

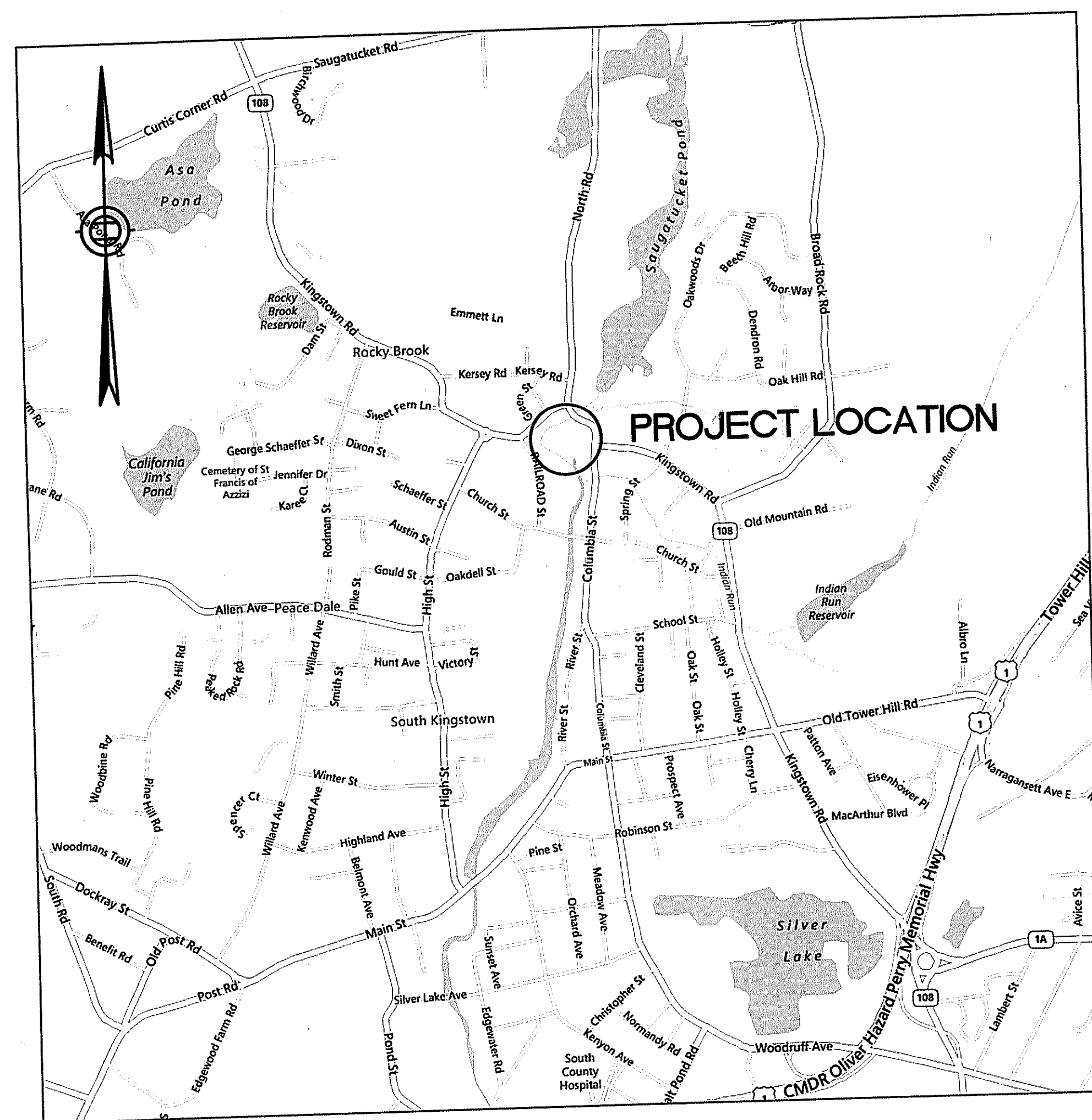
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
RESTORATION CENTER
and
THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT

SAUGATUCKET RIVER FISH PASSAGE
IMPROVEMENTS

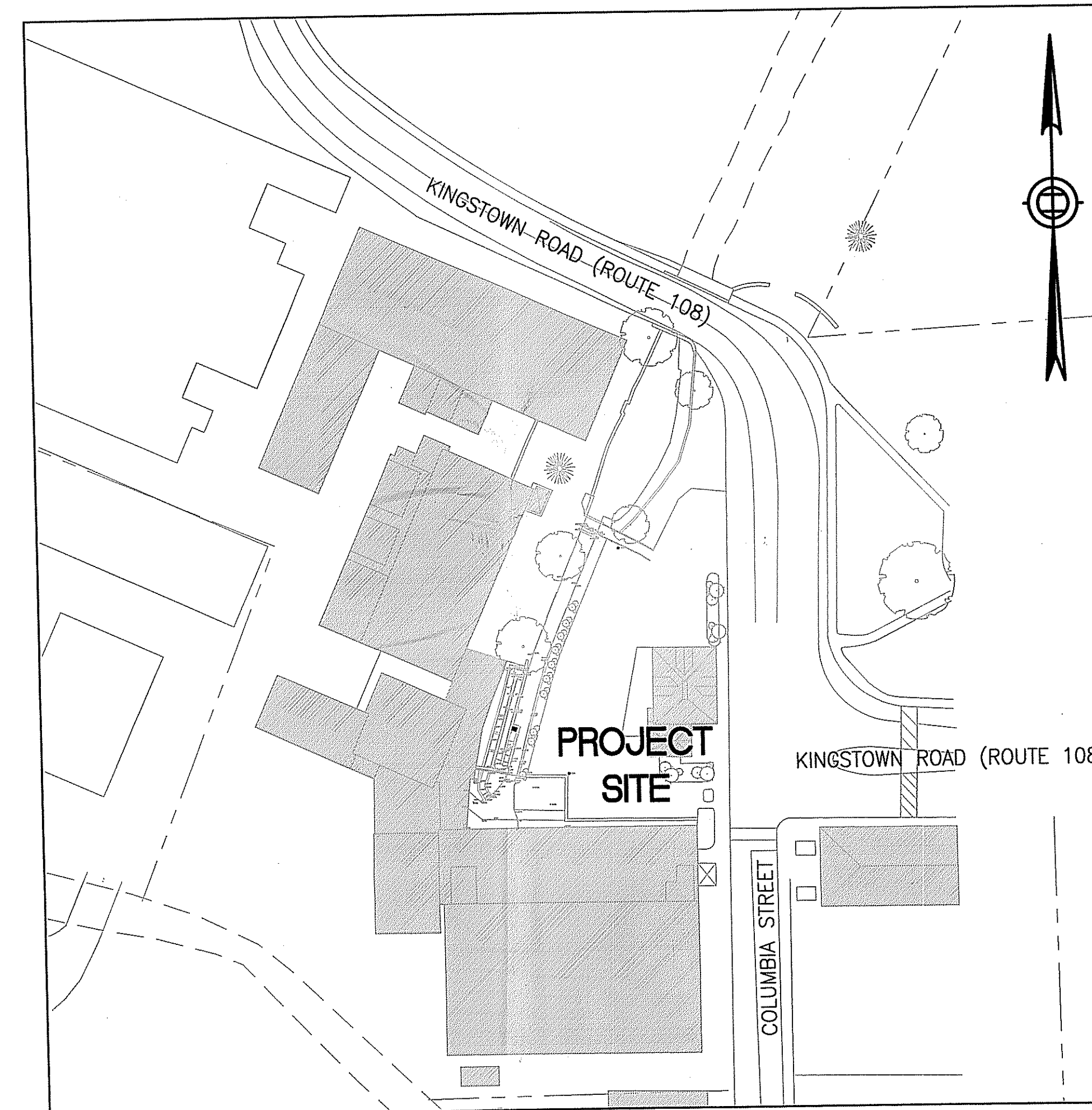
SOUTH KINGSTOWN, RHODE ISLAND
PALISADES MILL SITE
90% DOCUMENTS
DECEMBER 2012

INDEX OF DRAWINGS

NUMBER	DESCRIPTION
C-1	NOTES
C-2	EXISTING CONDITIONS
C-3	DEMOLITION/EROSION CONTROL PLAN
C-4	DETAILS
C-5	CONCRETE REPAIR LOCATIONS
S-1	STRUCTURAL NOTES AND TYPICAL DETAILS
S-2	PARTIAL PLAN AND SECTIONS
S-3	CONSTRUCTION DETAILS
S-4	CONCRETE REPAIR DETAILS



LOCATION MAP
SCALE: 1" = 1200 FT.



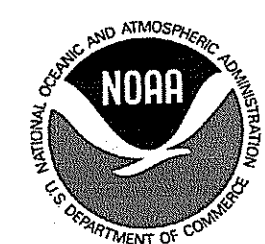
SITE MAP
SCALE: 1" = 60 FT.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 25 2013 FILE # 13-0043
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

Dec 19, 2012 - 11:42am EX:PROJECT 1986_Saugatucket River Fishway Improvements\CADD\DRAWINGS\CIVIL\C-Y_Palisades 2012-11-29.dwg

PREPARED FOR:

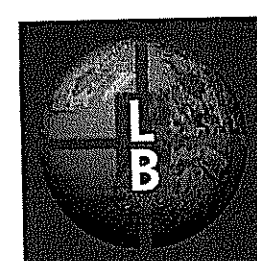


National Oceanic and
Atmospheric Administration
Restoration Center
28 Tarzwell Drive
Narragansett, Rhode Island 02882



Rhode Island Department of
Environmental Management
235 Promenade Street, Providence, Rhode
Island 02908

PREPARED BY:



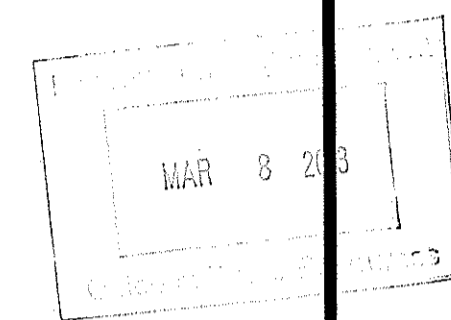
THE Louis Berger Group, INC.
ENGINEERS PLANNERS
SCIENTISTS ECONOMISTS
295 Promenade Street
Providence, Rhode Island 02908

GENERAL NOTES:

1. PALISADES MILL OWNS AND IS RESPONSIBLE FOR MAINTAINING THE DAM SLUICeway AND ANY MODIFICATIONS TO THE SLUICeway STRUCTURE AND NORMAL WATER FLOW THROUGH THE SLUICeway TO AFFORD EFFECTIVE FISH PASSAGE THROUGH THE FISHWAY AND PROPER FUNCTIONING OF THE EEL PASS.
2. RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM) OWNS, OPERATES AND MAINTAINS THE DENIL FISHWAY ON THE PALISADES MILL PROPERTY, AND THROUGH TEMPORARY CONSTRUCTION ACCESS EASEMENT FROM PALISADES MILL, WILL MODIFY THE DENIL FISHWAY FOR RIVER HERRING PASSAGE IMPROVEMENT AND PROVIDE FOR EEL PASSAGE. FOLLOWING COMPLETION OF THE FISHWAY MODIFICATION AND EEL PASS, AND BY FOLLOWING AN OPERATION AND MAINTENANCE PLAN FOR THE FISHWAY AND EEL PASS, RIDEM WILL BE PROVIDED ACCESS TO THE FISHWAY AND EEL PASS BY THE PROPERTY OWNER, AND WILL ROUTINELY OPERATE AND MAINTAIN THESE FISH PASSAGE FACILITIES.
3. IN THE CONTRACT DOCUMENTS THE TERM "THE GOVERNMENT" REFERS TO THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM), AS LEAD ON THE CONSTRUCTION CONTRACT AND THE NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), AS LEAD ON THE ENGINEERING DESIGN CONTRACT.
4. RIVER HERRING UPSTREAM MIGRATION PERIOD IS MARCH 15 - MAY 30. RIVER HERRING OUT-MIGRATION PERIOD IS JULY 1 - NOVEMBER 15. UPSTREAM EEL MIGRATION IS APRIL 1 - JULY 1. ANY TIME-OF-YEAR RESTRICTIONS ON IN-WATER WORK SHALL BE IN COMPLIANCE WITH CONDITIONS SPECIFIED IN THE RIDEM OR ARMY CORPS OR ENGINEERS PERMIT(S) FOR THE PROJECT.
5. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY ON-SITE SOIL DISTURBANCES TO IDENTIFY AND LOCATE ANY UNDERGROUND FACILITIES AND UTILITIES.
6. THE CONTRACTOR SHALL ACCESS THE WORK SITE WITH EQUIPMENT FROM THE PARKING LOT OFF KINGSTOWN ROAD (ROUTE 108).
7. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY INSTALLING ANY REQUISITE EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH CONTRACT SPECIFICATIONS PRIOR TO BEGINNING SITE WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ALL EROSION AND SEDIMENT CONTROLS ONCE THE PROJECT IS COMPLETED AND THE SITE IS VEGETATIVELY STABILIZED.
8. THE CONTRACTOR SHALL TAKE CARE IN AVOIDING DAMAGE TO ON-SITE TREES FROM EQUIPMENT USE, UNLESS SELECTED TREE REMOVAL OR PRUNING IS REQUIRED TO COMPLETE THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE OWNER'S REPRESENTATIVE TO DISCUSS THE NEED TO REMOVE TREES AND OTHER VEGETATION WITHIN THE PROJECT AREA, AND THE NEED TO REPLACE ANY TREES OR SHRUBS PRIOR TO PROJECT COMPLETION.
9. CONTRACTOR SHALL DEWATER THE PROJECT WORK SITE AS NECESSARY TO COMPLETE THE WORK UNDER DRY CONDITIONS. TO COMPLETE WORK ON THE CONCRETE FLUME, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING RIDEM AT LEAST 7 DAYS IN ADVANCE OF THE PROPOSED WORK COMMENCEMENT, SO THAT THE PALISADES MILL OWNER IS NOTIFIED OF THE NEED TO INSTALL STOP LOGS IN THE UPRIVER SLUICeway FOR TEMPORARY SITE DEWATERING. THE TEMPORARY DEWATERING SHALL BE IN ACCORDANCE WITH CONDITIONS IN THE RIDEM OR ARMY CORPS OF ENGINEERS PERMIT(S) FOR THE PROJECT.
10. THE CONTRACTOR IS RESPONSIBLE FOR VEGETATIVELY OR STRUCTURALLY STABILIZING ALL ON-SITE EXPOSED SOILS AND SEDIMENTS ONCE THE CONSTRUCTION ACTIVITIES ARE COMPLETE.
11. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ANY EXCESS MATERIALS AT AN APPROVED DISPOSAL FACILITY, AND IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE PARKING LOT, ROAD, FLUME AND BUILDING WALLS, GRASSED AREAS, SHRUBS, AND ANY OTHER AMENITIES ON THE PALISADES MILL PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY RESTORING THE SITE PRIOR TO COMPLETING THE WORK.

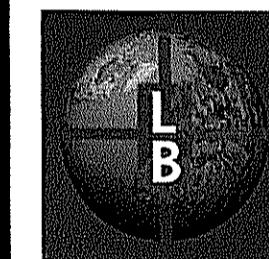
CONSTRUCTION SCOPE/SEQUENCE:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS.
2. REPRESENTATIVES FROM THE ENGINEER, THE OWNER'S REPRESENTATIVE, AND THE GOVERNMENT WILL ATTEND A KICK-OFF MEETING WITH THE CONTRACTOR TO DISCUSS THE PROJECT AND EXCHANGE REPRESENTATIVE AND CONTRACTOR CONTACT INFORMATION. THE GOVERNMENT IS EXPECTED TO MAKE SITE VISITS ON A ROUTINE BASIS. CONTRACTOR SHALL CONSULT WITH THE GOVERNMENT OR ITS REPRESENTATIVE AS NEEDED THROUGHOUT THE CONSTRUCTION DURATION.
3. CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO INITIATING CONSTRUCTION WORK.
4. CONTRACTOR SHALL COORDINATE WITH THE GOVERNMENT AND PRIVATE LAND OWNER TO GET STOP LOGS INSTALLED TO PROPERLY DEWATER THE SITE AND PERFORM THE WORK IN THE DRY.
5. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED ELEMENTS OF THE FISHWAY MODIFICATION.
6. THE CONTRACTOR SHALL INSTALL THE EEL PASS, TRAP BOX, AND GRAVITY WATER SUPPLY LINE IN ACCORDANCE WITH THE PLANS, AND SHALL TEST FLOWS THROUGH THE EEL PASS AND TRAP BOX TO ENSURE PROPER FUNCTIONING.
7. THE CONTRACTOR SHALL REMOVE ALL EROSION AND SEDIMENT CONTROLS FROM THE PROJECT SITE AND STAGING AREA AND RESTORE ANY DISTURBED AREAS TO THEIR PRECONSTRUCTION CONDITION.



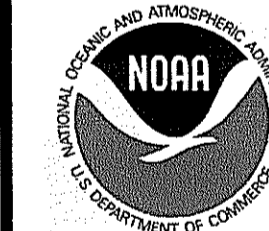
REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

PREPARED BY:



THE Louis Berger Group, Inc.
 ENGINEERS PLANNERS
 SCIENTISTS ECONOMISTS
 295 Promenade Street
 Providence, Rhode Island 02908

PREPARED FOR:



National Oceanic and Atmospheric Administration
 Restoration Center
 28 Tarzwell Drive
 Narragansett, Rhode Island 02882



Rhode Island Department of Environmental Management
 235 Promenade Street, Providence, Rhode Island 02908

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED MAR 25 2013 FILE # 13-0043
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Haber

90% Documents
 (NOT FOR CONSTRUCTION)

SAUGATUCKET RIVER FISH PASSAGE
 IMPROVEMENTS
 Town of South Kingstown, Rhode Island
 PALISADES MILL SITE

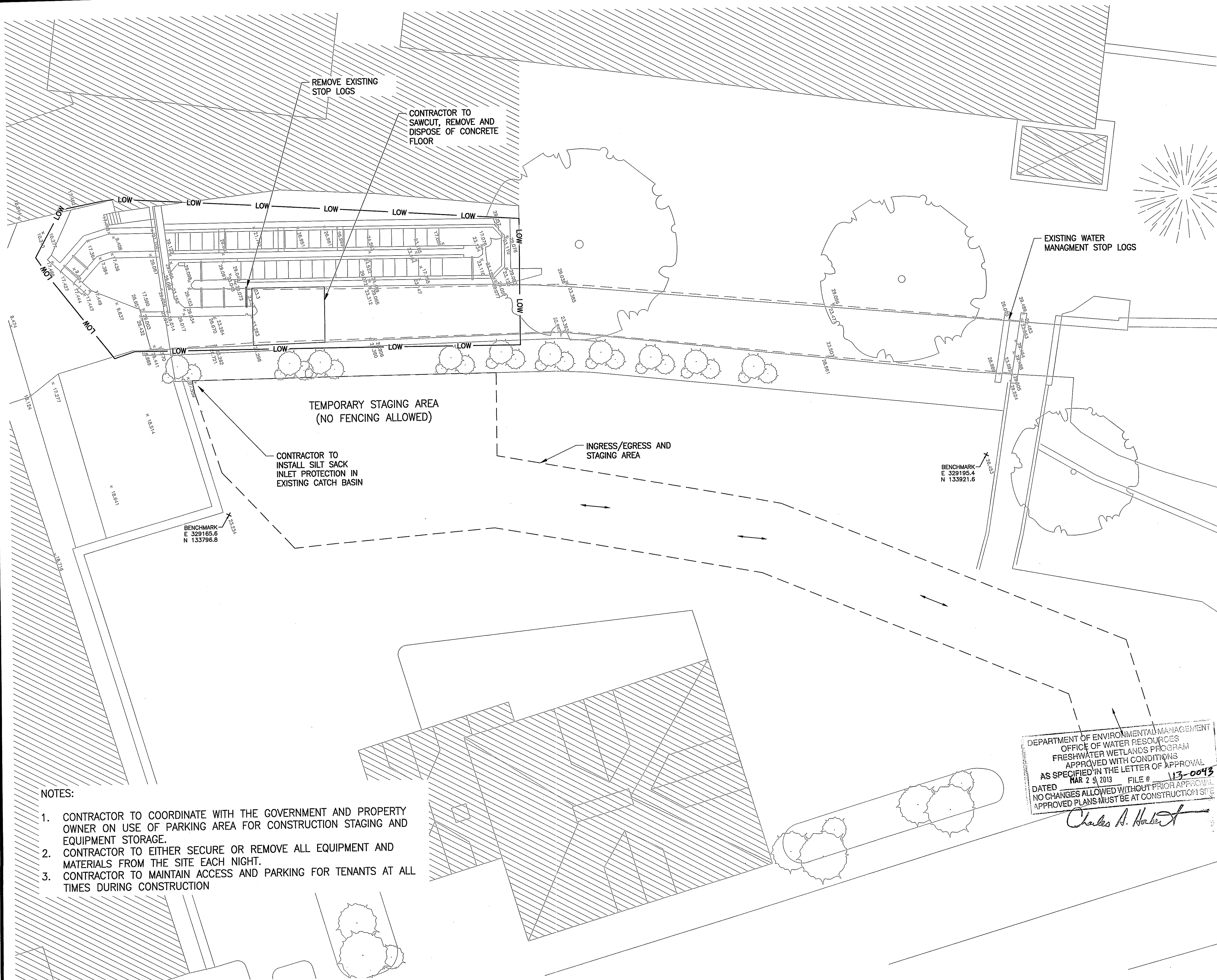
NOTES

SHEET TITLE:

SCALE:	AS SHOWN	DATE:	DECEMBER 2012
PROJECT MANAGER:	LR		
PROJECT ENGINEER:	AS		
CHECKED BY:	CF	SHEET No.	
DRAWN BY:	AS		
JOB NUMBER:	CJ1-1986		

C-1

Dec 19, 2012 - 11:49am F:\PROJECT\1986_Saugatucket River Fishway Improvements\CADD\DRAWINGS\CIVIL\C-X Palisades 2012-11-29.dwg

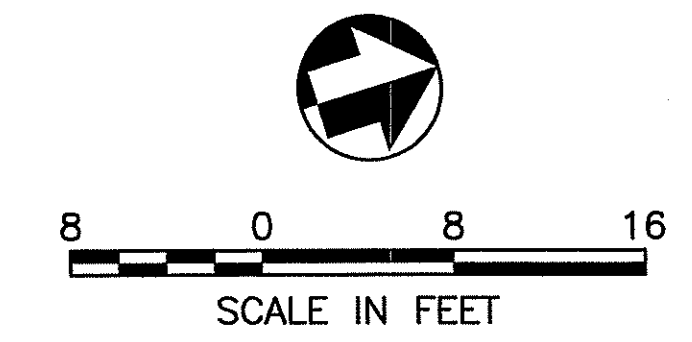


- NOTES:
1. CONTRACTOR TO COORDINATE WITH THE GOVERNMENT AND PROPERTY OWNER ON USE OF PARKING AREA FOR CONSTRUCTION STAGING AND EQUIPMENT STORAGE.
 2. CONTRACTOR TO EITHER SECURE OR REMOVE ALL EQUIPMENT AND MATERIALS FROM THE SITE EACH NIGHT.
 3. CONTRACTOR TO MAINTAIN ACCESS AND PARKING FOR TENANTS AT ALL TIMES DURING CONSTRUCTION

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 25, 2013 FILE # 113-0043
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

--- CONSTRUCTION ACCESS
— LOW — LIMIT OF WORK



SOURCE:
Spot elevation data is in NAVD 1988 (fall 2011), provided by Natural Resources Conservation Service. Fishway dimensions referenced from 1988 FISH LADDER SAUGATUCKET RIVER PEACE DALE Federal Aid Project AFSC-1-2 drawing set.

REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

PREPARED BY:

THE Louis Berger Group, Inc.
ENGINEERS PLANNERS
SCIENTISTS ECONOMISTS
295 Promenade Street
Providence, Rhode Island 02908

PREPARED FOR:

National Oceanic and Atmospheric Administration
Restoration Center
28 Tarzwell Drive
Narragansett, Rhode Island 02882

Rhode Island Department of Environmental Management
235 Promenade Street, Providence, Rhode Island 02908

90% Documents
(NOT FOR CONSTRUCTION)

SAUGATUCKET RIVER FISH PASSAGE IMPROVEMENTS
Town of South Kingstown, Rhode Island
PALISADES MILL SITE

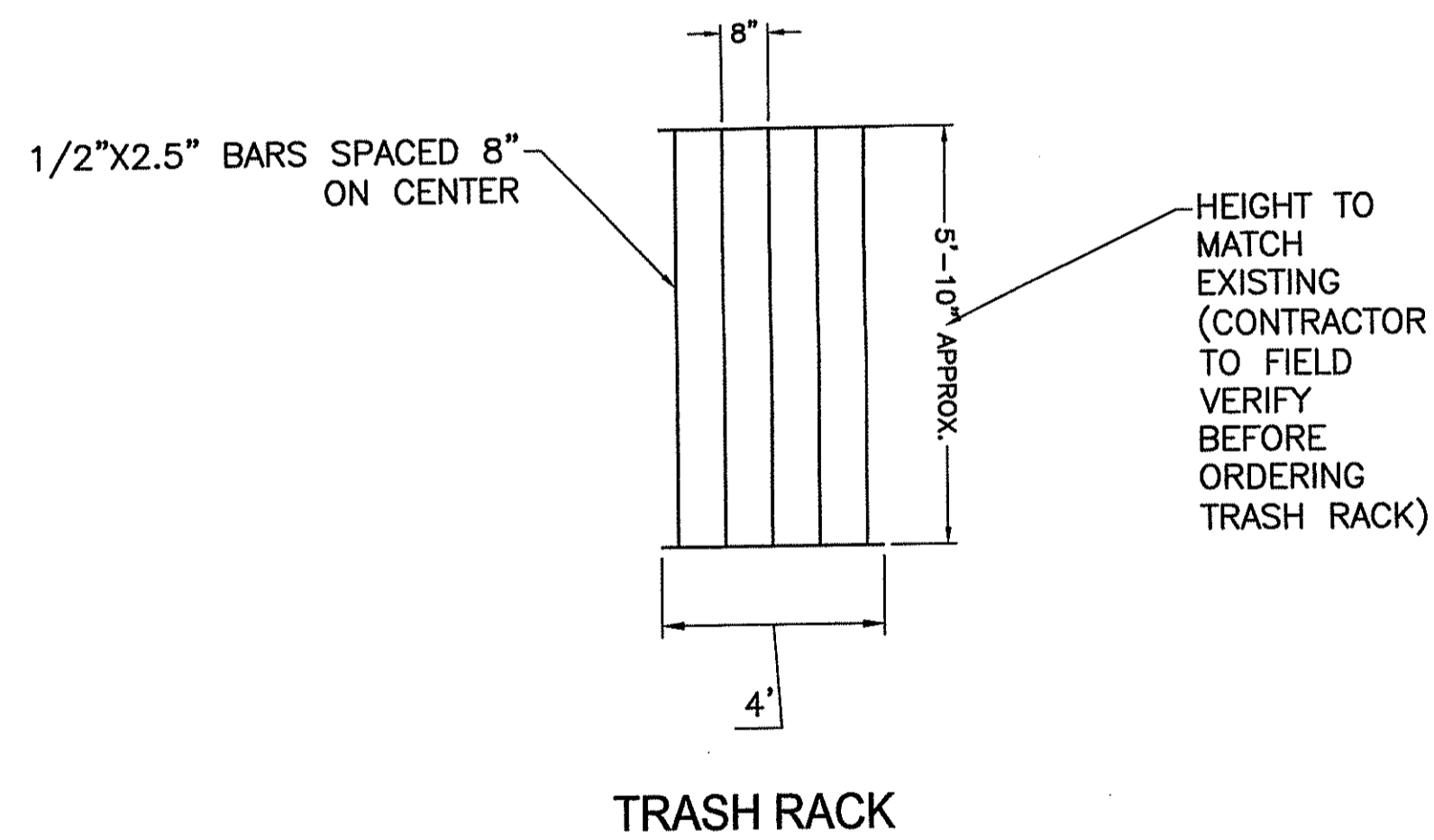
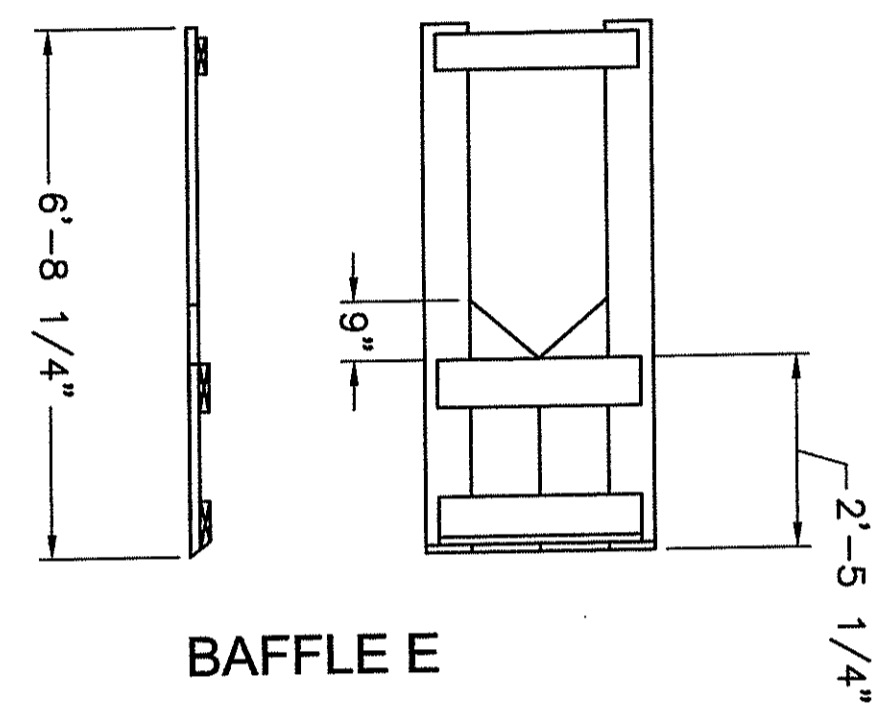
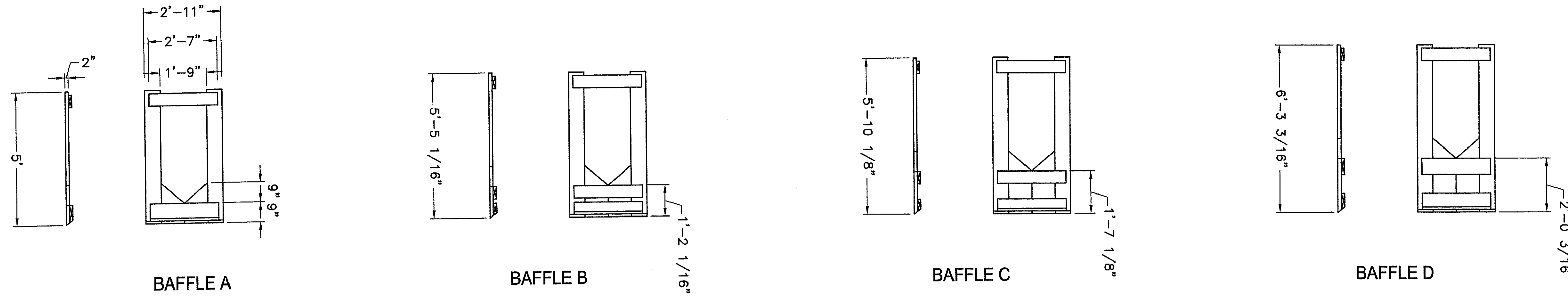
DEMOLITION/EROSION CONTROL PLAN

SHEET TITLE:

SCALE:	AS SHOWN	DATE:	DECEMBER 2012
PROJECT MANAGER:	LR		
PROJECT ENGINEER:	AS		
CHECKED BY:	CF	SHEET No.	C-3
DRAWN BY:	AS		
JOB NUMBER:	CJI-1986		

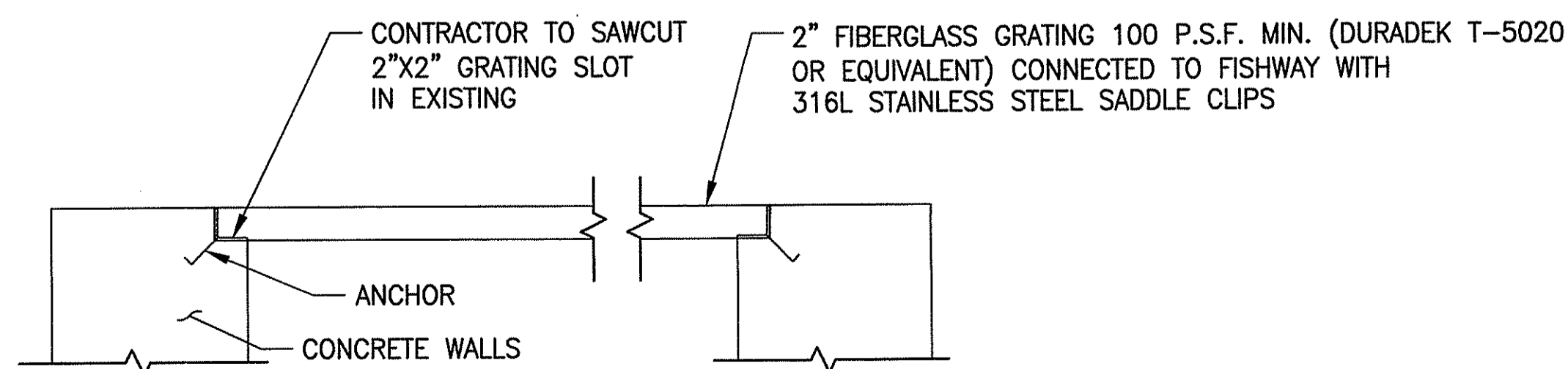
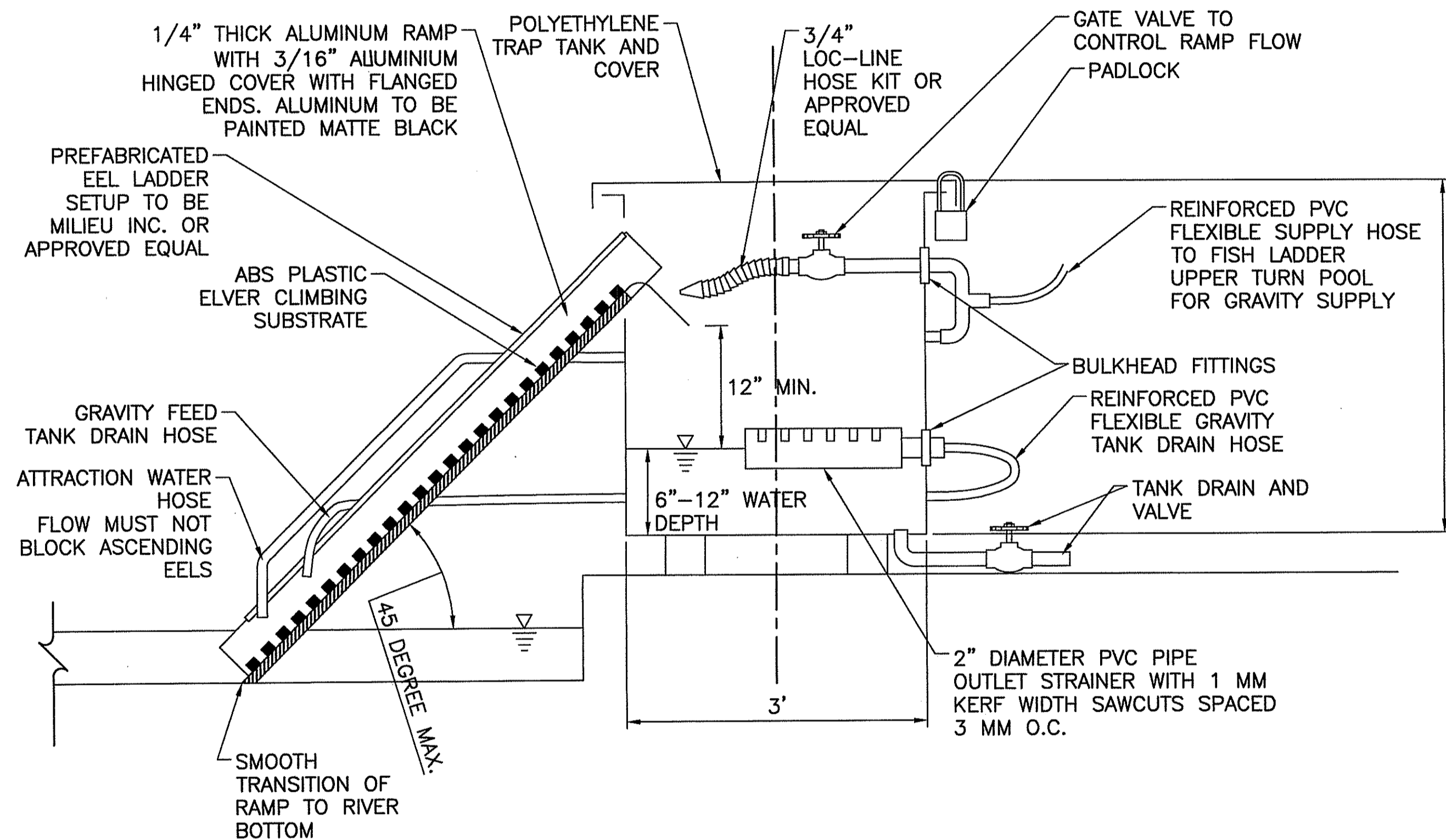
C-X Palisades 2012-11-29.dwg

Dec 19, 2012 - 11:51am F:\PROJECT\1986_Saugatucket_River_Fishway_Improvements\CADD\DRAWINGS\Civil\X-Palisades 2012-11-29.dwg



BAFFLE/TRASH RACK DETAILS

SCALE: N.T.S.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED 5/20/13 FILE # 13.0043
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Harbeck

MAR 8 2013

REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

PREPARED BY:

THE Louis Berger Group, Inc.
 ENGINEERS PLANNERS
 SCIENTISTS ECONOMISTS
 295 Promenade Street
 Providence, Rhode Island 02908

PREPARED FOR:

National Oceanic and Atmospheric Administration
 Restoration Center
 28 Tarzwell Drive
 Narragansett, Rhode Island 02882

Rhode Island Department of Environmental Management
 235 Promenade Street, Providence, Rhode Island 02908

90% Documents
 (NOT FOR CONSTRUCTION)
SAUGATUCKET RIVER FISH PASSAGE IMPROVEMENTS
 Town of South Kingstown, Rhode Island
 PALISADES MILL SITE

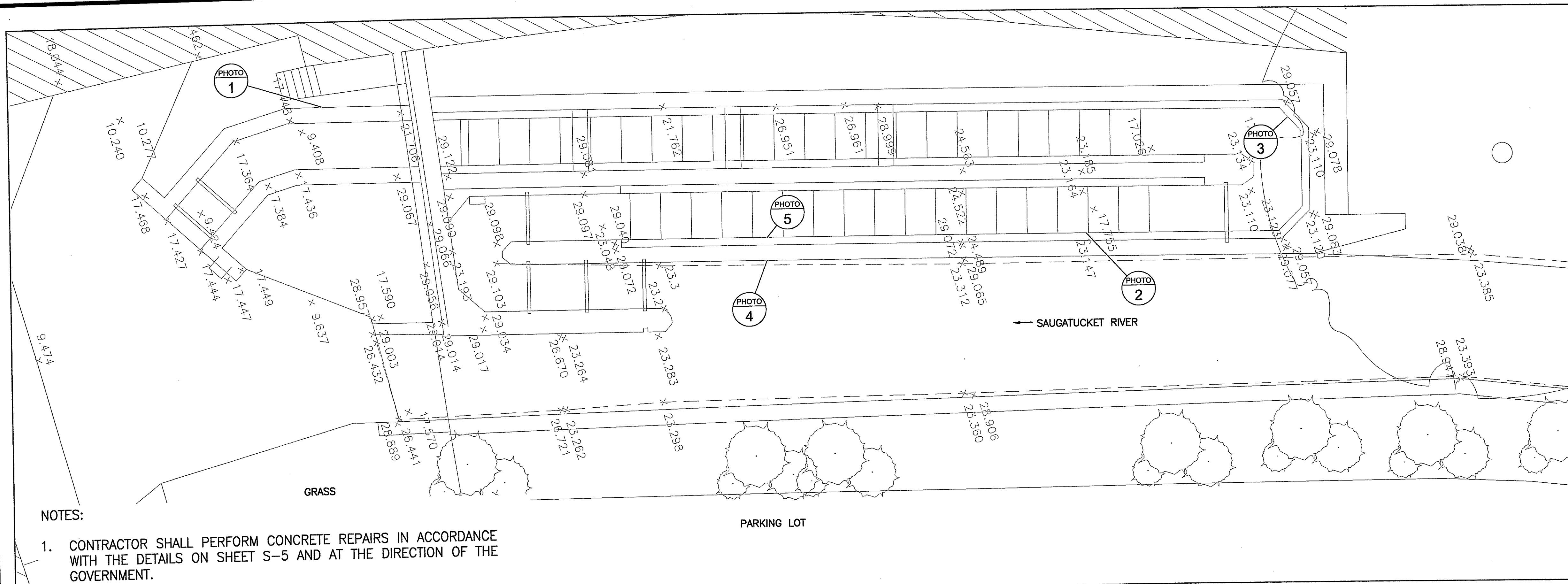
DETAILS

SHEET TITLE:

SCALE:	AS SHOWN	DATE:	DECEMBER 2012
PROJECT MANAGER:	LR		
PROJECT ENGINEER:	AS		
CHECKED BY:	CF	SHEET No.	C-4
DRAWN BY:	AS		
JOB NUMBER:	CJI-1986		

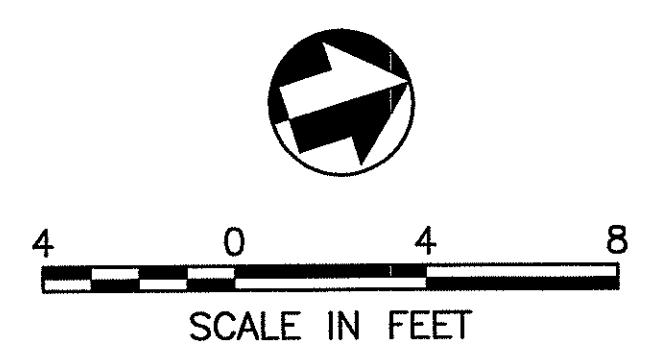
C-X Palisades 2012-11-29.dwg

Dec 19, 2012 - 11:53am F:\PROJECT\1986_Saugatucket_River_Fishway_Improvements\CADD\DRAWINGS\CIVIL\C-X_Palisades 2012-11-29.dwg



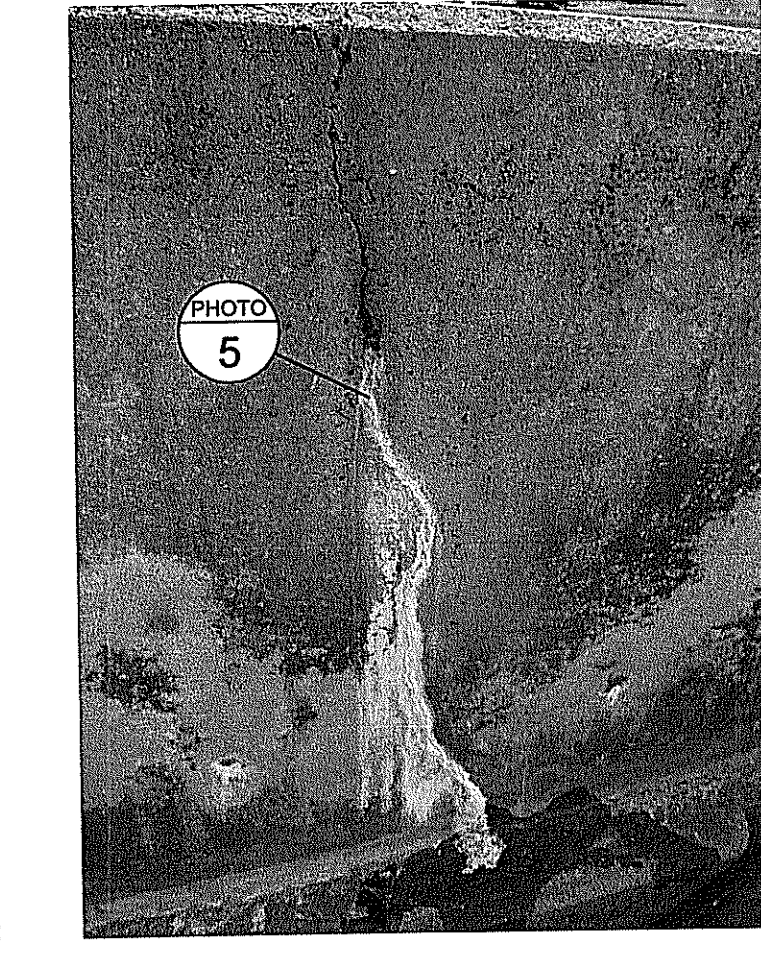
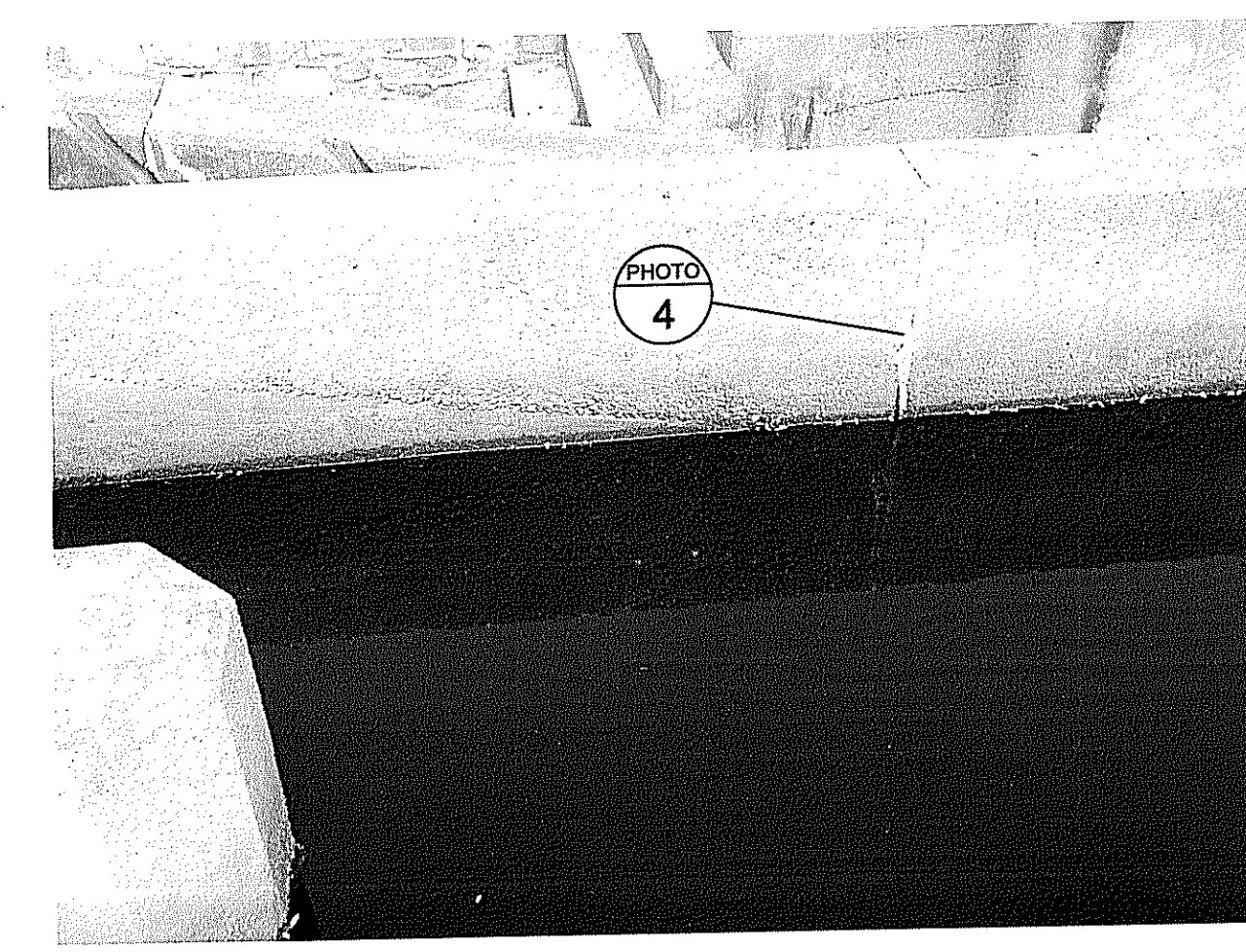
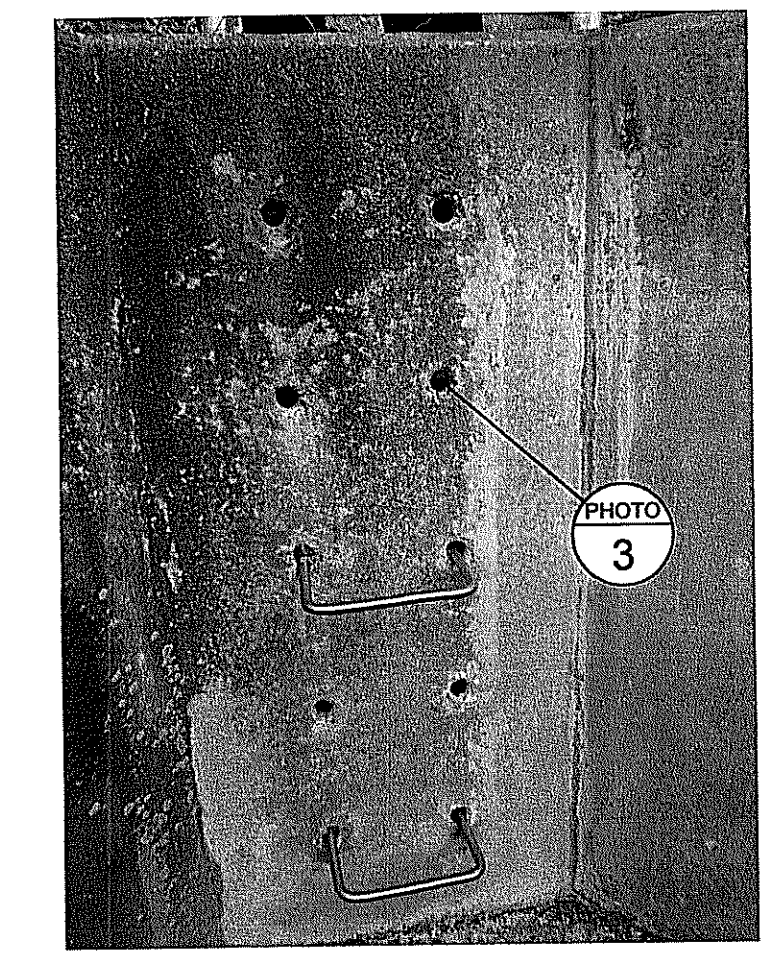
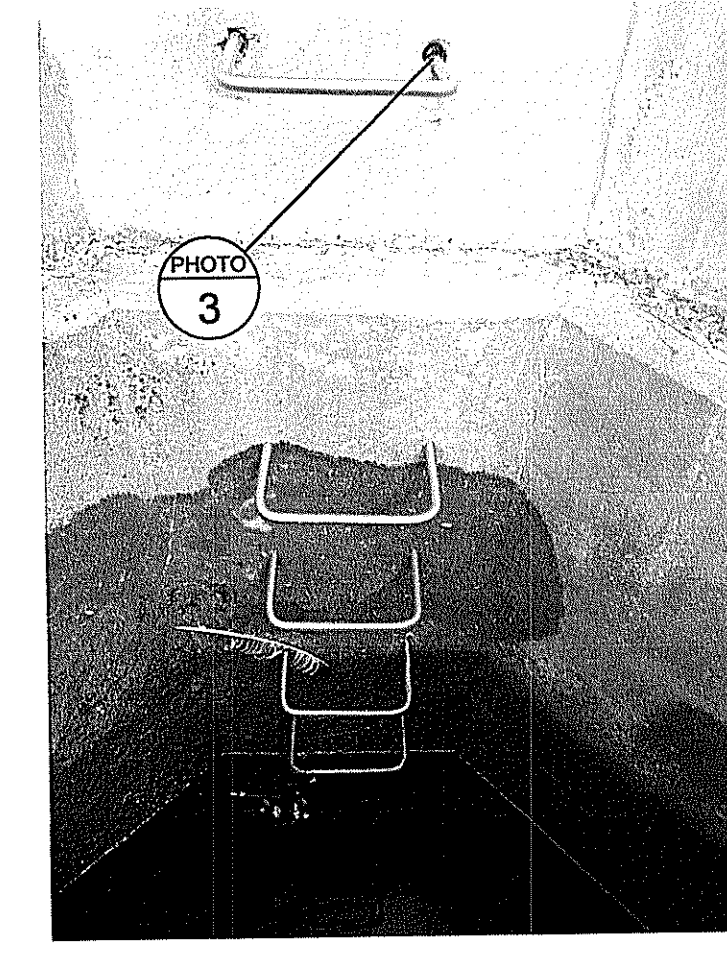
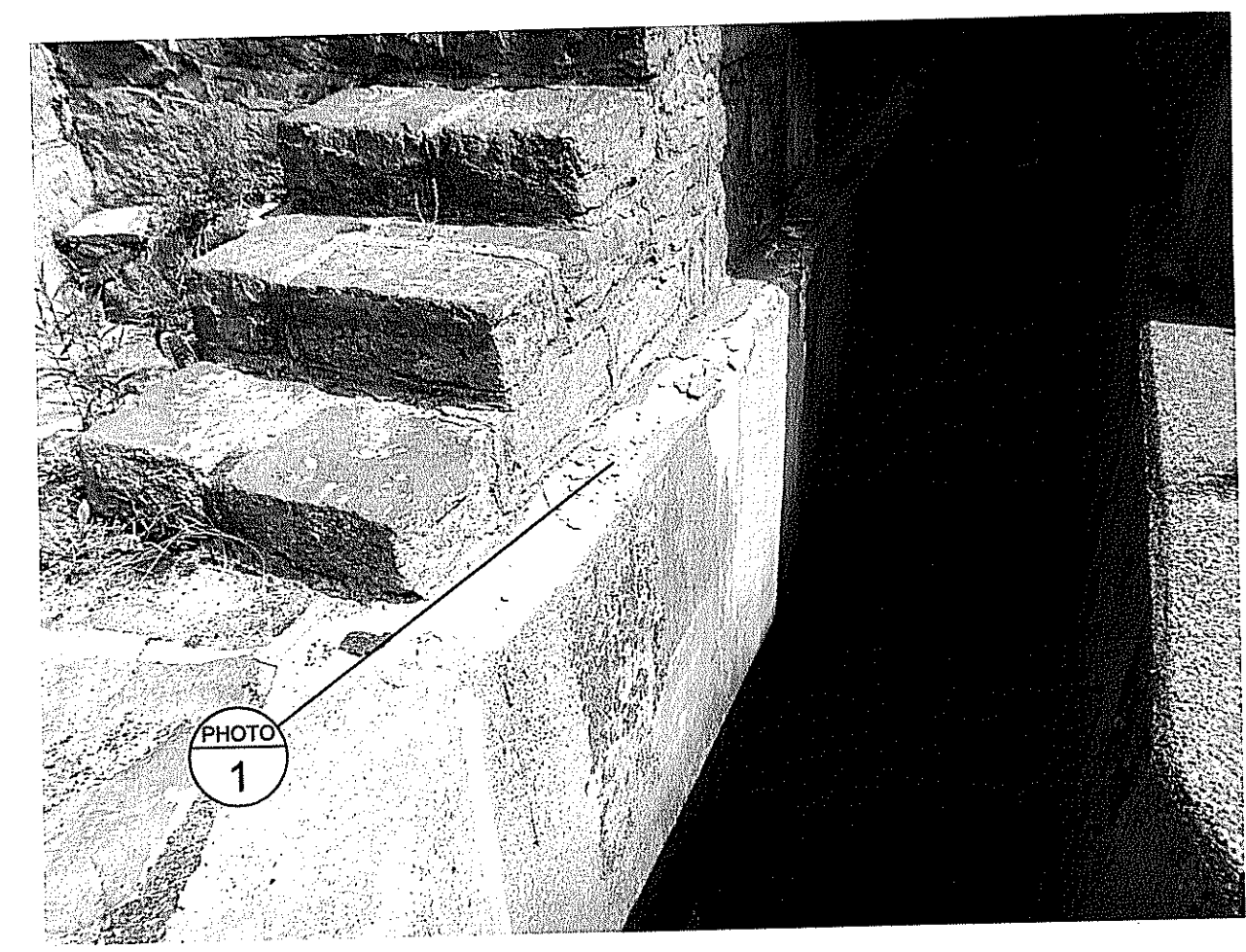
NOTES:
 1. CONTRACTOR SHALL PERFORM CONCRETE REPAIRS IN ACCORDANCE WITH THE DETAILS ON SHEET S-5 AND AT THE DIRECTION OF THE GOVERNMENT.

MAR 8 2013



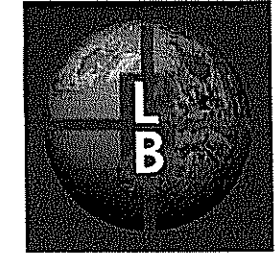
SOURCE:
 Spot elevation data is in NAVD 1988 (fall 2011), provided by Natural Resources Conservation Service. Fishway dimensions referenced from 1968 FISH LADDER SAUGATUCKET RIVER PEACE DALE Federal Aid Project AFSC-1-2 drawing set.

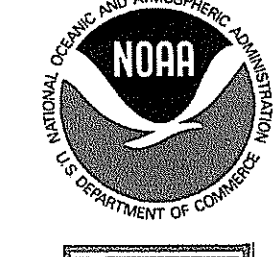
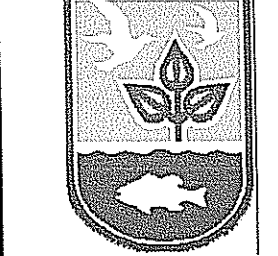
REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 MAR 2 5 2013 FILE # 13-0043
 DATED
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harber

PREPARED BY:

THE Louis Berger Group, Inc.
 ENGINEERS PLANNERS
 SCIENTISTS ECONOMISTS
 295 Promenade Street
 Providence, Rhode Island 02908

PREPARED FOR:


National Oceanic and Atmospheric Administration
 Restoration Center
 28 Tarzwell Drive
 Narragansett, Rhode Island 02882
Rhode Island Department of Environmental Management
 235 Promenade Street, Providence, Rhode Island 02908

90% Documents
 (NOT FOR CONSTRUCTION)
 SAUGATUCKET RIVER FISH PASSAGE
 IMPROVEMENTS
 Town of South Kingstown, Rhode Island
 PALISADES MILL SITE

CONCRETE REPAIR LOCATIONS

SHEET TITLE:
 SCALE: AS SHOWN DATE: JUNE 2012
 PROJECT MANAGER: LR
 PROJECT ENGINEER: AS
 CHECKED BY: CF SHEET No.
 DRAWN BY: AS
 JOB NUMBER: CJI-1986
C-5
 C-X Palisades 2012-11-29.dwg

GENERAL

1. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE GOVERNMENT BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
2. SHOP DRAWINGS FOR REINFORCING STEEL (INCLUDING ACCESSORIES), AND STRUCTURAL STEEL, SHALL BE SUBMITTED TO THE ENGINEER. FABRICATION SHALL NOT PROCEED UNTIL A STAMPED APPROVAL IS RECEIVED. ERECTION SHALL BE EXECUTED FROM APPROVED SHOP DRAWINGS ONLY.
3. A COMPLETE CONCRETE PLACEMENT SCHEDULE SHALL BE SUBMITTED TO THE GOVERNMENT AND A STAMPED ACCEPTANCE RECEIVED BEFORE ANY CONCRETE PLACEMENT CAN BE MADE.
4. UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWINGS ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.

CODE

1. INTERNATIONAL BUILDING CODE, 2009 EDITION AMENDED BY THE ARTICLES AND SECTIONS OF THE RHODE ISLAND STATE BUILDING CODE, 10TH EDITION.
2. DESIGN LIVE LOADS
GRATING: 100 PSF

FOUNDATIONS

1. CONSIST OF CONTINUOUS AND SPREAD FOOTINGS BEARING ON COMPACTED STRUCTURAL FILL PLACED ON UNDISTURBED NATURAL SOIL HAVING AN ALLOWABLE BEARING PRESSURE OF 2 KIPS PER SQUARE FOOT.
2. UNLESS OTHERWISE NOTED, FOUNDATIONS SHALL BE CENTERED UNDER SUPPORTED MEMBERS.
3. THE BOTTOM PERIMETER FOUNDATIONS SHALL BE AT LEAST 3 FT-4 INCHES BELOW FINISHED GRADE.
4. THE BOTTOM 3 INCHES OF FOOTING EXCAVATIONS SHALL BE FINISHED BY HAND SHOVEL.
5. BOTTOM OF EXCAVATIONS SHALL BE INSPECTED BY THE GOVERNMENT PRIOR TO THE PLACEMENT OF CONCRETE.
6. PLACE BACKFILL SIMULTANEOUSLY ON BOTH SIDES OF WALLS TO THE GRADES INDICATED.
7. PROVIDE FORMWORK FOR ALL FOOTINGS AND WALLS. EARTH FORMED FOUNDATIONS ARE NOT ALLOWED.
8. FOUNDATIONS SHALL BEAR ON COMPACTED SUBGRADE MATERIALS.

CONCRETE

1. CONCRETE SHALL BE A MIX DESIGNED FOR ULTIMATE STRENGTH IN ACCORDANCE WITH THE ACI 211.1 TO ACHIEVE THE FOLLOWING 28-DAY COMPRESSIVE STRENGTHS:
FISHWAY
4000 PSI, NORMAL WEIGHT
MAX SLUMP = 3 INCHES (WITHOUT PLANT WATER REDUCER)
MAX SLUMP = 4 FT-6 INCHES (WITH PLANT ADDED WATER REDUCER)
AIR ENTRAINMENT = 6%±1.5%
2. CONCRETE SHALL NOT BE CAST IN WATER OR ON FROZEN GROUND.
3. TOP OF FOUNDATION WALLS SHALL BE SMOOTH AND LEVEL.
4. KEYS SHALL BE 2 INCHES X 4 INCHES, WITH BEVELED SIDES, UNLESS OTHERWISE NOTED.
5. HORIZONTAL CONSTRUCTION JOINTS SHALL BE AS INDICATED ON THE DRAWINGS. THE GOVERNMENT SHALL APPROVE ALL VERTICAL CONSTRUCTION JOINTS. CONSTRUCTION JOINTS SHALL BE FORMED WITH A KEY AND REINFORCING SHALL BE LAPPED TO DEVELOP THE FULL TENSION CAPACITY OF THE (SMALLER) BAR.
6. CONCRETE WALLS SHALL HAVE CONTRACTION OR CONSTRUCTION JOINTS SPACED NO MORE THAN 60'-0" ON CENTER.
7. EXPOSED CONCRETE SHALL BE RUBBED IMMEDIATELY AFTER REMOVAL OF FORMS.
8. OPENINGS IN CONCRETE WALLS SHALL BE LOCATED, SIZED AND REINFORCED (WITH THE EXCEPTION OF SMALL OPENINGS AND/OR SLEEVES OF A SIZE THAT WILL NOT DISPLACE OR INTERRUPT THE CONTINUITY OF THE REINFORCING) AS SHOWN ON RESPECTIVE DETAILS. ANY ALTERATIONS REQUIRE APPROVAL OF THE GOVERNMENT.
9. DO NOT BACKFILL FOUNDATION WALLS UNTIL THE CONCRETE HAS BEEN IN PLACE FOR SEVEN DAYS AND ATTAINED 75% OF ITS DESIGN COMPRESSIVE STRENGTH.

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE DEFORMED BARS, FREE FROM LOOSE RUST AND SCALE, AND CONFORMING TO ASTM A615, GRADE 60.
2. CLEAR CONCRETE COVER OVER BARS SHALL BE AS FOLLOWS (SEE ACI 318 FOR CONDITIONS NOT NOTED):
FOOTINGS: 3 INCHES (BOTTOM), 2 INCHES (TOP AND SIDE)
WALLS: 2 INCHES (SIDE)
3. ACCESSORIES SHALL HAVE UPTURNED LEGS AND BE PLASTIC-DIPPED AFTER FABRICATION.
4. ACCESSORIES FOR REINFORCING SHALL BE IN ACCORDANCE WITH ACI CURRENT EDITION.
5. LAP REINFORCING TO DEVELOP THE FULL TENSION CAPACITY OF THE (SMALLER) BAR.
6. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD BECAUSE OF SLEEVES, DUCT OPENINGS OR RECESSORS. BARS MAY BE MOVED ASIDE WITHOUT CHANGE IN LEVEL WITH THE PRIOR APPROVAL OF THE GOVERNMENT.

STRUCTURAL STEEL

1. FABRICATE AND INSTALL STRUCTURAL STEEL IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN," AND THE "CODE OF STANDARD PRACTICE" OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE "STRUCTURAL WELDING CODE" OF THE AMERICAN WELDING SOCIETY.
2. STRUCTURAL STEEL CHANNELS SHALL CONFORM TO ASTM A572, GRADE 50. STRUCTURAL TUBE COLUMNS SHALL BE ASTM A500, GRADE B. STRUCTURAL STEEL PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.

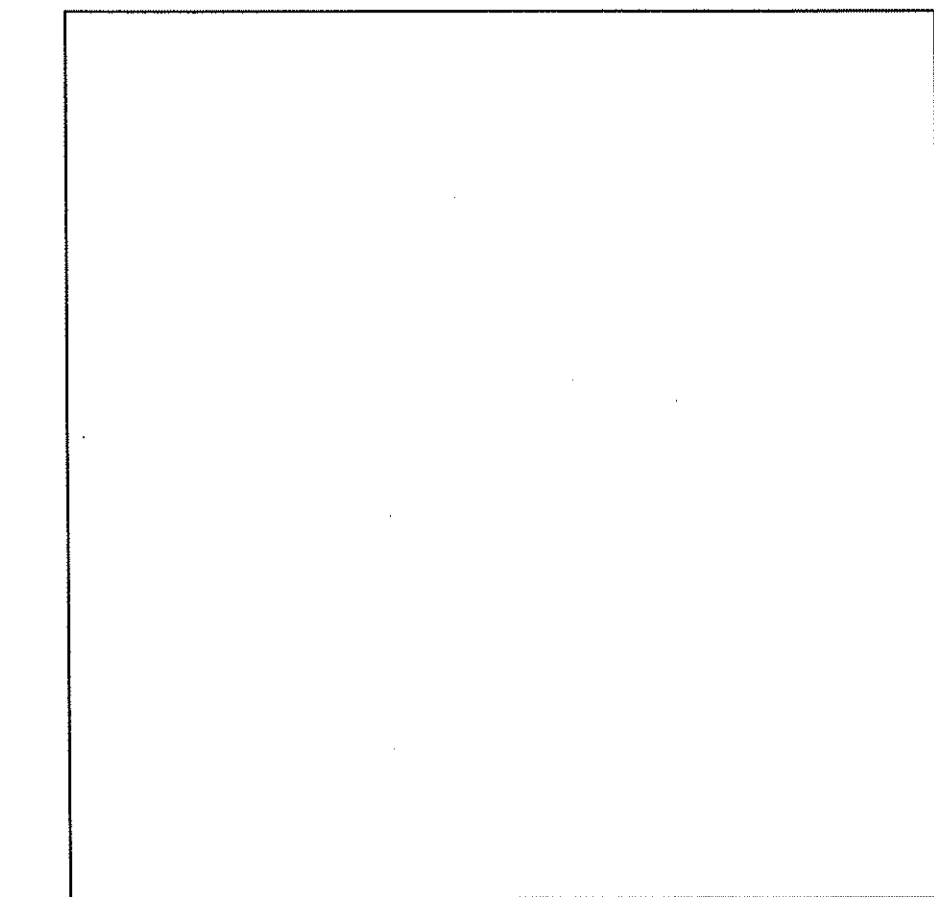
WOOD

1. WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN WOOD COUNCIL, ANSI/AF&PA, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 1997 (NDS)" INCLUDING "DESIGN VALUES FOR WOOD CONSTRUCTION", NATIONAL FOREST PRODUCTS ASSOCIATION.
2. NEW WOOD FOR STRUCTURAL USE SHALL HAVE A MOISTURE CONTENT AS SPECIFIED IN THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION."

STRUCTURAL TESTS AND INSPECTIONS

1. STRUCTURAL TESTS, INSPECTIONS, AND REPORTS FOR CONCRETE CONSTRUCTION, STEEL CONSTRUCTION, MASONRY CONSTRUCTION, SOILS, AND OTHER APPLICABLE CONSTRUCTION SHALL BE SUBMITTED TO THE GOVERNMENT IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
2. REMOVE AND REPLACE WORK WHERE TEST RESULTS INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.
3. CONCRETE TESTING: TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C 172 SHALL BE PERFORMED ACCORDING TO THE FOLLOWING REQUIREMENTS:
 - A. TESTING FREQUENCY: OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. WHEN FREQUENCY OF TESTING WILL PROVIDE FEWER THAN FIVE COMPRESSIVE-STRENGTH TESTS FOR EACH CONCRETE MIXTURE, TESTING SHALL BE CONDUCTED FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE ARE USED.
 - B. SLUMP: ASTM C 143/C 143M; ONE TEST AT A POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
 - C. AIR CONTENT: ASTM C 231, PRESSURE METHOD, FOR NORMAL-WEIGHT CONCRETE; ONE TEST FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE.
 - D. CONCRETE TEMPERATURE: ASTM C 1064; ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW AND WHEN 80 DEG F AND ABOVE, AND ONE TEST FOR EACH COMPOSITE SAMPLE.
 - E. COMPRESSION TEST SPECIMENS: ASTM C 31. CAST AND LABORATORY CURE TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE. CAST AND FIELD CURE TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
 - F. COMPRESSIVE-STRENGTH TESTS: ASTM C 39; TEST ONE SET OF TWO LABORATORY-CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS. TEST ONE SET OF TWO FIELD-CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS.
 - G. TEST RESULTS SHALL BE REPORTED IN WRITING TO THE GOVERNMENT, CONCRETE MANUFACTURER, AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE-STRENGTH TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTING AGENCY, LOCATION OF CONCRETE BATCH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7- AND 28- DAY TESTS.
 - H. ADDITIONAL TESTS: TESTING AND INSPECTING AGENCY SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY THE GOVERNMENT.
 - I. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.
 - J. CORRECT DEFICIENCIES IN THE WORK THAT TEST REPORTS AND INSPECTIONS INDICATE DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS.

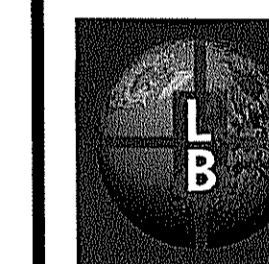
LEGEND



NOT TO SCALE

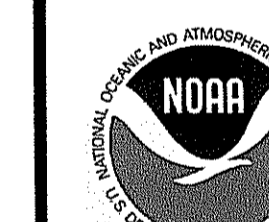
REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-
-	-	-

PREPARED BY:



The Louis Berger Group, Inc.
ENGINEERS PLANNERS
SCIENTISTS ECONOMISTS
295 Promenade Street
Providence, Rhode Island 02908

PREPARED FOR:



National Oceanic and Atmospheric Administration
Restoration Center
28 Tarzwell Drive
Narragansett, Rhode Island 02882



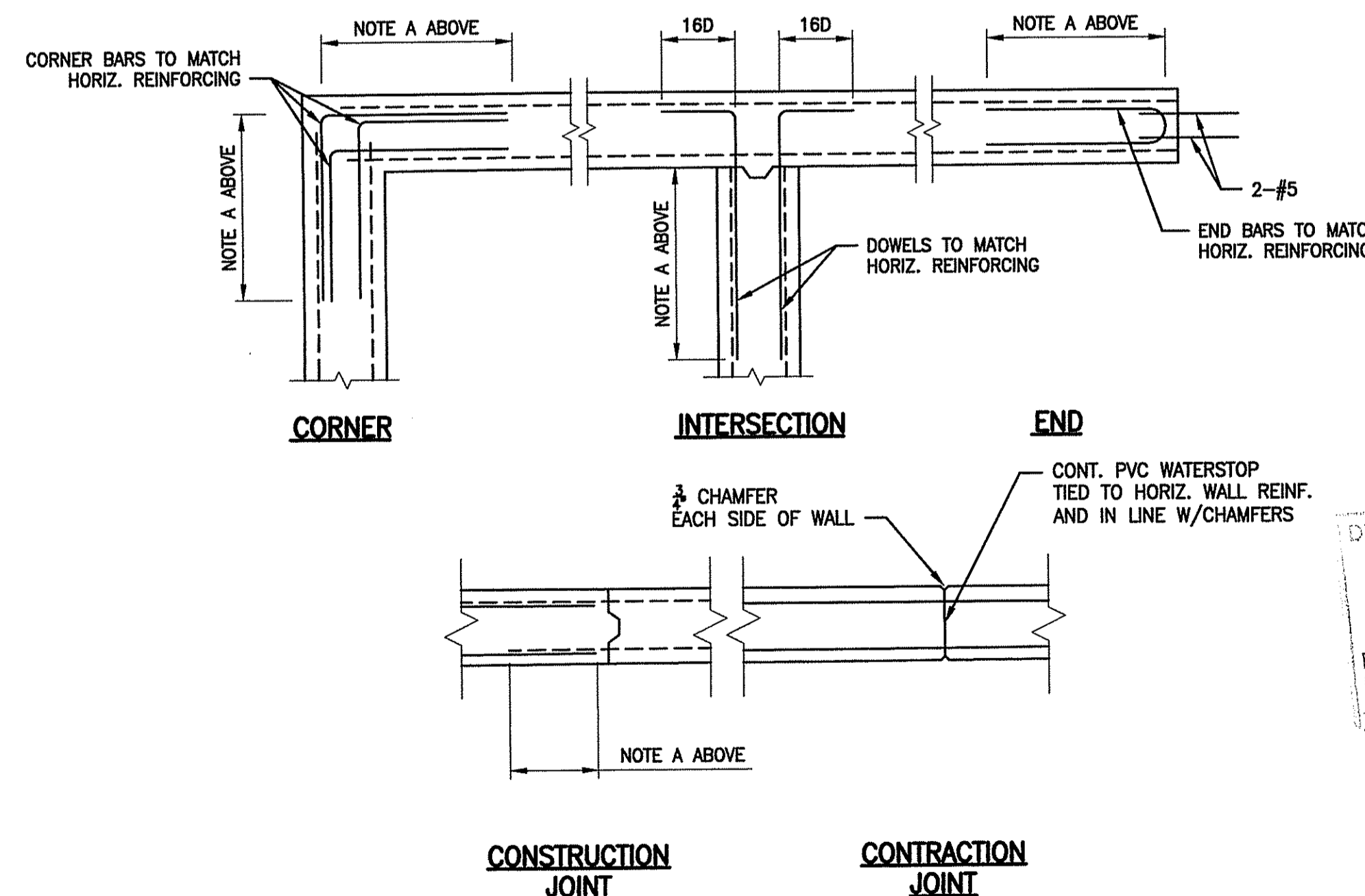
Rhode Island Department of Environmental Management
277 Great Neck Rd, West Kingstown,
Rhode Island 02892

90% Documents
(NOT FOR CONSTRUCTION)

SAUGATUCKET RIVER FISH PASSAGE
IMPROVEMENTS
Town of South Kingstown, Rhode Island
PALISADES MILL SITE

STRUCTURAL NOTES AND TYPICAL DETAILS

SHEET TITLE:		DATE: DECEMBER 2012	
SCALE:	AS SHOWN		
PROJECT MANAGER:	LR		
PROJECT ENGINEER:	CW		
CHECKED BY:	PFK	SHEET No.	
DRAWN BY:	MJC	S-1	
JOB NUMBER:	J11986/CM1931		
PALISADES-S1-Notes.dwg			

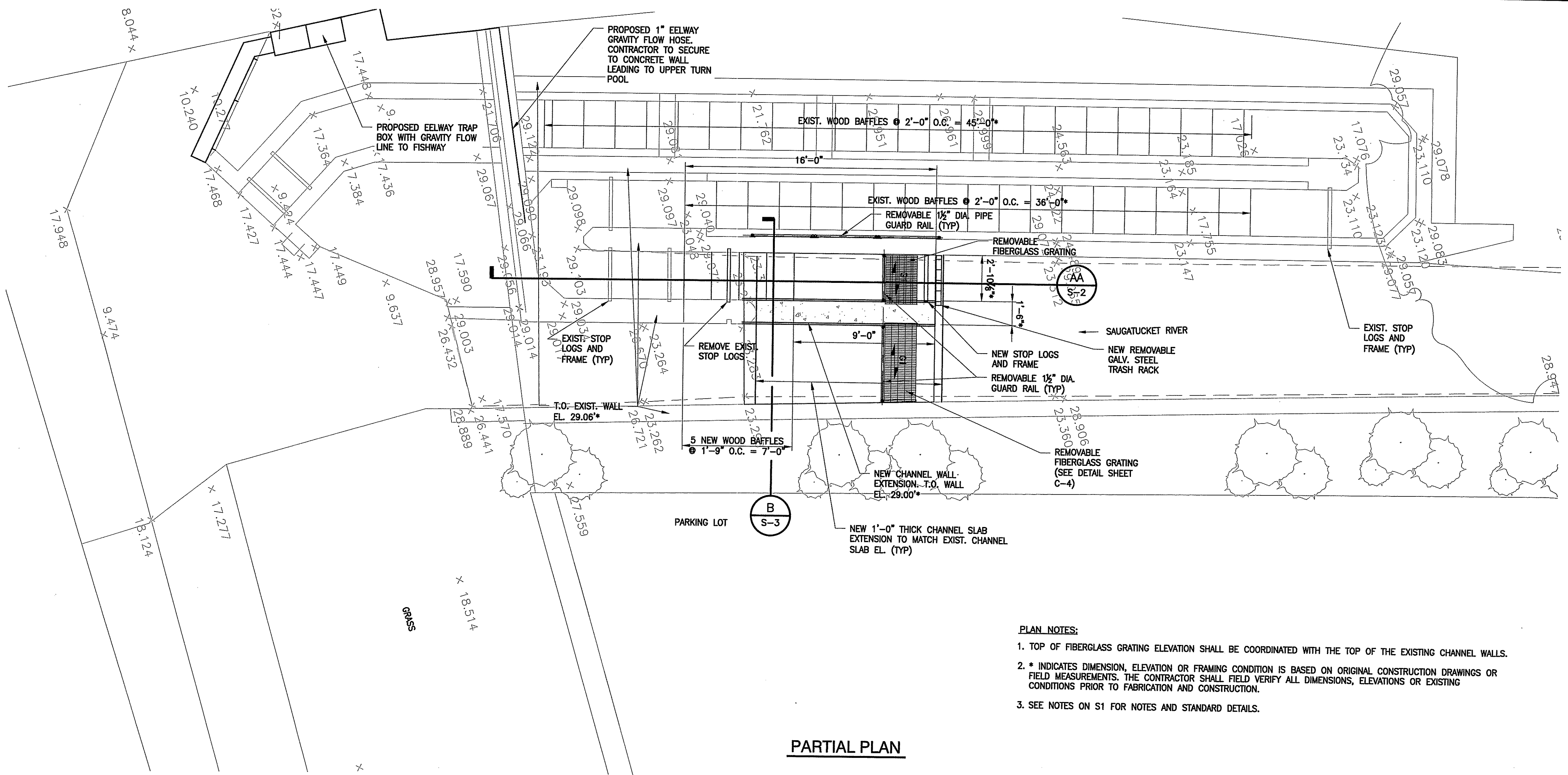


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 25 2013 FILE # 13-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Harte

1 TYPICAL CONCRETE WALL DETAILS
NOT TO SCALE

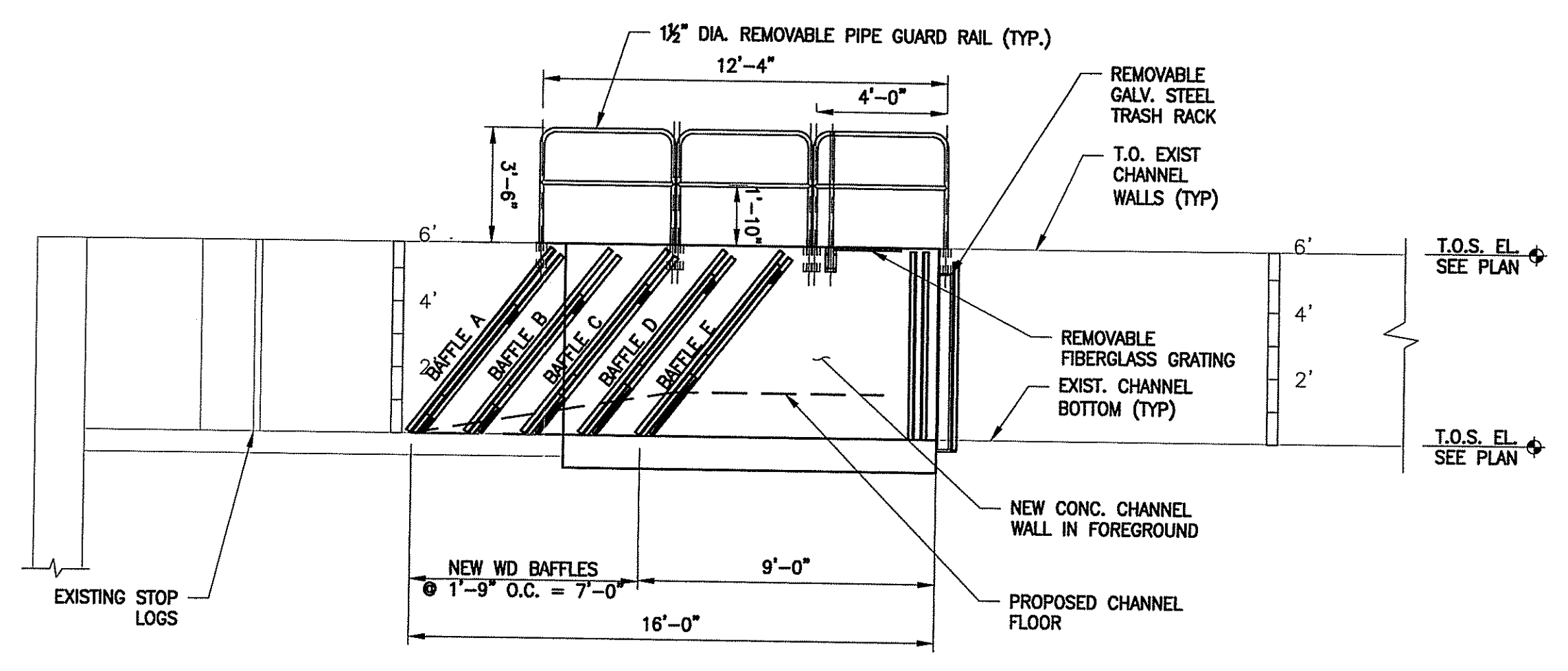
MAR 8 2013

Dec 19, 2012 - 2:13pm F:\PROJECT\1986_Saugatucket River Fishway Improvements\CADD\DRAWINGS\CM1931_FISHWAY - Palisades\PALISADES-S1-Notes.dwg



PARTIAL PLAN

- PLAN NOTES:**
1. TOP OF FIBERGLASS GRATING ELEVATION SHALL BE COORDINATED WITH THE TOP OF THE EXISTING CHANNEL WALLS.
 2. * INDICATES DIMENSION, ELEVATION OR FRAMING CONDITION IS BASED ON ORIGINAL CONSTRUCTION DRAWINGS OR FIELD MEASUREMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS OR EXISTING CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
 3. SEE NOTES ON S1 FOR NOTES AND STANDARD DETAILS.

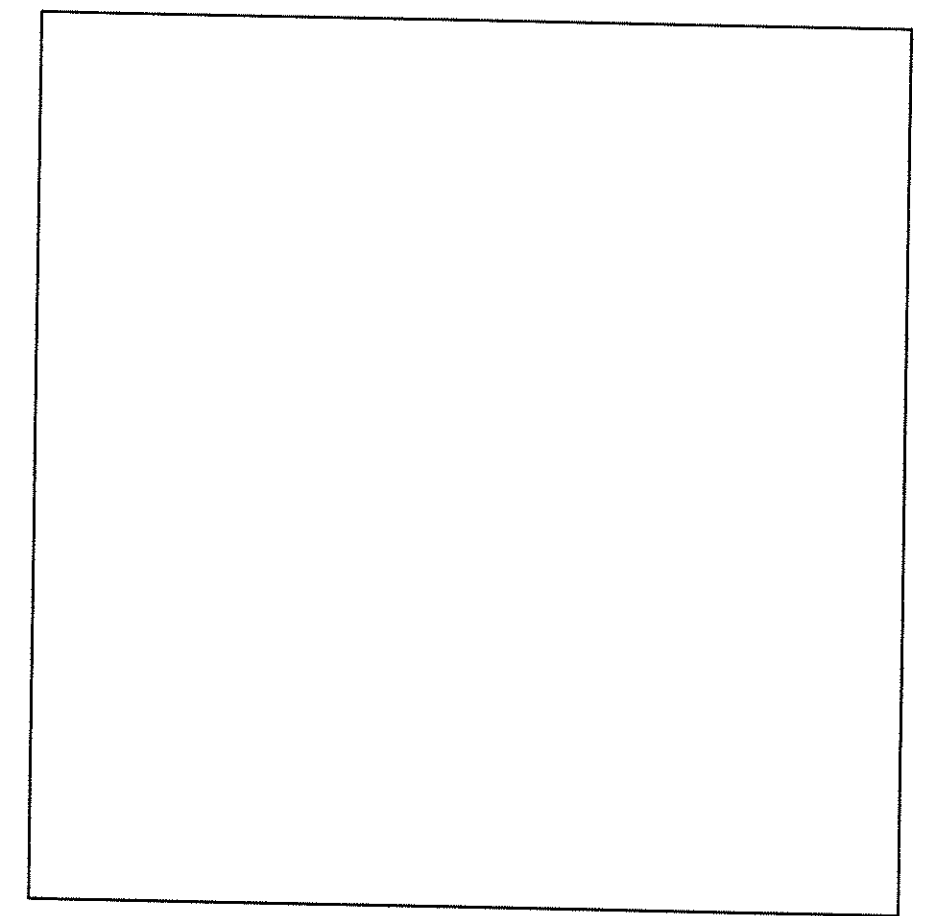


SECTION A-A

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 25 2013 FILE # 13-0043
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

LEGEND



SCALE IN FEET
4 0 4 8

SOURCE:
Spot elevation data provided by Natural Resources Conservation Service and Service in NAVD 1988 (fall 2011). Fishway dimensions referenced from 1968 FISH LADDER SAUGATUCKET RIVER PEACE DALE Federal Aid Project AFSC-1-2 drawing set. Parcel boundaries estimated from tax maps.

REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

PREPARED BY:
THE Louis Berger Group, Inc.
ENGINEERS PLANNERS
SCIENTISTS ECONOMISTS
295 Promenade Street
Providence, Rhode Island 02908

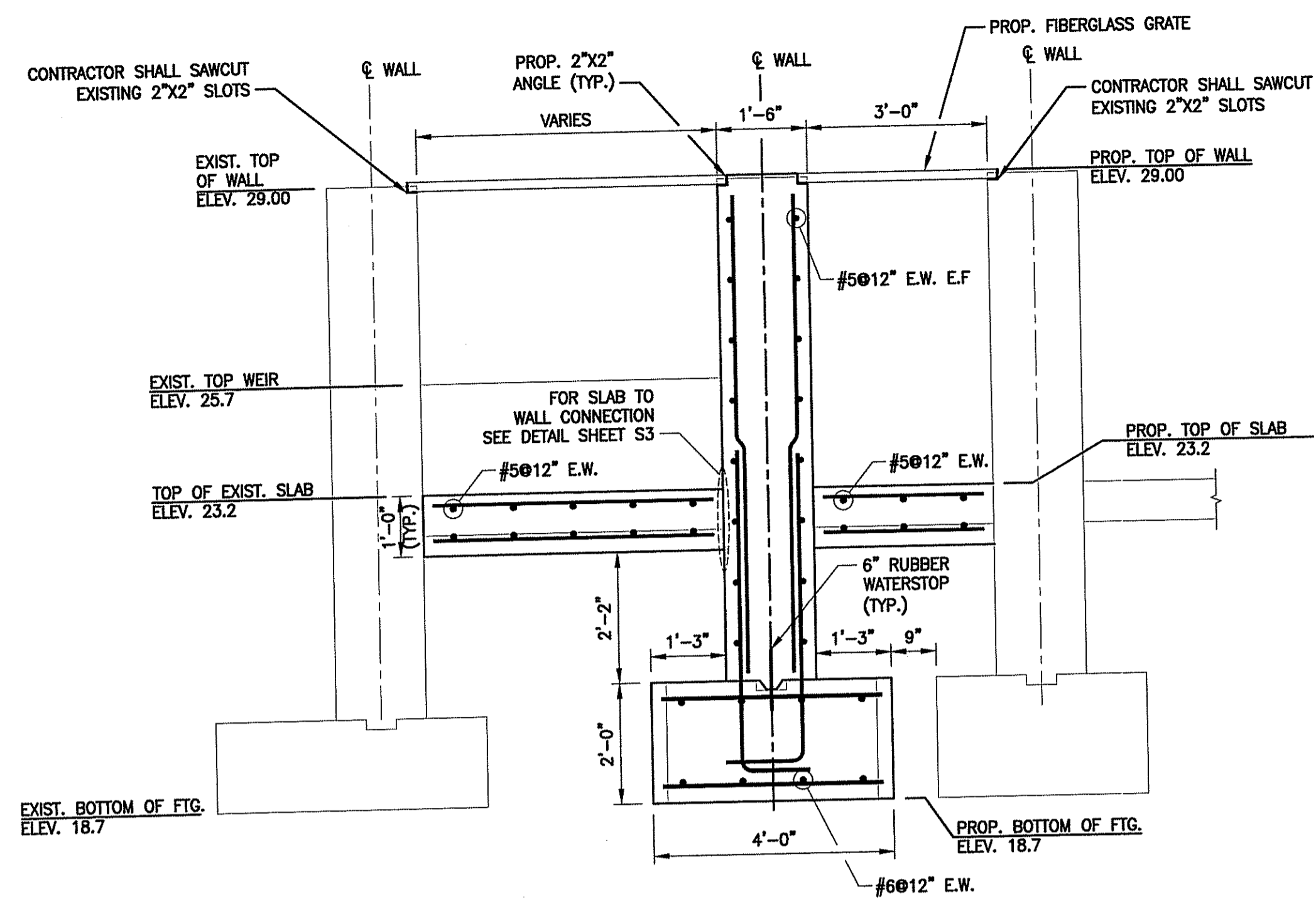
PREPARED FOR:
National Oceanic and Atmospheric Administration
Restoration Center
28 Tarzwell Drive
Narragansett, Rhode Island 02882
Rhode Island Department of Environmental Management
277 Great Neck Rd, West Kingstown, Rhode Island 02892

90% Documents
(NOT FOR CONSTRUCTION)
SAUGATUCKET RIVER FISH PASSAGE IMPROVEMENTS
Town of South Kingstown, Rhode Island
PALISADES MILL SITE

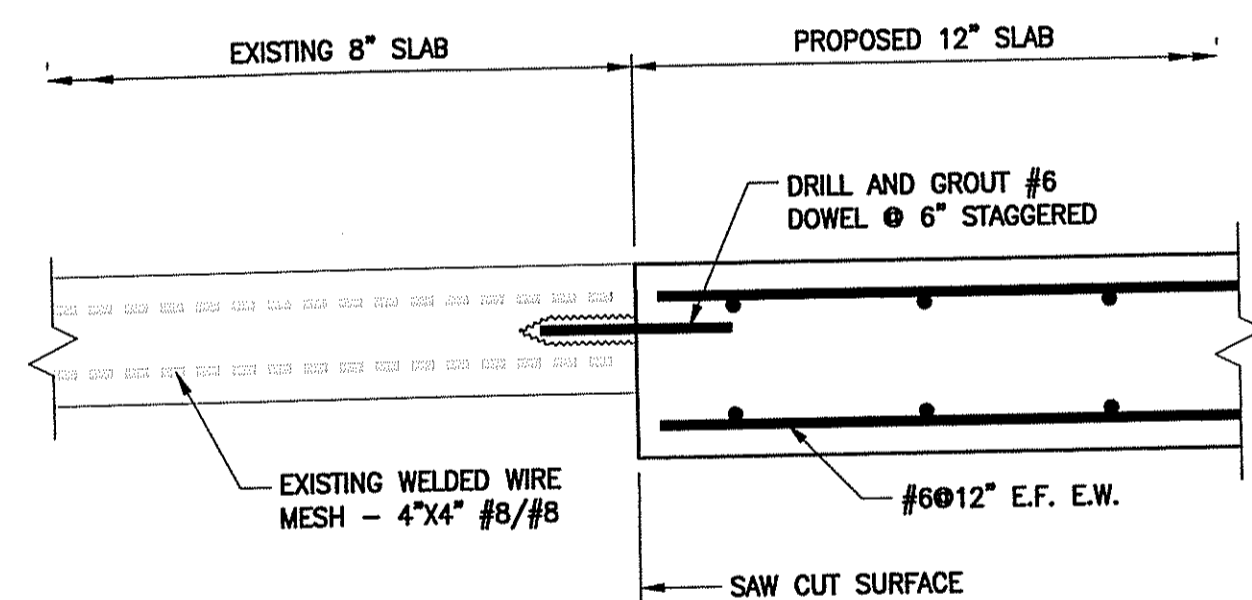
PROPOSED FISH PASSAGE PARTIAL PLAN & SECTIONS

SHEET TITLE:

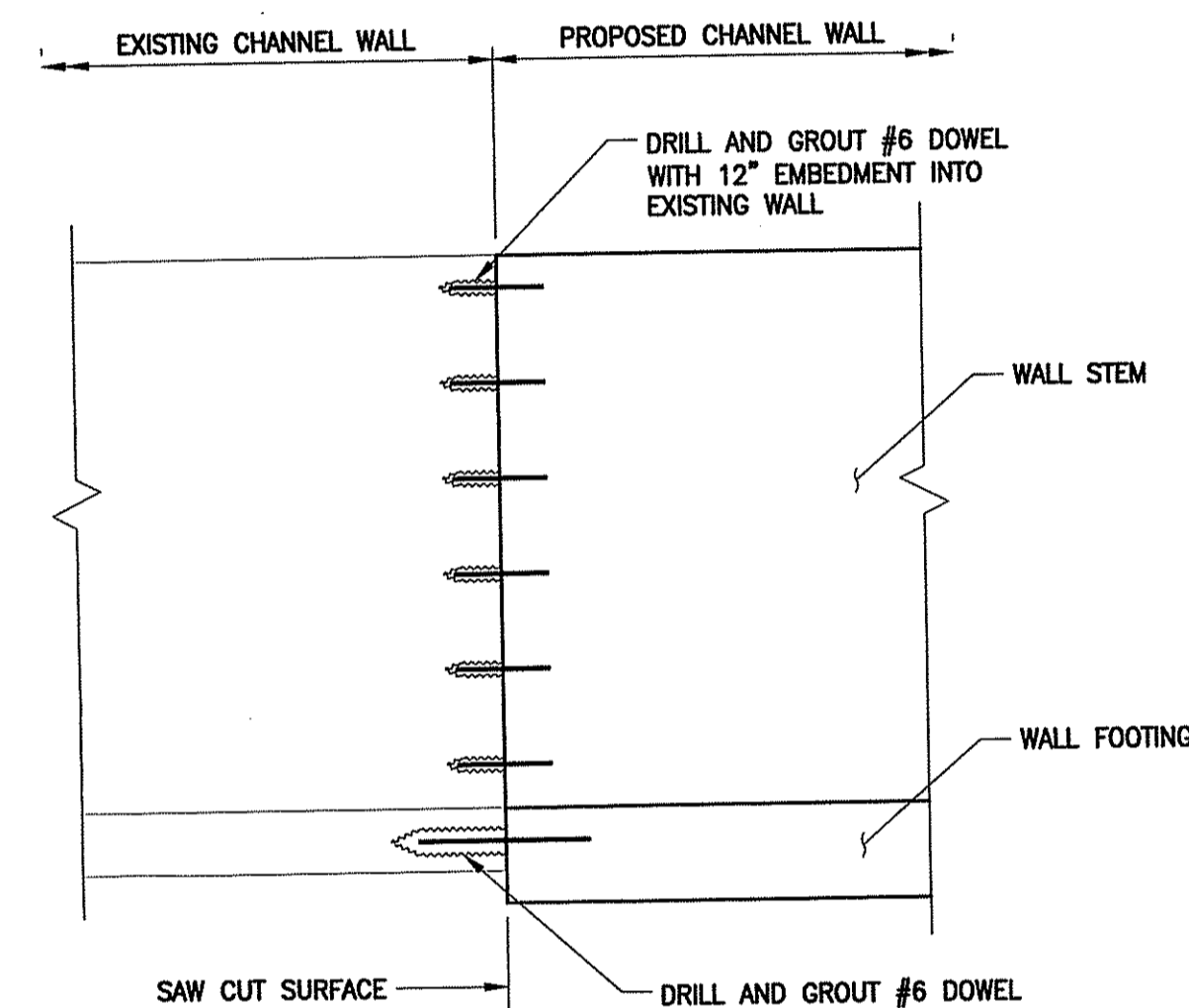
SCALE:	AS SHOWN	DATE:	DECEMBER 2012
PROJECT MANAGER:	LR		
PROJECT ENGINEER:	CW		
CHECKED BY:	PFK	SHEET No.	
DRAWN BY:	MJC		S-2
JOB NUMBER:	J1986/CM1931		
PALISADES-S2-PARTIAL PLAN.dwg			



SECTION B
SCALE: 1/2" = 1'-0" (LOOKING DOWNSTREAM)

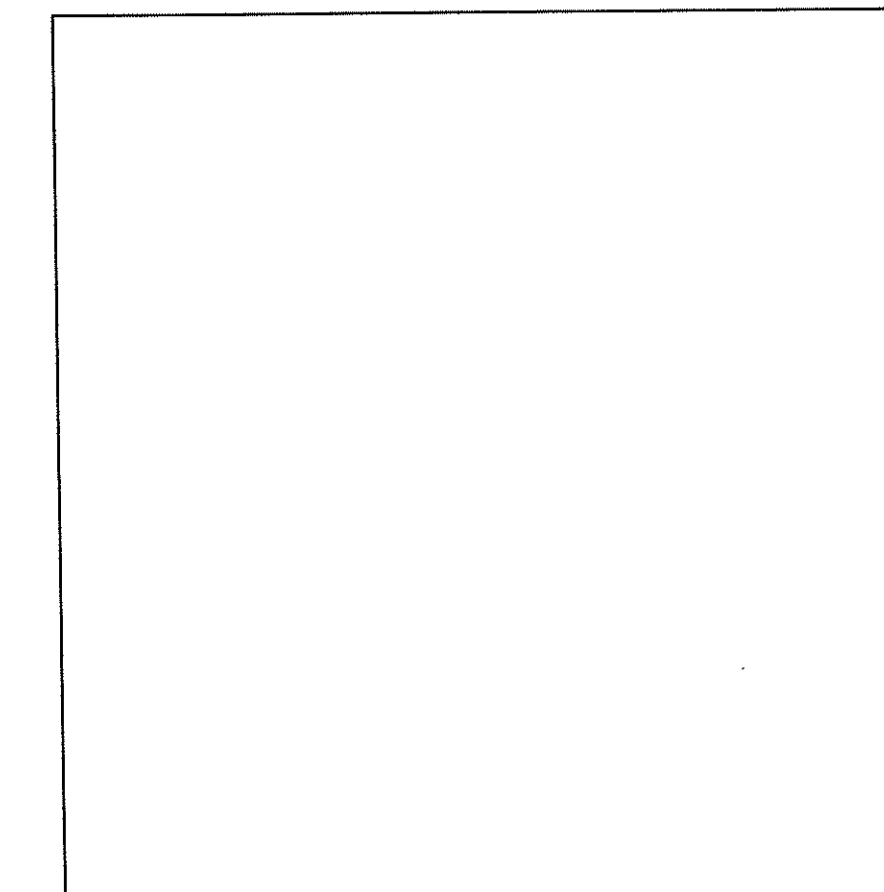


EXISTING/PROPOSED SLAB INTERFACE DETAIL
NOT TO SCALE:

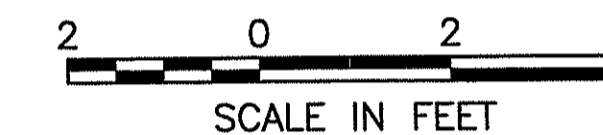


EXISTING/PROPOSED WALL INTERFACE DETAIL
NOT TO SCALE:

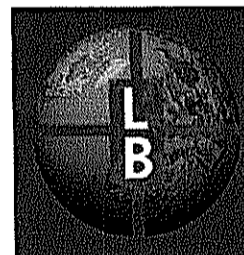
LEGEND





MAR 8 2013



REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

PREPARED BY:

THE Louis Berger Group, Inc.
 ENGINEERS PLANNERS .
 SCIENTISTS ECONOMISTS
 295 Promenade Street
 Providence, Rhode Island 02908

PREPARED FOR:

National Oceanic and Atmospheric Administration
 Restoration Center
 28 Tarzwell Drive
 Narragansett, Rhode Island 02882

Rhode Island Department of Environmental Management
 277 Great Neck Rd, West Kingstown, Rhode Island 02892

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED MAR 25 2013 FILE # 13-0043
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

90% Documents
 (NOT FOR CONSTRUCTION)
 SAUGATUCKET RIVER FISH PASSAGE
 IMPROVEMENTS
 Town of South Kingstown, Rhode Island
 PALISADES MILL SITE

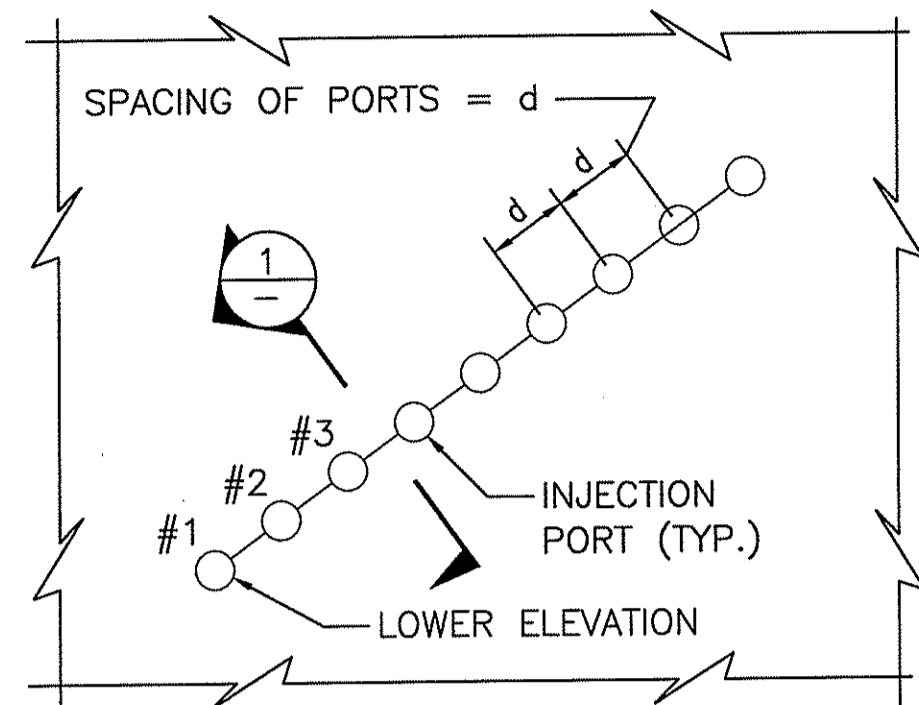
PROPOSED FISH PASSAGE FOUNDATION DETAILS

SHEET TITLE:
 SCALE: AS SHOWN DATE: DECEMBER 2012
 PROJECT MANAGER: LR
 PROJECT ENGINEER: CW
 CHECKED BY: PFK SHEET No.
 DRAWN BY: MJC
 JOB NUMBER: J11986/CM1931
 PALISADES-S3-Foundation Dets.dwg

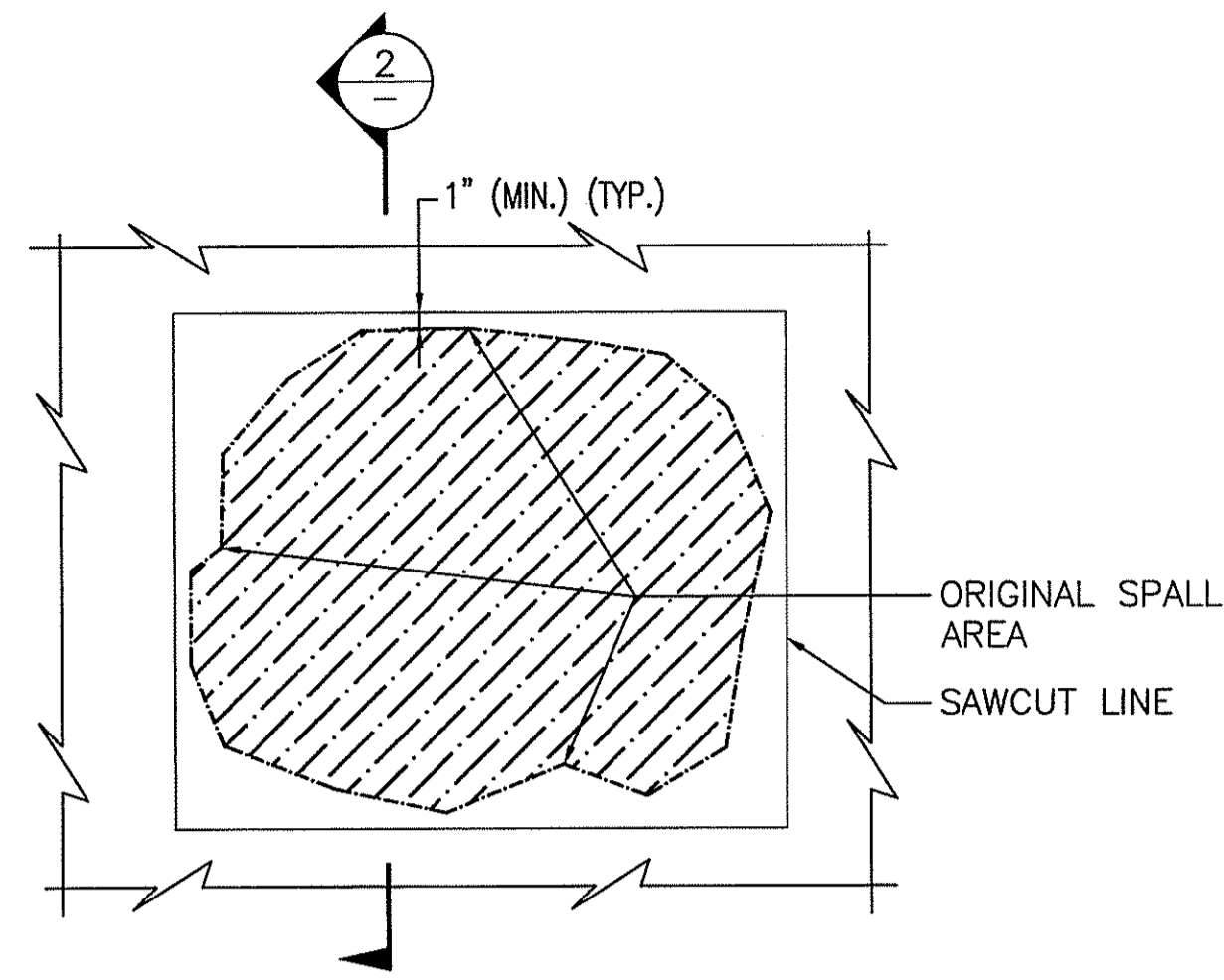
S-3

Dec 19, 2012 - 12:29pm F:\PROJECT\1986_Saugatucket River Fishway Improvements\CAD\DRAWINGS\COM\1931 FISHWAY - Palisades\PALISADES-S4-Concrete Repair Dets.dwg

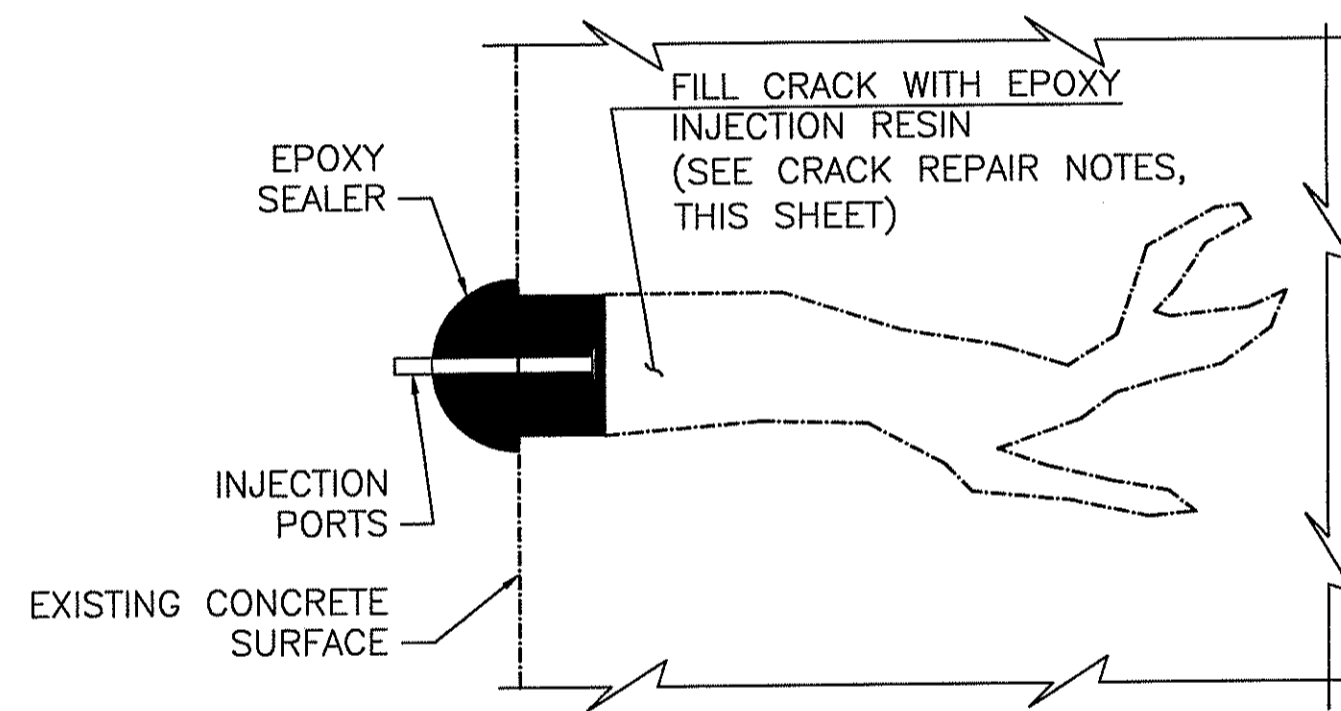
CRACK WIDTH	d
$\frac{1}{32}$ " TO $\frac{1}{8}$ "	6"
OVER $\frac{1}{8}$ "	10"



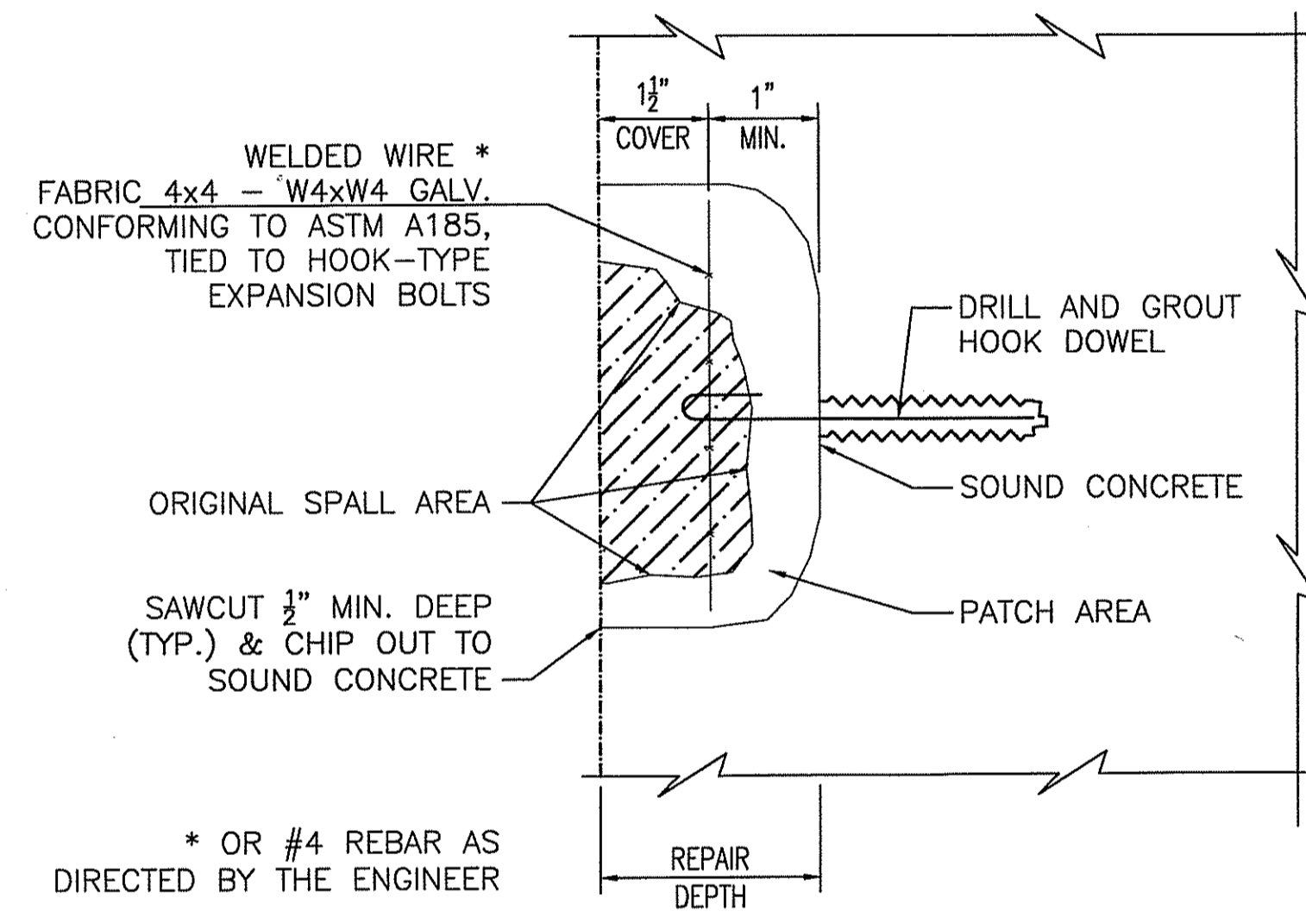
CONCRETE CRACK REPAIR DETAIL
NOT TO SCALE



CONCRETE SPALL REPAIR DETAIL
NOT TO SCALE



SECTION 1
NOT TO SCALE



SECTION 2
NOT TO SCALE

NOTES FOR EXISTING CONCRETE DETERIORATION:

CONCRETE DETERIORATION IS LOCATED AT THE EXISTING DRAIN GATE STRUCTURE AND SHALL BE REPAIRED PRIOR TO INSTALLATION OF PROPOSED OUTMIGRATION STRUCTURE. EXTENT OF CONCRETE DETERIORATION TO BE IDENTIFIED AND DETERMINED IN THE FIELD. EXTENT OF REPAIR SHALL BE APPROVED BY THE GOVERNMENT PRIOR TO THE REPAIR TAKING PLACE.

1. DETERIORATION DESIGNATION:

- CRACK - SINGLE OR INDIVIDUAL CRACK.
- SPALL - EXPOSED AGGREGATE.
- FULL DEPTH - MAP CRACKING, MISSING, HOLLOW SOUND.
- EXPANSION JOINT - MISSING JOINT MATERIAL

GENERAL NOTES FOR CONCRETE SPALL REPAIR:

1. SAWCUT THE EDGES OF THE AREA TO BE REPAIRED $\frac{1}{2}$ " DEEP AS SHOWN ON THE REPAIR DETAILS, THIS DRAWING.
2. REMOVE ALL UNSOUND AND DETERIORATED CONCRETE.
3. CLEAN CONCRETE SURFACES TO BE REPAIRED IN ACCORDANCE WITH SPECIFICATIONS.
4. PROVIDE WELDED WIRE FABRIC AS SHOWN ON THE REPAIR DETAIL.
5. PROVIDE FORMS TO ATTAIN ORIGINAL PLUMB OR LEVEL SURFACES.
6. PLACE CONCRETE PATCH MATERIAL IN ACCORDANCE WITH SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS.
7. THE GOVERNMENT SHALL PERFORM A THOROUGH SOUNDING AND INSPECTION AND MARK THE AREAS WHICH NEED REPAIR AND DIRECT THE CONTRACTOR ABOUT THE KINDS OF REPAIR.
8. LOOSE CONCRETE SHALL BE REMOVED FROM HOLLOW AREAS AND THE RESULTING SPALLS SHALL BE REPAIRED AS DIRECTED ON THIS SHEET.
9. THE CLEANING, REMOVAL OF LOOSE CONCRETE DEBRIS AND THE FINAL REPAIR OF CONCRETE AROUND SIGNAL CABLES SHALL BE PERFORMED USING HAND TOOLS ONLY.
10. SEE SPECIAL PROVISION FOR REPAIR.

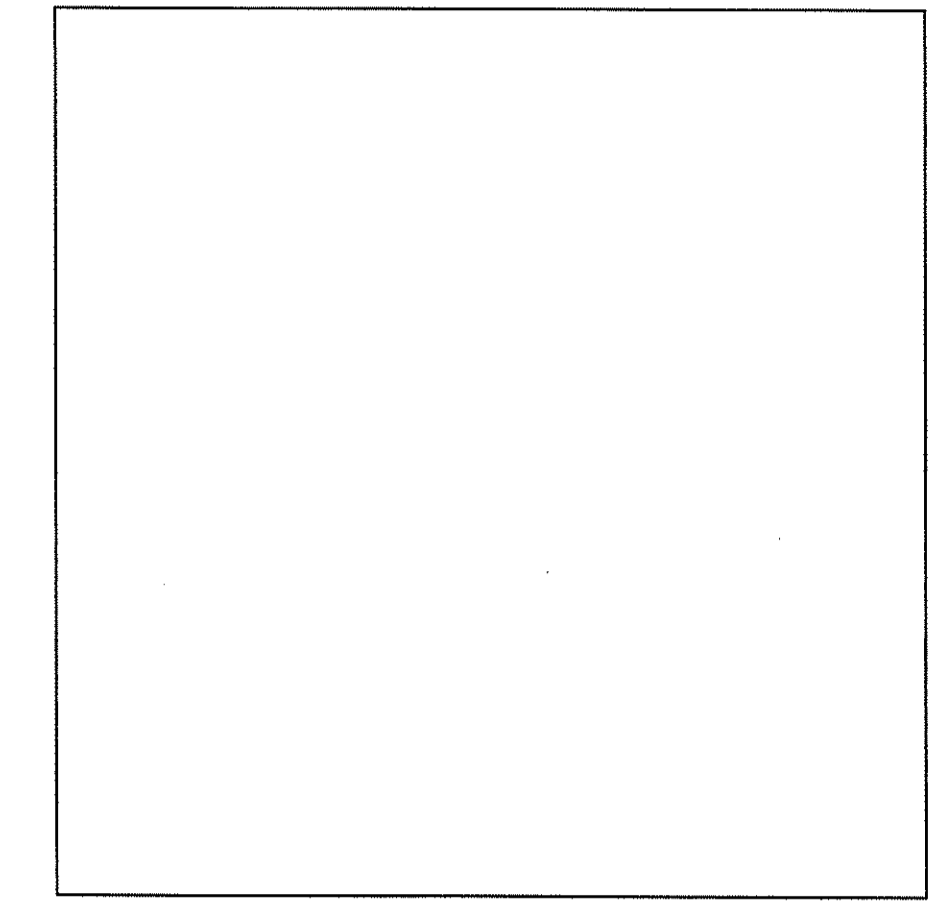
CRACK REPAIR NOTES:

1. CRACK REPAIR SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS.
2. THE INJECTION RESIN SHALL BE A POLYURETHANE RESIN INJECTION.
3. SEE SPECIAL PROVISION FOR REPAIR.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED MAR 25 2013 FILE # 13-0093
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Martin

LEGEND



MAR 8 2013

REV.	DESCRIPTION	DATE
-	-	-
-	-	-
-	-	-

PREPARED BY:
 THE Louis Berger Group, Inc.
ENGINEERS PLANNERS
SCIENTISTS ECONOMISTS
295 Promenade Street
Providence, Rhode Island 02908

PREPARED FOR:
 National Oceanic and Atmospheric Administration Restoration Center
28 Tarzwell Drive
Narragansett, Rhode Island 02882

Rhode Island Department of Environmental Management
277 Great Neck Rd, West Kingstown, Rhode Island 02892

90% Documents
(NOT FOR CONSTRUCTION)
SAUGATUCKET RIVER FISH PASSAGE IMPROVEMENTS
Town of South Kingstown, Rhode Island
PALISADES MILL SITE

PROPOSED FISH PASSAGE CONCRETE REPAIR DETAILS
SHEET TITLE:
SCALE: AS SHOWN DATE: DECEMBER 2012
PROJECT MANAGER: LR
PROJECT ENGINEER: CW
CHECKED BY: PFK SHEET No.
DRAWN BY: MJC
JOB NUMBER: J11986/CM1931
PALISADES-S4-Concrete Repair Dets.dwg

S-4