FOLIAGE IS PRESENT.

FOR CONTAINER GROWN SHRUBS, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.

INCORPORATE COMMERCIALY PREPARED MYCORRHIZA SPORES IN THE SOIL IMMEDIATELY AROUND THE ROOT BALL AT RATES SPECIFIED BY THE MANUFACTURER.

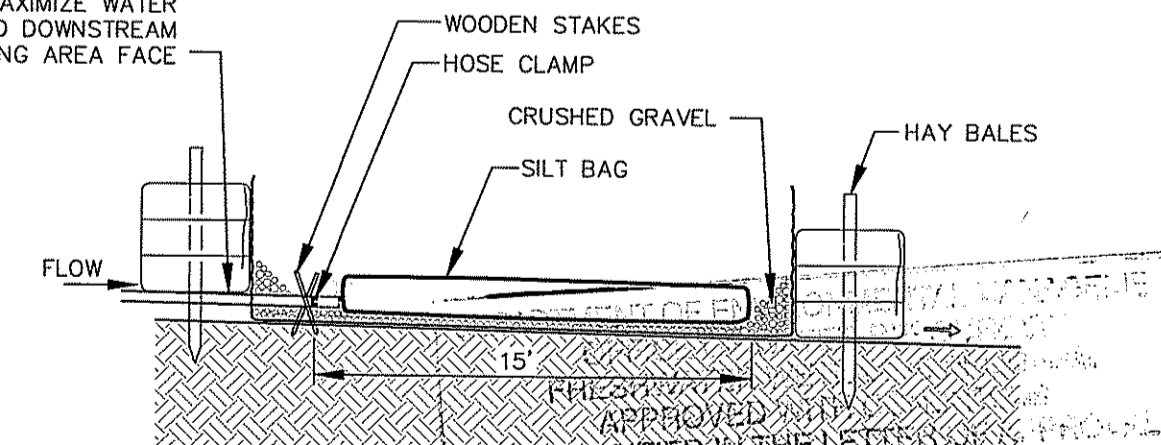
SHRUB PLANTING
 NOT TO SCALE



GROUND SLOPES AWAY FROM BASIN (ONE SIDE MIN.)

COVER ENTIRE INSIDE AREA WITH 6" MIN. LAYER OF CRUSHED STONE (D50 = 1.5")

TEMPORARY DEWATERING AREA
 NOT TO SCALE



APPROVED BY
 AS SPECIFIED IN THE LATEST REVISIONS
 DATED MAY 20 2013 FILE # 13-0038
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Habert

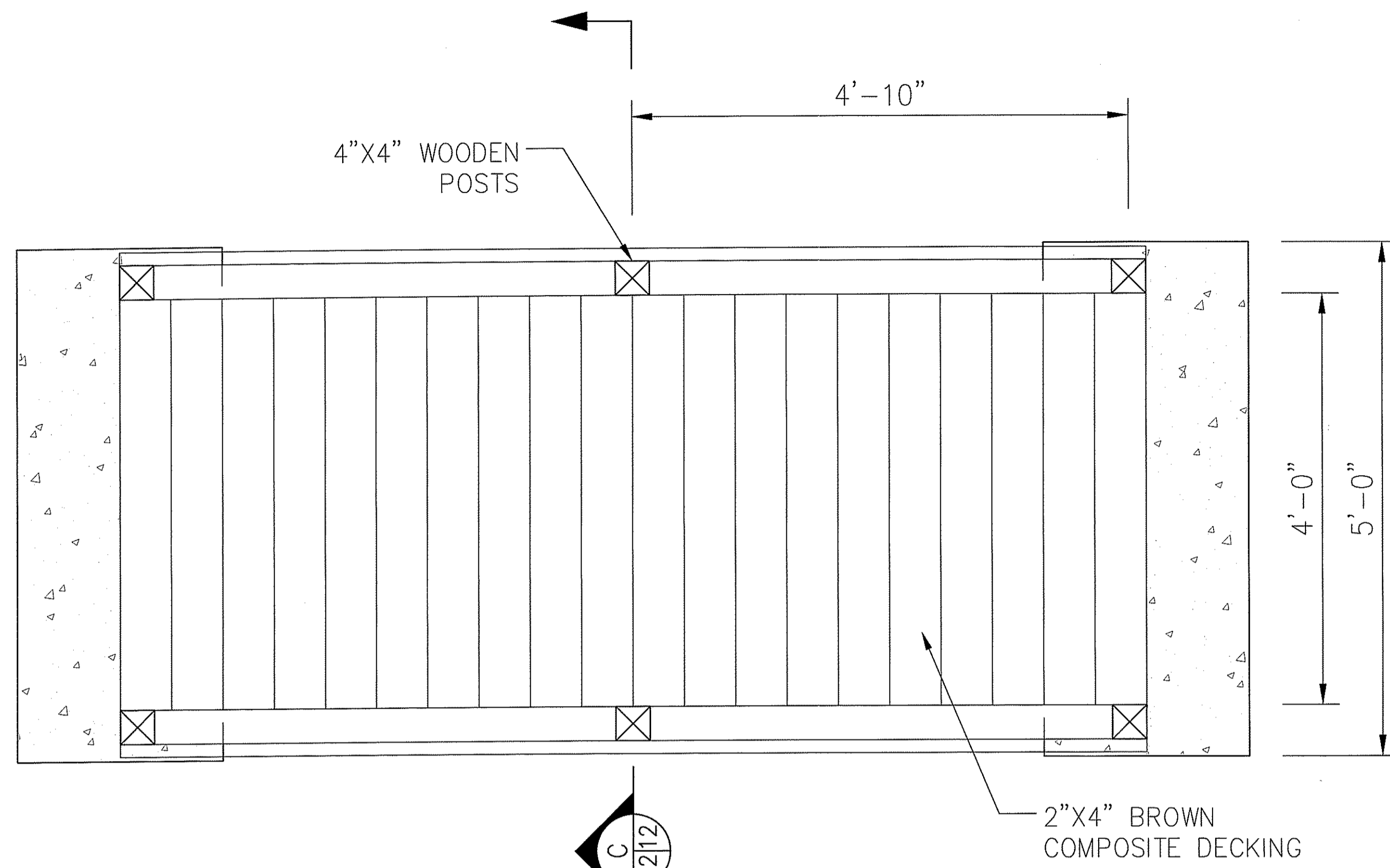
PERMIT DRAWINGS
 NOT FOR CONSTRUCTION

REVISIONS	DESCRIPTION
NO.	DATE
BY	

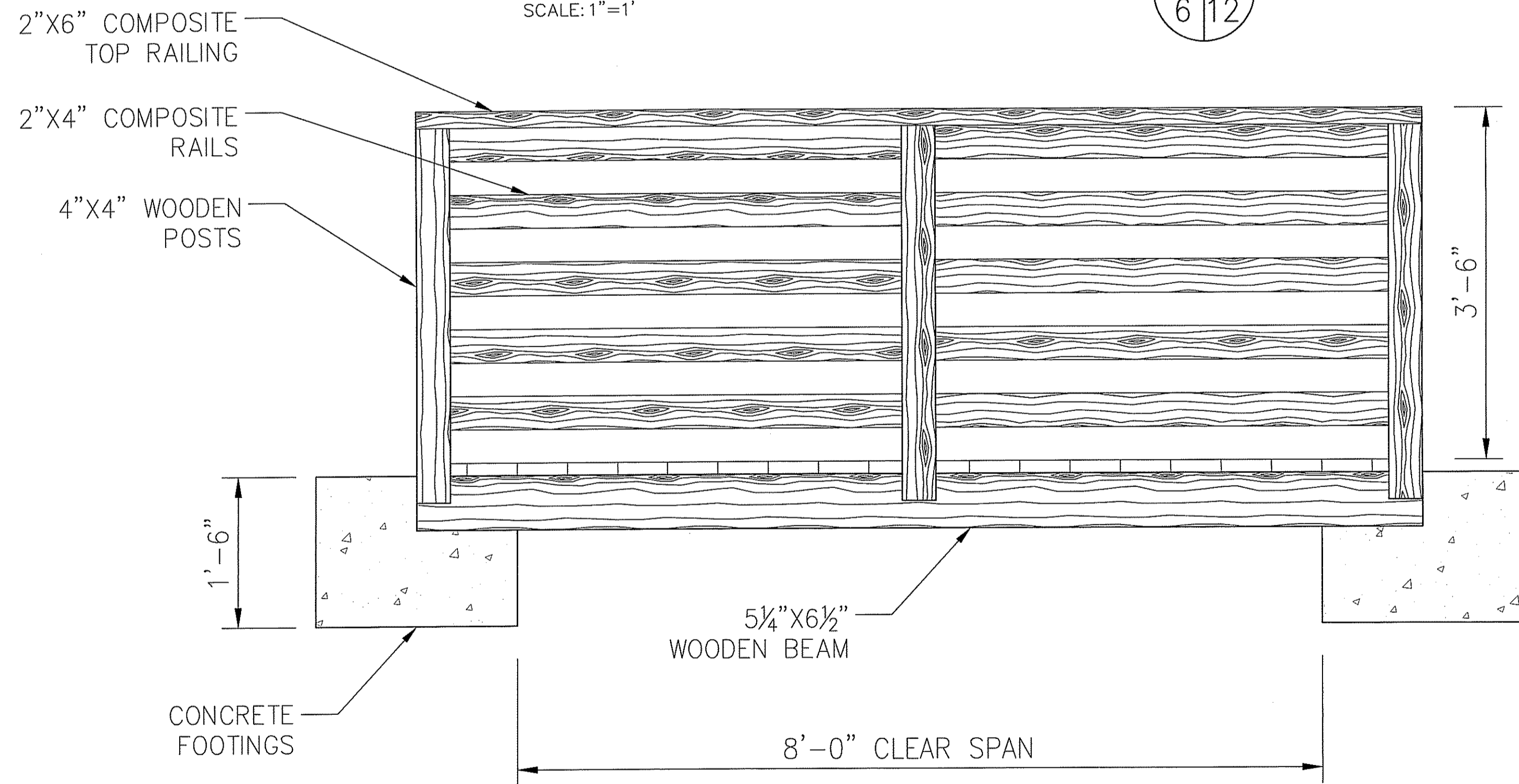
MANTON POND DAM NATURE-LIKE FISHWAY BYPASS JOHNSTON, RHODE ISLAND	
CONSTRUCTION DETAILS	

237A Post Road, Suite 102 Warwick, Rhode Island 02886 (401) 736-3440	
DATE	FEBRUARY 2013
DESIGNED BY	MET
DRAWN BY	DPA
CHECKED BY	TCC
PROJECT MANAGER	AEH
PROJECT NUMBER	62092.06
SCALE	AS SHOWN
FILE NAME	CONSTRUCTION DETAILS
DRAWING NUMBER	C-9
SHEET NUMBER	11 OF 12

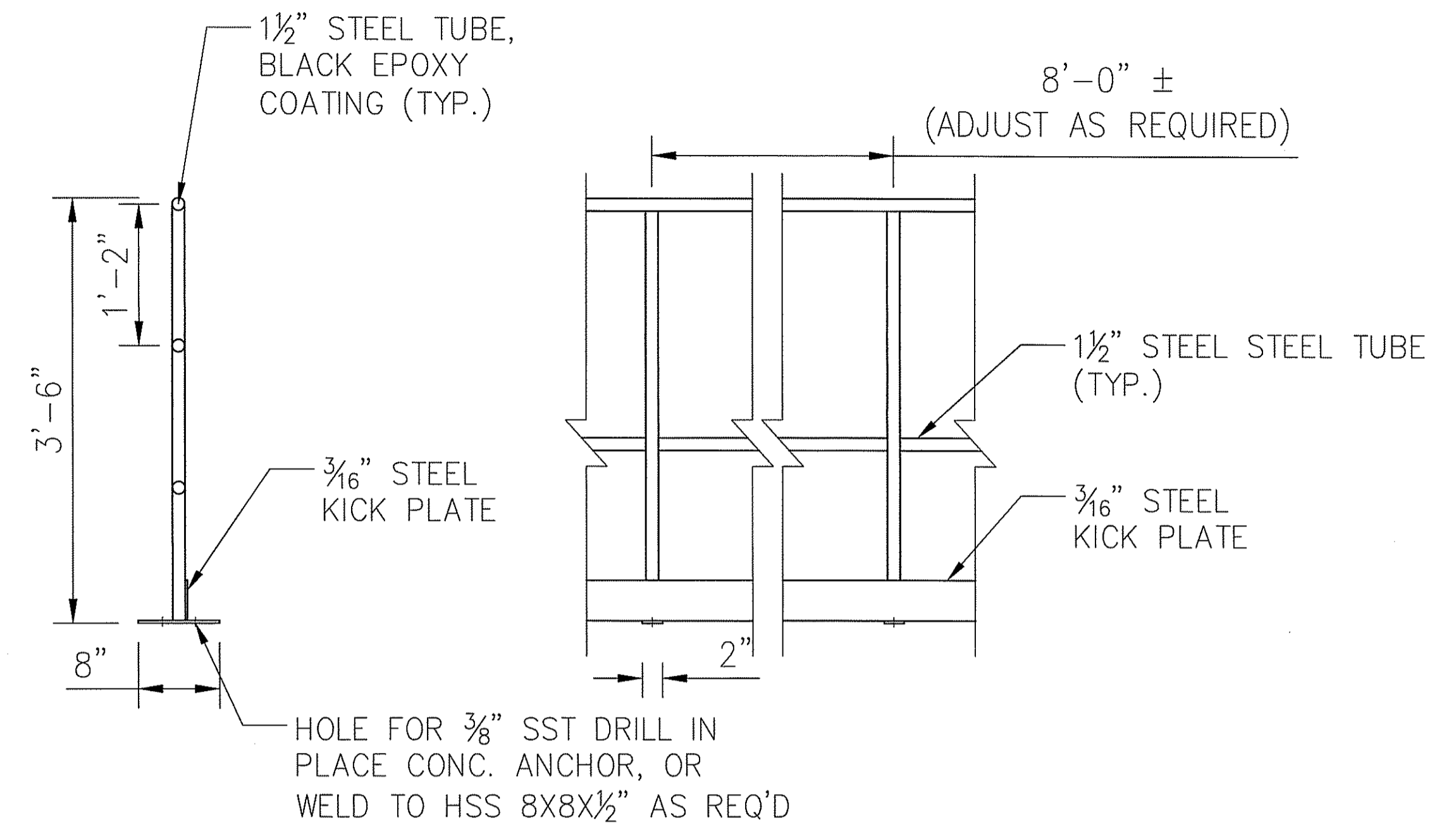
B
12/12



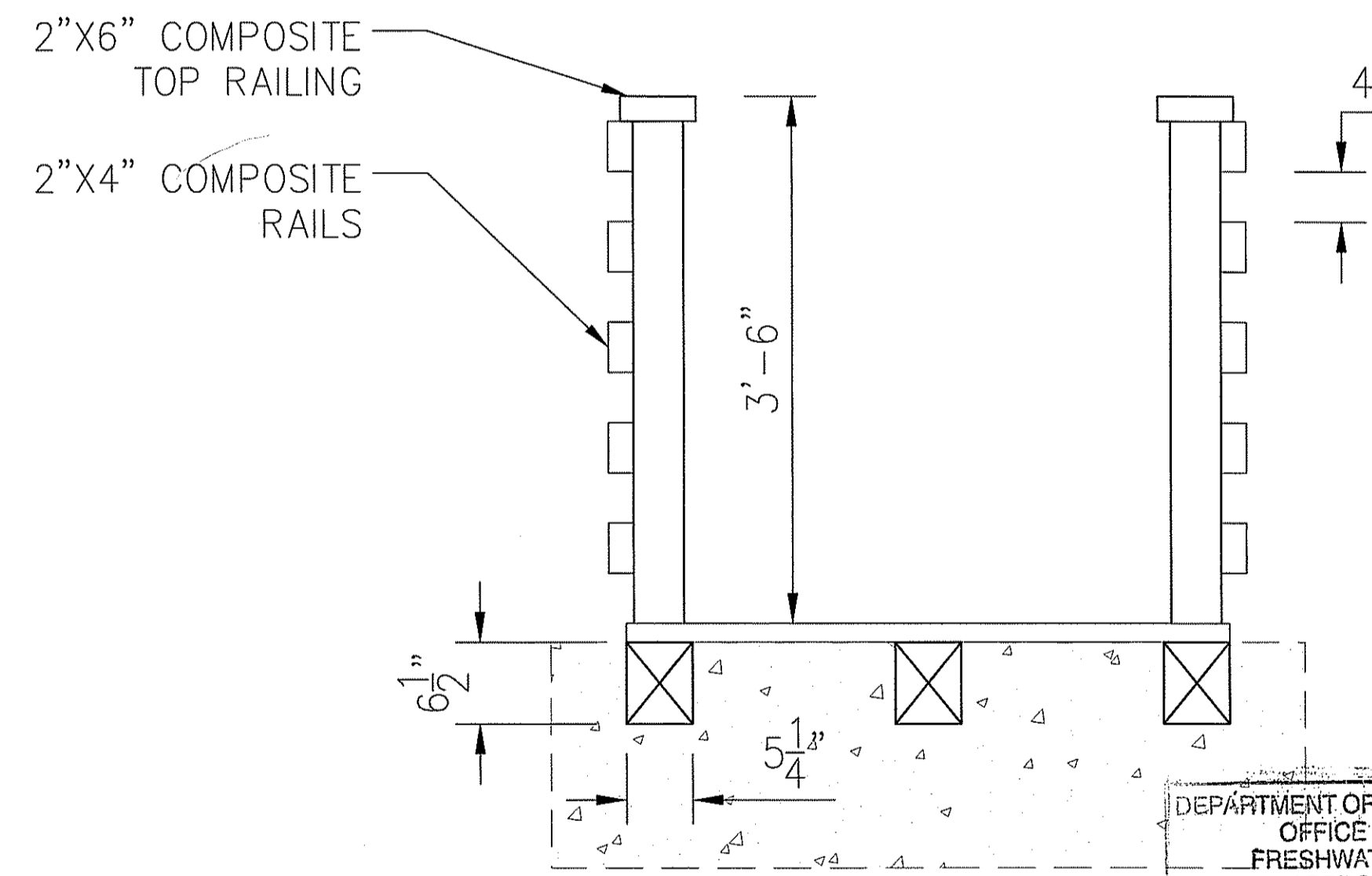
PEDESTRIAN BRIDGE PLAN VIEW
SCALE: 1"=1'
A
6/12



PEDESTRIAN BRIDGE PROFILE
SCALE: 1"=1'
B
12/12



HANDRAIL DETAIL
SCALE: 1"=1'
D
6/12



PEDESTRIAN BRIDGE SECTION - ELEVATION
SCALE: 1"=1'
C
12/12

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 1/15/2013 FILE # 13-0030
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hales

NO.	DATE	BY	DESCRIPTION

MANTON POND DAM
NATURE-LIKE FISHWAY BYPASS
JOHNSTON, RHODE ISLAND
PEDESTRIAN BRIDGE DETAILS



2374 Post Road, Suite 102
Warwick, Rhode Island 02886
(401) 736-3440

DATE	FEBRUARY 2013
DESIGNED BY	MET
DRAWN BY	DPA
CHECKED BY	TCC
PROJECT MANAGER	AEH
PROJECT NUMBER	62092.06
SCALE	AS SHOWN
FILE NAME	PEDESTRIAN BRIDGE DETAILS
DRAWING NUMBER	C-10
SHEET NUMBER	12 OF 12

PERMIT DRAWINGS
NOT FOR CONSTRUCTION