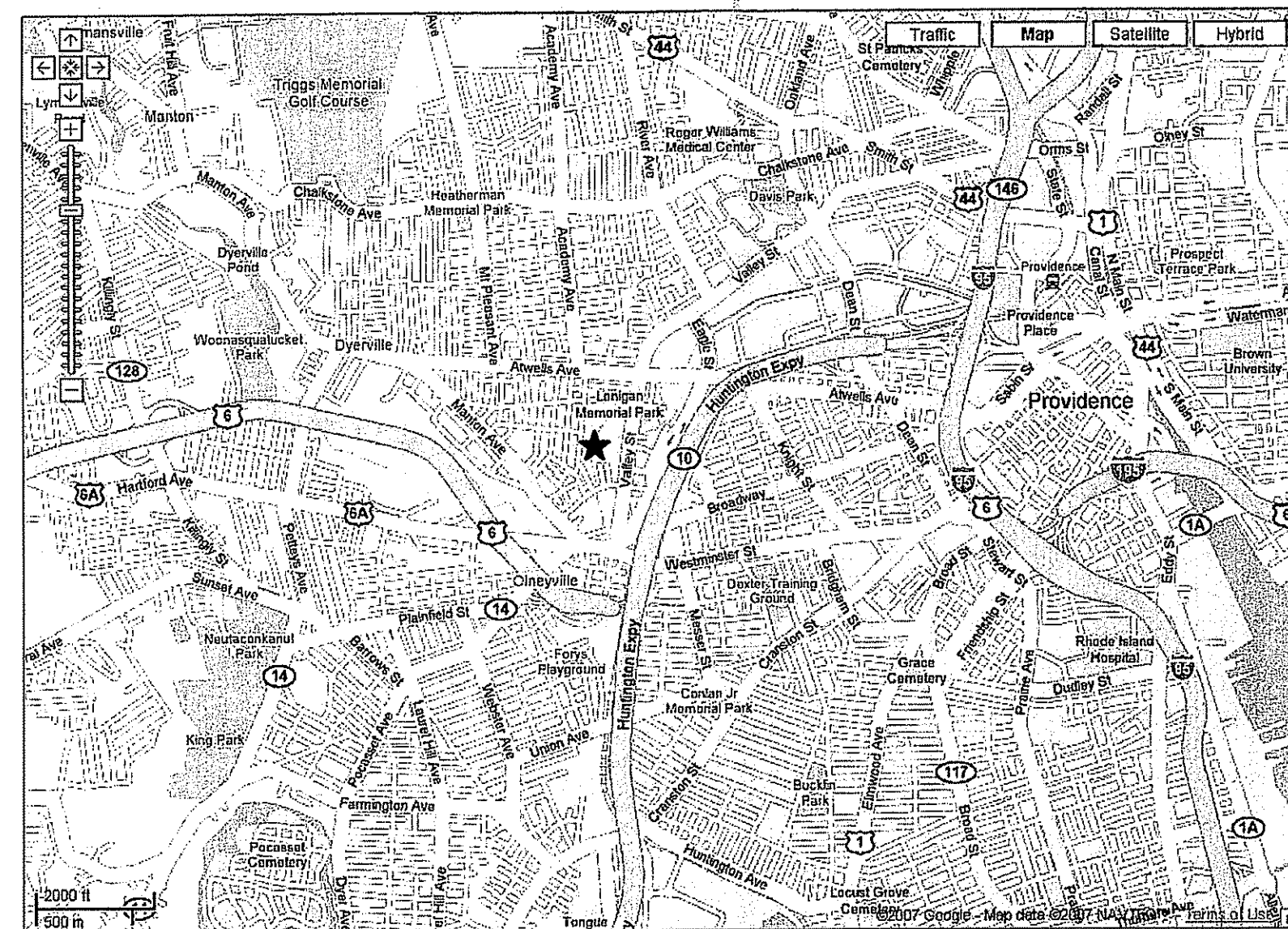


WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT

PARAGON DAM REMOVAL

PROVIDENCE, RHODE ISLAND

PREPARED FOR
 U.S. DEPARTMENT OF AGRICULTURE
 NATURAL RESOURCES CONSERVATION SERVICE



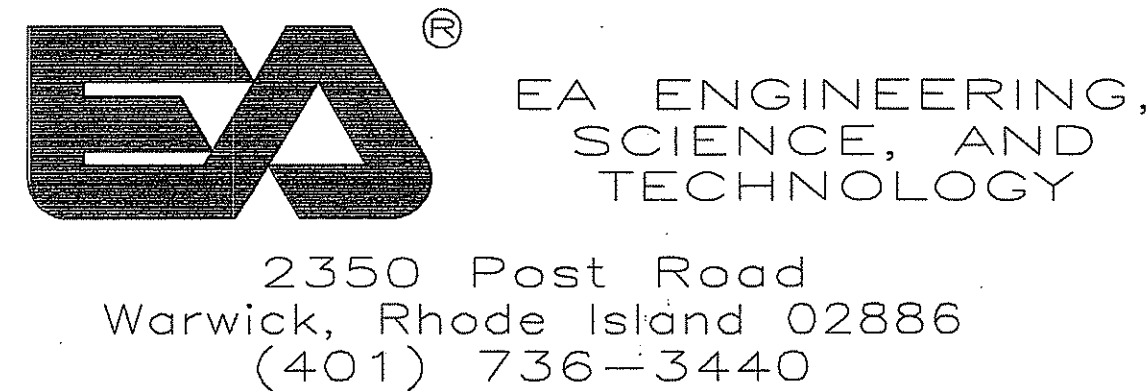
VICINITY MAP

DRAWING NUMBER	SHEET NUMBER	DRAWING TITLE
T-1	1 OF 8	TITLE SHEET
C-1	2 OF 8	EXISTING CONDITIONS
C-2	3 OF 8	CROSS-SECTION LOCATIONS
C-3	4 OF 8	PHASE I AND PHASE II
C-4	5 OF 8	PROFILE AND SECTIONS
C-5	6 OF 8	SECTIONS
C-6	7 OF 8	PHASE III CHANNEL/BANK RESTORATION PLAN
C-7	8 OF 8	DETAILS

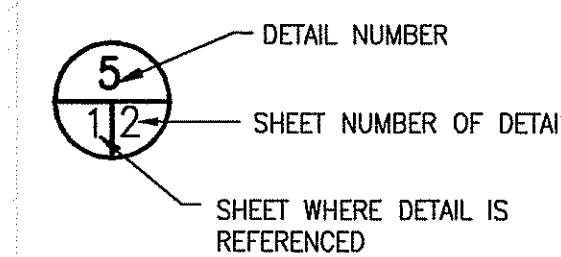


60 Quaker Lane, Suite 46
 Warwick, Rhode Island 02886
 (401) 828-1300

PREPARED BY



REFERENCE SYMBOLS



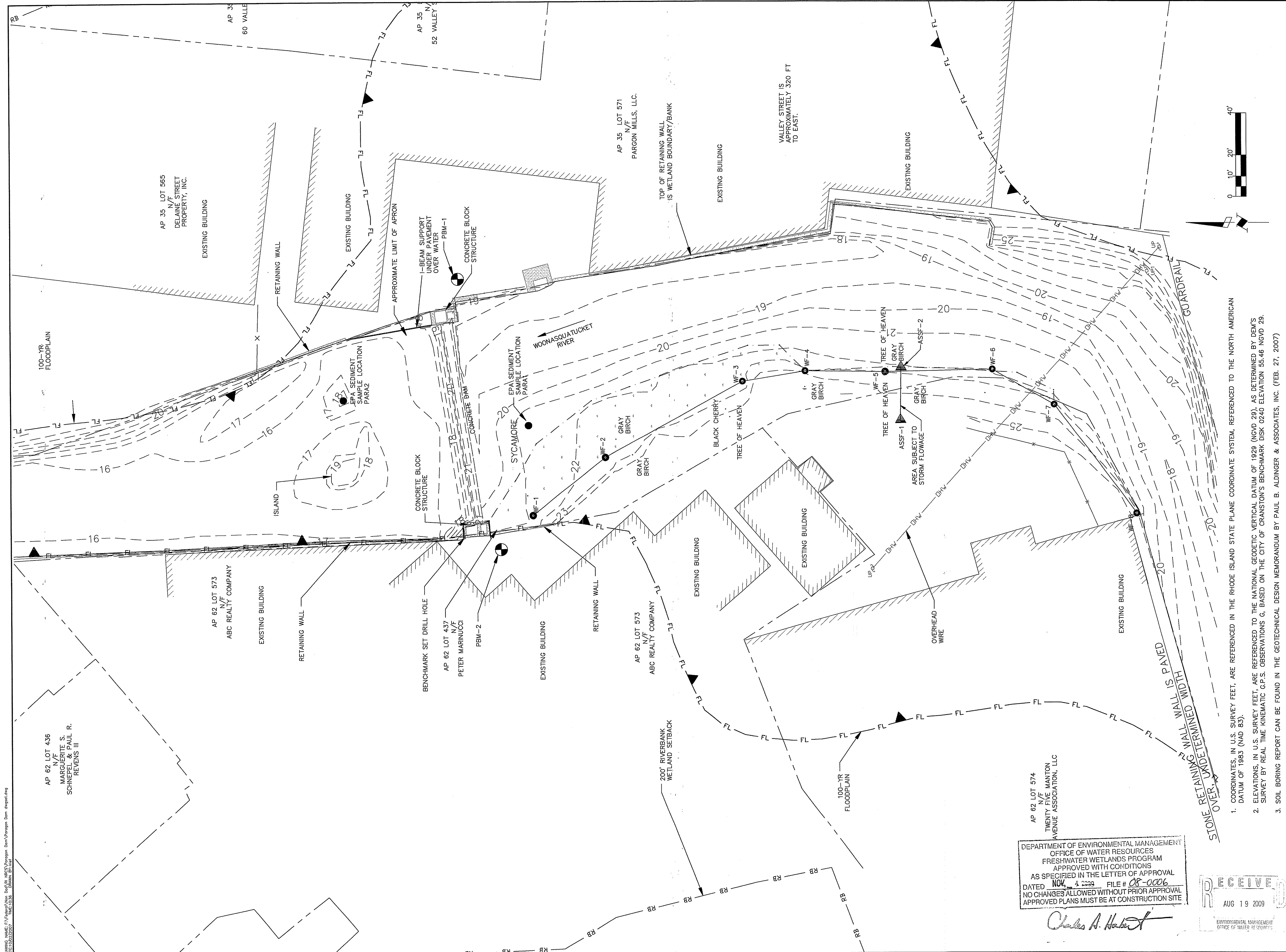
LEGEND	
	SOIL BORING LOCATIONS
	RETAINING WALL
	MINOR CONTOUR LINES
	MAJOR CONTOUR LINES
	EDGE OF WATER
	100 YEAR FLOODPLAIN
	LIMIT OF WORK
	TEMPORARY COFFERDAM
	EXISTING TREE
	WETLAND FLAG
	PROPOSED COBBLES
	DEWATERING PUMP
	SILT FENCE
	OVERHEAD WIRE
	200' RIVERBANK WETLAND SETBACK
	EDGE OF MARSH
	CHAIN LINK FENCE
	Temporary Cofferdam Phase I/II
	Temporary Cofferdam Phase I
	Temporary Cofferdam Phase II

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 4 2009 FILE # 08-006
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RECEIVED
 AUG 19 2009
 ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES

Charles A. Hester
 60% DESIGN DRAWINGS
 FOR REGULATORY REVIEW

REVISIONS NO. DATE BY DESCRIPTION 1 6/22/07 EA 60% DESIGN PERMIT DESIGN 2 1/16/08 EA PERMIT REVISIONS 3 6/7/08 EA PERMIT REVISIONS	
SEAL THOMAS C. COOK No. 8819 REGISTERED PROFESSIONAL ENGINEER CIVIL	\$13169
NATURAL RESOURCES CONSERVATION SERVICE WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT PARAGON DAM REMOVAL VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND	
TITLE SHEET	
NRCS Natural Resources Conservation Service	
EA ENGINEERING, SCIENCE, AND TECHNOLOGY 2350 Post Road Warwick, Rhode Island 02886 (401) 736-3440	
DATE: JANUARY 2008 DESIGNED BY: JT DRAWN BY: LLR CHECKED BY: HLB PROJECT MANAGER: SW PROJECT NUMBER: 62130.02 SCALE: AS SHOWN FILE NAME: - DRAWING NUMBER: T-1 SHEET NUMBER: 1 OF 8	



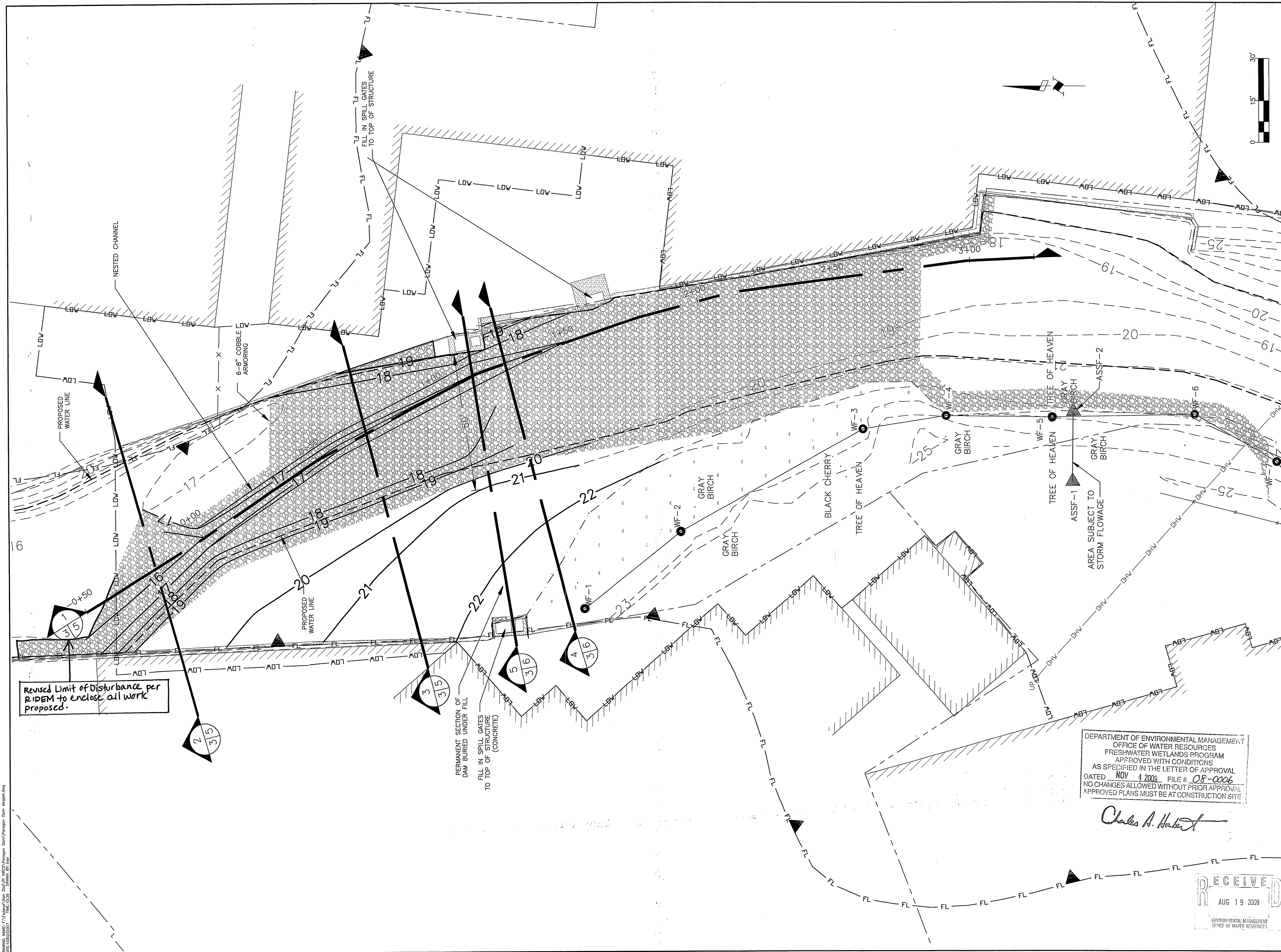
1. COORDINATES, IN U.S. SURVEY FEET, ARE REFERENCED IN THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29), AS DETERMINED BY DEM'S SURVEY BY REAL TIME KINEMATIC G.P.S. OBSERVATIONS G, BASED ON THE CITY OF CRANSTON'S BENCHMARK DISK 0240 ELEVATION 55.46 NGVD 29.
3. SOIL BORING REPORT CAN BE FOUND IN THE GEOTECHNICAL DESIGN MEMORANDUM BY PAUL B. ALDINGER & ASSOCIATES, INC. (FEB. 27, 2007)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 1 2009 FILE # 08-0006
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harte

RECEIVED
 AUG 19 2009
 ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES

THOMAS C. COOK <i>Thomas C. Cook</i> No. 8819 REGISTERED PROFESSIONAL ENGINEER CIVIL 8/13/08		REVISIONS <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>6/22/07</td> <td>EA</td> <td>60% DESIGN</td> </tr> <tr> <td>2</td> <td>1/19/08</td> <td>EA</td> <td>PERMIT DESIGN</td> </tr> <tr> <td>3</td> <td>6/1/09</td> <td>EA</td> <td>PERMIT REVISIONS</td> </tr> </table>	NO.	DATE	BY	DESCRIPTION	1	6/22/07	EA	60% DESIGN	2	1/19/08	EA	PERMIT DESIGN	3	6/1/09	EA	PERMIT REVISIONS
NO.	DATE	BY	DESCRIPTION															
1	6/22/07	EA	60% DESIGN															
2	1/19/08	EA	PERMIT DESIGN															
3	6/1/09	EA	PERMIT REVISIONS															
NATURAL RESOURCES CONSERVATION SERVICE WOODSQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT PARAGON DAM REMOVAL VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND EXISTING CONDITIONS																		
<p>Natural Resources Conservation Service</p> <p>EA ENGINEERING, SCIENCE, AND TECHNOLOGY 2350 Post Road Warwick Rhode Island 02886 (401) 736-3440</p>																		
DATE: JANUARY 2008 DESIGNED BY: JT DRAWN BY: LLR CHECKED BY: HLB PROJECT MANAGER: SW PROJECT NUMBER: 62130.02 SCALE: AS SHOWN FILE NAME: DRAWING NUMBER: C-1 SHEET NUMBER: 2 OF 8																		



Revised Limit of Disturbance per RIDEM to enclose all work proposed.

PERMANENT SECTION OF DAM BURIED UNDER FILL
 FILL IN SPILL GATES TO TOP OF STRUCTURE (CONCRETE)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 4 2008 FILE # 08-006
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

RECEIVED
 AUG 19 2009
 ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES

NO.	DATE	DESCRIPTION
1	9/22/07	60% DESIGN
2	1/16/08	PERMIT DESIGN
3	6/7/09	PERMIT REVISIONS

THOMAS C. COOK
Thomas C. Cook
 No. 8819
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 6/13/09

NATURAL RESOURCES CONSERVATION SERVICE
 RIVER FISH PASSAGE RESTORATION PROJECT
 PARAGON DAM REMOVAL
 VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND
 CROSS SECTION LOCATIONS

NRCS
 Natural Resources Conservation Service

EA
 EA ENGINEERING, SCIENCE AND TECHNOLOGY
 2350 Post Road
 Warwick, Rhode Island 02886
 (401) 736-3440

DATE	JANUARY 2008
DESIGNED BY	JT
DRAWN BY	LLR
CHECKED BY	HLB
PROJECT MANAGER	SW
PROJECT NUMBER	62130.02
SCALE	AS SHOWN
FILE NAME	-
DRAWING NUMBER	C-2
SHEET NUMBER	3 OF 8

NOTES:

1. ALL ELEVATIONS REFERENCE NGVD 29 DATUM.
2. SITE IS LOCATED AT 50 VALLEY STREET, PROVIDENCE, RHODE ISLAND. APPROXIMATELY 590 FT. SOUTHWEST OF THE VALLEY STREET/ DELAINE STREET INTERSECTION.
3. WORK IS TO BE PERFORMED DURING THE LOW FLOW PERIOD (1 JULY - 31 OCTOBER).
4. MAINTAIN A COPY OF THE DEM STAMPED APPROVED SITE PLANS AND FRESHWATER WETLANDS PERMIT ON SITE AT ALL TIMES DURING CONSTRUCTION.
5. IN A CONSPICUOUS LOCATION, POST A WEATHER RESISTANT SIGN AT LEAST 12" WIDE AND 18" LONG, WHICH BOLDLY IDENTIFIES THE INITIALS "DEM" AND THE APPLICATION AND PERMIT NUMBER FOR THE PROJECT.
6. TEMPORARY COFFERDAMS SHALL BE AS FOLLOWS, OR EQUIVALENT: UPSTREAM OF THE DAM, COFFERDAMMING SHALL CONSIST OF SUITABLE NUMBER AND SIZE OF SAND BAGS SECURING AN IMPERMEABLE GEOTEXTILE MATERIAL. COFFERDAMS SHALL EXTEND AT LEAST 1.5 FT ABOVE THE HIGH WATER LEVELS INDICATED ON SHEET 2.
7. LOCATION OF STAGING, ACCESS, AND STOCKPILE AREAS TO BE FINALIZED DURING PRE-CONSTRUCTION MEETING/SITE WALK. REFER TO SOIL MANAGEMENT PLAN FOR SEDIMENT HANDLING INSTRUCTIONS.

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO DEM (CERTIFIED BY A R.I. P.E.) AT LEAST TEN (10) DAYS PRIOR TO MOBILIZATION.
2. NOTIFY THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) AT (401) 822-8842 FOR THE REQUIRED PRE-CONSTRUCTION MEETING SEVEN (7) DAYS BEFORE COMMENCING SITE DISTURBANCE.
3. MAP AND CLEAR UTILITIES AS NECESSARY.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCES, THEN CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER EROSION AND SEDIMENTATION CONTROL DEVICES ONLY.

PHASE I:

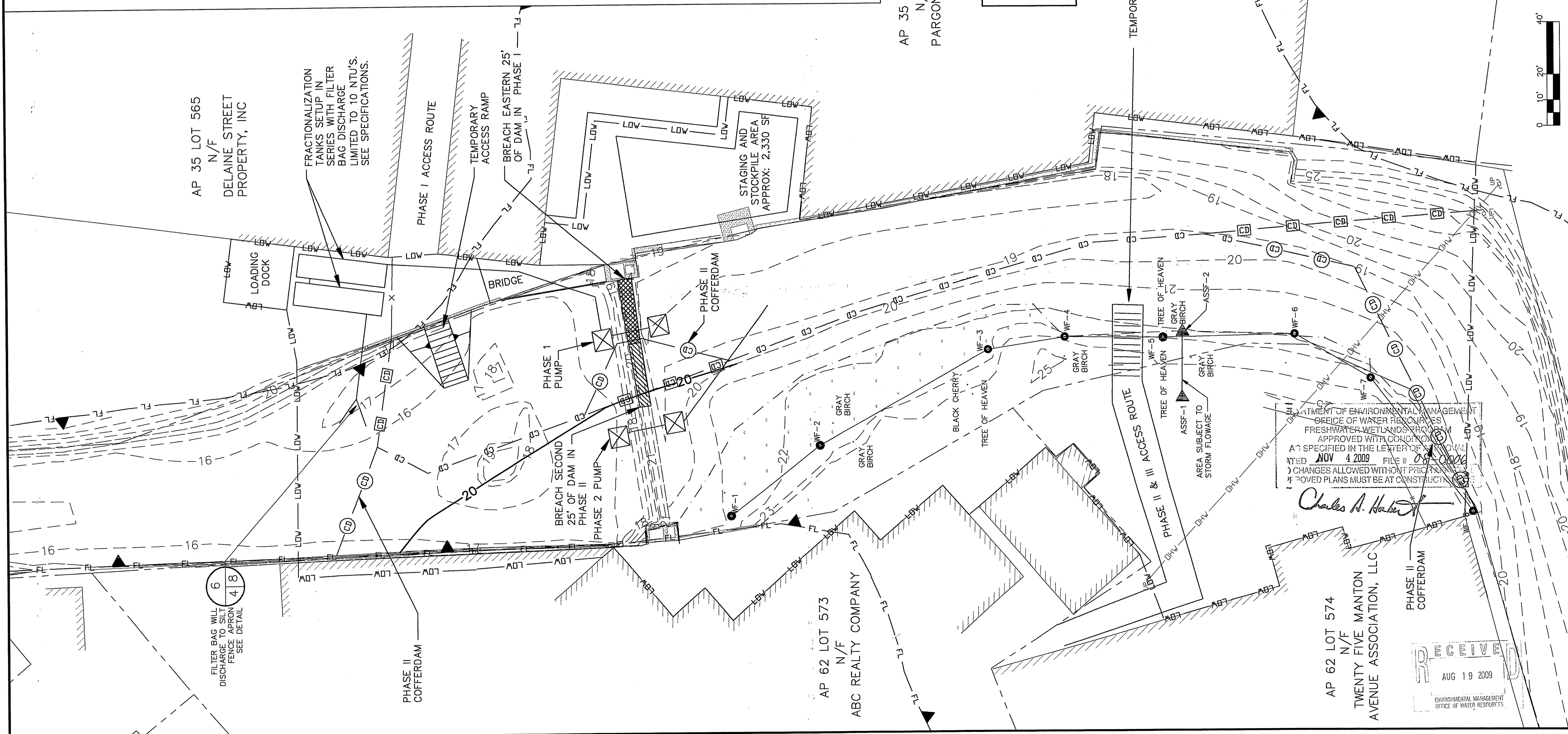
1. OPEN DRAW DOWN GATE AND REMOVE ANY OTHER OBSTRUCTIONS FROM THE CONCRETE BOX/GATE CONTROL STRUCTURE ON THE EAST SIDE OF THE DAM. ALLOW HEAD POND TO DRAW DOWN TO THE EXTENT PRACTICABLE.
2. CONSTRUCT TEMPORARY RAMP/ACCESS ROUTE.
3. INSTALL COFFERDAMMING AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS. PHASE I STREAM FLOW SHALL BE MAINTAINED AS SHOWN ON THE PLANS.
4. ALLOW PHASE I WORK AREA TO DEWATER. COMPLETE COFFERDAM INSTALLATION.
5. DEWATER PHASE I WORK AREA.
6. REMOVE DAM WITHIN PHASE I LIMITS AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
7. SHAPE AND RESTORE CHANNEL IN PHASE I WORK AREA. CONTRACTOR WILL PLACE UP TO TEN SURFACE BOULDERS RANGING IN SIZE FROM 4' TO 5' IN DIAMETER TO CREATE FISH RESTING ZONES, AS DISCUSSED IN THE SPECIFICATIONS. LOCATIONS FOR STONES TO BE DETERMINED IN THE FIELD.
8. REMOVE TEMPORARY RAMP/ ACCESS ROUTE.
9. REMOVE PHASE I COFFERDAMMING.

PHASE II:

1. INSTALL PHASE II COFFERDAM AND ACCESS ROUTE AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS. PHASE II STREAM FLOW SHALL BE MAINTAINED AS SHOWN ON THE PLANS.
2. COMPLETE GRADING WORK ON WEST SIDE OF CHANNEL AND BANK AS SHOWN IN THE PLANS AND DETAILED IN THE SPECIFICATIONS.

PHASE III (DRAWING C-6):

7. UPON COMPLETION OF THE ABOVE ACTIVITIES, STABILIZE THE DISTURBED AREAS WITH THE SPECIFIED SEED MIXES, CONTAINERIZED PLANTINGS, AND OTHER BIOENGINEERING ELEMENTS AS SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
8. RESTORE ALL STAGING, CONSTRUCTION ACCESS, AND STOCKPILE AREAS TO THEIR ORIGINAL CONDITION.
9. INSTALL PERMANENT MONUMENTS FOR POST-CONSTRUCTION MONITORING AS DIRECTED BY THE ENGINEERS.



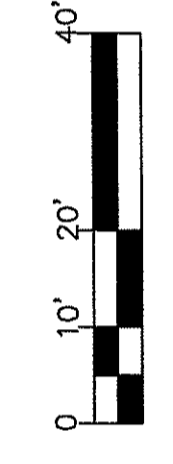
AP 35 LOT 571
N/F
PARGON MILLS, LLC.

AP 62 LOT 573
N/F
ABC REALTY COMPANY

AP 62 LOT 574
N/F
TWENTY FIVE MANTON AVENUE ASSOCIATION, LLC

CD	PHASE I COFFERDAM
CD	PHASE II COFFERDAM
CD	PHASE I/II COFFERDAM

NOTE: SEE COFFERDAM DETAIL ON SHEET C-7

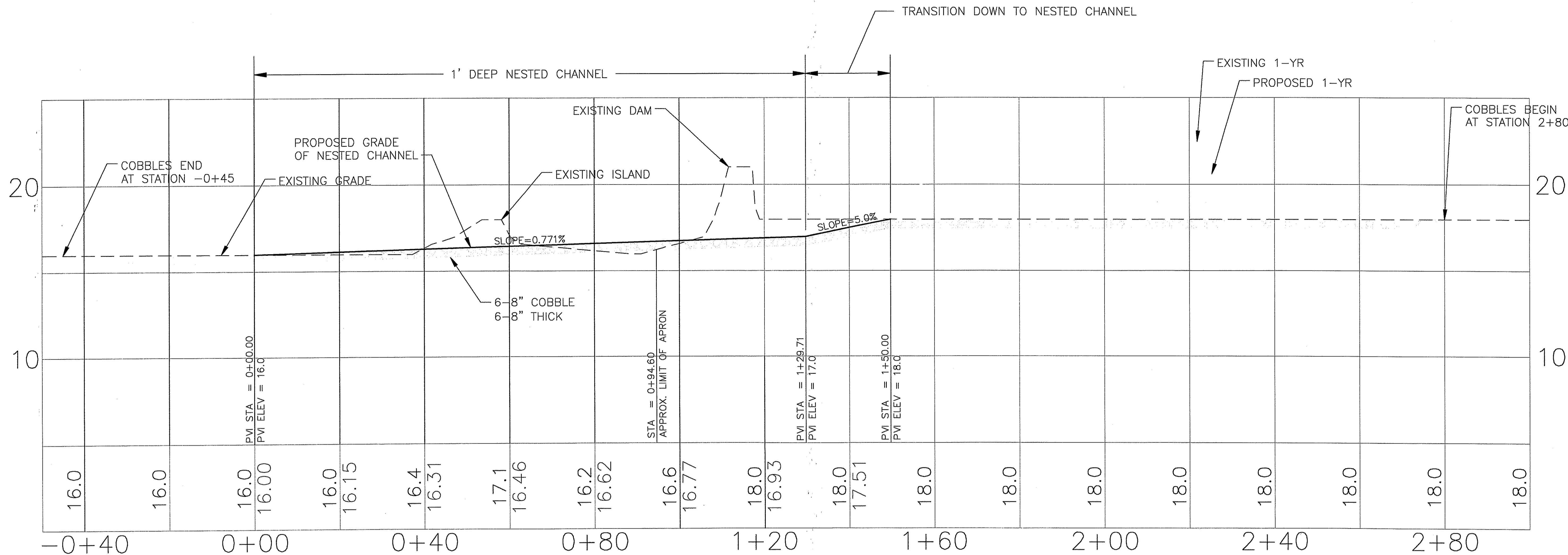


STATE OF RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 4 2009 FILE # 2009-001
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION

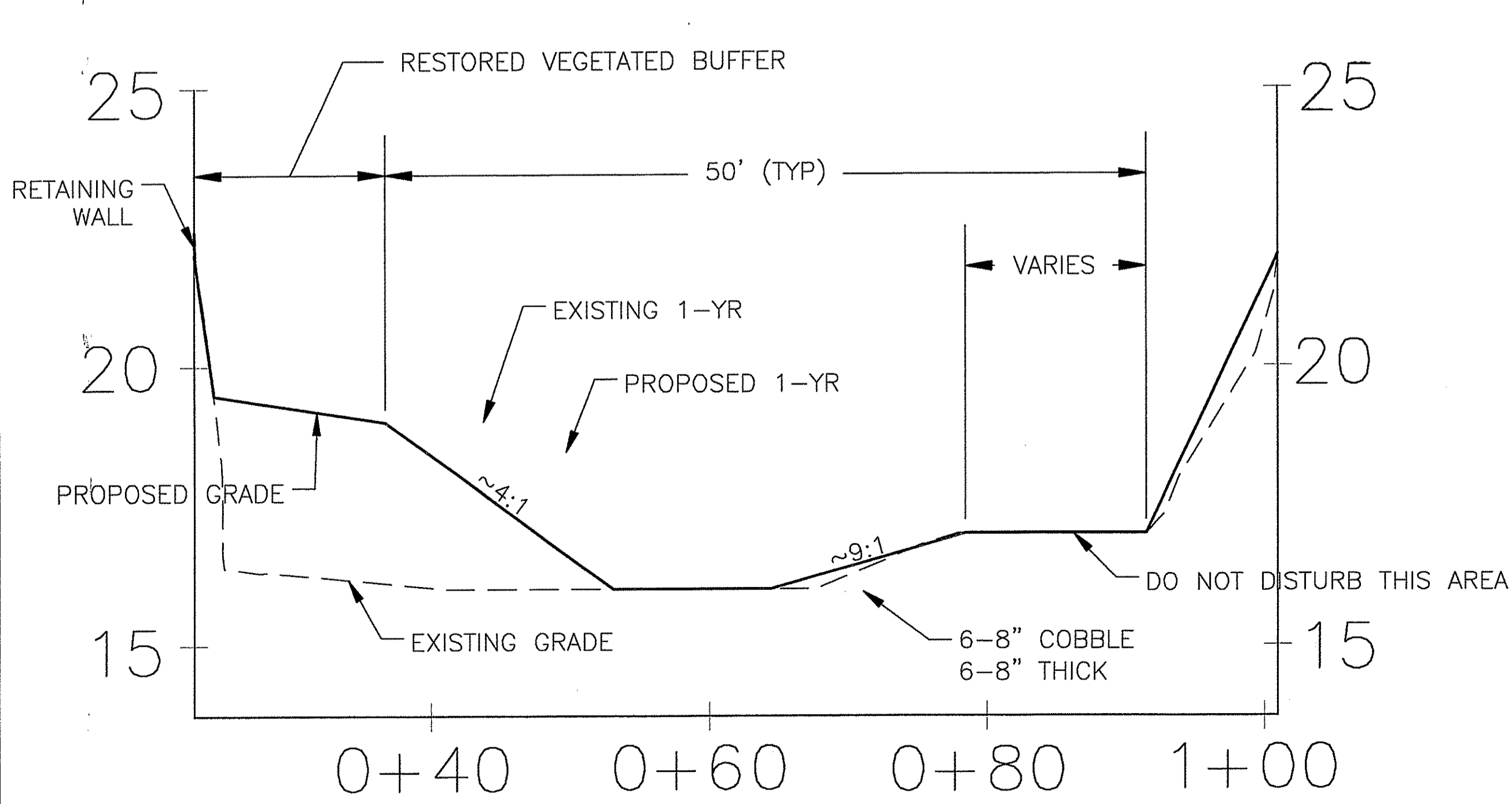
Charles A. Harker

RECEIVED
AUG 19 2009
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

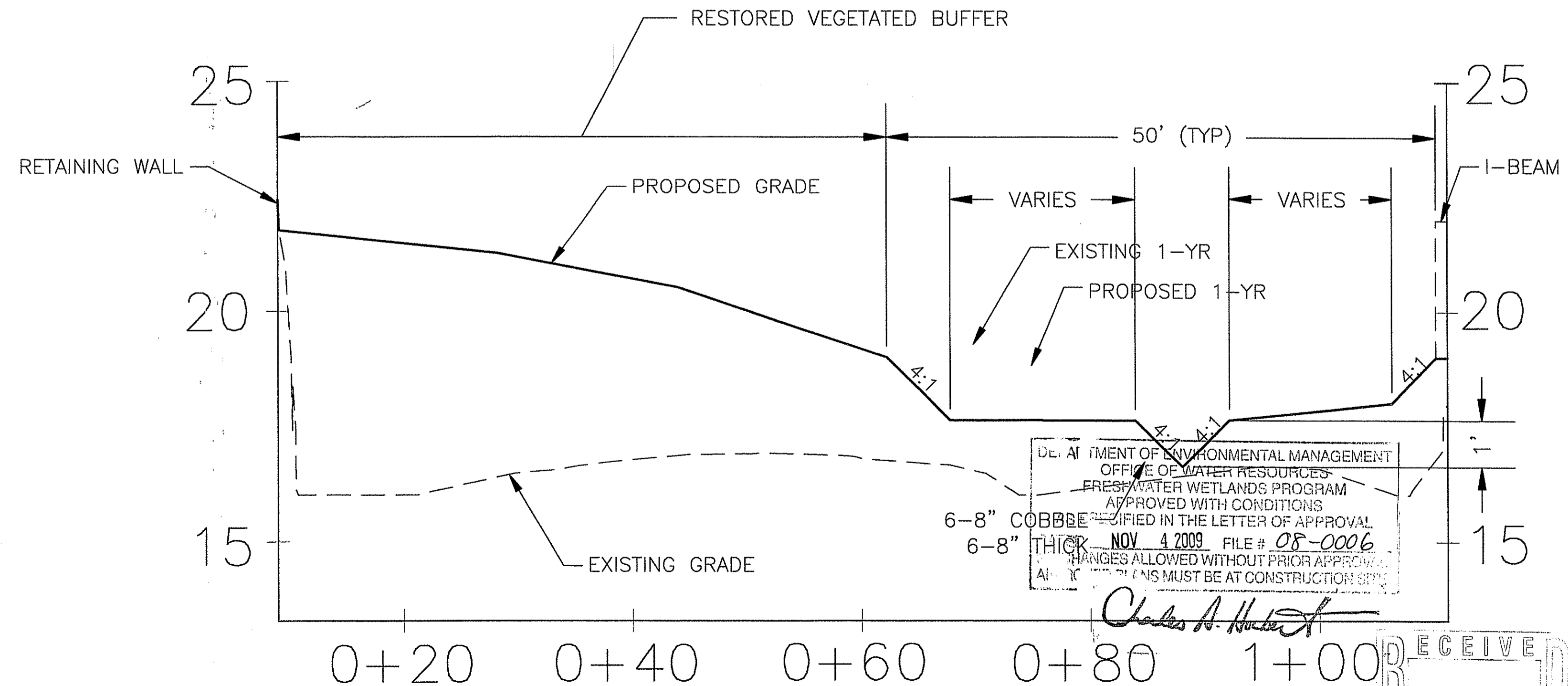
SEAL		THOMAS C. COOK Professional Engineer No. 8819	
NO.	DATE	BY	DESCRIPTION
1	6/22/07	EA	60% DESIGN
2	1/16/08	EA	PERMIT DESIGN
3	6/1/09	EA	PERMIT REVISIONS
<p>NATURAL RESOURCES CONSERVATION SERVICE WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT PARAGON DAM REMOVAL VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND</p> <p>PHASE I AND PHASE II</p>			
<p>NRCS Natural Resources Conservation Service</p>			
<p>EA ENGINEERING, SCIENCE, AND TECHNOLOGY 2350 Post Road Warwick Rhode Island 02886 (401) 736-3440</p>			
DATE	JANUARY 2008		
DESIGNED BY	JT		
DRAWN BY	LLR		
CHECKED BY	HLB		
PROJECT MANAGER	SW		
PROJECT NUMBER	62130.02		
SCALE	AS SHOWN		
FILE NAME	-		
DRAWING NUMBER	C-3		
SHEET NUMBER	4 OF 8		



1 CENTERLINE OF NESTED CHANNEL - PROFILE
 3/5 HORIZONTAL 1"=12'
 VERTICAL 1"=3'



2 SECTION OF RIVER
 3/5 HORIZONTAL 1"=8'
 VERTICAL 1"=2'

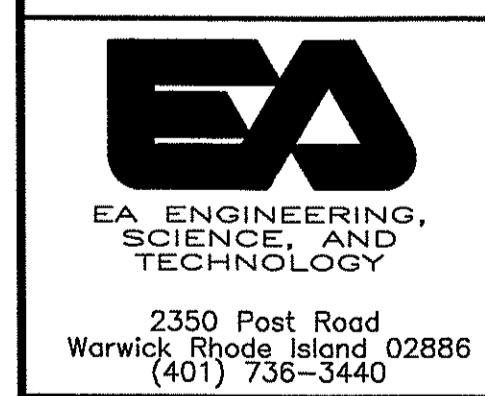


3 SECTION OF RIVER
 3/5 HORIZONTAL 1"=8'
 VERTICAL 1"=2'

REVISIONS		DESCRIPTION
NO.	DATE	BY
1	6/22/07	EA
2	1/15/08	EA
3	6/1/09	EA

THOMAS C. COOK
 No. 8819
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 6/13/09

NATURAL RESOURCES CONSERVATION SERVICE
 WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT
 PARAGON DAM REMOVAL
 VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND
 PROFILE AND SECTIONS



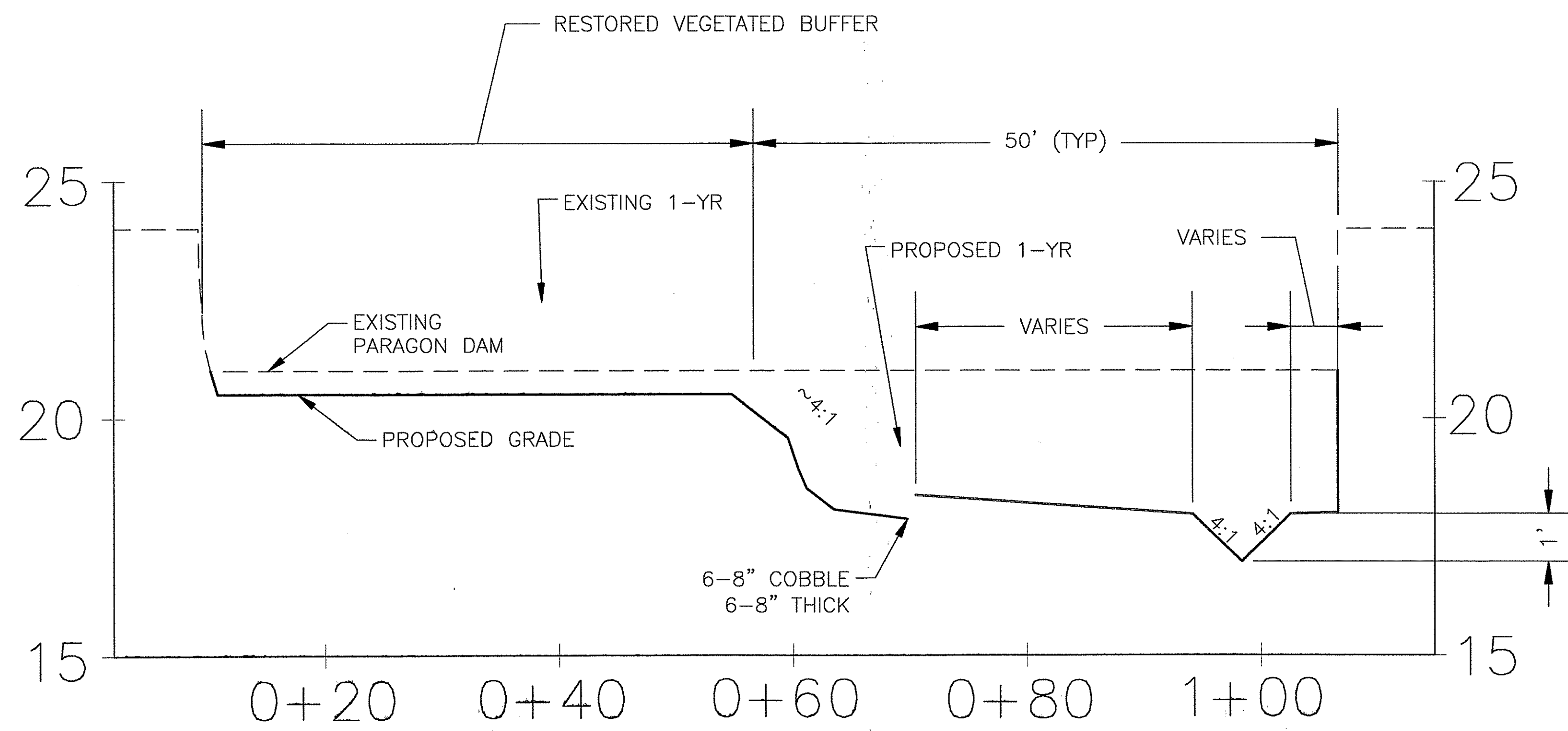
2350 Post Road
 Warwick Rhode Island 02886
 (401) 736-3440

DATE	JANUARY 2008
DESIGNED BY	JT
DRAWN BY	LLR
CHECKED BY	HLB
PROJECT MANAGER	SW
PROJECT NUMBER	62130.02
SCALE	AS SHOWN
FILE NAME	-
DRAWING NUMBER	C-4
SHEET NUMBER	5 OF 8

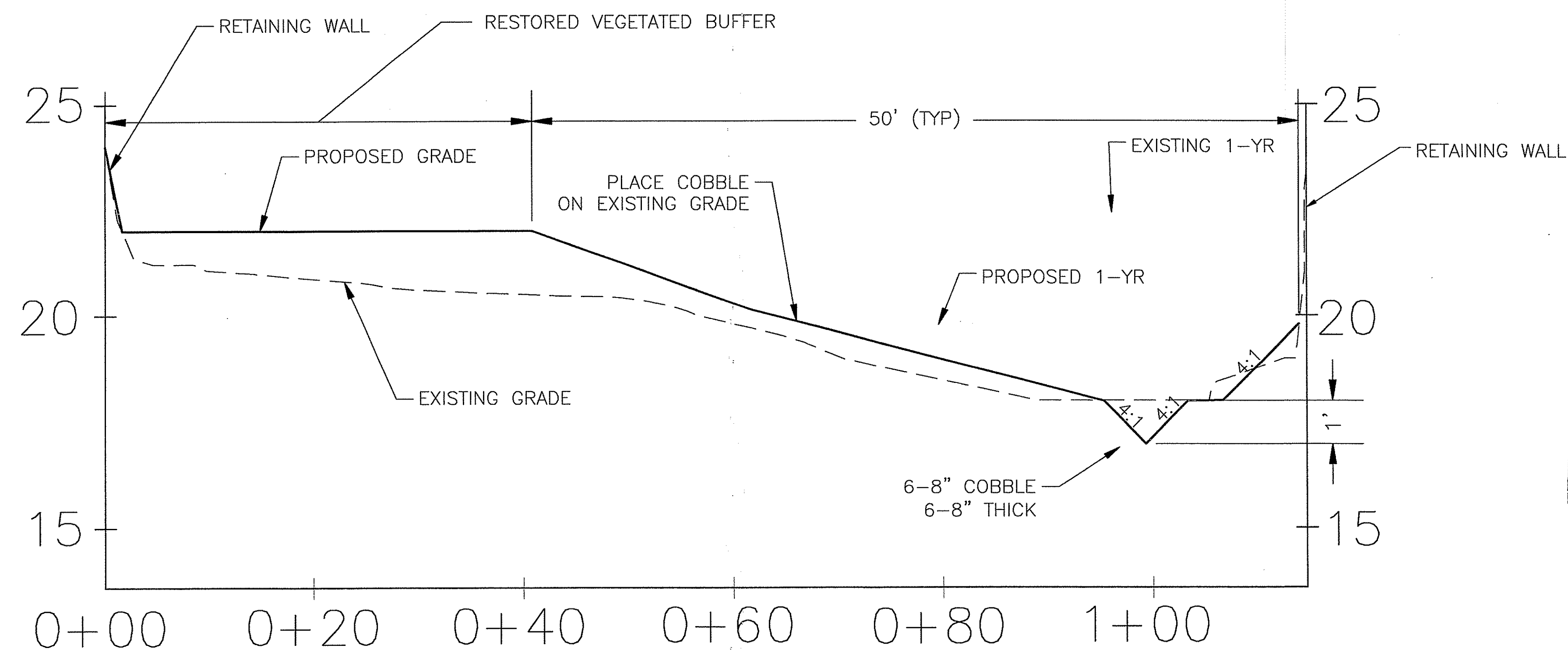
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 NOV 4 2009 FILE # 08-0006
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 ALL OTHER CHANGES MUST BE AT CONSTRUCTION SITE

Charles A. Hubert

RECEIVED
 AUG 19 2009
 ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES



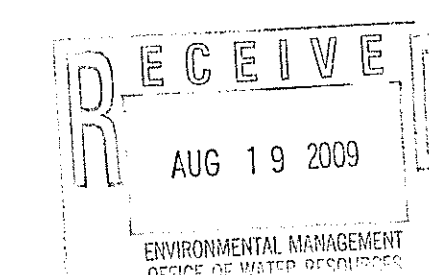
5 SECTION OF RIVER
 3/6 HORIZONTAL 1"=8'
 VERTICAL 1"=2'



4 SECTION OF RIVER
 3/6 HORIZONTAL 1"=8'
 VERTICAL 1"=2'

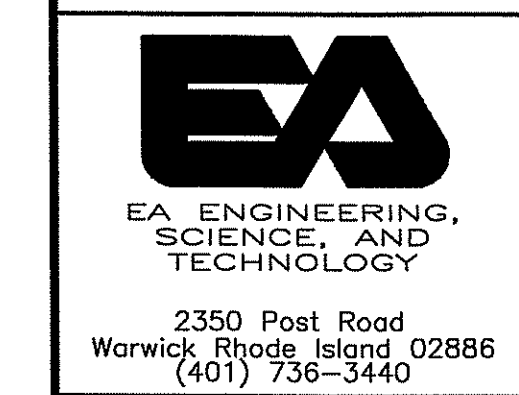
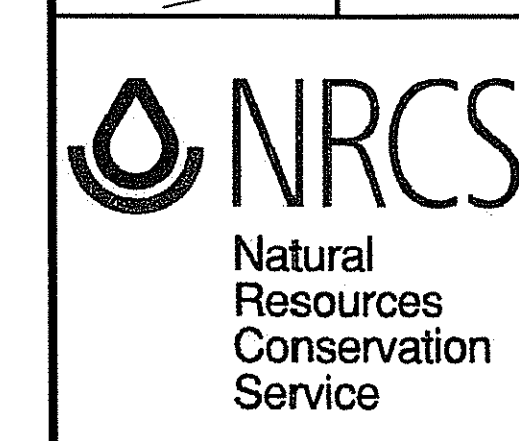
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 4 2009 FILE # 08-0006
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hester



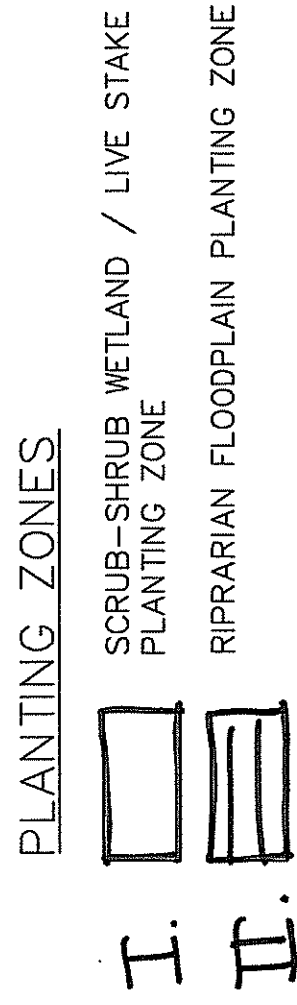
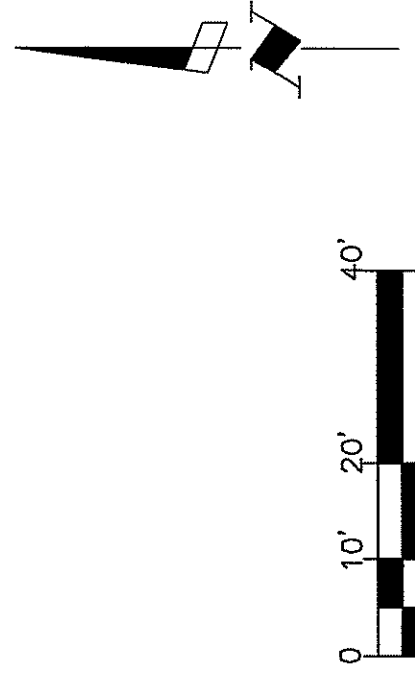
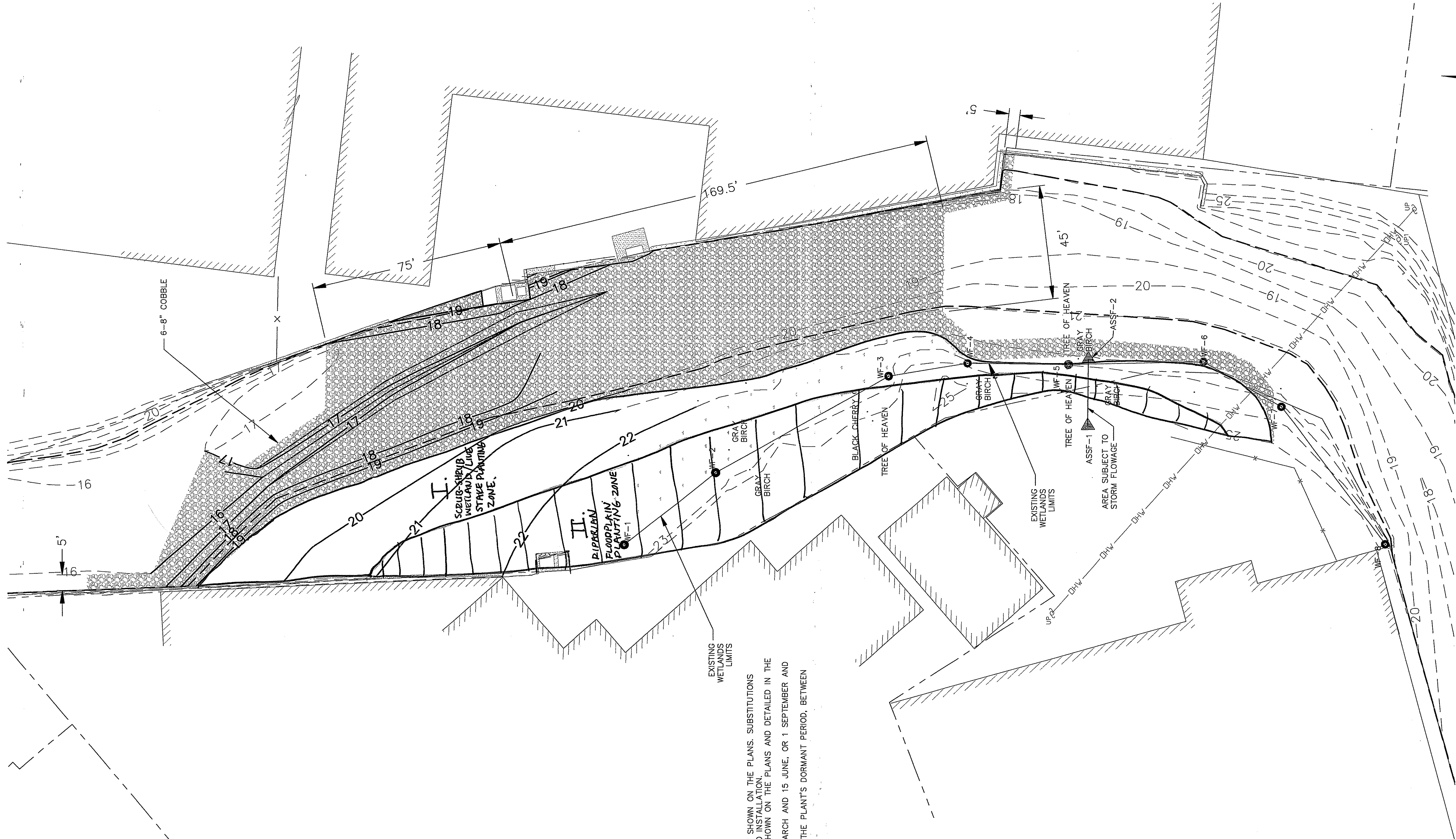
REVISIONS		DESCRIPTION
NO.	DATE	BY
1	6/22/07	EA
2	1/16/08	EA
3	6/1/08	EA

NATURAL RESOURCES CONSERVATION SERVICE
 WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT
 PARAGON DAM REMOVAL
 VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND



DATE	JANUARY 2008
DESIGNED BY	JT
DRAWN BY	LLR
CHECKED BY	HLB
PROJECT MANAGER	SW
PROJECT NUMBER	62130.02
SCALE	AS SHOWN
FILE NAME	-
DRAWING NUMBER	C-5
SHEET NUMBER	6 OF 8

DRAWING NAME: C-5 Fish Passage Restoration Dam Removal
 DATE: 10/20/2007
 DRAWN BY: LLR



- NOTES:
1. AVERAGE COBBLE DIAMETER SHALL BE A MINIMUM OF 6".
 2. CHANNEL ARMORING THICKNESS SHALL BE MINIMUM OF 6"-8".
 3. DIMENSIONS SHOWN ARE APPROXIMATE.
 4. COBBLE SHALL COVER 5-YR. STORM EVENT ELEVATION AS SHOWN.

PLANTING NOTES:

1. RESTORATION PLANTINGS WILL CONSIST OF THE TYPE, SIZE, AND QUANTITY SHOWN ON THE PLANS. SUBSTITUTIONS MUST BE APPROVED THROUGH A PERMIT MODIFICATION BY RIDEM PRIOR TO INSTALLATION.
2. PLANTS SHALL BE INSTALLED IN THE LOCATIONS AND AT THE DENSITIES SHOWN ON THE PLANS AND DETAILED IN THE SPECIFICATIONS.
3. INSTALLATION OF CONTAINERIZED PLANTINGS SHALL OCCUR BETWEEN 15 MARCH AND 15 JUNE, OR 1 SEPTEMBER AND 15 NOVEMBER.
4. INSTALLATION OF DORMANT LIVE STAKE PLANTINGS SHALL OCCUR DURING THE PLANT'S DORMANT PERIOD, BETWEEN 15 MARCH AND 15 MARCH.

PLANTING SCHEDULE:

SCRUB - SHRUB WETLAND / LIVE STAKE PLANTING ZONE			
Common Name	Botanical Name	Qty.	Spacing
Red-osier dogwood	<i>Cornus stolonifera</i>	80	5' cts
Silky dogwood	<i>Cornus amomum</i>	80	5' cts
Bebb willow	<i>Salix bebbiana</i>	80	5' cts
Pin cherry	<i>Prunus pensylvanica</i>	80	5' cts

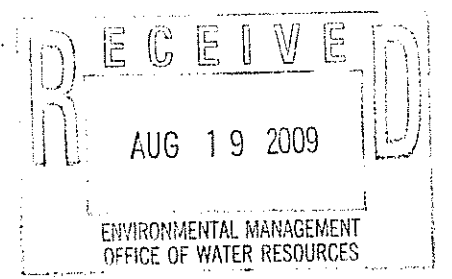
New England Erosion Control / Restoration Seed Mix (for Moist Sites)			
Common Name	Botanical Name	Qty.	Spacing
Upland bentgrass	<i>Agrostis perennans</i>		
Creeping bentgrass	<i>Agrostis stolonifera</i>		
Big bluestem	<i>Andropogon gerardii</i>		
Fox sedge	<i>Carex vulpinoidea</i>		
Canada wild rye	<i>Elymus virginicus</i>		
Creeping red fescue	<i>Festuca rubra</i>		
Soft rush	<i>Juncus effusus</i>		
Switchgrass	<i>Panicum virgatum</i>		
Little bluestem	<i>Schizachyrium scoparium</i>		
Green burlrush	<i>Scirpus atrovirens</i>		
New England aster	<i>Aster novae-angliae</i>		
Spotted Joe-Pye weed	<i>Eupatorium maculatum</i>		
Blue vervain	<i>Verbena hastata</i>		

RIPARIAN FLOODPLAIN PLANTING ZONE			
Common Name	Botanical Name	Spacing	Qty.
Black willow	<i>Salix nigra</i>	20 cts	5
Gray birch	<i>Betula populifolia</i>	20 cts	20
Sycamore	<i>Platanus occidentalis</i>	20 cts	10
Common Name	Botanical Name	Spacing	Qty.
Spangled alder	<i>Alnus incana</i>	12 cts	10
Shadblow	<i>Arnica montana canadensis</i>	12 cts	15
Winterberry holly	<i>Ilex verticillata</i>	12 cts	20
Northern arrowwood	<i>Viburnum dentatum</i>	12 cts	20

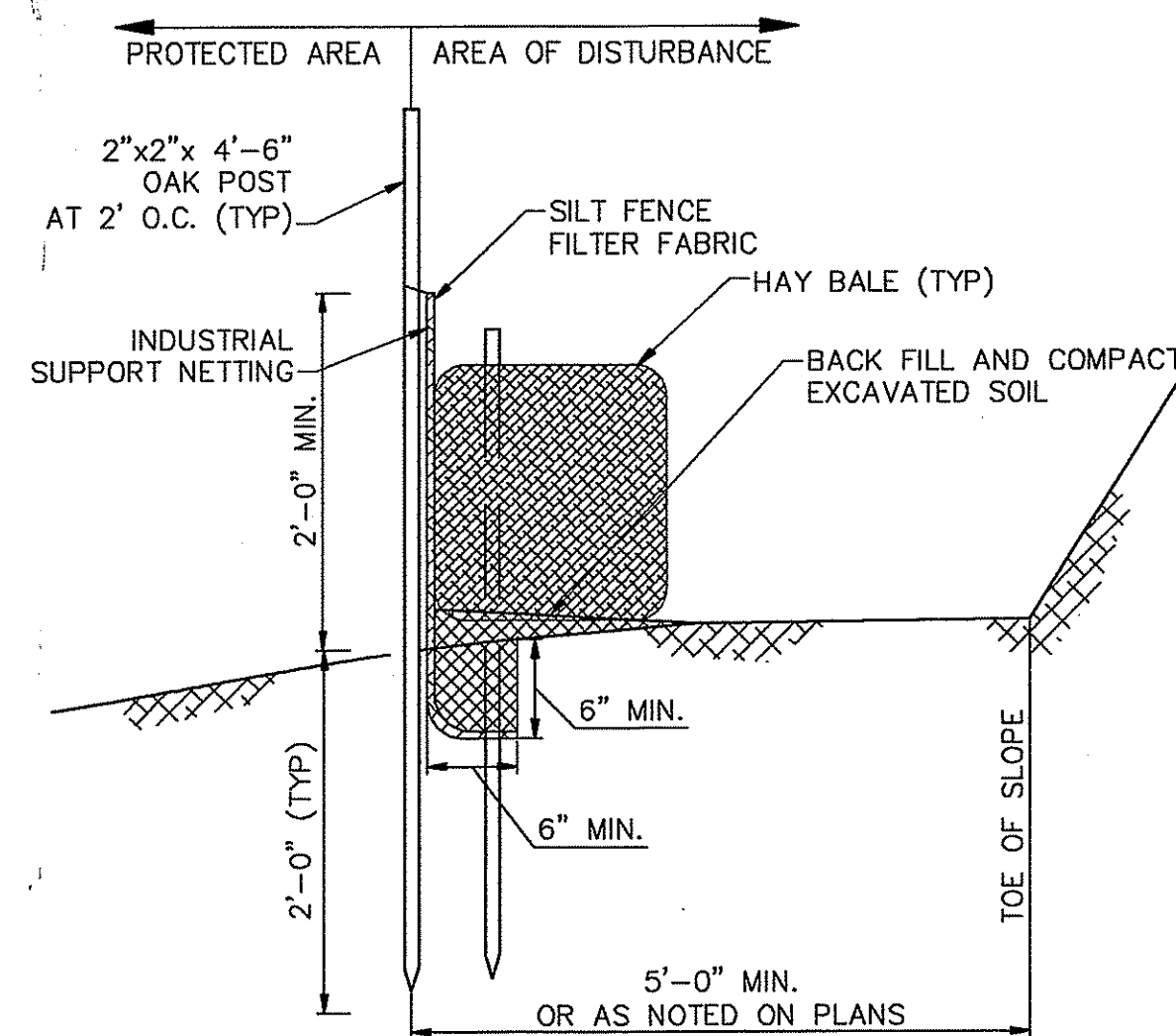
New England Conservation/Wetlands Seed Mix			
Common Name	Botanical Name	Spacing	Qty.
Big bluestem	<i>Andropogon gerardii</i>		
Fringed bromegrass	<i>Bromus ciliatus</i>		
Creeping red fescue	<i>Festuca rubra</i>		
Shade grass	<i>Elymus argenteus</i>		
Canada wild rye	<i>Elymus virginicus</i>		
Little bluestem	<i>Schizachyrium scoparium</i>		
Indian grass	<i>Sorghastrum nutans</i>		
Common milkweed	<i>Asclepias syriaca</i>		
New England aster	<i>Aster novae-angliae</i>		
Partridge pea	<i>Chamaecrista fasciculata</i>		
Showy tick-rail	<i>Desmodium canadense</i>		
Grass leaved goldenrod	<i>Euthamia graminifolia</i>		
Gray goldenrod	<i>Solidago nemoralis</i>		

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED NOV 4 2009 FILE # 08-0006
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

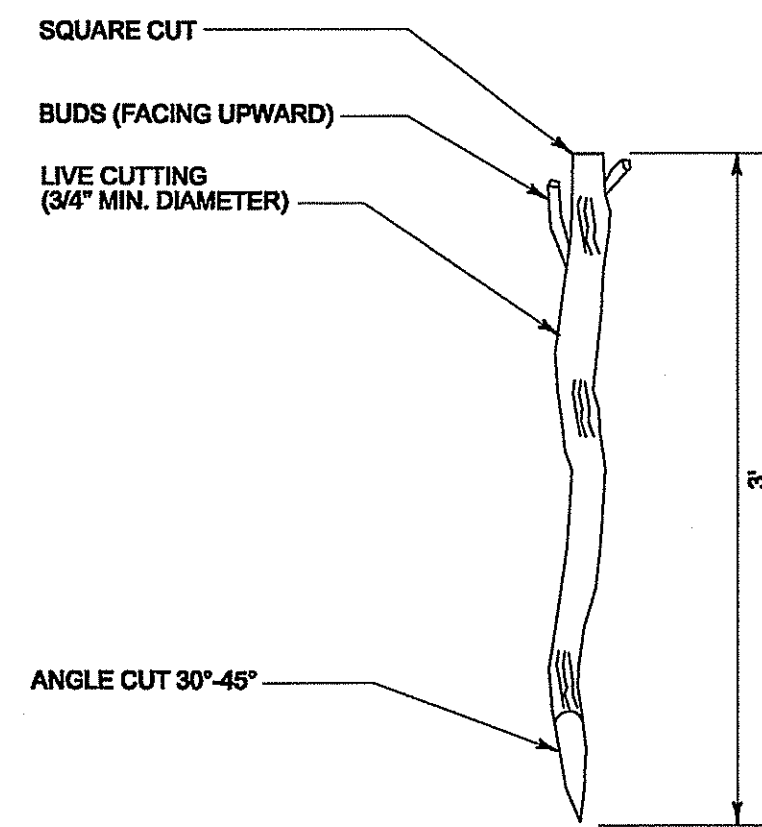
Charles A. Harber



<p>Natural Resources Conservation Service</p>		<p>EA ENGINEERING, SCIENCE, AND TECHNOLOGY</p> <p>2350 Post Road Warwick, Rhode Island 02886 (401) 736-3440</p>																	
NATURAL RESOURCES CONSERVATION SERVICE WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT PARAGON DAM REMOVAL VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND		PHASE III CHANNEL/BANK RESTORATION PLAN																	
DATE: JANUARY 2008 DESIGNED BY: JT DRAWN BY: LLR CHECKED BY: HLB PROJECT MANAGER: SW PROJECT NUMBER: 62130.02 SCALE: AS SHOWN FILE NAME: - DRAWING NUMBER: C-6 SHEET NUMBER: 7 OF 8		REVISIONS <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>6/22/07</td> <td>EA</td> <td>BID DESIGN</td> </tr> <tr> <td>2</td> <td>1/16/08</td> <td>EA</td> <td>PERMIT DESIGN</td> </tr> <tr> <td>3</td> <td>6/1/08</td> <td>EA</td> <td>PERMIT REVISIONS</td> </tr> </table>		NO.	DATE	BY	DESCRIPTION	1	6/22/07	EA	BID DESIGN	2	1/16/08	EA	PERMIT DESIGN	3	6/1/08	EA	PERMIT REVISIONS
NO.	DATE	BY	DESCRIPTION																
1	6/22/07	EA	BID DESIGN																
2	1/16/08	EA	PERMIT DESIGN																
3	6/1/08	EA	PERMIT REVISIONS																
SEAL THOMAS S. COOK Thomas S. Cook No. 8819 REGISTERED PROFESSIONAL ENGINEER CIVIL 813109																			

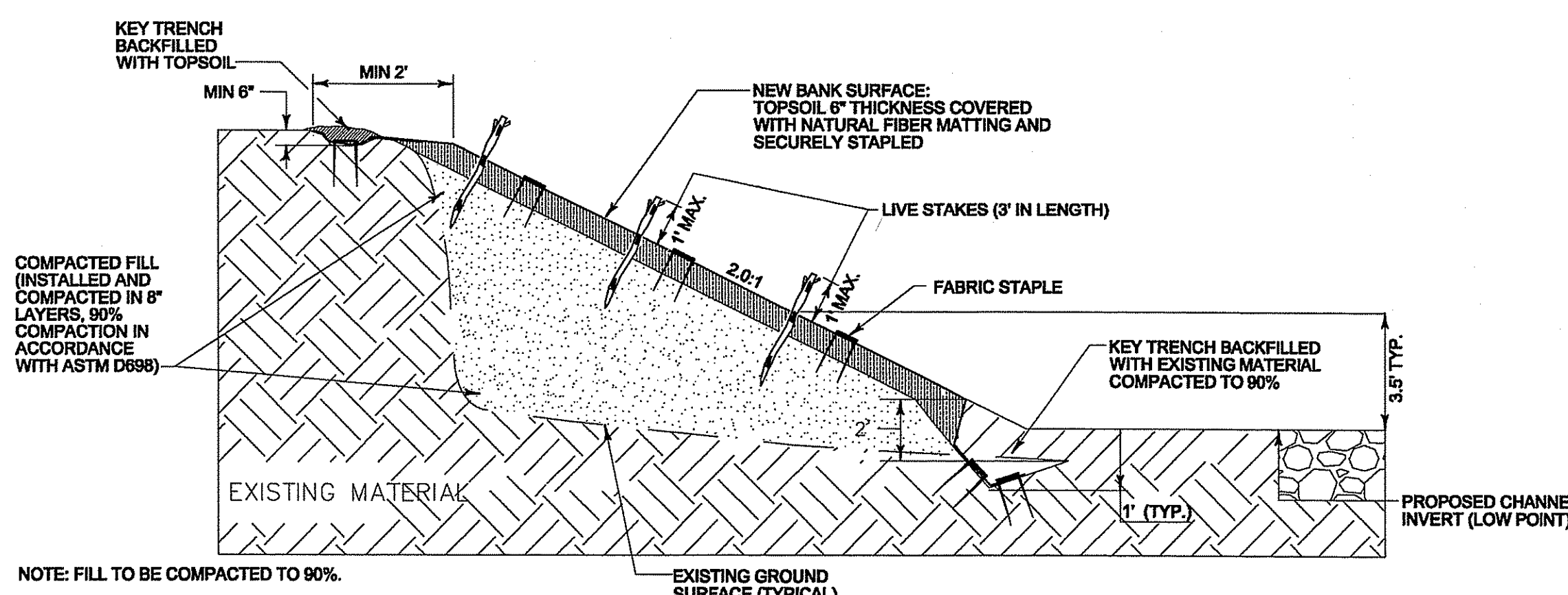


NOTE:
SILT FENCE FABRIC SHALL NOT BE SLIT HAY BALE POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC



LIVE STAKE DETAIL

NOT TO SCALE

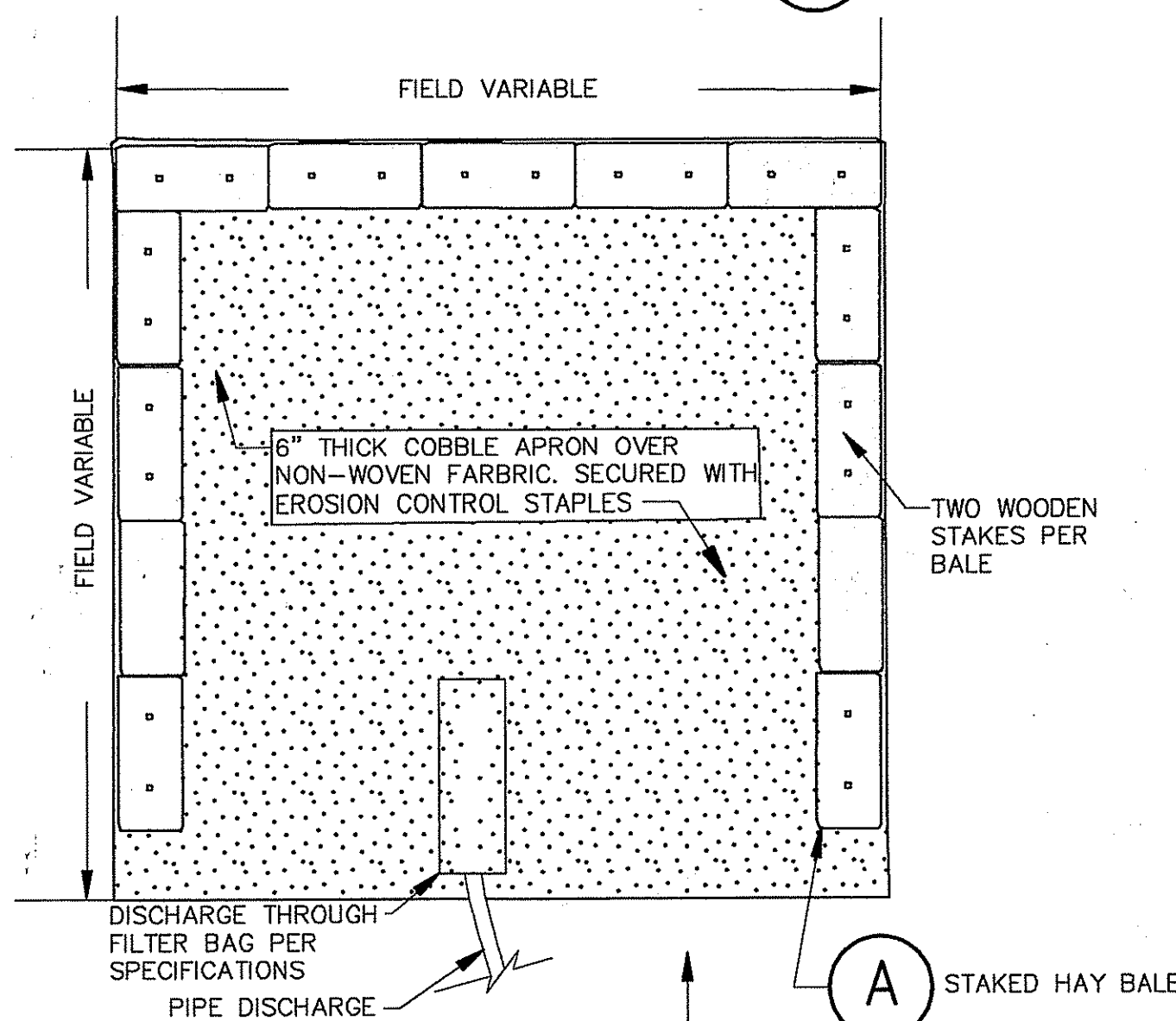


BANK TREATMENT NATURAL FIBER MATTING IN FILL WITH LIVE STAKES (TYP.)

NOT TO SCALE

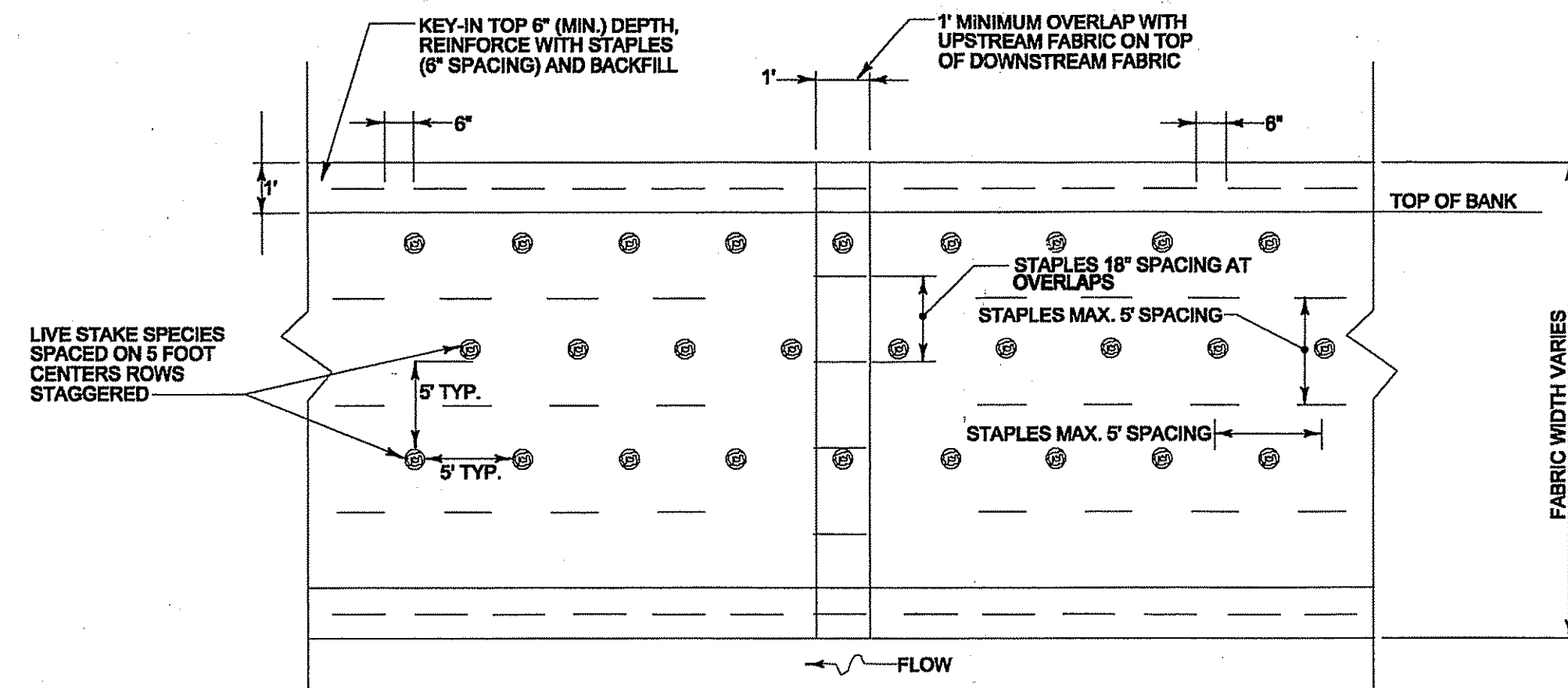
SILT FENCE DETAIL (A)

SCALE N.T.S.



SILT FENCE APRON DETAIL (6)

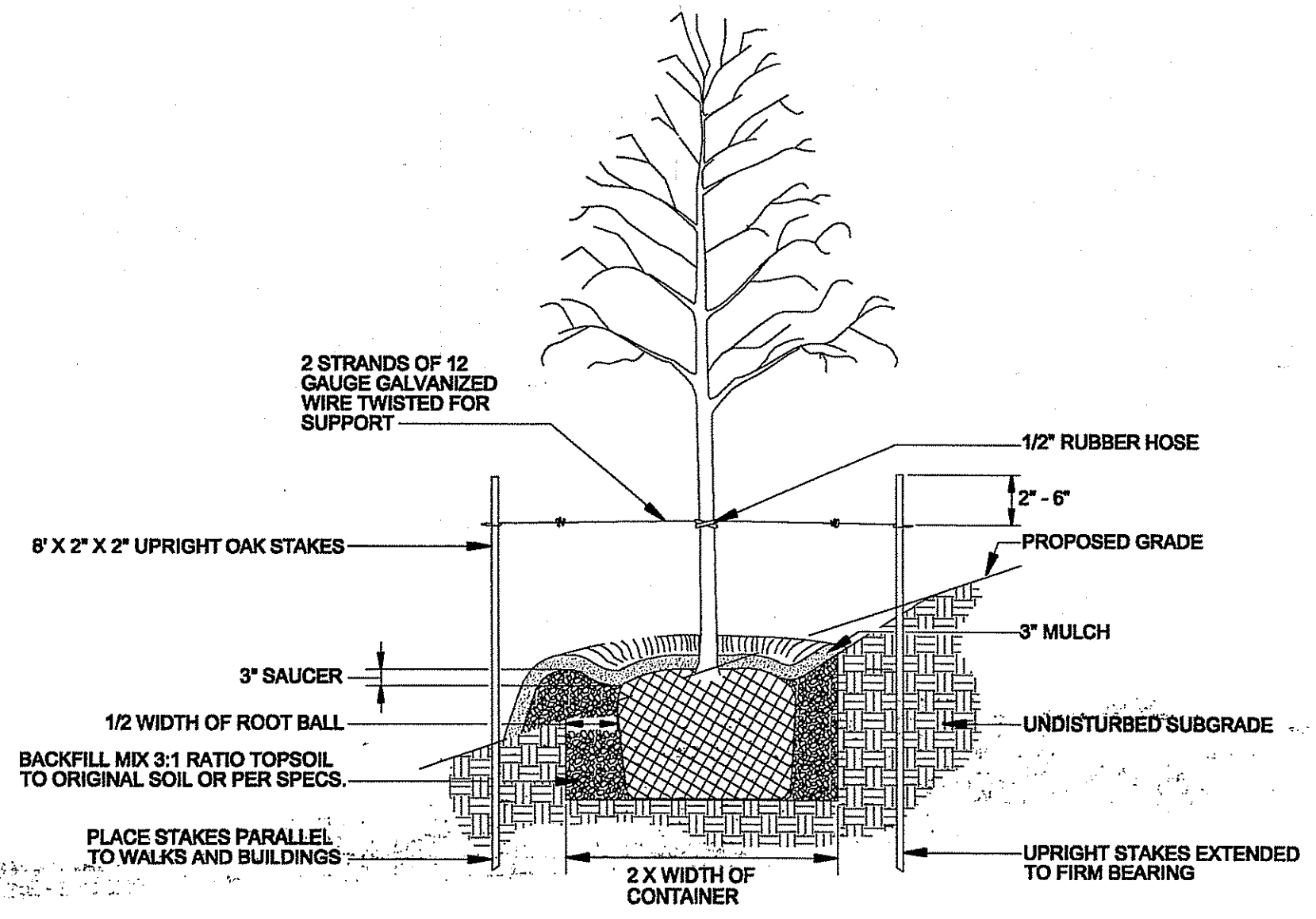
SCALE N.T.S.



TYPICAL PLAN VIEW NATURAL FIBER MATTING WITH LIVE STAKES OR TUBELINGS

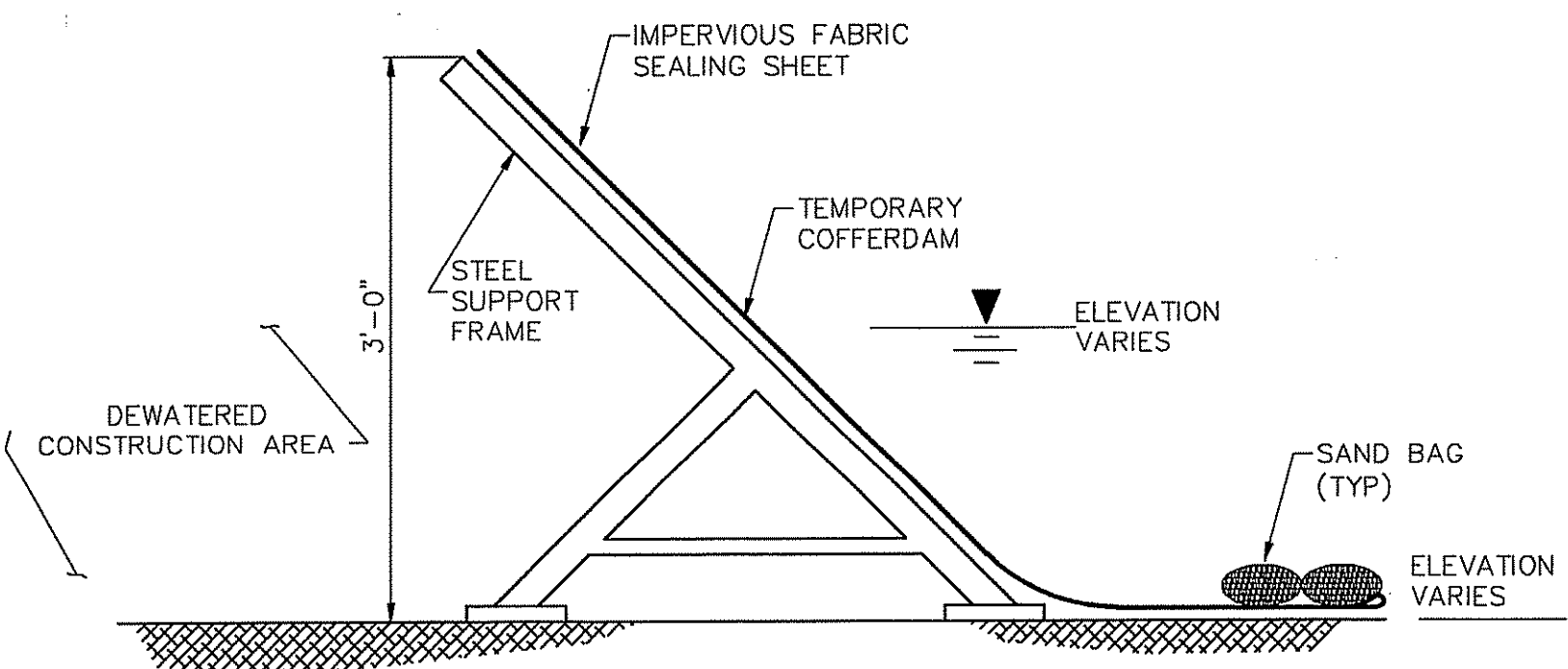
KEY-IN BOTTOM AND BACKFILL WITH NATIVE CHANNEL MATERIAL

NOT TO SCALE



SLOPE PLANTING DETAIL FOR ALL TREES/ SHRUBS

CONTAINER GROWN NOT TO SCALE



COFFERDAM SECTION

SCALE N.T.S.

MISC. DETAILS

NOTES:

- MATTING TO BE ROLLED LENGTHWISE ALONG STREAMBANK EXTENDING BELOW THE TOE PROTECTION AND A MINIMUM OF ONE FOOT FROM TOP OF BANK. IF MORE THAN ONE ROLL IS REQUIRED, MID-BANK OVERLAP SHOULD BE A MINIMUM OF ONE FOOT AND SECURELY FASTENED WITH STAPLES.
- CUTTINGS FOR LIVE STAKES SHALL BE A MINIMUM OF 3/4\"/>

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED NOV 4 2009 FILE # 08-0006
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

NATURAL RESOURCES CONSERVATION SERVICE
WOONASQUATUCKET RIVER FISH PASSAGE RESTORATION PROJECT
PARAGON DAM REMOVAL
VALLEY STREET, A.P. 35 LOT 571, PROVIDENCE, RHODE ISLAND

NRCS
Natural Resources Conservation Service

EA
EA ENGINEERING, SCIENCE AND TECHNOLOGY
2350 Post Road
Warwick, Rhode Island 02886
(401) 736-3440

DATE	JANUARY 2008
DESIGNED BY	JT
DRAWN BY	LLR
CHECKED BY	HLB
PROJECT MANAGER	SW
PROJECT NUMBER	62130.02
SCALE	AS SHOWN
FILE NAME	-
DRAWING NUMBER	C-7
SHEET NUMBER	8 OF 8

RECEIVED
AUG 19 2009
ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

DRAWING MADE BY: J. Herbert, Date: 08/20/08, Checked By: J. Herbert, Date: 08/20/08, Approved By: J. Herbert, Date: 08/20/08, Scale: AS SHOWN, Project: 62130.02, Drawing: C-7, Sheet: 8 OF 8