

GENERAL NOTES:

- TOPOGRAPHY, SPOT GRADES AND STREET LINES WERE TAKEN FROM PLAN DEVELOPED BY NATIONAL LAND SURVEYORS-DEVELOPERS, INC., 42 HAMILT AVENUE, WOONSOCKET, RI, DATED APRIL 2014 ENTITLED "PAWTUXET RIVER AUTHORITY ASSESSORS PLAT 12 SECTION 4 LOT 3137 LIBERA STREET, CRANSTON, RHODE ISLAND.
- IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES, GRADES, AND DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF ANY CONSTRUCTION. REPORT TO THE ENGINEER ALL OBSERVATIONS AND DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.
- THE CONTRACTOR IS ADVISED THAT IN THE CASE OF ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS FOUND BEFORE OR DURING CONSTRUCTION, THE FINAL DECISION AS TO WHAT INFORMATION TAKES PRECEDENCE WILL BE MADE BY THE ENGINEER OF RECORD ON THE BASIS OF THAT INTENT.
- ALL SECTIONS AND DETAILS APPLY TO SAME AND SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN.
- THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS. DAMAGE TO ANY PROPERTY, PRIVATE OR OF PUBLIC TRUST, OCCURRING DURING THE CONSTRUCTION BY THE CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.

GENERAL MATERIAL NOTES:

- THIS DRAWINGS ARE INTENDED TO ILLUSTRATE THE MATERIAL REQUIREMENTS FOR A WALKWAY / DOCK STRUCTURE TO BE CONSTRUCTED BY OTHERS.
- DIMENSIONS SHOWN ON THE PLAN ARE MEANT TO PROVIDE A GENERAL INFORMATION REGARDING THE OVERALL SIZE OF THE STRUCTURE. CLEARANCE REQUIREMENTS TO THE TOP OF THE DUNE AND TIMBER SPACING TO SATISFY STRUCTURAL CODE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS SHOWN PRIOR TO ORDERING MATERIALS AND TO MAINTAIN THE CLEARANCES SHOWN.
- THE MATERIAL USED IN THE CONSTRUCTION OF THE STRUCTURE SHALL CONFORM TO THE TIMBER FRAMING REQUIREMENTS SHOWN BELOW.
- THE MATERIAL, INCLUDING PILES, STRUCTURAL TIMBER FRAMING, DECKING, RAILINGS, HARDWARE AND FASTENERS SHALL BE NEW AND MAY BE SUBJECT TO INSPECTION AT ANY TIME BY THE ENGINEER OR TOWN BUILDING OFFICIAL.

CONCRETE NOTES:

- CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS". MINIMUM COMPRESSIVE STRENGTHS OF CONCRETE AT THE END OF 28 DAYS SHALL BE 4,000 PSI FOR ALL FOOTINGS, GRADE BEAMS AND PIERS.
- CEMENT TO BE PORTLAND TYPE II OR APPROVED EQUAL WITH THE FOLLOWING PARAMETERS: MAXIMUM WATER CEMENT RATIO 0.45, MAXIMUM SLUMP 4", MAX. AIR ENTRAINMENT TO 4%.
- EXTERIOR CONCRETE:
 - CONCRETE CLEAR COVER DIMENSIONS ARE 3 INCHES FOR FACES CAST AGAINST EARTH AND 1 1/2 INCHES FOR ALL OTHER FACES EXCEPT AS NOTED.
 - REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.
 - CONCRETE SHALL BE CAST AGAINST FIRM SOIL OR COMPACTED CRUSHED STONE AS SHOWN ON THE PLANS.
 - CONCRETE SHALL NOT BE POURED IN WATER OR ON FROZEN GROUND AND SHALL BE PROTECTED FROM FROST DURING CONSTRUCTION.
 - ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY BUILDING INSPECTOR OR ENGINEER BEFORE ANY CONCRETE IS PLACED.

TIMBER FRAMING:

- ALL TIMBER WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL FOREST PRODUCTS ASSOCIATION NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION.
- UNLESS OTHERWISE APPROVED BY THE TOWNS ENGINEER ALL TIMBER FRAMING SHALL BE STRESS GRADED LUMBER HAVE THE FOLLOWING STRUCTURAL PROPERTIES (L.O.N.):
 - SOUTHERN YELLOW PINE (S.Y.P.) (#1 OR SELECT STRUCTURAL)
 - F_b = 1400 PSI
 - F_v = 110 PSI
 - COLUMNS SHALL BE S.Y.P. - SELECT STRUCTURAL
- ALL ABOVE GRADE FRAMING MEMBERS AND DECKING SHALL BE TREATED WITH WOOD PRESERVATIVE (PRESSURE TREATMENT): FS T4-H-571 ANPA TREATMENT C2 USING CHROMATED COPPER ARSENATE (0.6 CCA MINIMUM RETENTION). ALL HOLES AND CUTS SHALL BE DRESSED WITH CCA. ALL POSTS / BEAMS SUPPORTING THE DOCK STRUCTURE SHALL BE TREATED USING A CCA WITH A MINIMUM RETENTION ASSOCIATED WITH DIRECT BURIAL.
- ALL THREADED FASTENERS AND ANCHORS SHALL BE HOT DIPPED GALVANIZED STEEL FOR EXTERIOR, HIGH HUMIDITY (4 MILS FOR MARINE ENVIRONMENT) TO ASTM 123 AND TREATED WOOD LOCATIONS. BOLTS SHALL CONFORM TO A307 GRADE A WHEAVEY HEX NUTS AND HOT DIPPED GALVANIZED (HDG) OGE OR DOCK STEEL WASHERS AS SPECIFIED ON DRAWINGS. BOLT HOLES SHALL BE A MAXIMUM OF 1/8" LARGER THAN BOLT DIAMETER SPECIFIED.
- ALL NAILS & SCREWS SHALL BE AS SPECIFIED ON DRAWINGS (STAINLESS STEEL GRADE 316 UNLESS OTHERWISE SPECIFIED). PRE-DRILL UNDERSIZE HOLES FOR NAILS THROUGH TOP PLY ONLY.
- ALL TIMBER SIZES ARE NOMINAL UNLESS OTHERWISE NOTED.
- ALL TIMBER FRAMING USED IN THE PROJECT SHALL BE STRAIGHT IN BOTH LONGITUDINAL PLANES WITH NO OR MINIMAL TWIST. TIMBER SHALL BE INSPECTED FOR CROWN PRIOR TO INSTALLATION BY THE CONTRACTOR AND INSTALLED CROWN UP WHERE SLIGHT CROWN EXISTS. JOINTS SHALL BE SAW CUT AND ACCURATELY AND TIGHTLY FITTED. THE ENGINEER RESERVES THE RIGHT TO REJECT TIMBER MEMBERS AND FINISH CONSTRUCTION OF TIMBER ASSEMBLIES WHERE IN THE OPINION OF THE ENGINEER THE DESIGN INTENT OF THE STRUCTURE WOULD BE COMPROMISED DUE TO THE FAULTY TIMBER, JOINTING, AND OR CONSTRUCTION PRACTICES.
- LUMBER USED FOR DECKING, STAIR TREADS, RAILINGS, AND BALUSTERS SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE. SOUTHERN YELLOW PINE USED FOR DECKING, STAIR TREADS, RAILINGS AND BALUSTERS SHALL BE PRESSURE TREATED SIMILAR TO ABOVE GRADE FRAMING MEMBERS NOTED IN NOTE 3 ABOVE.

HELICAL PILE NOTES:

- THE CONTRACTOR SHALL FURNISH ALL NECESSARY ENGINEERING AND DESIGN SERVICES, SUPERVISION, LABOR, TOOLS, MATERIALS, AND EQUIPMENT TO PERFORM ALL WORK NECESSARY TO INSTALL THE HELICAL PILES SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INSTALL HELICAL PILES THAT WILL DEVELOP THE LOAD CAPACITIES AS DETAILED ON THE DRAWINGS. THIS INCLUDES PROVISIONS FOR LOAD TESTING TO VERIFY HELICAL PILE CAPACITY AND DEFLECTION.
- HELICAL PILES SHALL BE DESIGN FOR A MINIMUM FACTOR OF SAFETY OF 2 BASED ON THE DESIGN LOADS PROVIDED ON THE DRAWINGS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND COMPUTATIONS PREPARED BY AN ENGINEER LICENSED IN THE STATE OF RHODE ISLAND FOR ALL HELICAL PILES. WHERE HELICAL PILES ARE SUBJECT TO LATERAL OR BASE SHEAR LOADS AS INDICATED ON THE PLANS, THE BENDING MOMENT FROM SAID LOADS SHALL BE DETERMINED USING LATERAL LOAD ANALYSIS PROGRAM SUCH AS LPILE.
- CORROSION PROTECTION SHALL BE PROVIDED FOR A MINIMUM LIFE OF 30 YEARS. ALL HELICAL ANCHORS SHALL BE HOT DIPPED GALVANIZED. THE CONTRACTOR SHALL SUPPLY THE OWNER COPIES OF HELICAL PILE INSTALLATION RECORDS WITHIN 1 WEEK AFTER EACH INSTALLATION IS COMPLETED. RECORDS SHALL INCLUDE:
 - NAME OF CONTRACTOR
 - DATE & TIME OF INSTALLATION
 - NAME & MODEL OF INSTALLATION EQUIPMENT
 - LOCATION OF HELICAL PILE (IDENTIFICATION NO.)
 - ACTUAL HELICAL PILE TYPE AND CONFIGURATION (INCL. LEAD SCREW, NO. PLATES, NO. EXTENSIONS, ...)
 - HELICAL PILE INSTALLATION DURATIONS & OBSERVATIONS
 - TOTAL LENGTH OF INSTALLED HELICAL PILE
 - CUT-OFF ELEVATION
 - INCLINATION ANGLE OF HELICAL PILE
 - INSTALLATION TORQUE AT ONE-FOOT INTERVALS FOR FINAL 10 FEET
 - COMMENTS PERTAINING TO INTERRUPTIONS, OBSTRUCTIONS, OR OTHER RELEVANT INFORMATION
 - RATED LOAD CAPACITIES

STEEL FABRICATIONS

ALL WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE FOR STEEL" LATEST EDITION, AS ADOPTED BY THE AMERICAN WELDING SOCIETY (AWS). ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER IN ACCORDANCE WITH AWS STANDARDS.

STRUCTURAL STEEL MATERIALS SHALL MEET THE FOLLOWING REQUIREMENTS:

STEEL SECTIONS AND MISCELLANEOUS: ASTM A572 GRADE 50 UNLESS OTHERWISE NOTED

BOLTS: ASTM A307 GRADE A WITH HEAVY HEXAGONAL HEADS

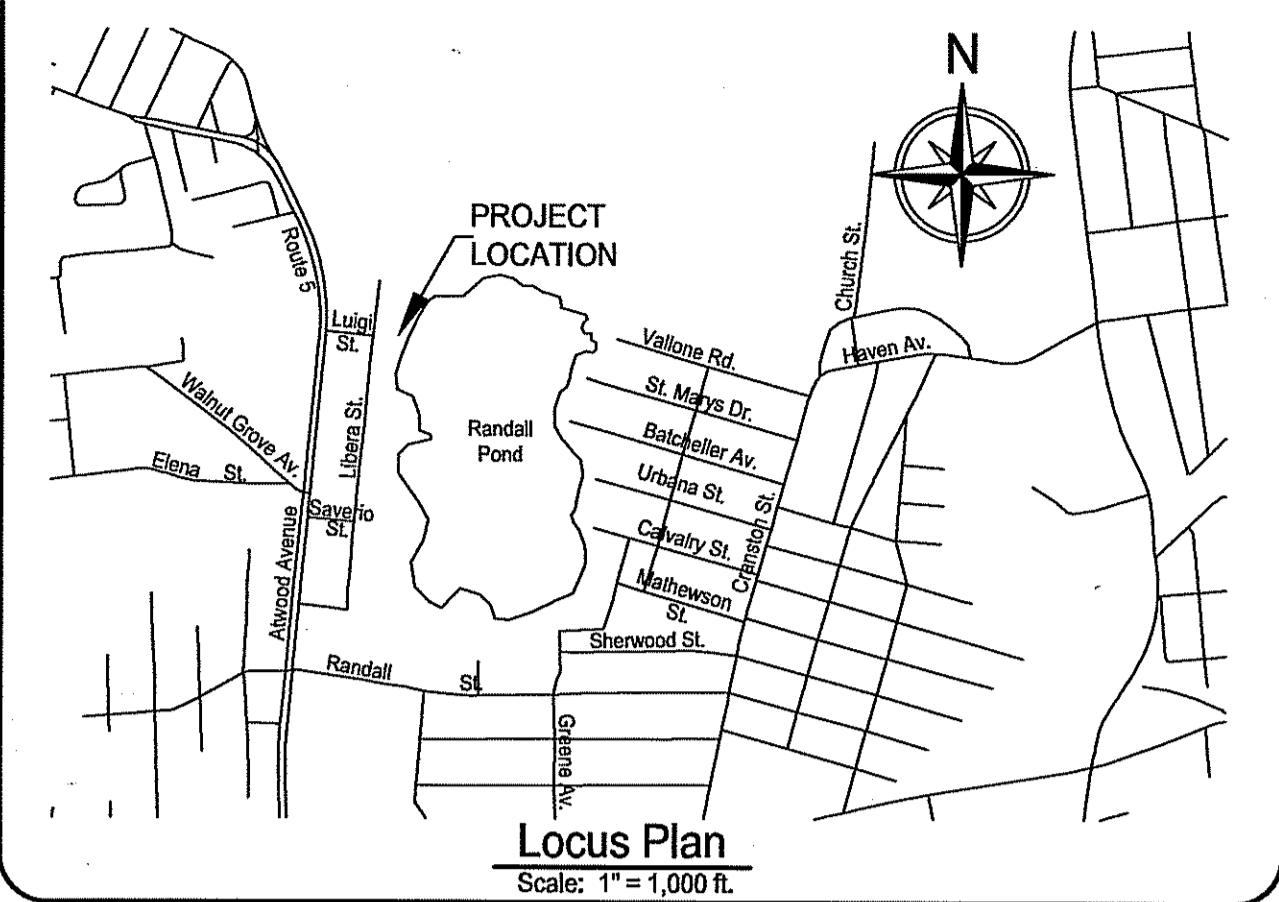
NUTS: ASTM A307 GRADE A WITH HEAVY HEXAGONAL HEADS

WASHERS: ASTM F436 OVERSIZED DOCK WASHERS OR OGE WASHERS AS INDICATED ON THE PLANS

WELD RODS: ASTM A233, E70XX SERIES ELECTRODES AS REQ'D FOR CONDITIONS OF INTENDED USE

BOLTS, NUTS, & WASHERS: ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT DIPPED GALVANIZED FOR EXTREME SERVICE (4 MILS THICKNESS) IN ACCORDANCE WITH ASTM A153 AND MEET MINIMUM TESTS OF ASTM A293.

CLIPS, HANGERS, ANGLES AND OTHER HARDWARE REQUIRING FABRICATION SHALL BE FABRICATED COMPLETE WITH HOLES AND WELDING PRIOR TO HOT DIP GALVANIZING. HOT DIPPED GALVANIZING (4 MIL MIN. THICKNESS) SHALL BE IN ACCORDANCE WITH ASTM A123 FOR PLATES AND FABRICATIONS AND ASTM A153 FOR BOLTS AND BOLTING HARDWARE. SEE PLANS FOR ADDITIONAL INFORMATION.



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

AP 12 SECTION 4 LOT 3138
TIME REALTY MANAGEMENT LLC
D.B. 4121 PG. 148

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 3 2015 FILE # 14-0210
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

1. MOVE DOCK SOUTH PER RIDEM COMMENTS LETTER DATED 8-4-2015. (8/25/15)

RICHARD N. ST. JEAN
4987
PROFESSIONAL ENGINEER

ST. JEAN ENGINEERING, LLC
CIVIL, MARINE AND STRUCTURAL
CONSULTING ENGINEERING
Phone/Fax: 401.398.0999
st.jean.engineering@verizon.net

1145 Middle Road
East Greenwich, RI 02818

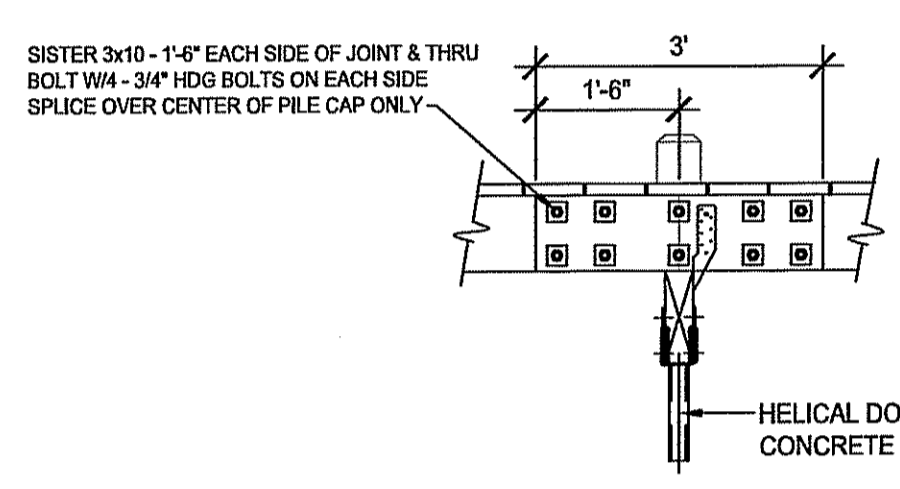
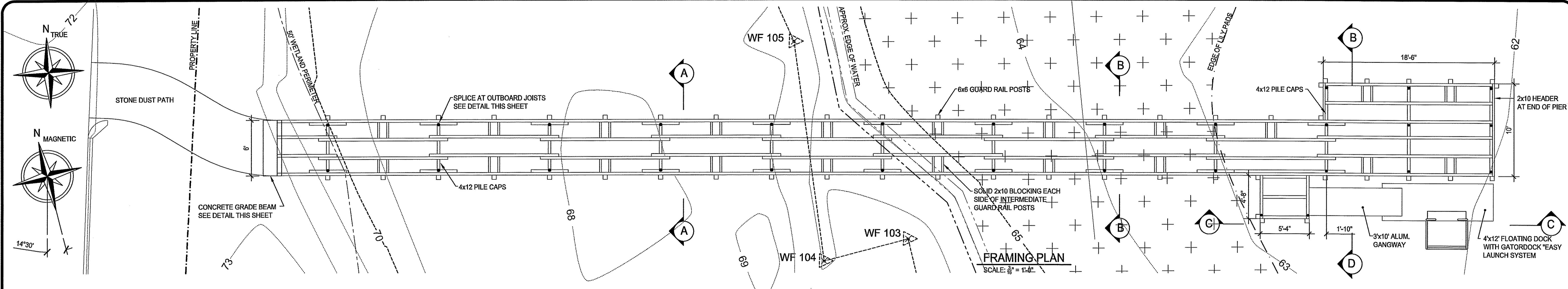
Drawn: RWF
Checked: RSJ
Scale: 1" = 20 ft. (UON)
DATE: 5/26/15

Pawtuxet River Authority
Randall Pond Canoe/Kayak
Launch & Fishing Area
Assessors Plat 12 Section 4
Libera Street,
Cranston, Rhode Island

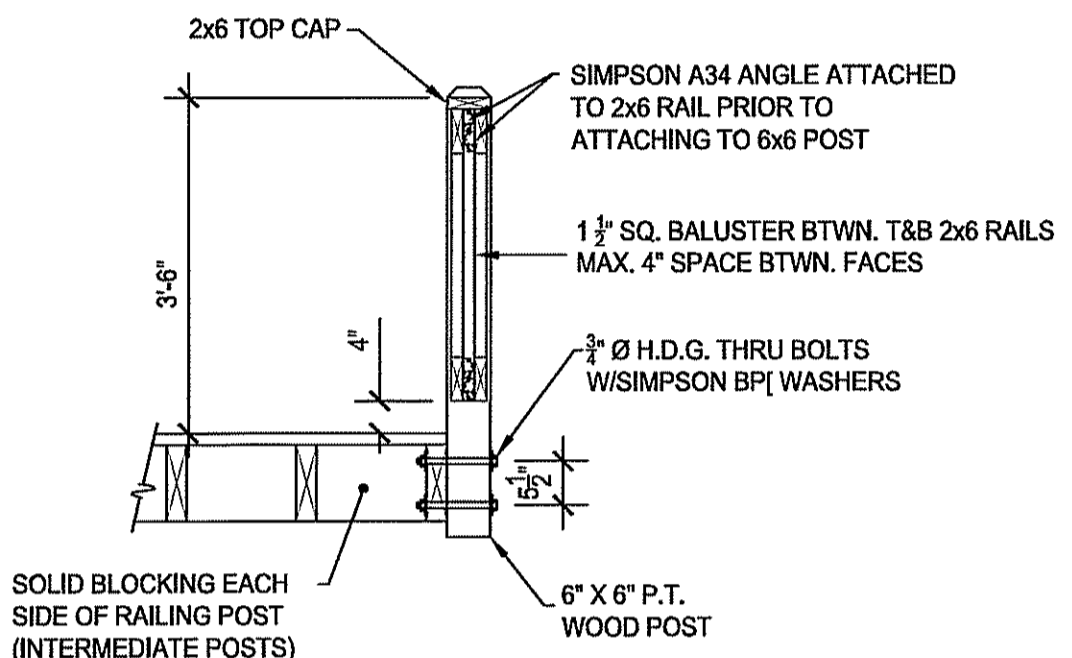
Proposed Randall Pond Dock

DWG. NO.
C1

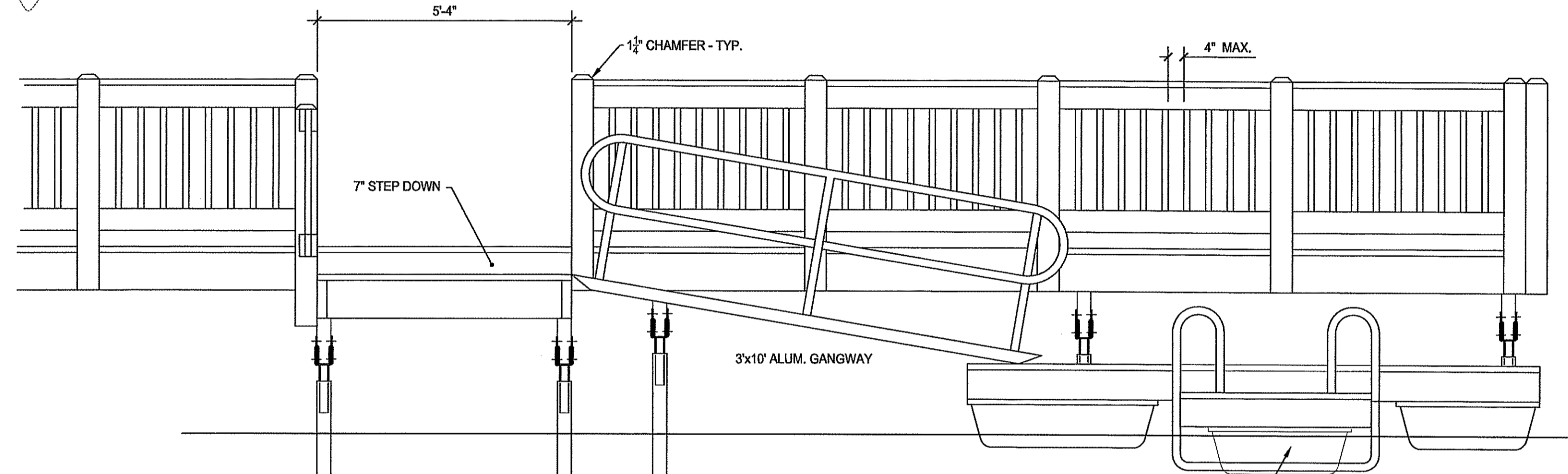
SHEET 1 OF 3



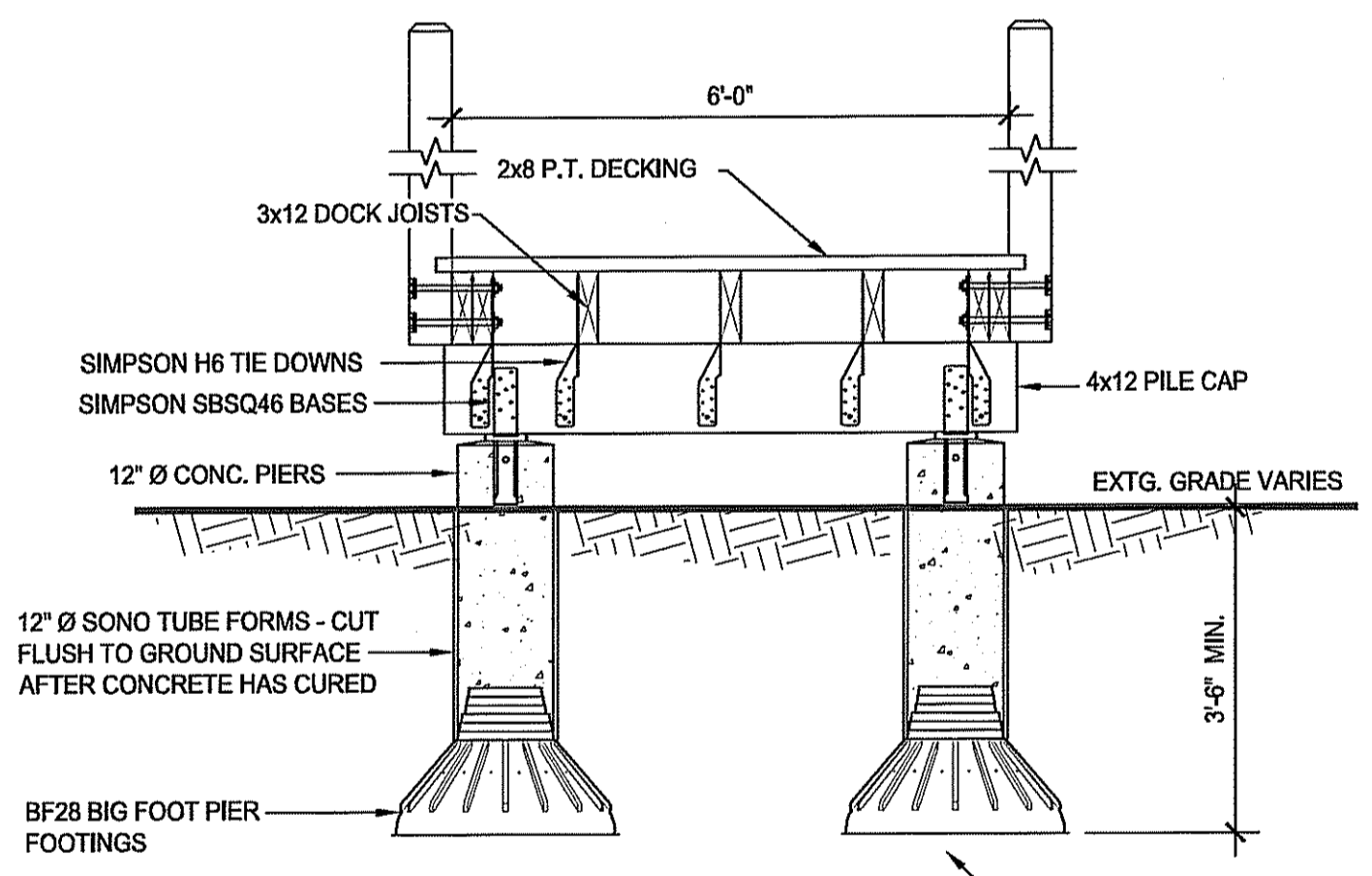
TYPICAL SPLICE AT OUTBOARD DOCK JOISTS
SCALE: 1/2" = 1'-0"



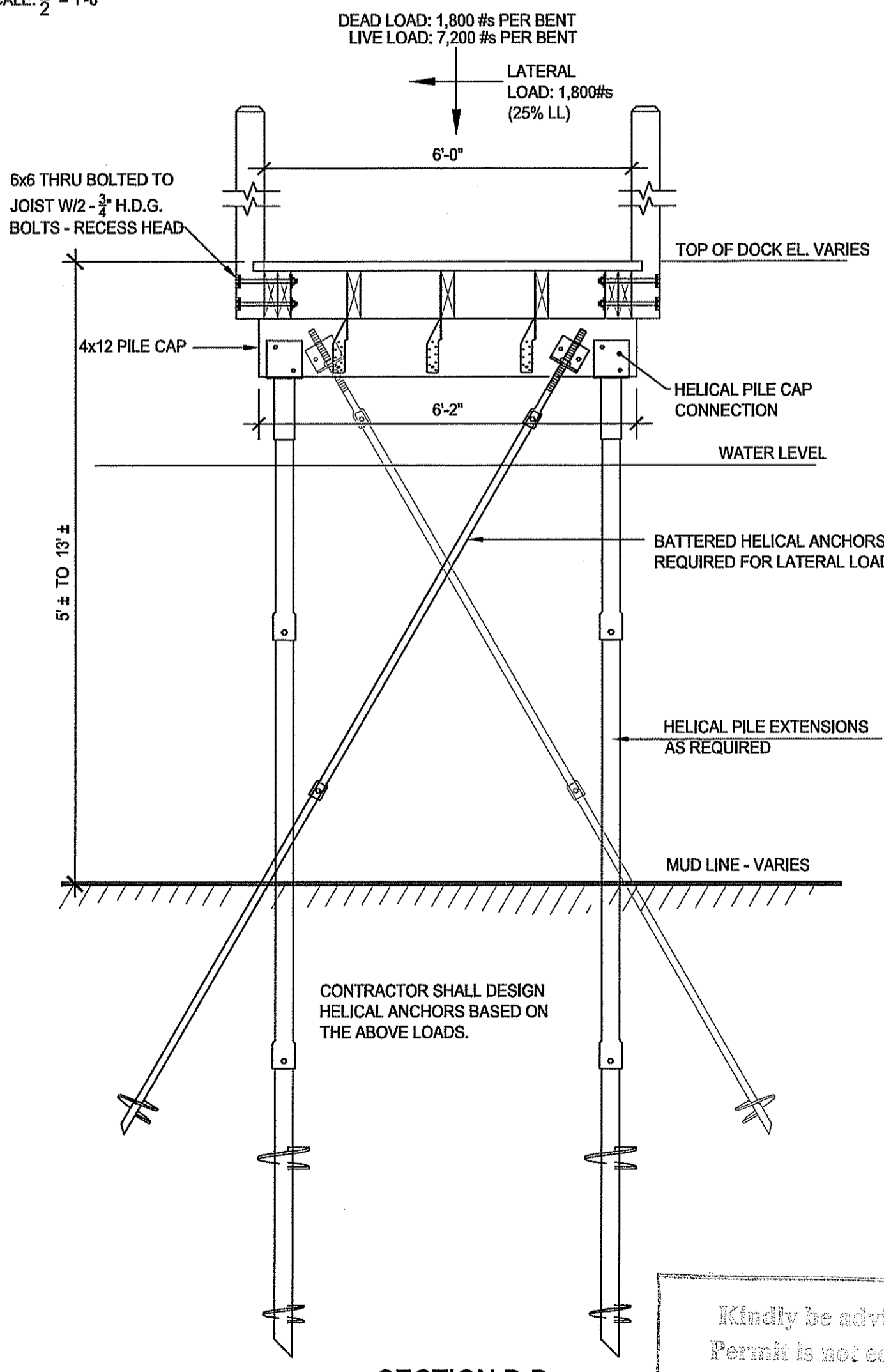
TYPICAL POST & GUARD RAIL DETAIL
SCALE: 1/2" = 1'-0"



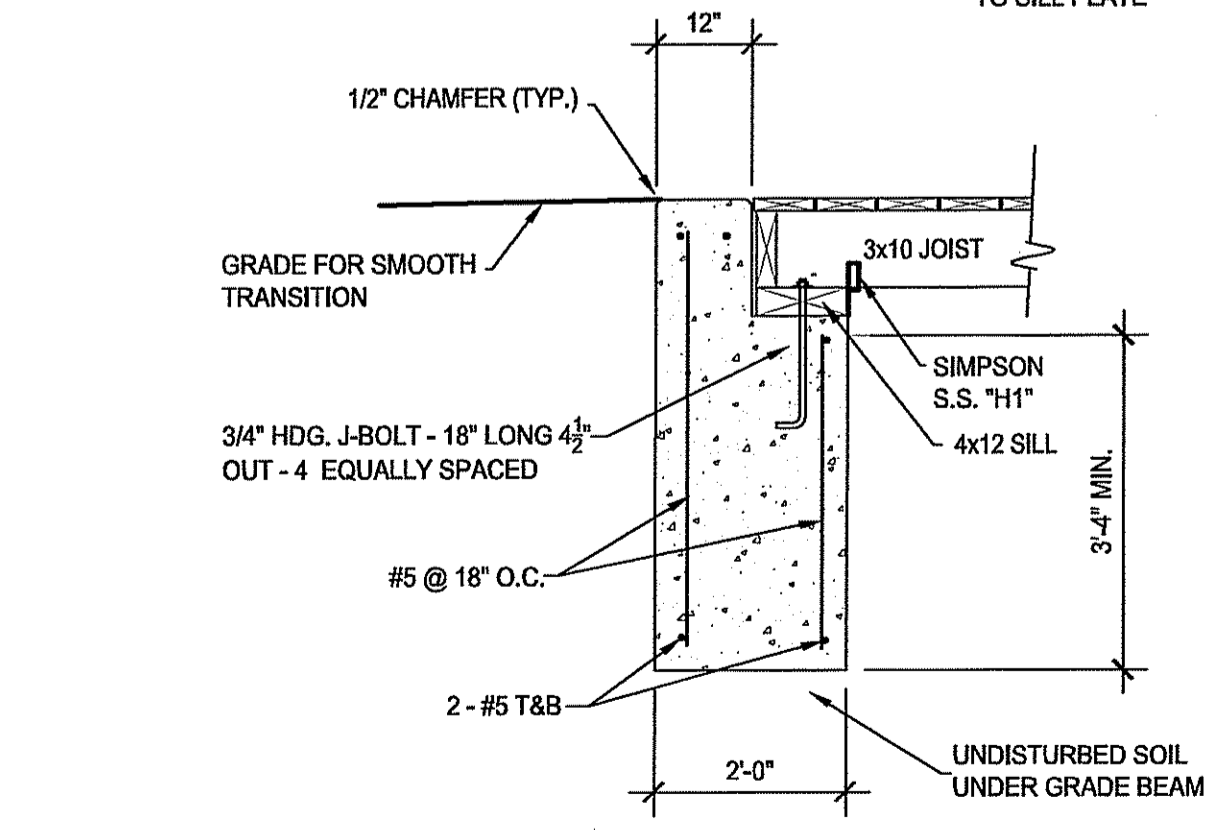
SECTION C-C
SCALE: 1/2" = 1'-0"



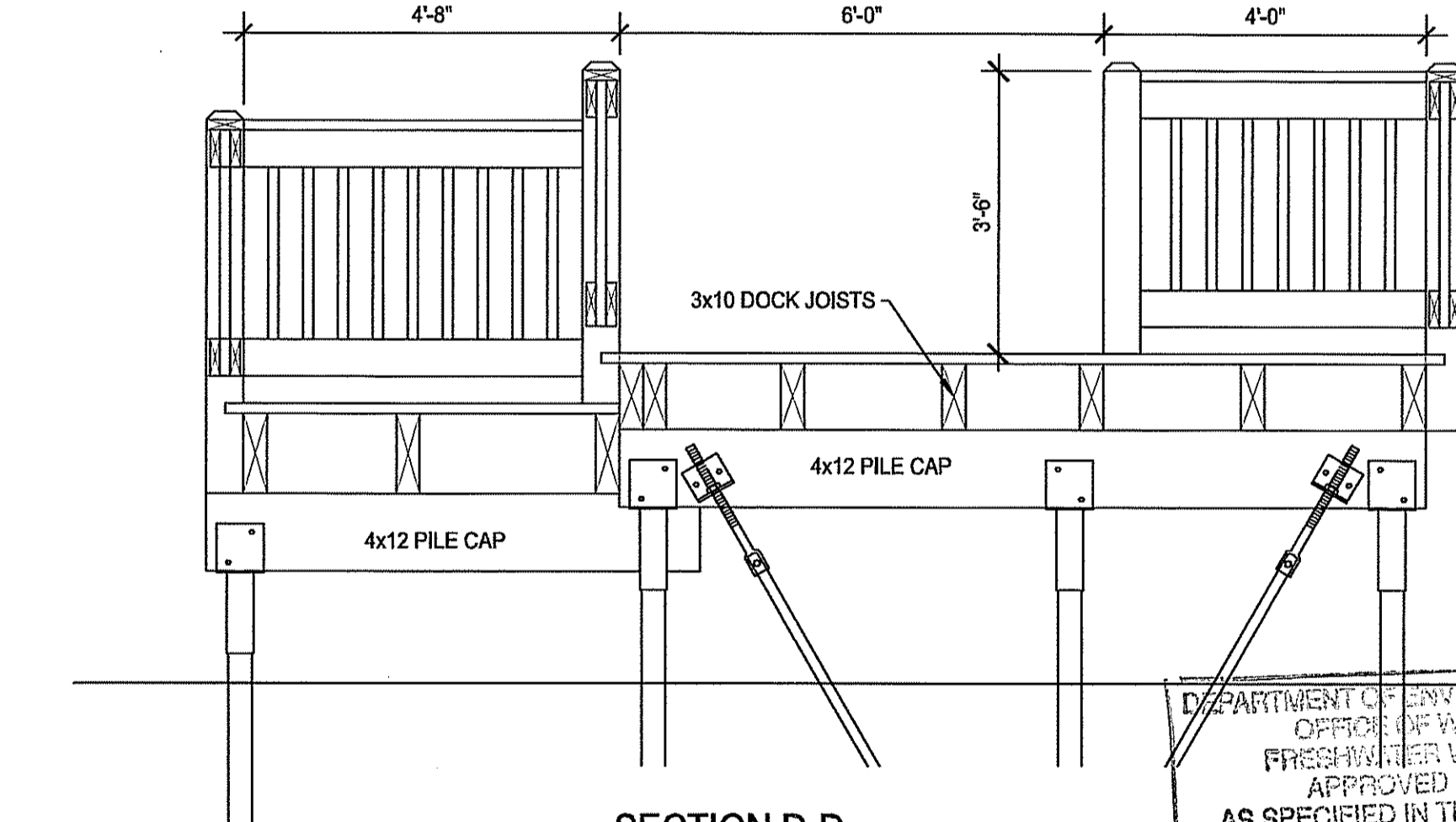
SECTION A-A
SCALE: 1/2" = 1'-0"



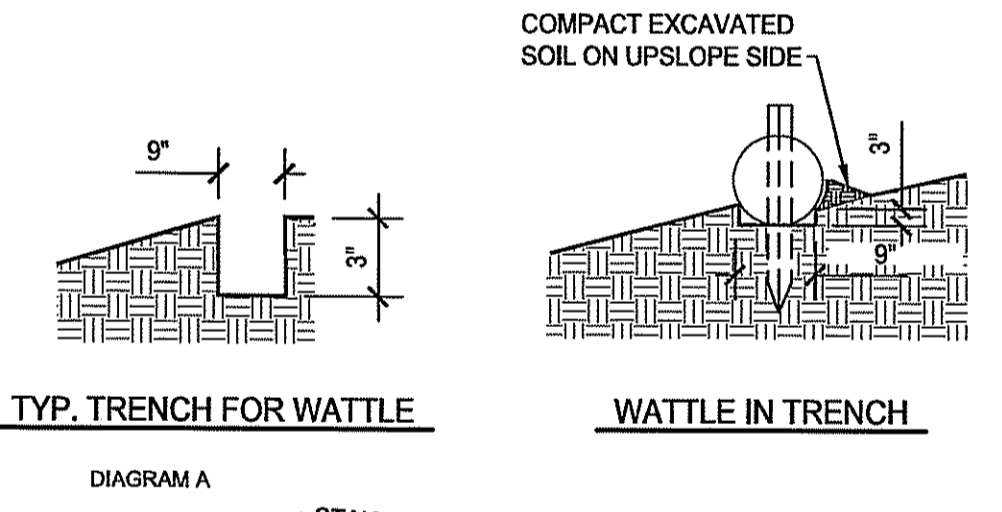
SECTION B-B
SCALE: 1/2" = 1'-0"



GRADE BEAM @ START OF DOCK
SCALE: 1/2" = 1'-0"

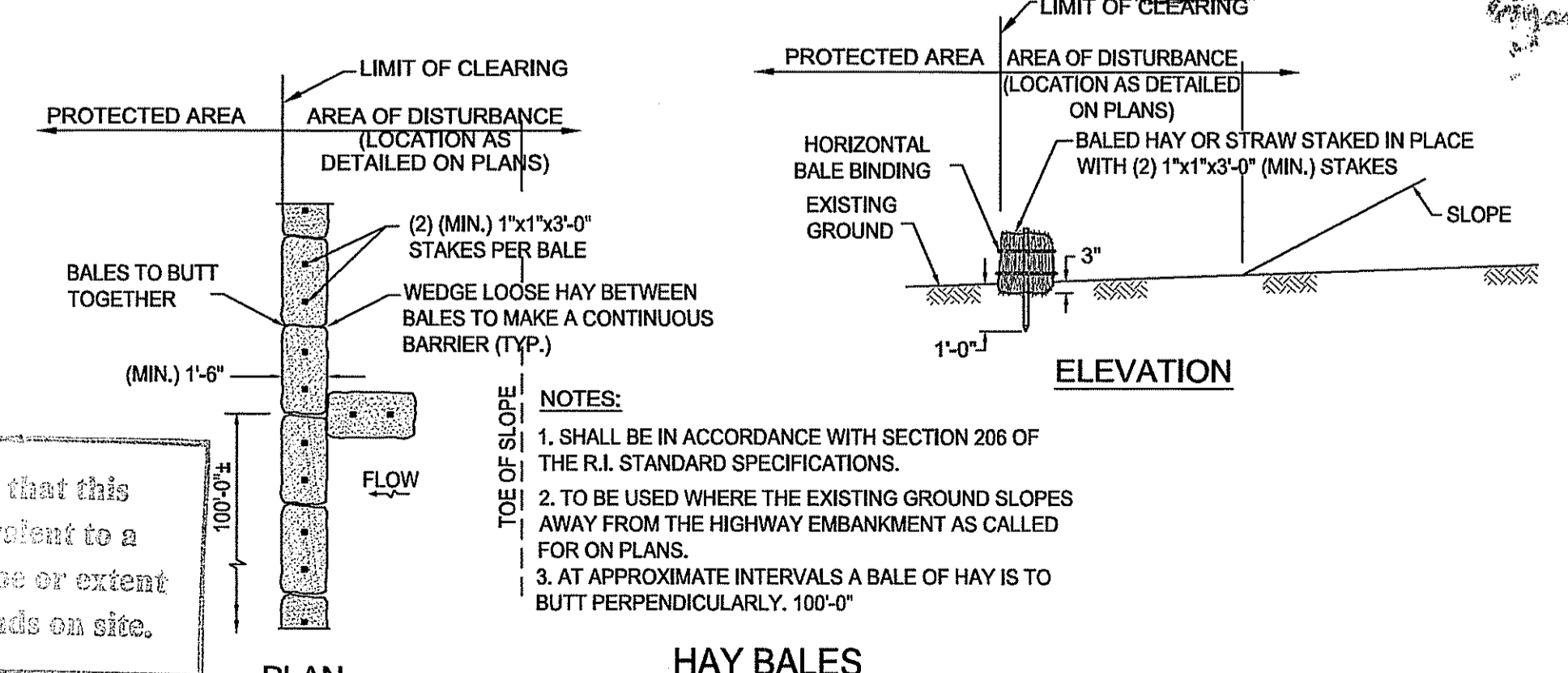


SECTION D-D
SCALE: 1/2" = 1'-0"

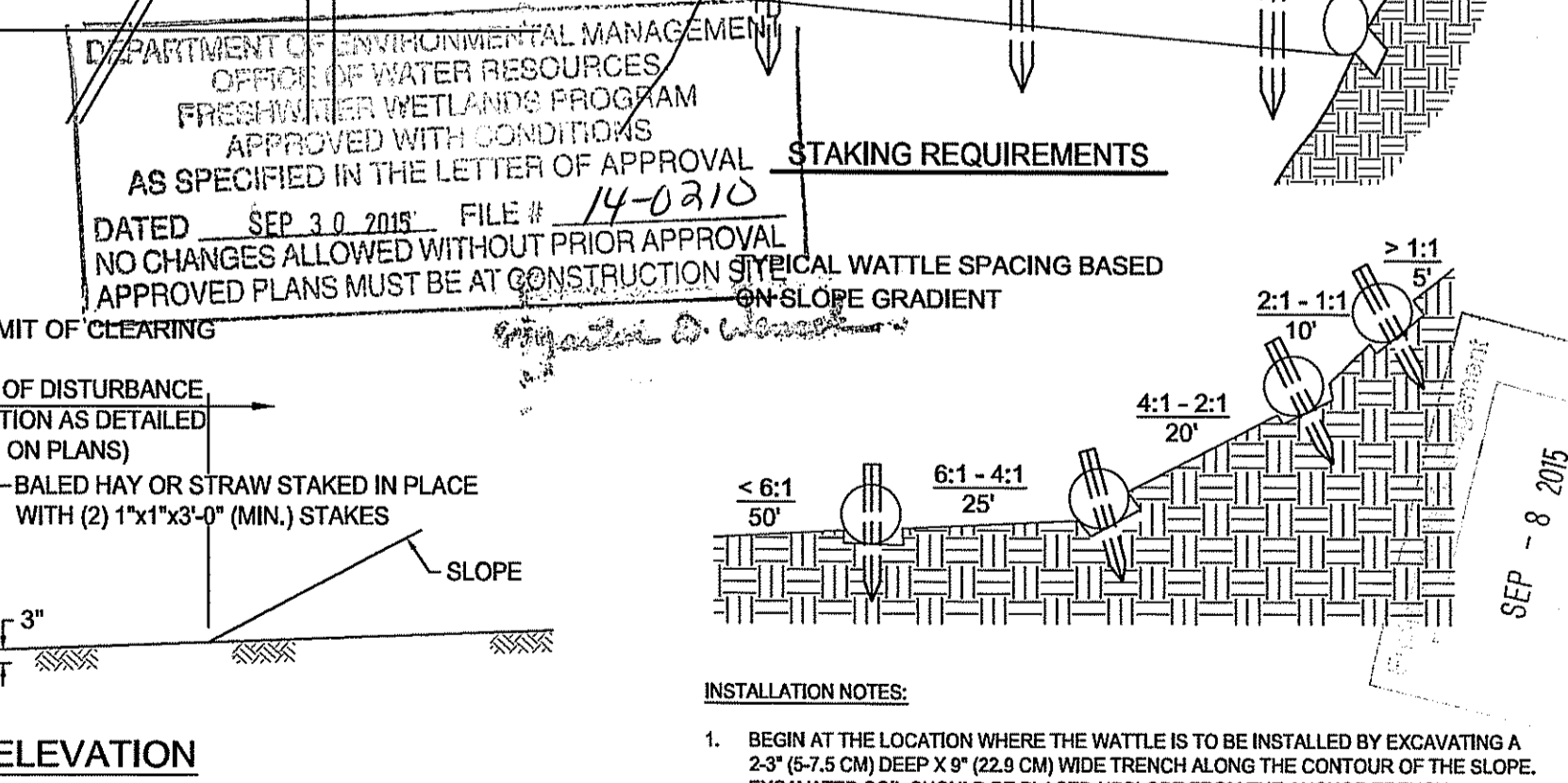


TYP. TRENCH FOR WATTLE
DIAGRAM A

WATTLE IN TRENCH



HAY BALES



EROSION CONTROL MEASURES
SCALE: N.T.S.

STRAW WATTLES

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 30 2015 FILE # 14-0210
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION

- INSTALLATION NOTES:**
- BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2'-3" (61.3 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
 - PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPSLOPE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
 - SECURE THE WATTLE WITH 16-24" (40.7-61 CM) STAKES EVERY 3-4' (0.9-1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5.7-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

ISSUED FOR PERMITTING ONLY

1. MOVE DOCK SOUTH PER RIDEM COMMENTS LETTER DATED 8-6-2015. (8/25/15)

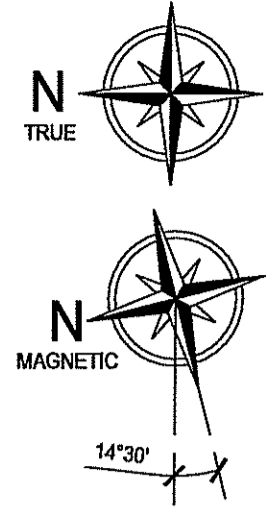
RICHARD N. ST. JEAN
Professional Engineer
No. 4897

ST. JEAN ENGINEERING, LLC
CIVIL, MARINE AND STRUCTURAL
CONSULTING ENGINEERING
1145 Middle Road
East Greenwich, RI 02818
Phone/Fax: 401.398.0999
st.jean.engineering@verizon.net

Drawn: RWF
Checked: RSJ
Scale: AS NOTED
DATE: 5/28/15

Pawtuxet River Authority
Randall Pond Canoe / Kayak
Launch & Fishing Area
Assessors Plat 12 Section 4,
Libana Street,
Conston, Rhode Island
CONSTRUCTION DETAILS

DWG. NO.
C2
SHEET 2 OF 3



NO.	DATE	DESCRIPTION	BY
3	9/4/2015	REVISED AS PER RIDER COMMENTS	DCS
2	10/31/2014	REVISED AS PER MASON COMMENTS	WCR
1	7/22/2014	ADDED TREE LEGEND	WCR

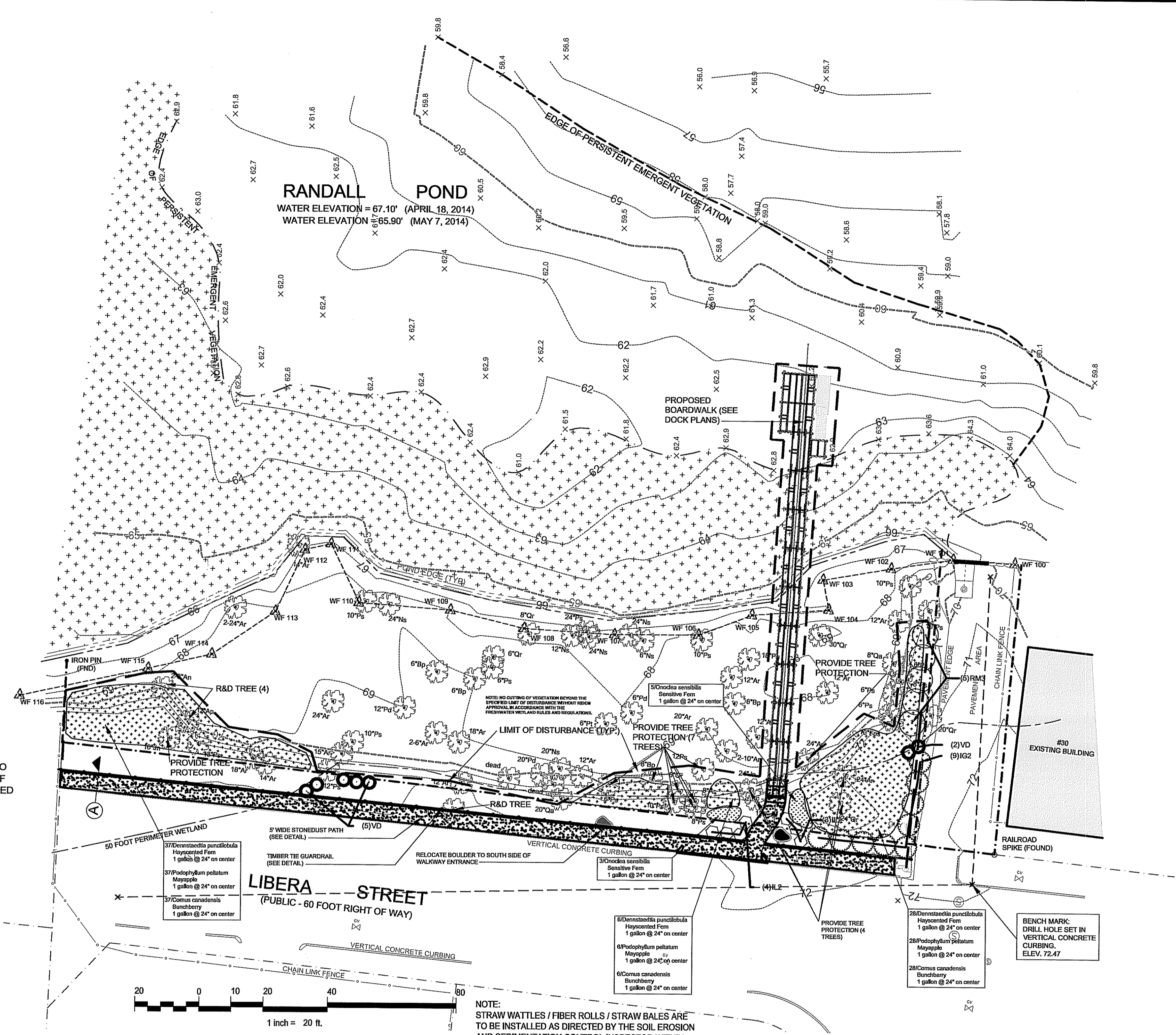
Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

TREE LEGEND

CODE	SCIENTIFIC NAME	COMMON NAME
An	Acer negundo	Ashleaf Maple
Ap	Acer platanoides	Norway Maple
Ar	Acer rubrum	Red Maple
Bp	Betula populifolia	Gary Birch
Fsp	Fraxinus sp.	Ash
Jn	Juglans nigra	Black Walnut
Ns	Nyssa sylvatica	Black Gum, Tupelo
Pd	Populus deltoides	Eastern Cottonwood
Pg	Populus grandidentata	Aspen, Big-Tooth
Pl	Populus tremula	Quaking Aspen
Ps	Prunus serotina	Cherry, Black
Qa	Quercus alba	Oak, White
Qr	Quercus rubra	Northern Red Oak
Qv	Quercus velutina	Black Oak



NOTES:
 1. PROVIDE WILDLIFE CONSERVATION SEED MIX IN ALL DEBRIS REMOVAL AREAS SHOWN ON PLAN.
 2. ORIGINAL GRADES TO BE RESTORED AFTER DEBRIS REMOVAL - NO GRADE CHANGES PROPOSED.

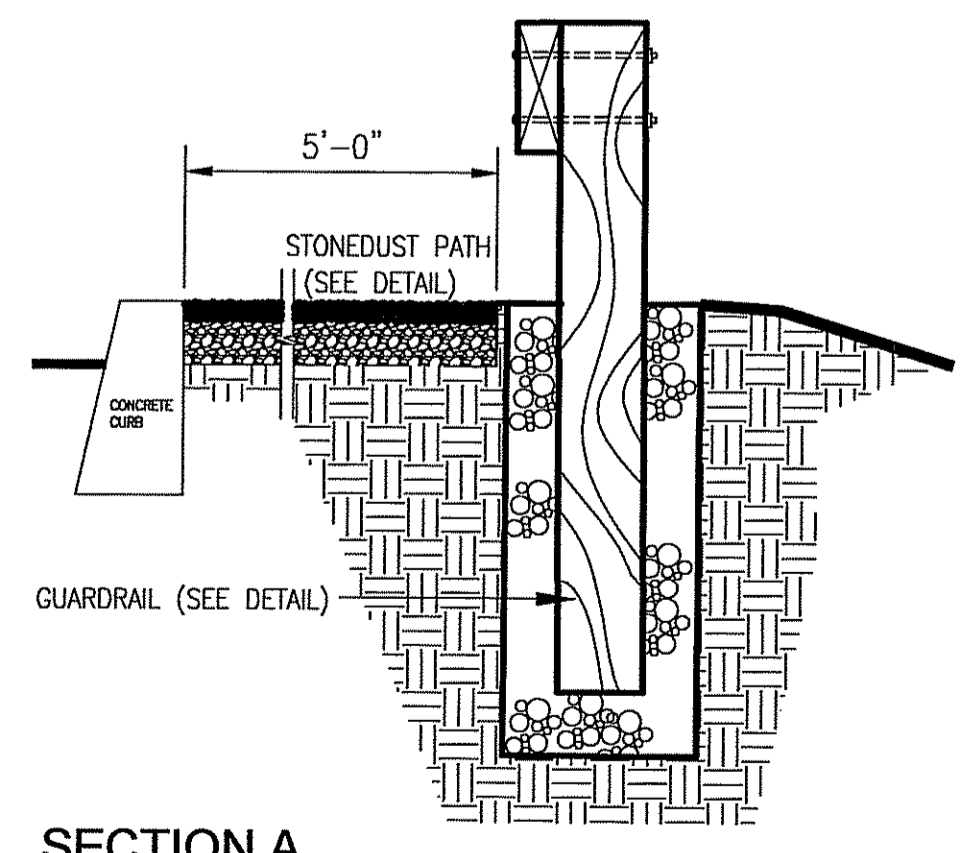


LANDSCAPE PLAN
 Scale: 1" = 20'

PLANT SCHEDULE-SHRUBS ONLY

SHRUBS	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT.
	IG2	9	Inkberry Holly / Ilex glabra FACW	3 gal
	IL2	7	Red Sprite Winterberry / Ilex verticillata "Red Sprite"	5 gal
	RM3	5	Rose Bay / Rhododendron maximum	B&B; 4-5 FT.
RAIN GARDEN PLANTS	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT.
	VD	7	Arrowwood Viburnum / Viburnum dentatum "Arrowwood" Native to RI	2 gal

NOTE: SEE PLAN FOR WOODLAND PERENNIAL PLANTINGS



SECTION A
 no scale

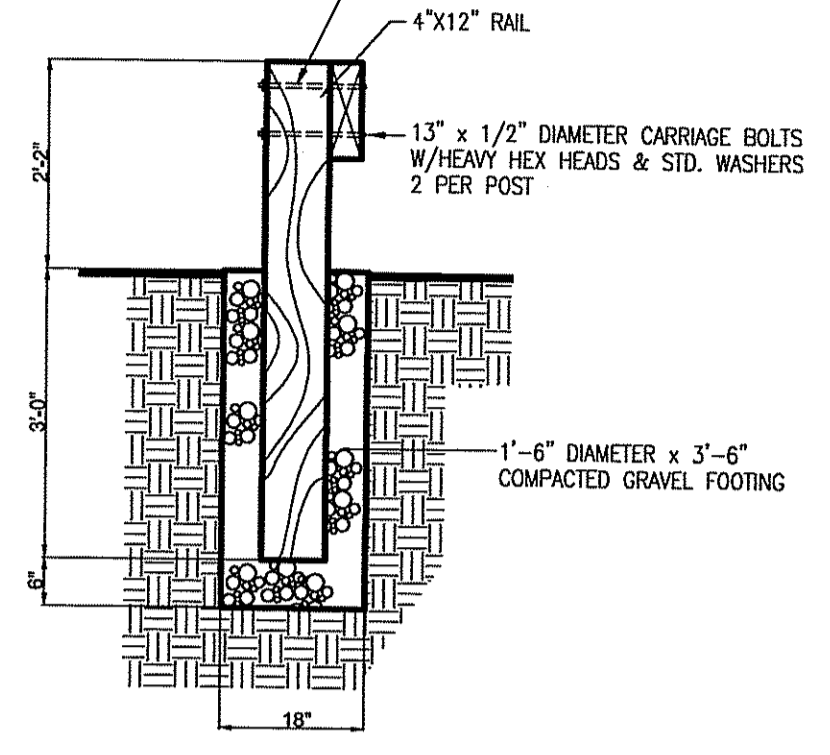
RESTORATION SEQUENCE NOTES:

All Erosion and Sedimentation (E&S) controls must be installed prior to the commencement of restoration along the Limits of Disturbance (LOD) or at the specific areas indicated on the plans. Stones, brush, construction debris, litter or other such materials shall not be deposited on the wetland side of E&S controls.

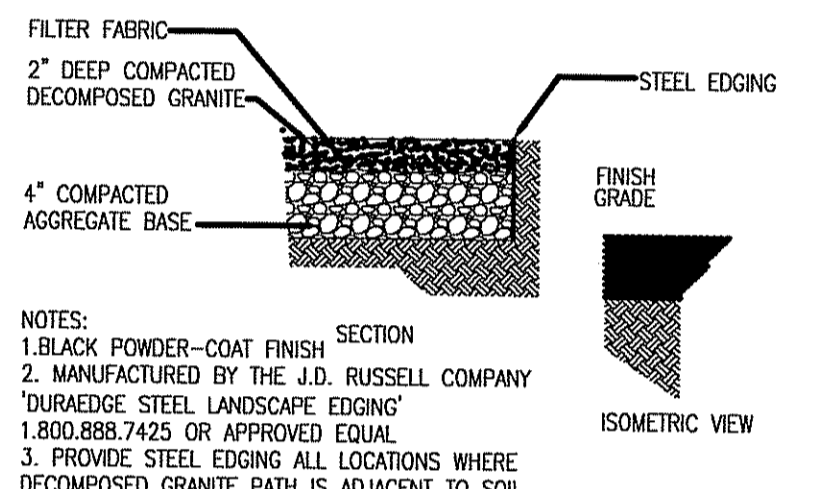
Restoration will begin with the removal of debris within the restoration areas. Topsoil will be added to the restoration areas as necessary to restore original grade (min. 3") and plants will be installed as shown on the Landscape Plan. A Wildlife Conservation Seed Mixture will be applied to the restoration areas following planting.

All E&S controls shall be properly maintained throughout construction and restoration and shall remain in place until soil and vegetative stabilization has been achieved. Once vegetation is established, erosion control materials shall be removed for off-site disposal.

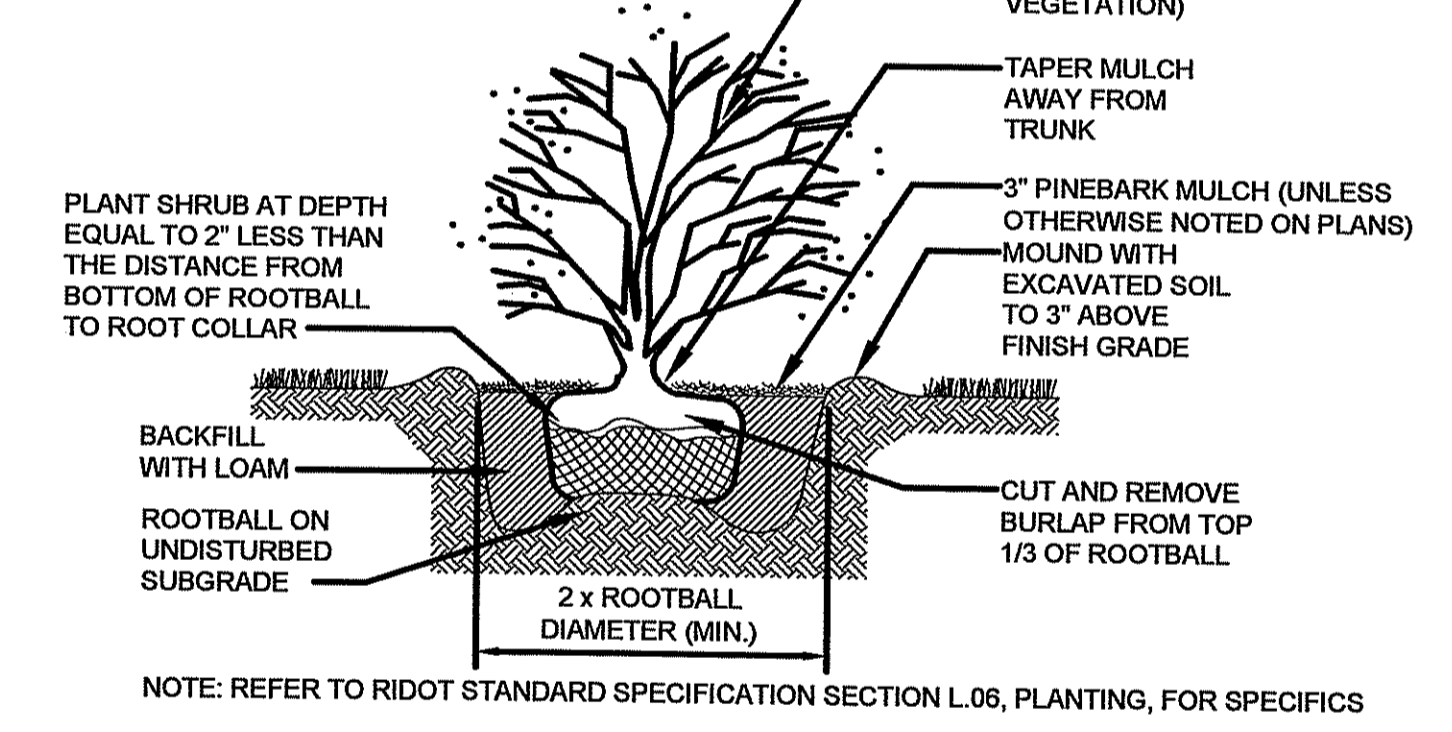
NOTES:
 1. ALL WOOD SHALL BE ROUGH SAWN RED CEDAR.
 2. ALL HARDWARE TO BE HOT-DIPPED GALVANIZED.



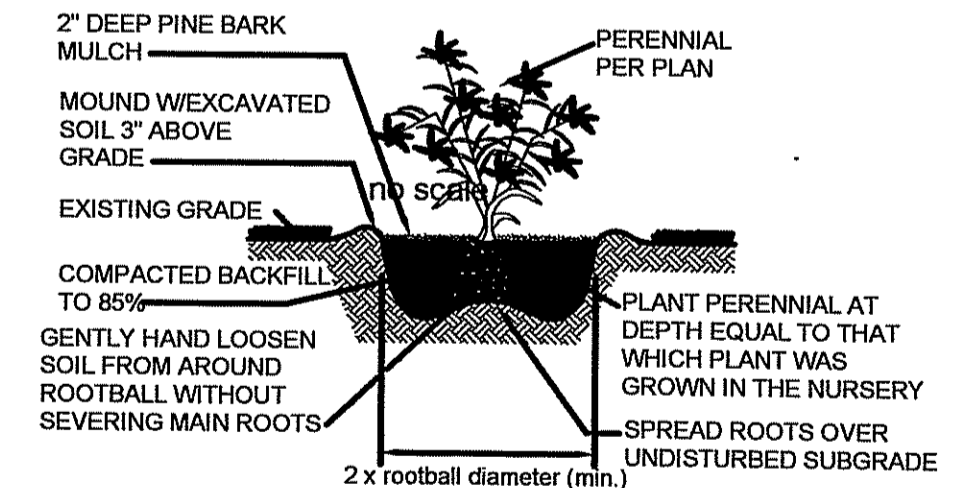
TIMBER TIE GUARD RAIL DETAIL



STONEDUST PATH DETAIL
 no scale

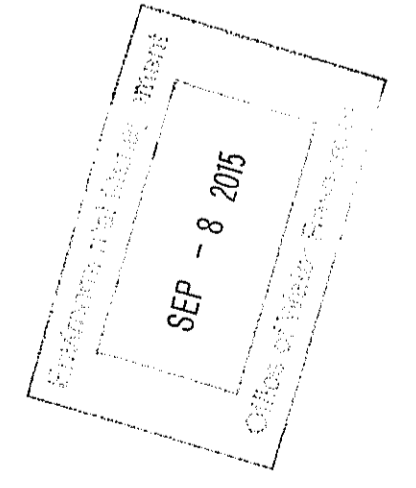


SHRUB PLANTING DETAIL
 no scale



PERENNIAL PLANTING DETAIL
 no scale

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED SEP 24 2015 FILE # 14-0210
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



Diane C. Soule & Associates, ASLA
 Landscape Architecture
 422 Farnum Pike
 Smithfield, Rhode Island 02917
 www.dianesouleandassociates.com

401.231.0736
 email: diane@dcas.com

PAWTUXET RIVER AUTHORITY
 RANDALL POND CANOE / KAYAK
 LAUNCH & FISHING AREA
 LIBERA STREET
 CRANSTON, RHODE ISLAND

LANDSCAPE PLAN

DRAWN BY: D.C.S.	CHECKED BY: D.C.S.	FIELD BY: W.C.R., J.N.
APRIL 2014	JOB No. 2014-51	SHEET 3 OF 3

ISSUED FOR PERMITTING ONLY