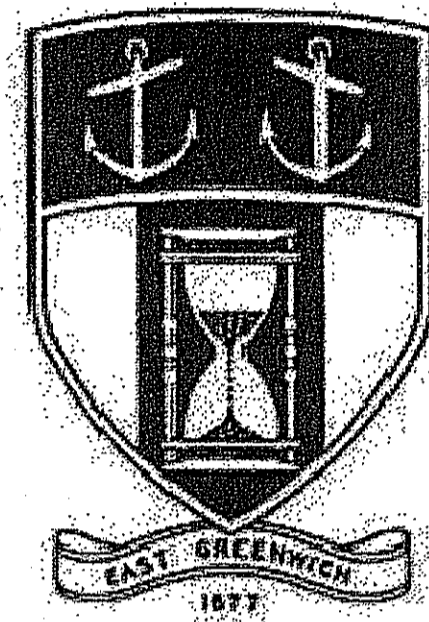


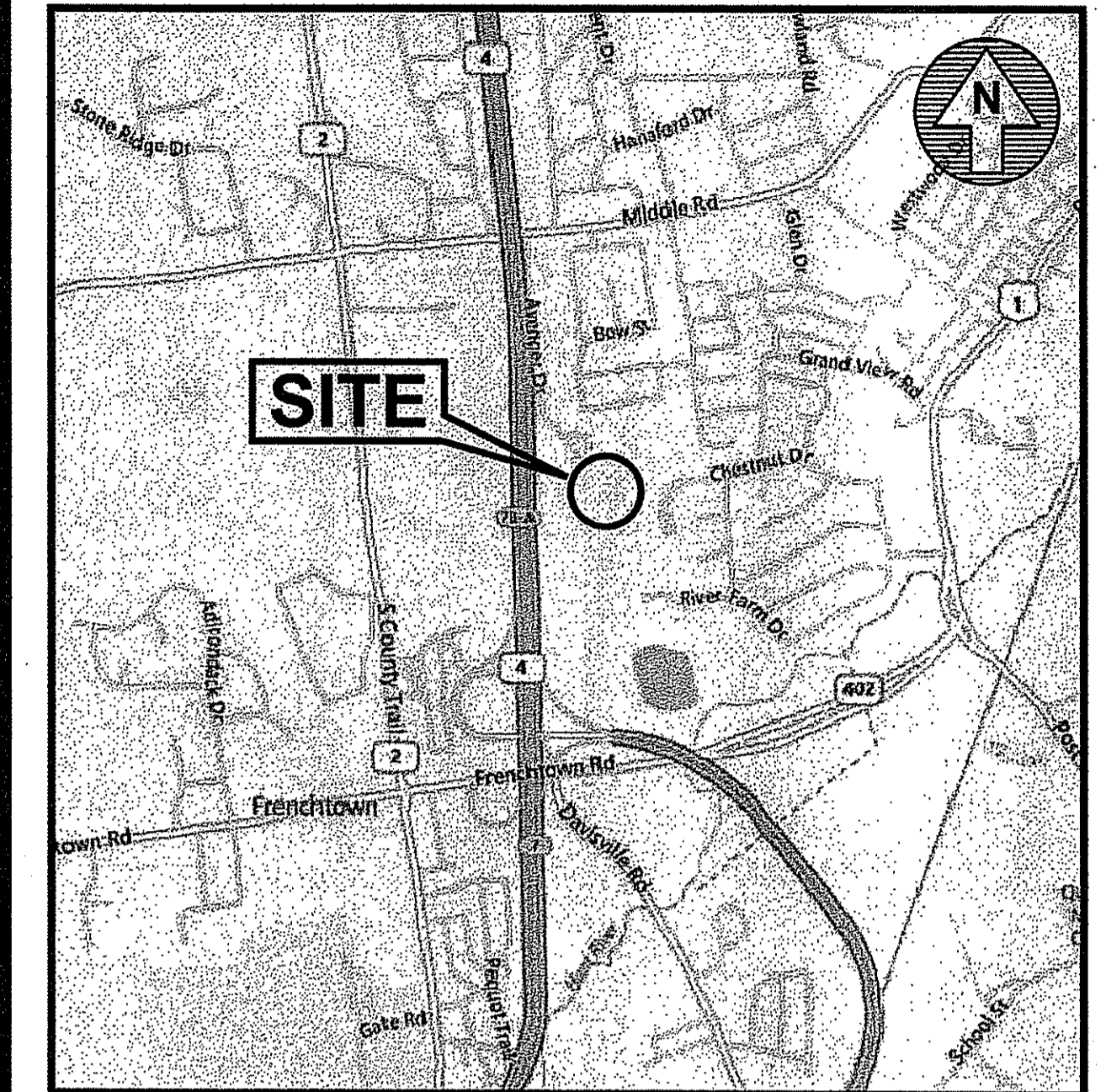
SITE PLAN SET

FOR

MULTI-PURPOSE CROSS COUNTRY TRAILS



PLAT 11, LOTS 11 & 393
300 AVENGER DRIVE
EAST GREENWICH, RHODE ISLAND



LOCATION MAP
NOT TO SCALE

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PREPARED FOR:

TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS

P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RHODE ISLAND 02818

ENGINEERS and LAND SURVEYORS:



- Civil
- Transportation
- Environmental
- Site Planning
- Land Surveying

CROSSMAN ENGINEERING

151 Centerville Road | Warwick, Rhode Island 02886
 Phone: (401) 738-5660 | Fax: (401) 738-8157
 Email: cel@crossmaneng.com

LANDSCAPE ARCHITECTS:

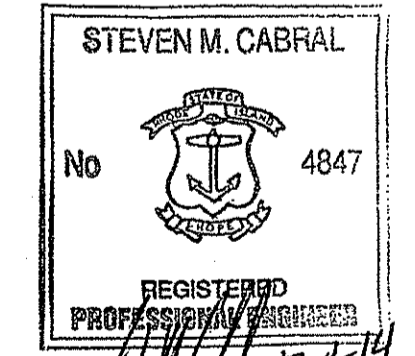


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 Tel. 401.294.1684 - www.halibeckman.com
 Estate Planning - Landscape Architecture

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED FEB 18 2015 FILE # 14-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harker



REVISIONS:

No.:	DATE:	DESCRIPTION:
1	10/03/14	RIDEM COMMENTS

PLANS FOR NOTICE

MARCH 2014
SHEET 1 of 24

GENERAL NOTES

- ALL EXISTING UTILITIES HAVE BEEN PLOTTED BASED UPON PLANS PROVIDED BY THE OWNER. FIELD SURVEY HAS BEEN CONDUCTED TO OBTAIN THE TOPOGRAPHY WITHIN THE WORK AREA AS REFERENCED ON SHEETS C6.1, C6.2 AND C6.3. UTILITY LOCATIONS WITHIN THIS PLAN SET ARE FROM BEST AVAILABLE INFORMATION AND REPRESENT APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE R.I. LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATES, ORDINANCES, RULES AND REGULATIONS OF ANY MUNICIPALITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I.D.O.T. STANDARD SPECIFICATIONS. FOR ALL EXCAVATION, PLACEMENT OF FILL, PIPE INSTALLATION, BITUMINOUS PAVEMENT, CUTTING INTO CATCHBASIN/MANHOLE, CONCRETE AND SAWCUTTING, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010 EDITION, WITH LATEST REVISIONS UNLESS OTHERWISE SHOWN ON PLANS. THE "METHOD OF MEASUREMENT" AND "BASIS OF PAYMENT" ARE NOT APPLICABLE. THESE SPECIFICATIONS CAN BE OBTAINED ON-LINE AT:
[HTTP://WWW.DOT.STATE.RI.US/ENGINEERING/STANDARDS/INDEX.ASP](http://www.dot.state.ri.us/engineering/standards/index.asp)
- FOR ALL EXCAVATION AND PLACEMENT OF FILL, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE R.I. STANDARD SPECIFICATION SECTION 202.
- RHODE ISLAND STANDARDS REFERENCED ARE ACCORDING TO THE STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS "RHODE ISLAND STANDARD DETAILS" DATED OCTOBER 12, 2012, WITH ALL REVISIONS AS PREPARED BY THE DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
- WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
- CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK.
- TOPOGRAPHY WITHIN THIS PLAN SET IS OBTAINED FROM TWO SOURCES; CROSSMAN ENGINEERING SURVEY FOR CONTOURS ON SHEETS C6.1, C6.2 AND C6.3, AND PLANS PROVIDED BY OWNER (MAP REFERENCE 1) FOR CONTOURS ON SHEETS C6.4 AND C6.5. THE CONTRACTOR SHALL BE AWARE THAT ADJUSTMENTS IN GRADING MAY BE REQUIRED AT THE CONTOUR TRANSITION AREA (SHEET C6.3 AND C6.4 MATCH LINE). COORDINATION WITH THE ENGINEER MAY BE REQUIRED. THE CONTRACTOR SHALL INCLUDE ALL WORK NECESSARY TO GRADE THE SITE IN THE TOTAL BID PRICE.
- THE CONTRACTOR IS REQUIRED TO SET BENCH MARKS FOR THE PROPOSED GRADING REFERENCED ON SHEETS C6.4 AND C6.5.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT PRIOR TO THE INITIATION OF WORK. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS, RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCAL REGULATIONS AND CODES.
- ALL DISTURBED AREAS SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE EAST GREENWICH DEPARTMENT OF PUBLIC WORKS PRIOR TO CONSTRUCTION.
- THE VERTICAL DATUM USED FOR THIS PLAN SET IS NGVD 29.

LAYOUT NOTE

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

FLOOD ZONE NOTE

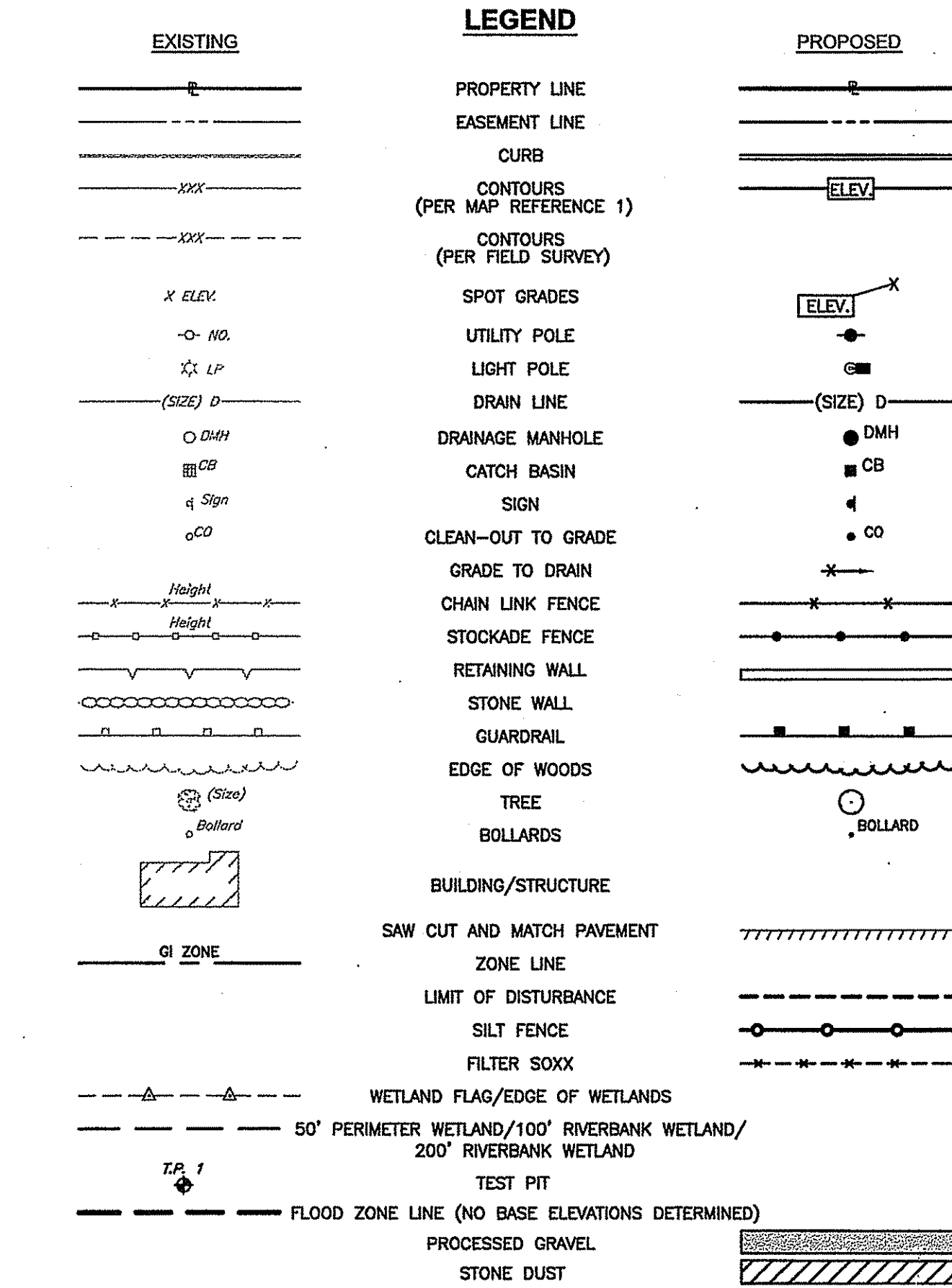
THE SITE IS LOCATED IN ZONE 'X', AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. AREAS ADJACENT TO THE FRY BROOK AND HUNT RIVER ARE LOCATED IN ZONE 'A', SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, NO BASE FLOOD ELEVATIONS DETERMINED. THE 1% ANNUAL CHANCE FLOOD (100 YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALLED OR EXCEEDED IN ANY GIVEN YEAR. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. AREAS OF THE SPECIAL FLOOD HAZARD INCLUDE ZONE A, AE, AH, AD, AR, A99, V AND VE. THE BASE FLOOD ELEVATION IS THE WATER SURFACE ELEVATION OF THE 1% ANNUAL CHANCE FLOOD. THE FLOOD ZONES ARE SHOWN ON THE FLOOD INSURANCE MAP FOR KENT COUNTY, RHODE ISLAND (ALL JURISDICTIONS), PANEL 138 OF 251, MAP NUMBER 44003C01380, EFFECTIVE DATE: DECEMBER 3, 2010.

PROPOSED PAVEMENT STRUCTURE

- 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE
- 3" BITUMINOUS CONCRETE BASE COURSE
- 8" GRAVEL BORROW SUBBASE

LIGHTING NOTES

- LIGHT POLES ARE NOT PROPOSED WITHIN THIS PROJECT SCOPE. ANY FUTURE LIGHT INSTALLATION SHALL HAVE APPROPRIATE SHIELDING TO DIRECT LIGHTS AWAY FROM ANY WETLAND AREAS.



WETLAND NOTES

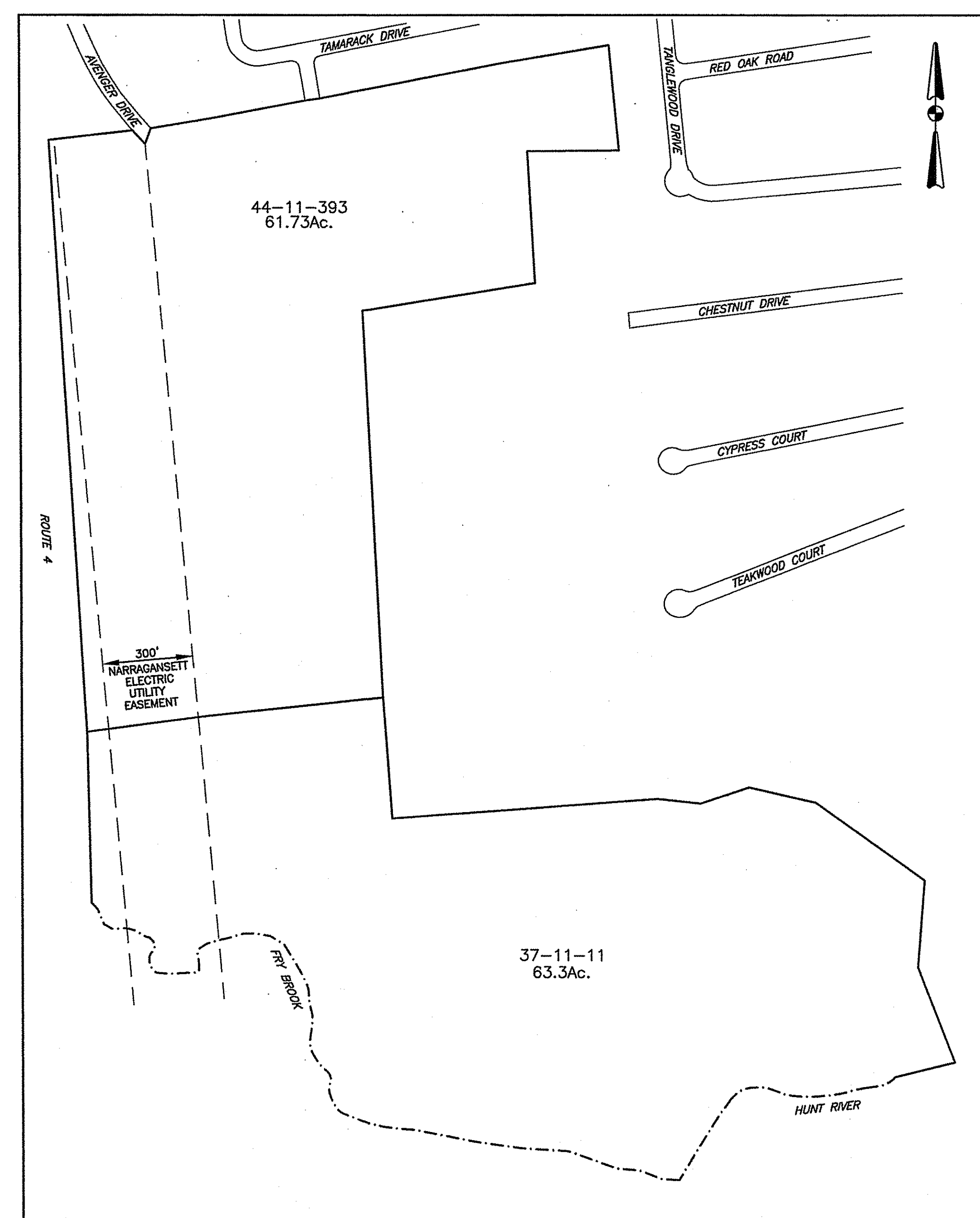
- WETLANDS SHOWN WITHIN THIS PLAN SET HAVE BEEN PREVIOUSLY LOCATED AND REFERENCED ON PLANS PROVIDED BY OWNER (MAP REFERENCE). THESE MAP REFERENCE PLANS HAVE BEEN REVIEWED AND APPROVED UNDER RIDEM PERMIT NO. 09-0092.
- CROSSMAN ENGINEERING HAS FIELD LOCATED FLAGS THAT ARE STILL PRESENT WITHIN THE ROADWAY-WETLAND CROSSING AREA. THE LOCATED FLAGS ARE CONSISTANT WITH THE MAP REFERENCE PLANS.

MAP REFERENCE

REFERENCE IS MADE TO PLANS ENTITLED "CONSTRUCTION PLANS FOR EAST GREENWICH HIGH SCHOOL ATHLETIC FIELD IMPROVEMENTS PHASE I, ASSESSOR'S PLAT 11, LOTS 11, 13 AND 393, AVENGER DRIVE EAST GREENWICH RHODE ISLAND" PREPARED FOR EAST GREENWICH PUBLIC SCHOOLS, OCTOBER 2008, LAST REVISION JUNE 2009, SHEETS 1 THROUGH 42, PREPARED BY JOHN P. CAITO CORPORATION AND THE GIFFORD DESIGN GROUP, INC.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES

- CONSTRUCTION SHALL BE CONDUCTED IN A MANNER AS TO NOT DISRUPT THE SCHOOL ACTIVITIES. THE CONTRACTOR SHALL BE REQUIRED TO MODIFY ACTIVITIES AS NECESSARY. COORDINATION WITH CONSTRUCTION AND SCHOOL SCHEDULES WILL BE REQUIRED WITH THE TOWN OF EAST GREENWICH RECREATION AND PUBLIC WORKS DEPARTMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS WILL NOT BE PARKED IN THE ROADWAY RIGHT-OF-WAY.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, AND SUBSEQUENT ADDENDA.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE STATE D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.



PLAT MAP
SCALE: 1"=300'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 18 2015 FILE # 14-0069
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hackett
102 8 330

SOIL EVALUATION TEST PIT DATA
TEST PITS CONDUCTED BY CROSSMAN ENGINEERING ON 7/30/13.

TEST PIT 1	TEST PIT 2	TEST PIT 3	TEST PIT 4	TEST PIT 14-1	TEST PIT 14-2	TEST PIT 14-3	TEST PIT 14-4	TEST PIT 14-5	TEST PIT 14-6	TEST PIT 14-7
0' Forest Litter 2' Dark Yellowish Brown Fine Sandy Loom 5' Dark Yellowish Brown Fine Sandy Loom 10' Yellowish Brown Stony Loamy Fine Sand 30' Yellowish Brown Gravelly Loamy Sand 54' Light Olive Brown Gravelly Fine Sand 72' Light Olive Brown Gravelly Loamy Sand 132'	0' Forest Litter 2' Dark Yellowish Brown Fine Sandy Loom 6' Dark Yellowish Brown Fine Sandy Loom 17' Yellowish Brown Stony Loamy Fine Sand/ Fine Sandy Loom 27' Light Olive Brown Loamy Sand 42' Light Olive Brown Gravelly Fine Sand 60' Light Olive Brown Gravelly Fine Sand 120'	0' Forest Litter 2' Dark Brown Fine Sandy Loom 6' Dark Yellowish Brown Fine Sandy Loom 16' Yellowish Brown Stony Gravelly Stony Loom 25' Light Olive Brown Stony Sand 48' Light Olive Brown Gravelly Sand 79' Olive Brown Gravelly Sand 116'	0' Forest Litter 2' Fine Sandy Loom 6' Dark Yellowish Brown Fine Sandy Loom 12' Yellowish Brown Stony Loamy Sand 28' Yellowish Brown Stony Gravelly Loamy Sand 55' Very Dark Brown Gravelly Sand 60' Light Yellowish Brown Very Fine Sand 74' Gray Loamy Fine Sand 120'	0' Forest Litter 2' Very Dark Grayish Brown Sand 6' Light Olive Brown Gravelly Sand 10' Light Olive Brown Gravelly Sand 13' Light Brownish Gray Fine Sand 22' Light Yellowish Brown Gravelly Coarse Sand 36' Light Olive Brown Gravelly Coarse Sand 40' Light Brownish Gray Fine Sand 84'	0' Broken Stones and Sand Mix 6' Light Olive Brown Gravelly Sand 8' Light Olive Brown Gravelly Sand 8' Light Yellowish Brown Sand 8' Light Yellowish Brown Gravelly Coarse Sand 36' Light Olive Brown Stratified Coarse Sand/ Gravelly Sand 92'	0' Sandy Loom 8' Light Brownish Gray Fine Sand 8' Light Yellowish Brown Gravelly Coarse Sand 36' Light Olive Brown Stratified Sand and Coarse Sand 98'	0' Forest Litter 6' Very Dark Grayish Brown Sandy Loom 74' Light Brownish Gray Very Fine Sand 88' Strong Gravelly Sand 120' Light Olive Brown Gravelly Sand 134' Light Yellowish Brown Fine Sand 169'	0' Forest Litter 5' Dark Grayish Brown Cobble and Stony Very Fine Sandy Loom 22' Brown Cobble Sand and Coarse Sand 56' Olive Brown Coarse Sand 112'		
NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 72"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 72"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 42"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 55"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 48"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 62"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 60"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table = 80"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table > 144"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table > 144"	NOTES: No Limiting Layer Encountered No Groundwater Seepage Est. Seasonal High Water Table > 102"

- NOTES:**
- TEST PITS CONDUCTED BY CROSSMAN ENGINEERING ON 7/17/14 - 7/18/14.
 - THE ESHWT NOTED FOR TEST PITS 14-1 THROUGH 14-4 USE A COMBINATION OF SOIL OBSERVATIONS, EXISTING GRADES AND CONTOURS, AND THE ADJACENT WETLAND LOCATIONS FOR THE PROPOSED DESIGN CONDITIONS.
 - THE SOILS OBSERVED IN TEST PITS 14-5 THROUGH 14-7 ARE CONSISTANT TO A GEOLOGICAL KAME CHARACTERISTIC.

CROSSMAN ENGINEERING
151 Centerville Road | Warwick, Rhode Island 02886
Phone: (401) 738-5660 | Fax: (401) 738-8157
Email: cel@crossmaneng.com

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STEVEN M. CABRERA
No
REGISTERED PROFESSIONAL ENGINEER
12/14

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN OF EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN OF EAST GREENWICH
DEPARTMENT OF PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
GENERAL NOTES AND LEGEND

DATE: MARCH 2014
SCALE: AS NOTED
DWG. NAME: 1905-C01-NOTE-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER
C1
SHEET: 2 OF 24

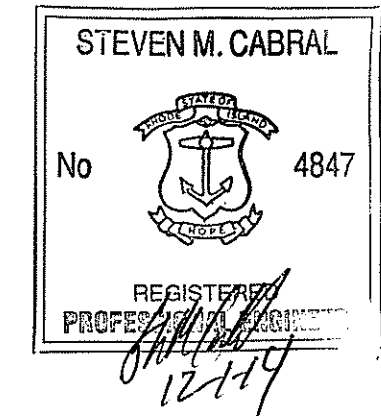


- Civil
- Transportation
- Environmental
- Site Planning
- Land Surveying

CROSSMAN ENGINEERING
 151 Centerville Road | Warwick, Rhode Island 02886
 Phone: (401) 738-5660 | Fax: (401) 738-8157
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STATE OF RHODE ISLAND
 DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 RECREATION WATERWAYS
 APPROVED WITH
 PERMITTED IN THE STATE OF RHODE ISLAND
 FEB 18 2015 14-0069
Charles A. Hallett



PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
 TOWN of EAST GREENWICH
 PLAT 11, LOTS 11 & 393
 EAST GREENWICH, RI

PREPARED FOR:
 TOWN of EAST GREENWICH
 DEPARTMENT of PUBLIC WORKS
 P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RI 02818

DRAWING TITLE:
AERIAL MAP

DATE: MARCH 2014 SCALE: 1"=150'
 DWG. NAME: 1905-C02-AERIAL-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER
C2
 SHEET: 3 OF 24



- Civil
- Transportation
- Environmental
- Site Planning
- Land Surveying

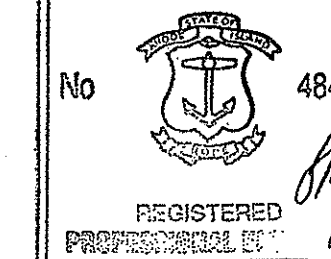
CROSSMAN ENGINEERING

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Phone: (401) 738-5660 | Fax: (401) 738-8157

Email: cel@crossmaneng.com

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STEVEN M. CABRAL



PROJECT TITLE:

MULTI-PURPOSE CROSS COUNTRY TRAILS

TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393

EAST GREENWICH, RI

PREPARED FOR:

TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS

P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:

200' RADIUS MAP

DATE: MARCH 2014 SCALE: 1"=100'

DWG. NAME: 1905-C03-RADIUS.dwg

REVISIONS

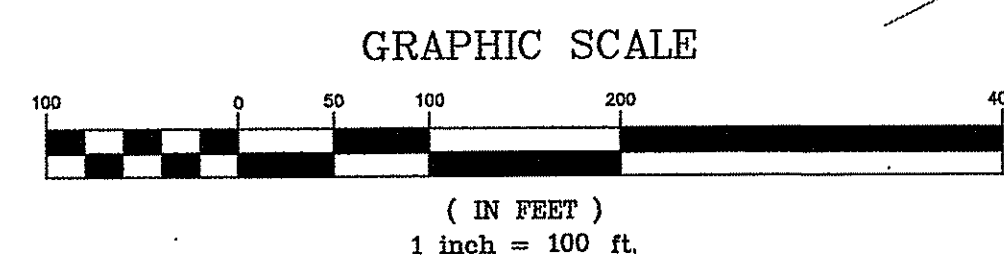
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DATE: FEB 18 2014
NO CHANGES APPROVED
14-0069

DRAWING NUMBER

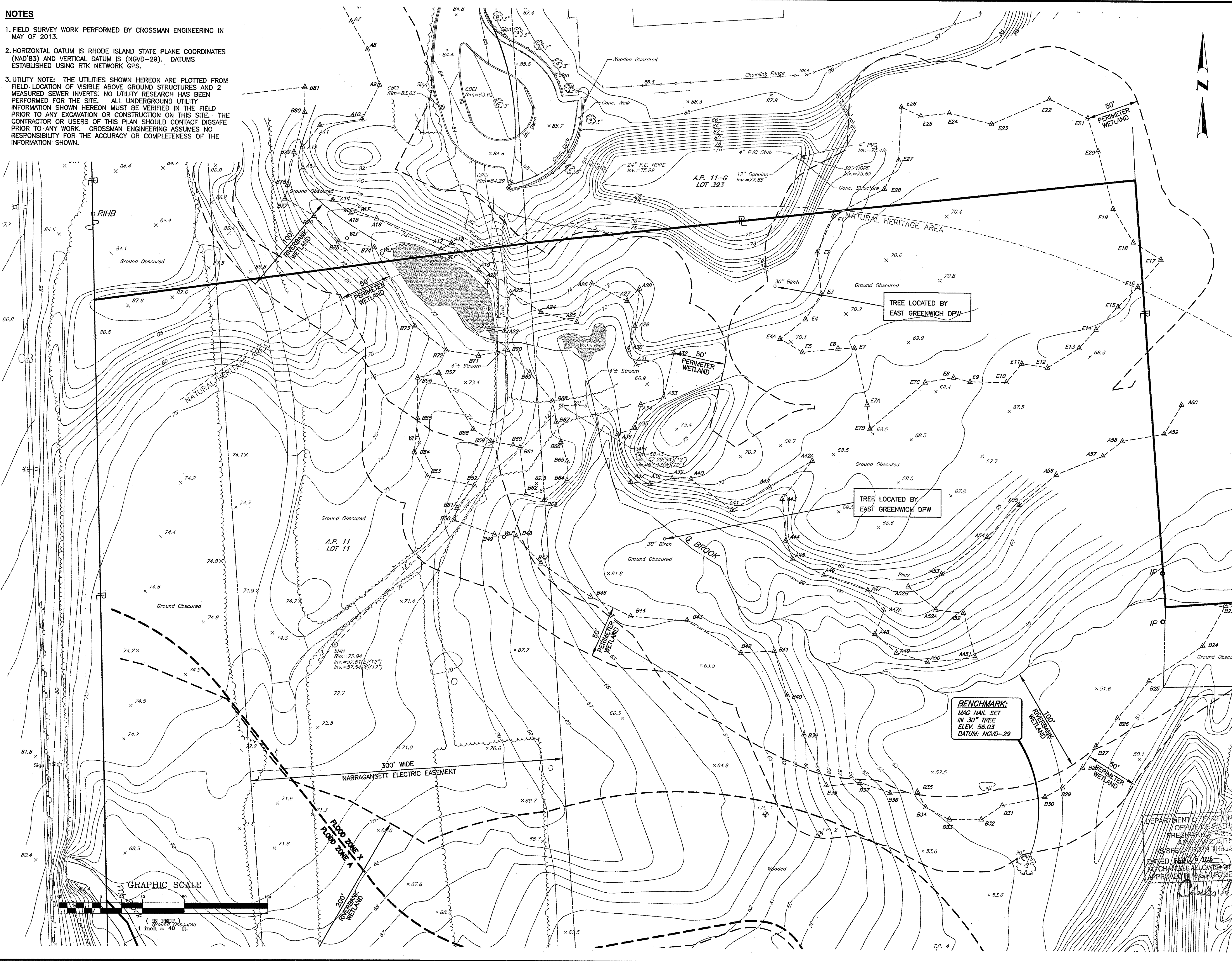
C3

SHEET: 4 OF 24



NOTES

1. FIELD SURVEY WORK PERFORMED BY CROSSMAN ENGINEERING IN MAY OF 2013.
2. HORIZONTAL DATUM IS RHODE ISLAND STATE PLANE COORDINATES (NAD'83) AND VERTICAL DATUM IS (NGVD-29). DATUMS ESTABLISHED USING RTK NETWORK GPS.
3. UTILITY NOTE: THE UTILITIES SHOWN HEREON ARE PLOTTED FROM FIELD LOCATION OF VISIBLE ABOVE GROUND STRUCTURES AND 2 MEASURED SEWER INVERTS. NO UTILITY RESEARCH HAS BEEN PERFORMED FOR THE SITE. ALL UNDERGROUND UTILITY INFORMATION SHOWN HEREON MUST BE VERIFIED IN THE FIELD PRIOR TO ANY EXCAVATION OR CONSTRUCTION ON THIS SITE. THE CONTRACTOR OR USERS OF THIS PLAN SHOULD CONTACT DIGSAFE PRIOR TO ANY WORK. CROSSMAN ENGINEERING ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN.




CROSSMAN ENGINEERING
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STEVEN M. CABRAL
 No. 486
 REGISTERED PROFESSIONAL ENGINEER
 12-2-14

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
 TOWN of EAST GREENWICH
 PLAT 11, LOTS 11 & 393
 EAST GREENWICH, RI

PREPARED FOR:
 TOWN of EAST GREENWICH
 DEPARTMENT of PUBLIC WORKS
 P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RI 02818

DRAWING TITLE:
EXISTING CONDITIONS PLAN - ROADWAY

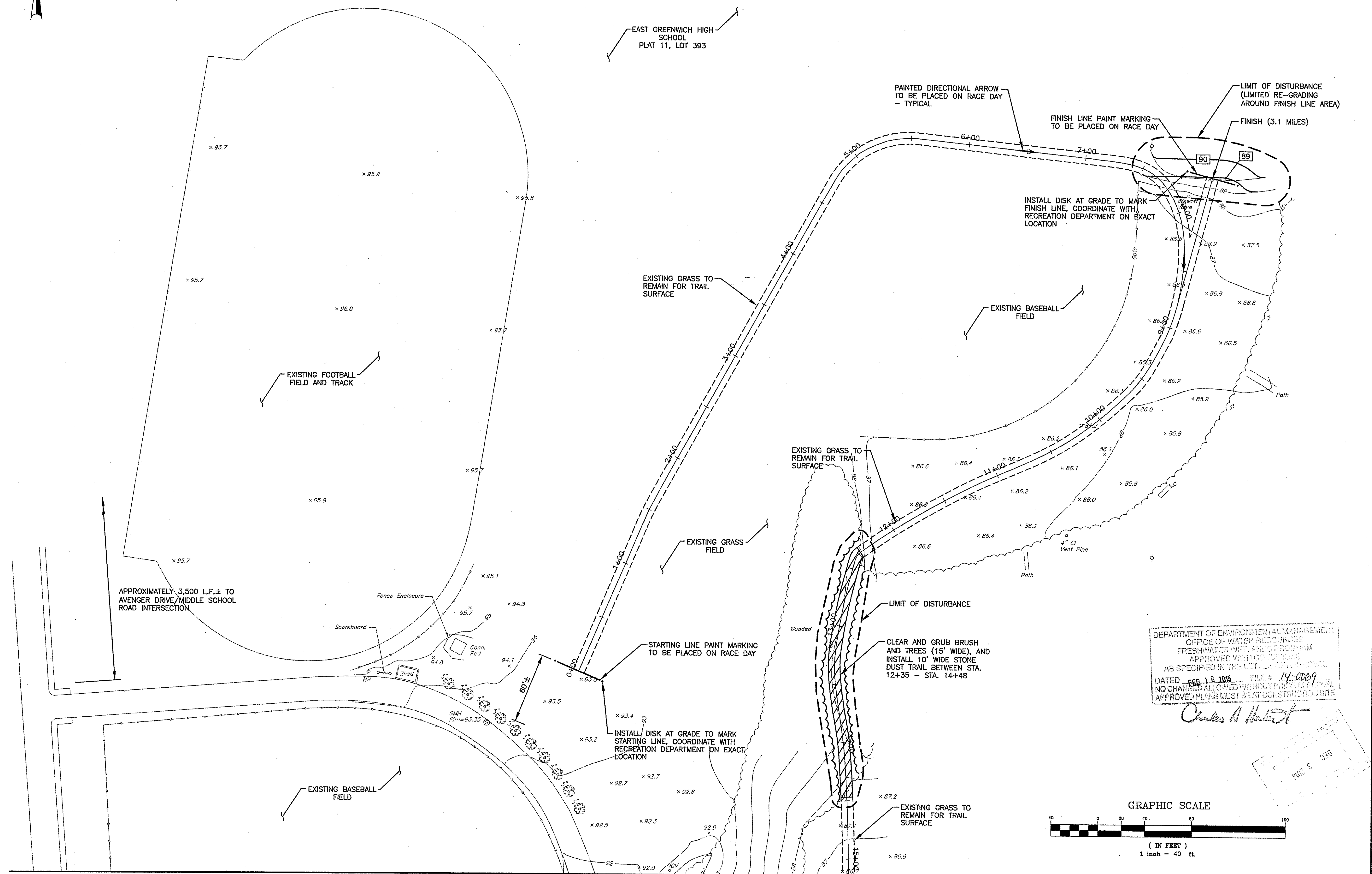
DATE: MARCH 2014
 SCALE: 1"=40'
 DWG. NAME: 1905-C04-EXCN-R1.dwg

REVISIONS

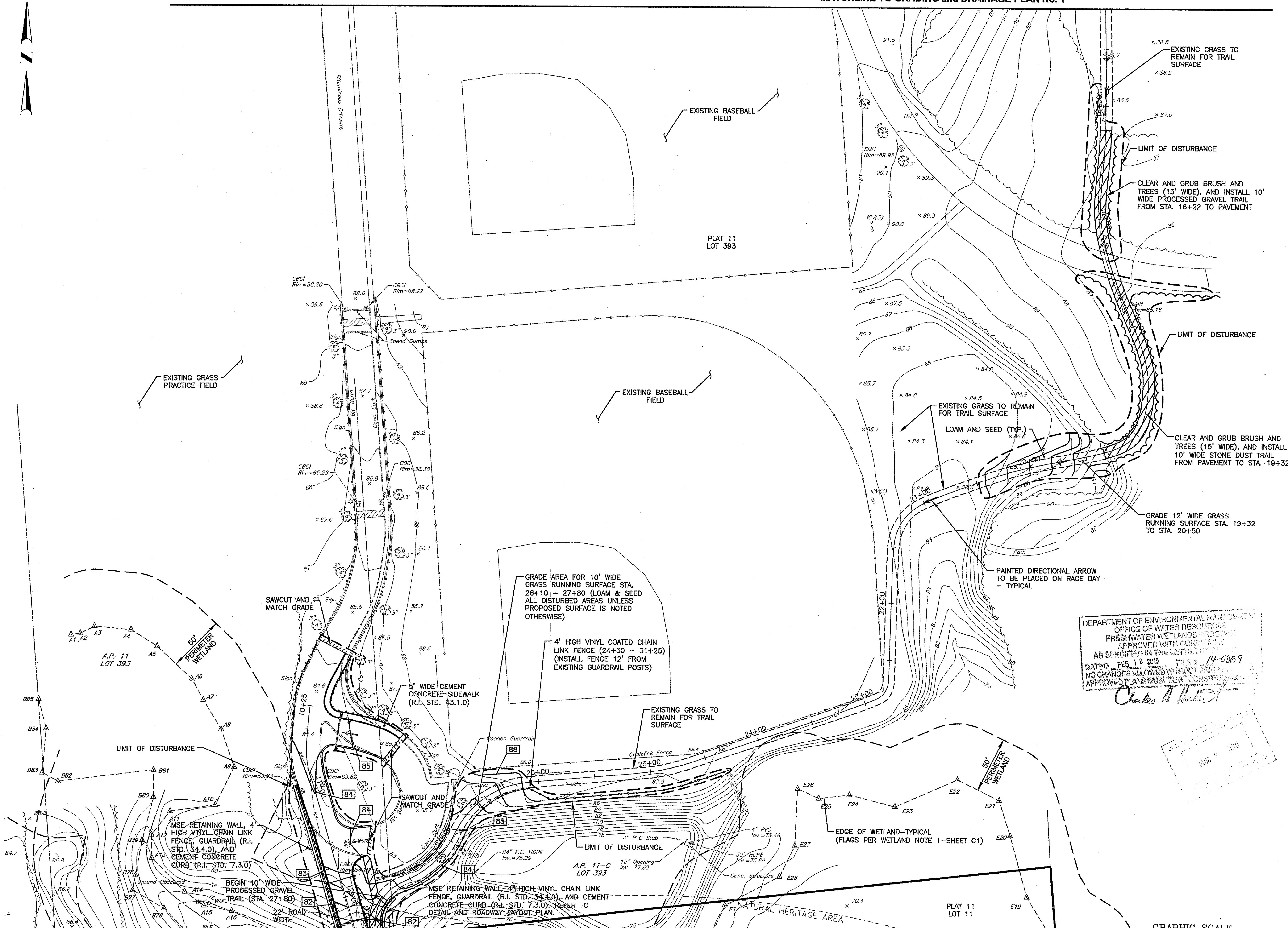
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF PERMITTING AND REGULATORY AFFAIRS
 FRESHFIELD, RI 02840
 AS SPECIFIED IN THE PERMIT
 DATED 12/15/15
 NO CHANGES TO BE MADE WITHOUT THE APPROVED PLANS MUST BE RETURNED TO THE PERMITTING OFFICE

DRAWING NUMBER
C4
 SHEET: 5 OF 24

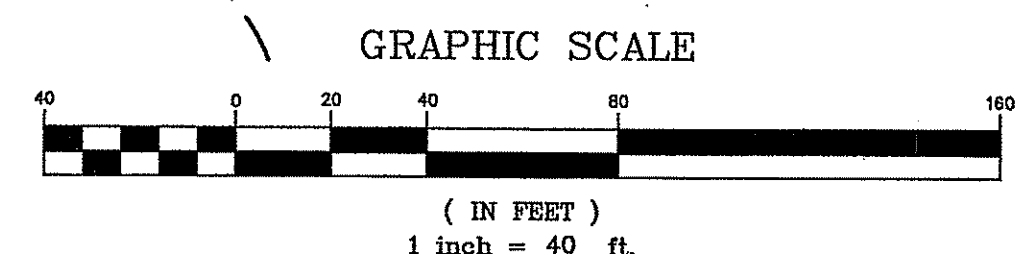


MATCHLINE TO GRADING and DRAINAGE PLAN No. 1



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF PERMIT
 DATED FEB 18 2015 FILE # 14-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BEAT CONSTRUCTION

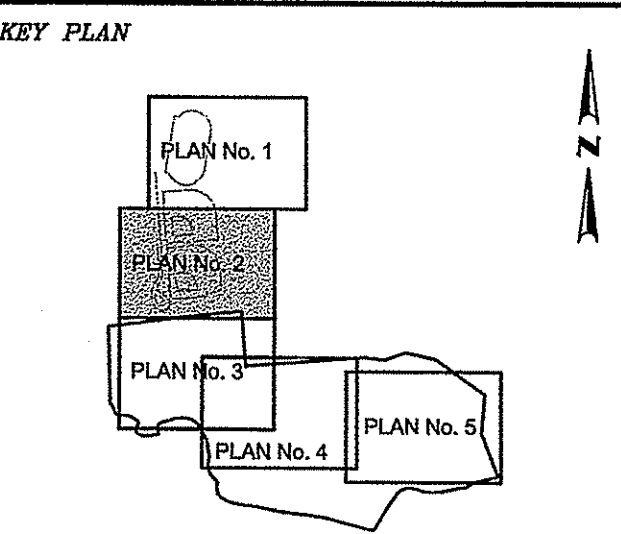
Charles A. Hest



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 Email: cel@crossmaneng.com

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STEVEN M. CABRAL
 No. 487
 REGISTERED PROFESSIONAL ENGINEER
 12-1-14



PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
 TOWN of EAST GREENWICH
 PLAT 11, LOTS 11 & 393
 EAST GREENWICH, RI

PREPARED FOR:
 TOWN of EAST GREENWICH
 DEPARTMENT of PUBLIC WORKS
 P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RI 02818

DRAWING TITLE:
GRADING and DRAINAGE PLAN No. 2

DATE: MARCH 2014 SCALE: 1"=40'

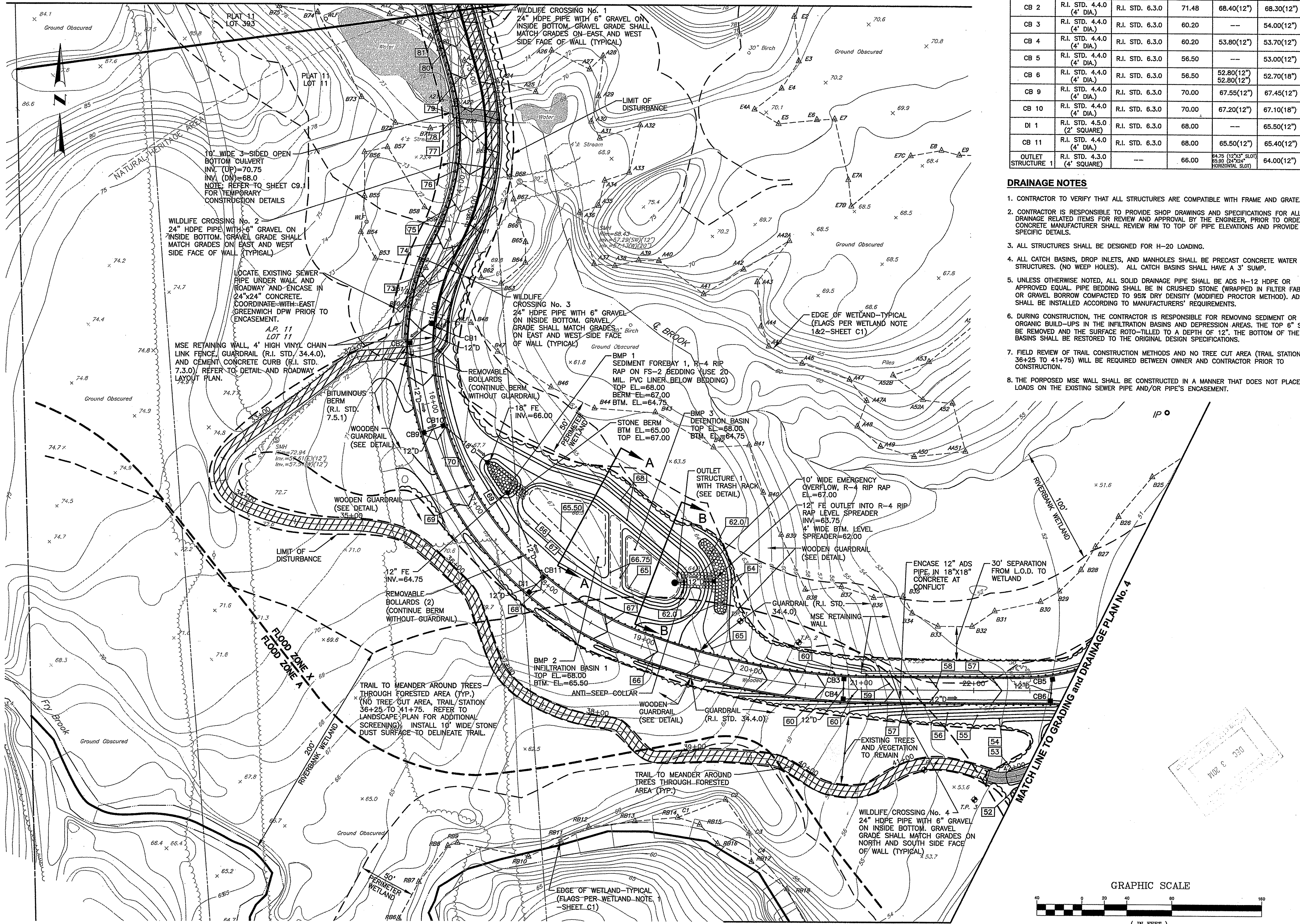
DWG. NAME: 1905-C05-GRADE-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER:
C5.2
 SHEET: 7 OF 24

MATCH LINE TO GRADING and DRAINAGE PLAN No. 2



DRAINAGE STRUCTURE TABLE

NUMBER	STRUCTURE	FRAME AND GRATE/COVER	RIM	INVERT (IN)	INVERT (OUT)
CB 1	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	71.93	---	68.60(12")
CB 2	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	71.48	68.40(12")	68.30(12")
CB 3	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	60.20	---	54.00(12")
CB 4	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	60.20	53.80(12")	53.70(12")
CB 5	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	56.50	---	53.00(12")
CB 6	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	56.50	52.80(12")	52.70(18")
CB 9	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	70.00	67.55(12")	67.45(12")
CB 10	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	70.00	67.20(12")	67.10(18")
CB 11	R.I. STD. 4.4.0 (4" DIA.)	R.I. STD. 6.3.0	68.00	65.50(12")	65.40(12")
DI 1	R.I. STD. 4.5.0 (2" SQUARE)	R.I. STD. 6.3.0	68.00	---	65.50(12")
OUTLET STRUCTURE 1	R.I. STD. 4.3.0 (4" SQUARE)	---	66.00	64.75 (12"x3" SLOPE) 65.80 (24"x24" PERFORATED SLOPE)	64.00(12")

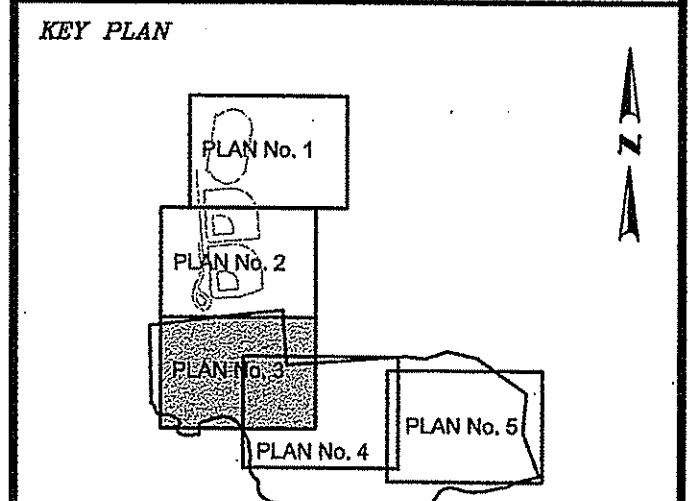
DRAINAGE NOTES

- CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO ORDERING. CONCRETE MANUFACTURER SHALL REVIEW RIM TO TOP OF PIPE ELEVATIONS AND PROVIDE SPECIFIC DETAILS.
- ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
- ALL CATCH BASINS, DROP INLETS, AND MANHOLES SHALL BE PRECAST CONCRETE WATER TIGHT STRUCTURES. (NO WEEP HOLES). ALL CATCH BASINS SHALL HAVE A 3" SUMP.
- UNLESS OTHERWISE NOTED, ALL SOLID DRAINAGE PIPE SHALL BE ADS N-12 HDPE OR APPROVED EQUAL. PIPE BEDDING SHALL BE IN CRUSHED STONE (WRAPPED IN FILTER FABRIC) OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD). ADS PIPE SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS.
- DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENT OR ORGANIC BUILD-UPS IN THE INFILTRATION BASINS AND DEPRESSION AREAS. THE TOP 6" SHALL BE REMOVED AND THE SURFACE ROTO-TILLED TO A DEPTH OF 12". THE BOTTOM OF THE BASINS SHALL BE RESTORED TO THE ORIGINAL DESIGN SPECIFICATIONS.
- FIELD REVIEW OF TRAIL CONSTRUCTION METHODS AND NO TREE CUT AREA (TRAIL STATIONS 36+25 TO 41+75) WILL BE REQUIRED BETWEEN OWNER AND CONTRACTOR PRIOR TO CONSTRUCTION.
- THE PROPOSED MSE WALL SHALL BE CONSTRUCTED IN A MANNER THAT DOES NOT PLACE THE LOADS ON THE EXISTING SEWER PIPE AND/OR PIPE'S ENCASEMENT.

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STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
 12-1-14



PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
 TOWN of EAST GREENWICH
 PLAT 11, LOTS 11 & 393
 EAST GREENWICH, RI

PREPARED FOR:
 TOWN of EAST GREENWICH
 DEPARTMENT of PUBLIC WORKS
 P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RI 02818

DRAWING TITLE:
GRADING and DRAINAGE PLAN No. 3

DATE: MARCH 2014 SCALE: 1"=40'

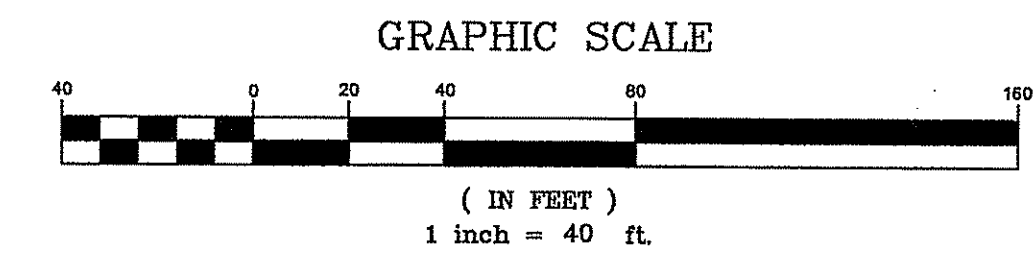
FIG. NAME: 1905-C05-GRADE-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRED HAMMATER, WATER RESOURCES ENGINEER
 APPROVED WITH COMMENTS
 AS SPECIFIED IN THE LETTER TO THE ENGINEER
 DATED FEB 11 2015 FILE # 14-0069
 NO CHANGES ALLOWED WITHOUT PREVIOUS WRITTEN APPROVAL
 APPROVED PLANS MUST BE BY CONTRACTOR

DRAWING NUMBER
C5.3
 SHEET: 8 OF 24

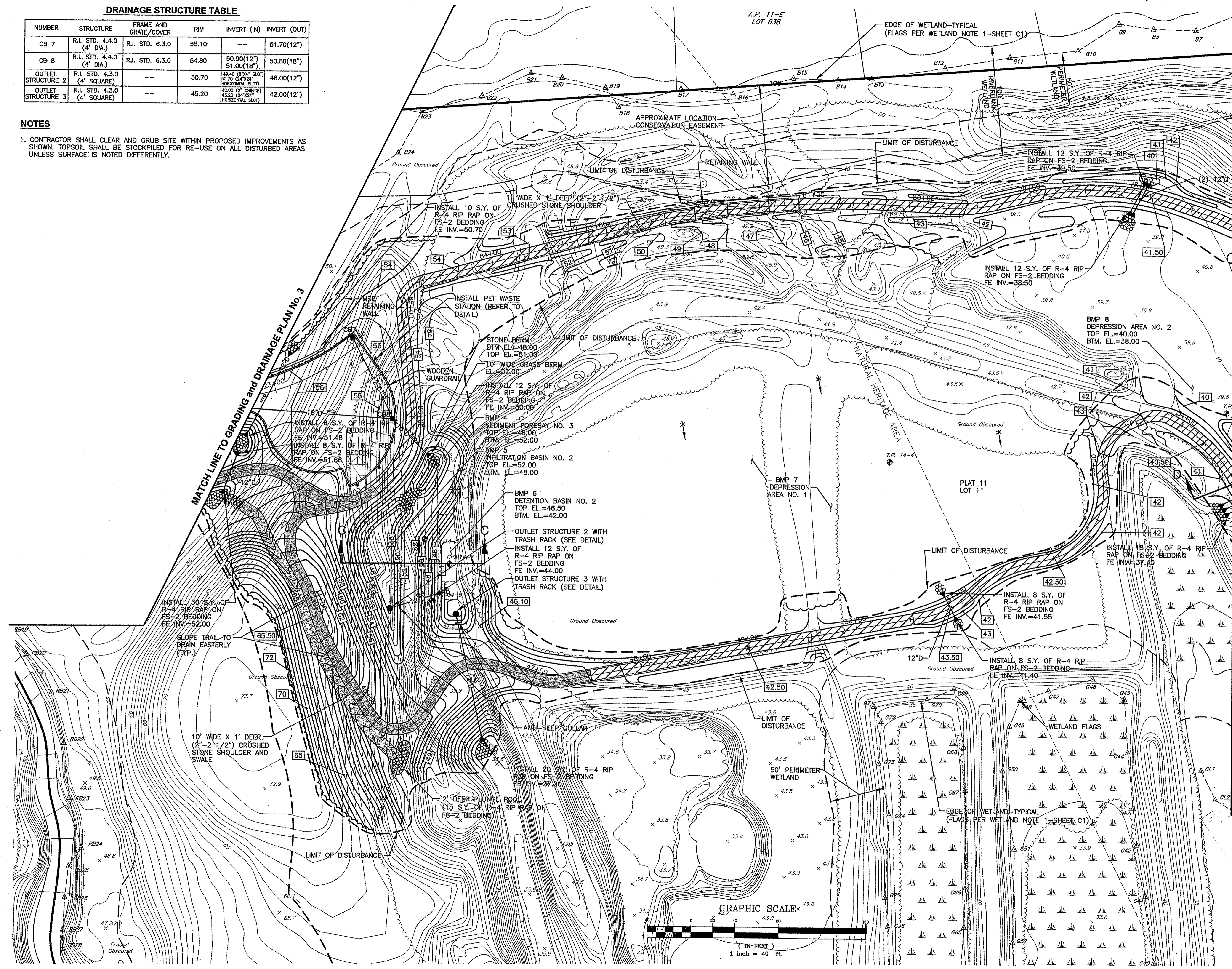


DRAINAGE STRUCTURE TABLE

NUMBER	STRUCTURE	FRAME AND GRATE/COVER	RIM	INVERT (IN)	INVERT (OUT)
CB 7	R.I. STD. 4.4.0 (4' DIA.)	R.I. STD. 6.3.0	55.10	---	51.70(12")
CB 8	R.I. STD. 4.4.0 (4' DIA.)	R.I. STD. 6.3.0	54.80	50.90(12") 51.00(18")	50.80(18")
OUTLET STRUCTURE 2	R.I. STD. 4.3.0 (4' SQUARE)	---	50.70	49.40 (8" X 8" SLOPE) 50.70 (24" X 24" HORIZONTAL SLOPE)	46.00(12")
OUTLET STRUCTURE 3	R.I. STD. 4.3.0 (4' SQUARE)	---	45.20	42.00 (12" ORIFICE) 45.20 (24" X 24" HORIZONTAL SLOPE)	42.00(12")

NOTES

1. CONTRACTOR SHALL CLEAR AND GRUB SITE WITHIN PROPOSED IMPROVEMENTS AS SHOWN. TOPSOIL SHALL BE STOCKPILED FOR RE-USE ON ALL DISTURBED AREAS UNLESS SURFACE IS NOTED DIFFERENTLY.



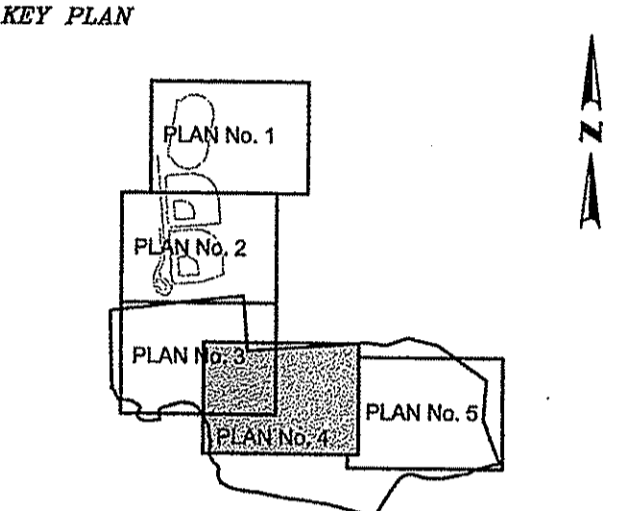
MATCH LINE TO GRADING and DRAINAGE PLAN No. 5

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- Civil
- Environmental
- Site Planning
- Land Surveying

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STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
 12-14



PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
GRADING and DRAINAGE
PLAN No. 4

DATE: MARCH 2014 **SCALE:** 1"=40'

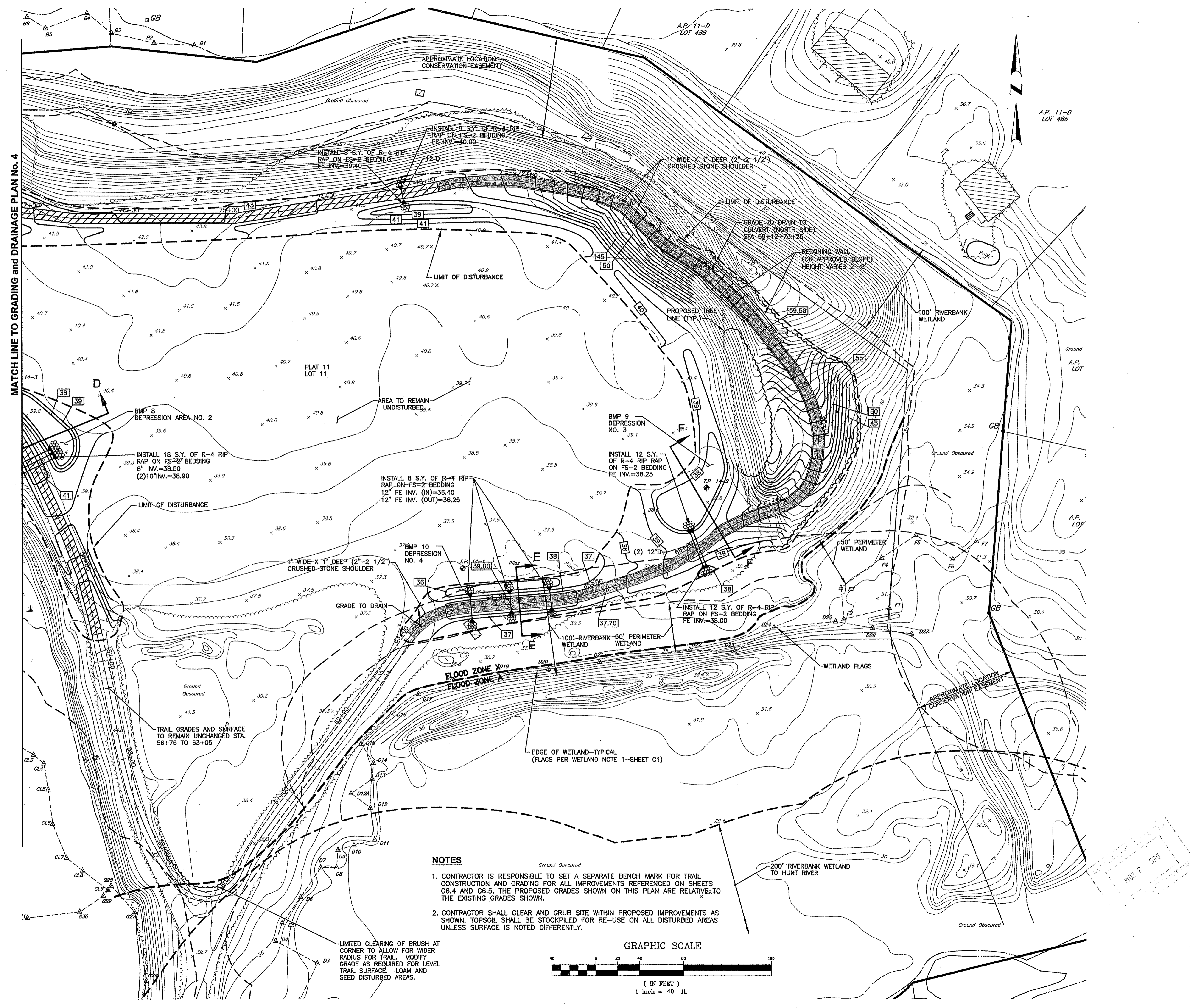
DWG. NAME: 1905-C05-GRADE-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

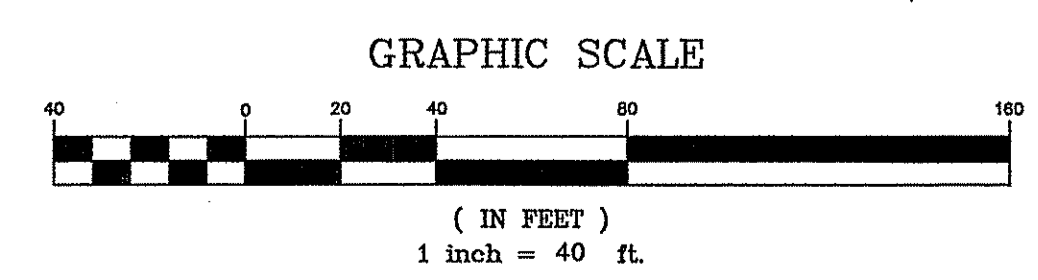
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS SECTION
 APPROVED WITH COMMENTS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATE: FEB 18 2015 FILE # 14-0069
 NO CHANGES ALLOWED WITHOUT PREVIOUS APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION

DRAWING NUMBER
C5.4
 SHEET: 9 OF 24



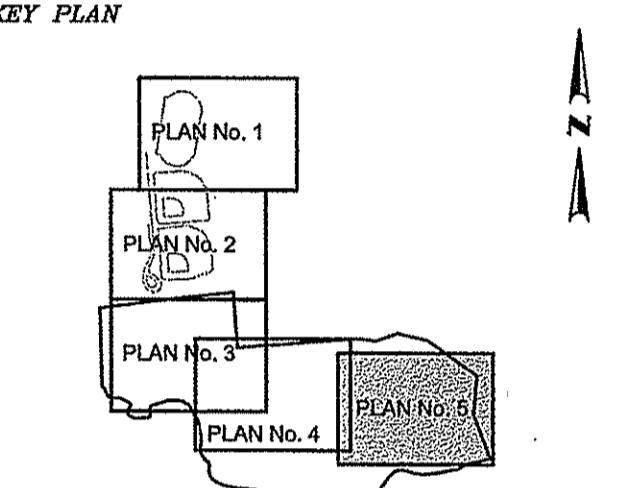
MATCH LINE TO GRADING and DRAINAGE PLAN No. 4

- NOTES**
- CONTRACTOR IS RESPONSIBLE TO SET A SEPARATE BENCH MARK FOR TRAIL CONSTRUCTION AND GRADING FOR ALL IMPROVEMENTS REFERENCED ON SHEETS C6.4 AND C6.5. THE PROPOSED GRADES SHOWN ON THIS PLAN ARE RELATIVE TO THE EXISTING GRADES SHOWN.
 - CONTRACTOR SHALL CLEAR AND GRUB SITE WITHIN PROPOSED IMPROVEMENTS AS SHOWN. TOPSOIL SHALL BE STOCKPILED FOR RE-USE ON ALL DISTURBED AREAS UNLESS SURFACE IS NOTED DIFFERENTLY.



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STEVEN M. CABRAL
 No. 486
 REGISTERED PROFESSIONAL ENGINEER
 12-1-14



PROJECT TITLE:

MULTI-PURPOSE CROSS COUNTRY TRAILS

**TOWN of EAST GREENWICH
 PLAT 11, LOTS 11 & 393**

EAST GREENWICH, RI

PREPARED FOR:

**TOWN of EAST GREENWICH
 DEPARTMENT of PUBLIC WORKS**

**P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RI 02818**

DRAWING TITLE:

**GRADING and DRAINAGE
 PLAN No. 5**

DATE: MARCH 2014 **SCALE:** 1"=40'

DWG. NAME: 1905-C05-GRADE-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH COMMENTS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATE: FEB 18 2015 FILE # 14-0069
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DRAWING NUMBER

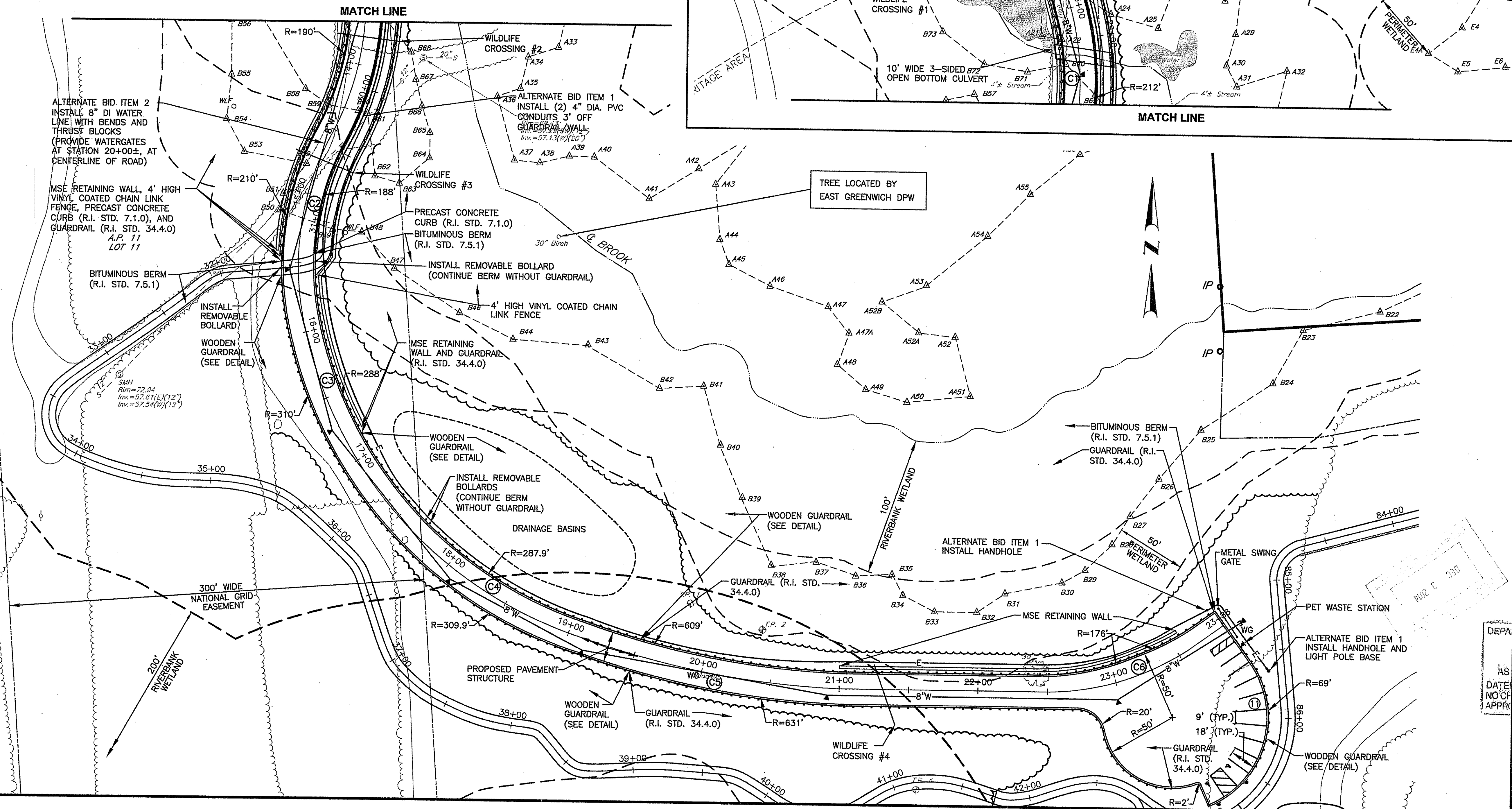
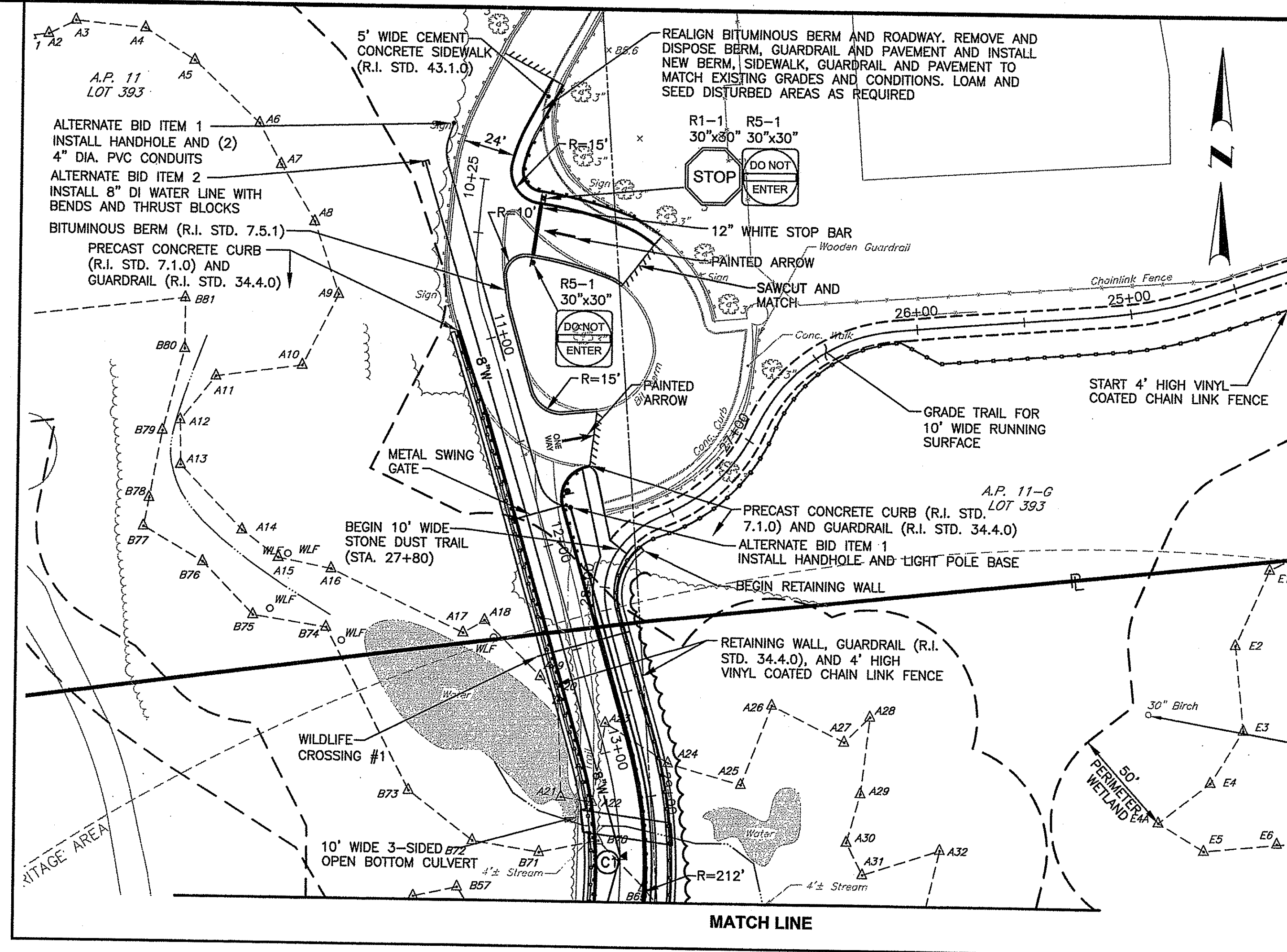
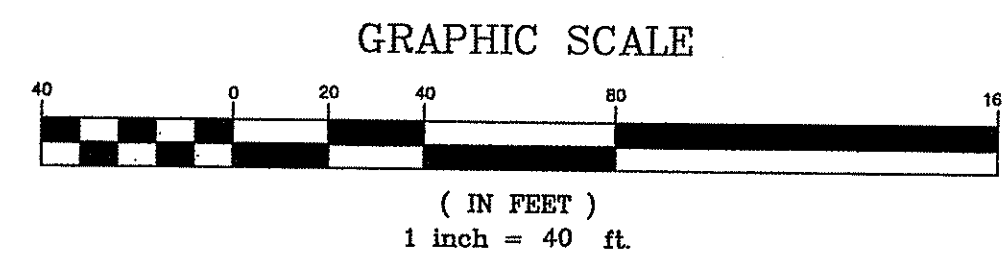
C5.5

SHEET: 10 OF 24

NOTES

1. THIS PLAN REFERENCES BOTH ROADWAY STATIONING AND TRAIL STATIONING.
2. ALL NEW GUARDRAIL SHALL HAVE APPROPRIATE GUARDRAIL END SECTIONS.
3. PROPOSED ROAD WIDTH = 22' (GUTTER TO GUTTER LINE)

PROPOSED ROAD CURVE DATA				
CURVE No.	PC STATION	PT STATION	RADIUS	LENGTH
C1	12+98.52	14+53.22	201.00'	154.70'
C2	14+53.22	15+87.35	199.00'	134.13'
C3	15+87.35	17+43.88	299.00'	156.53'
C4	17+43.88	19+10.41	298.90'	166.53'
C5	19+10.40	20+99.99	620.00'	189.59'
C6	22+47.00	23+57.21	185.60'	110.21'



• Civil
• Transportation
• Environmental
• Site Planning
• Land Surveying

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STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
12/1/14

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
ROADWAY LAYOUT PLAN

DATE: MARCH 2014 SCALE: 1"=40'
DWG. NAME: 1905-C06-ROAD LAYOUT-R1.dwg

REVISIONS	NUMBER	REMARKS	DATE
Δ	1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL & PLANNING
OFFICE OF WATER RESOURCES
FRESH WATER WETLANDS PERMITTING
APPROVED WITH COMMENTS AS SPECIFIED IN THE LETTER OF APPROVAL
DATE: FEB 18 2015 FILE # 14-0069
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED: [Signature]

DRAWING NUMBER
C6
SHEET: 11 OF 24

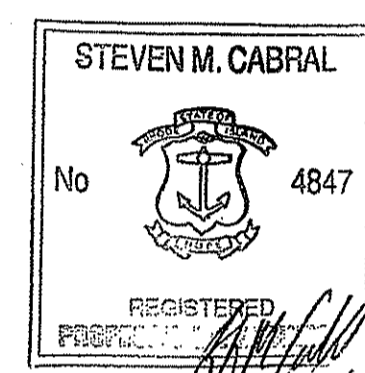


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PROJECT TITLE:

MULTI-PURPOSE CROSS COUNTRY TRAILS

**TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393**

EAST GREENWICH, RI

PREPARED FOR:

**TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS**

**P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818**

DRAWING TITLE:

SOIL EROSION and SEDIMENT CONTROL PLAN No. 1

DATE: MARCH 2014 SCALE: 1"=60'

DWG. NAME: 1905-C08-SOIL-R1.dwg

REVISIONS

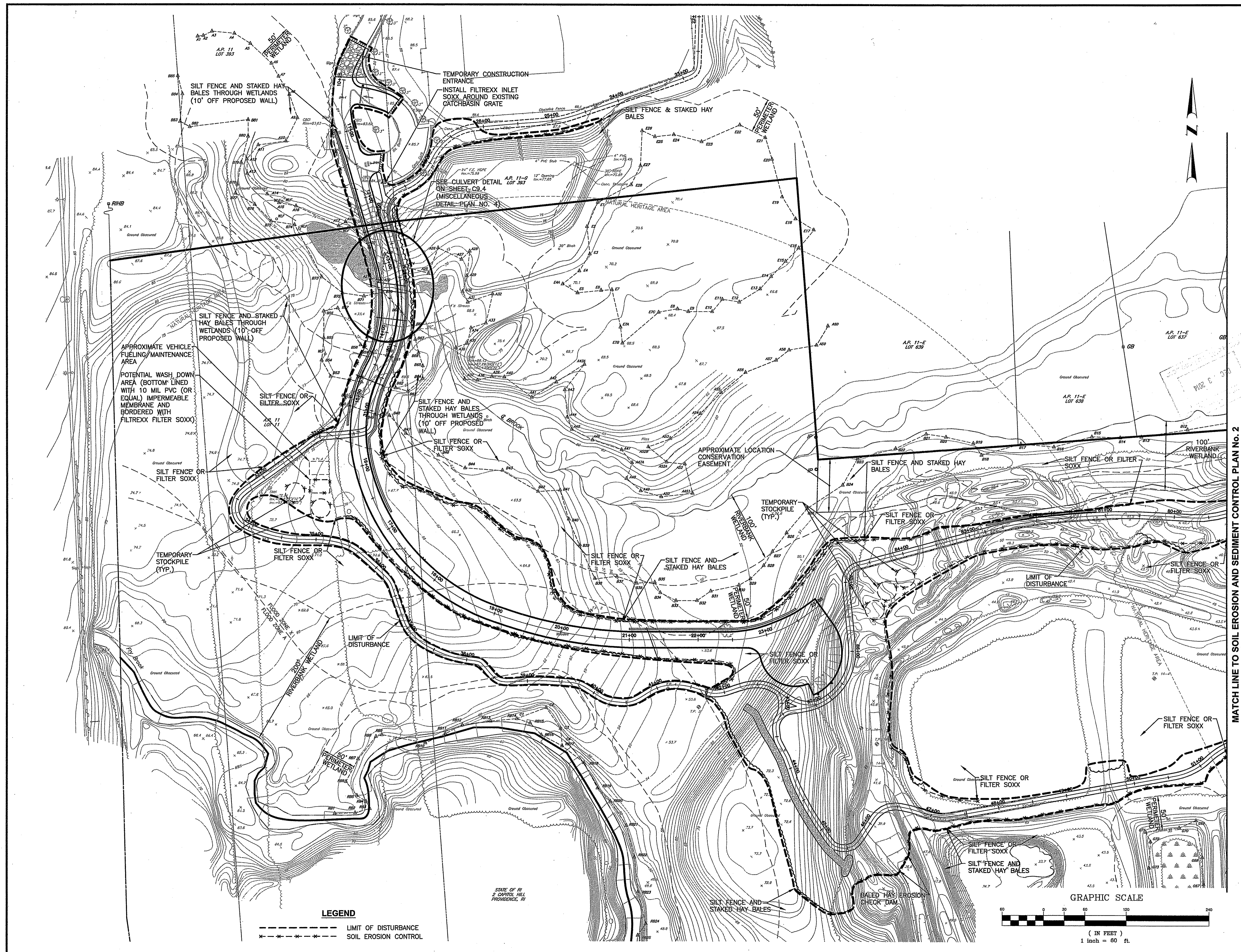
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS
APPROVED WITH COMMENTS
DATE FEB 18 2015
NO CHANGES ALLOWED WITHOUT PERMIT
APPROVED PLANS MUST BE AT CROSSMAN ENGINEERING

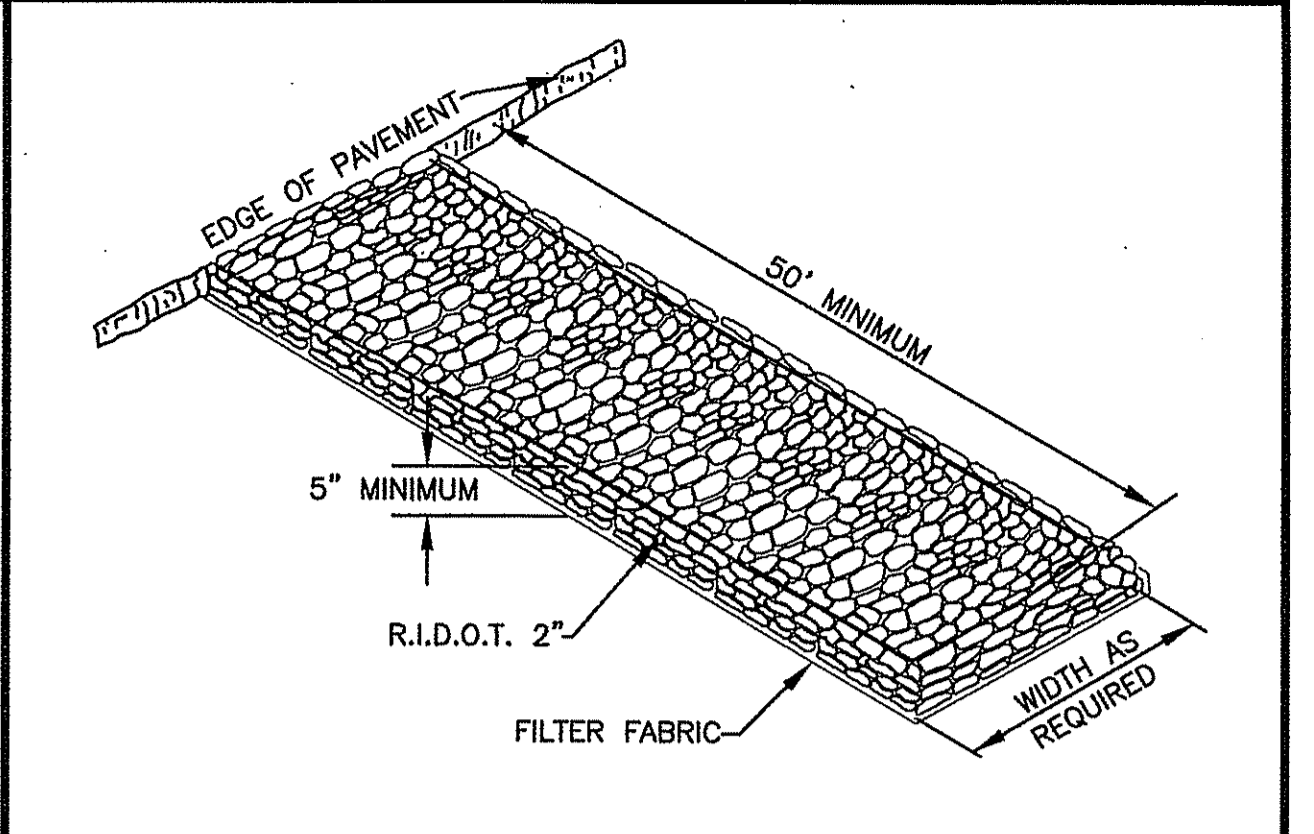
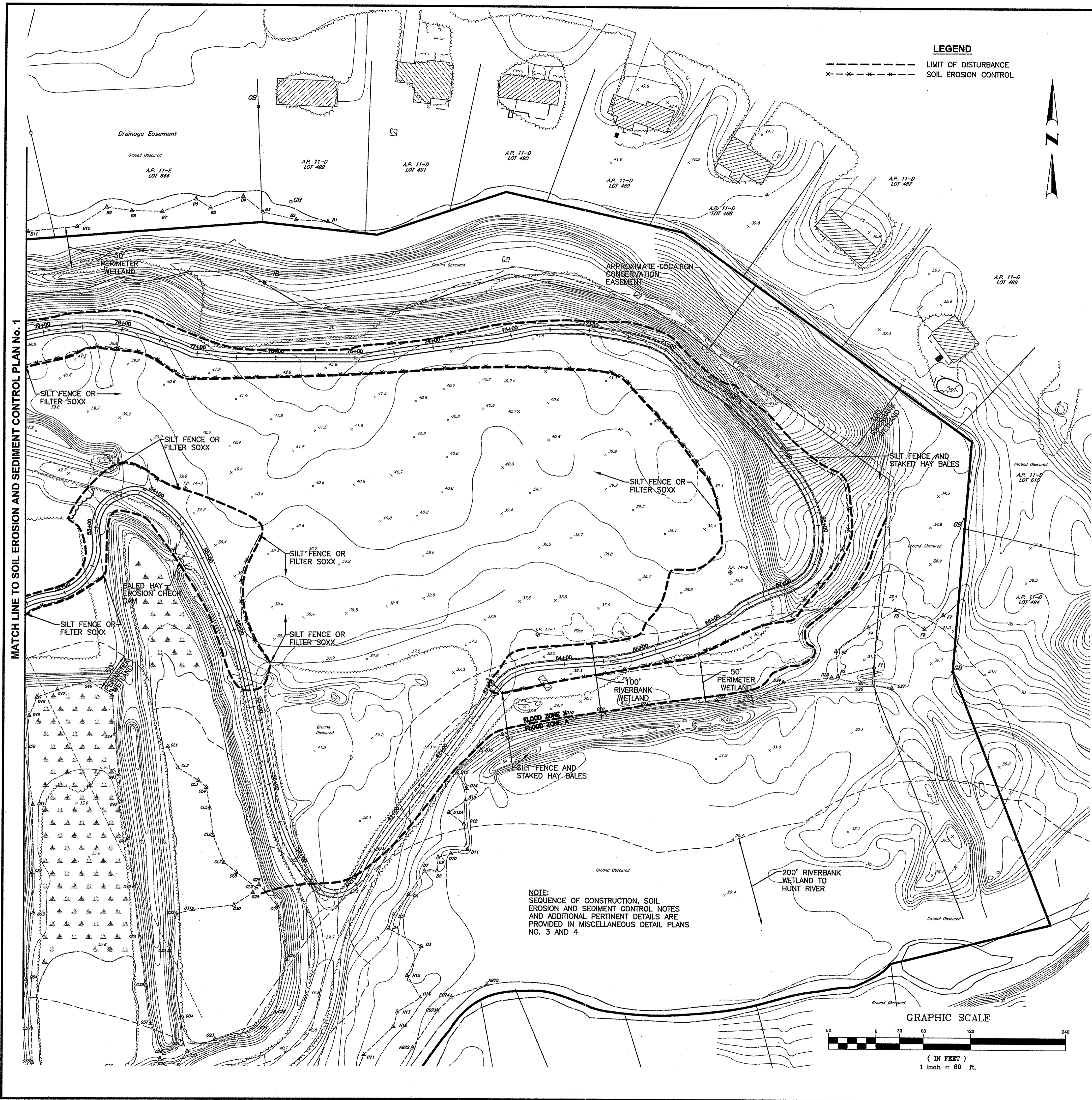
DRAWING NUMBER

C8.1

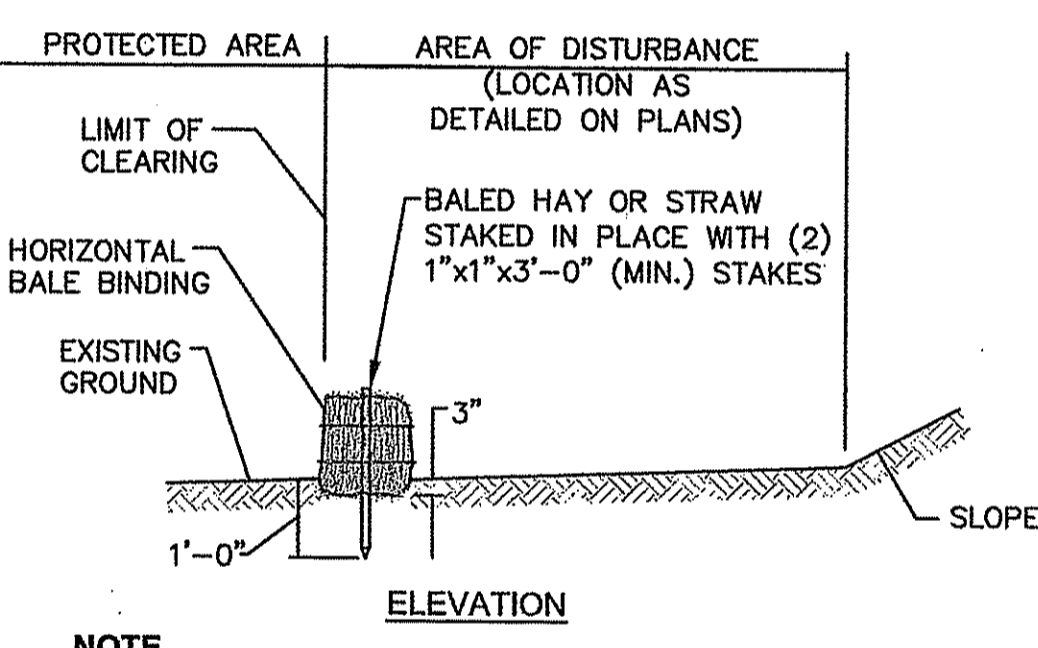
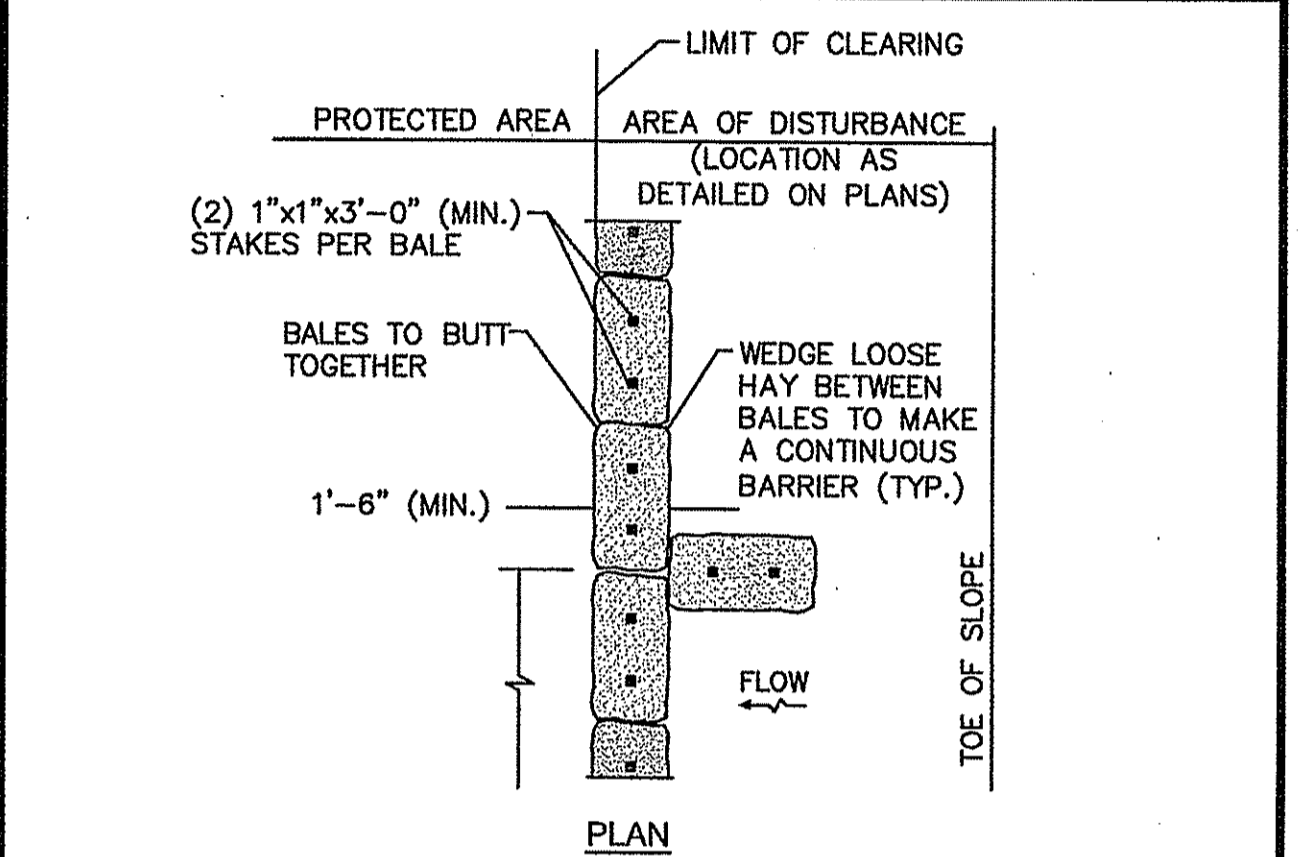
SHEET: 13 OF 24



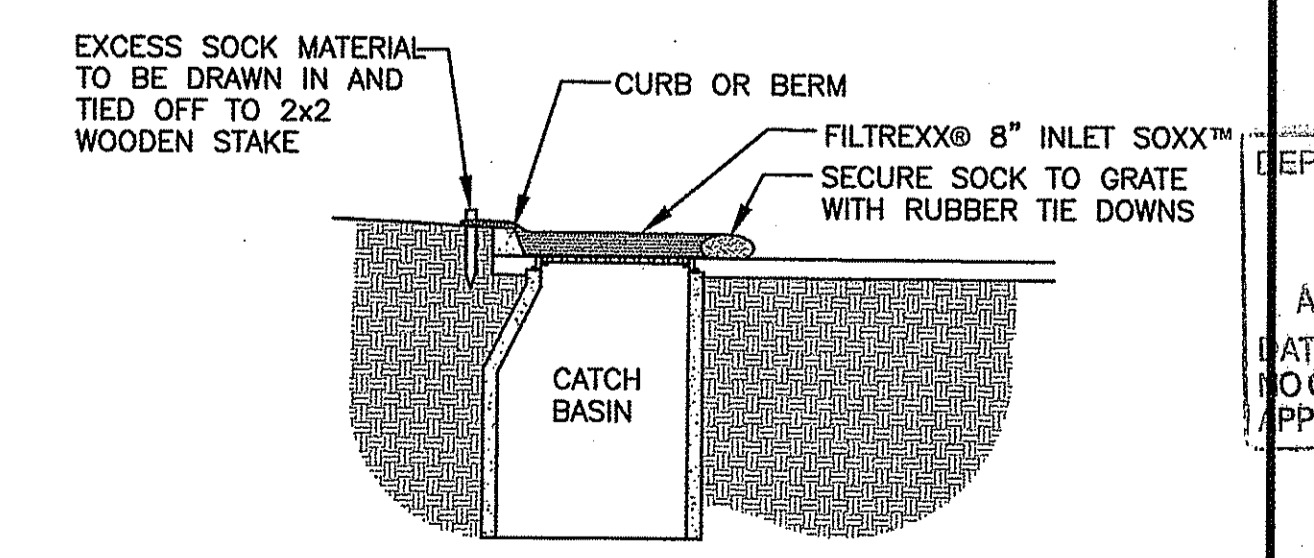
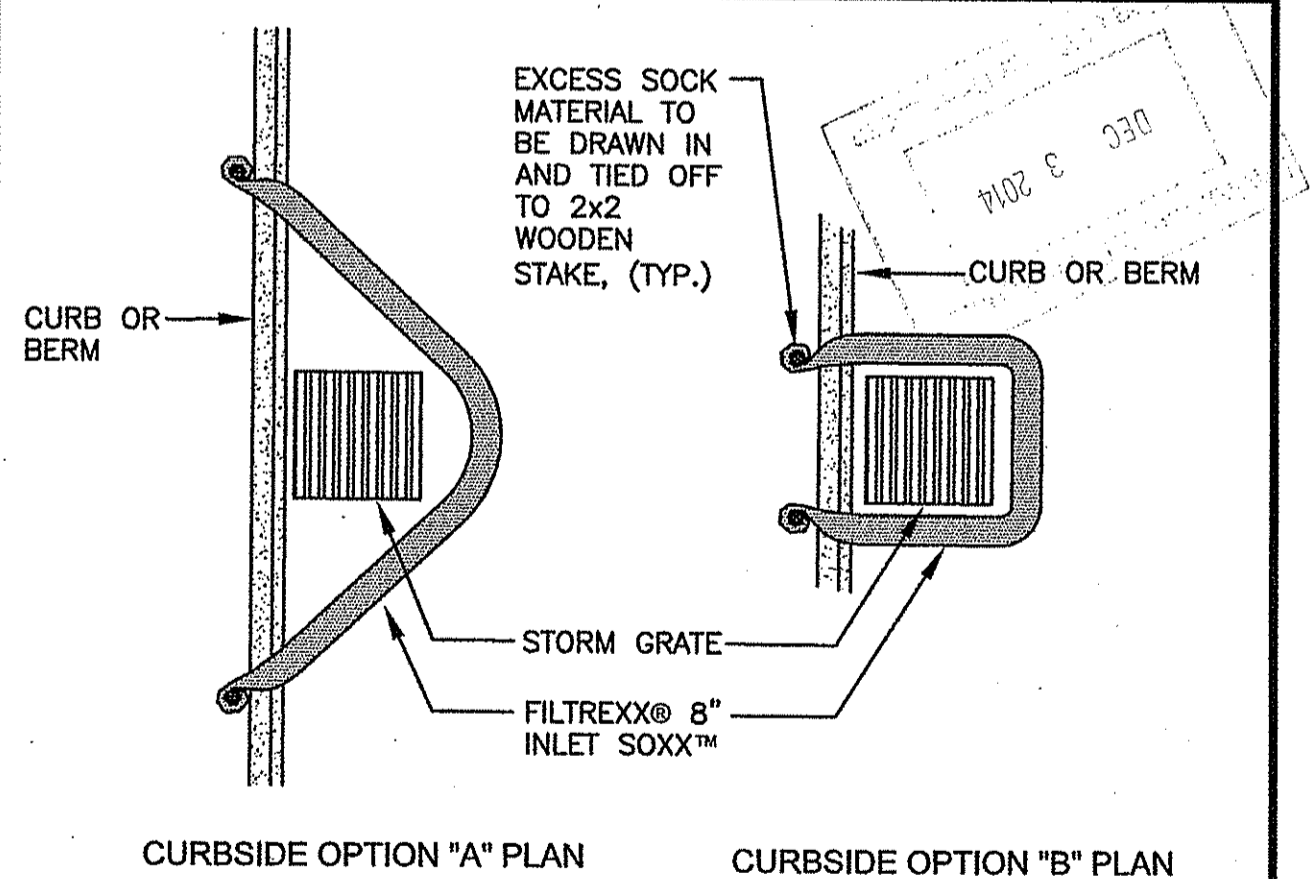
MATCH LINE TO SOIL EROSION AND SEDIMENT CONTROL PLAN No. 2



CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



BALED HAY EROSION CHECK DETAIL
NOT TO SCALE



FILTREXX® INLET SOXX™ DETAILS
NOT TO SCALE

CROSSMAN ENGINEERING
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Email: cel@crossmaneng.com

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STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
12-1-14

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
SOIL EROSION and SEDIMENT CONTROL PLAN No. 2

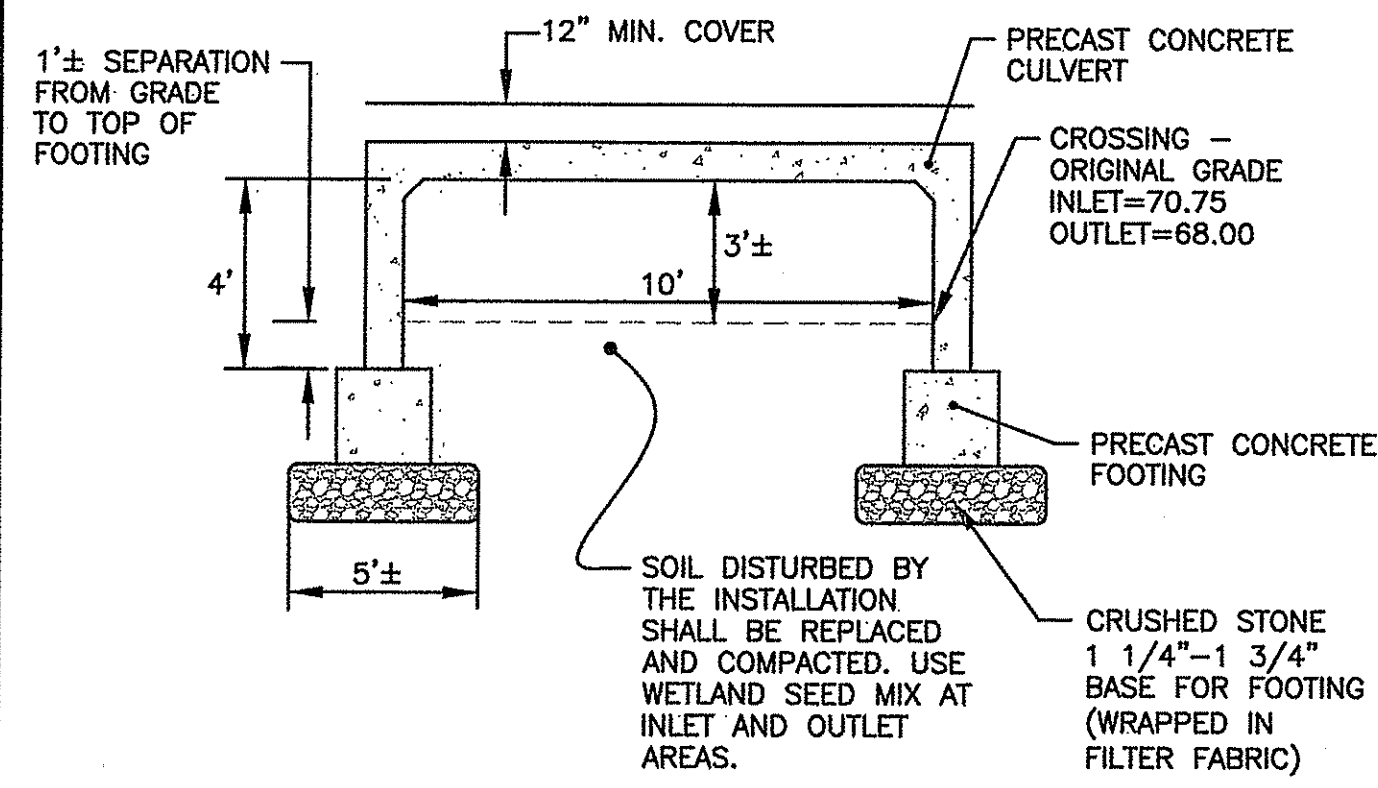
DATE: MARCH 2014 **SCALE:** 1"=60'
DWG. NAME: 1905-C08-SOIL-R1.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

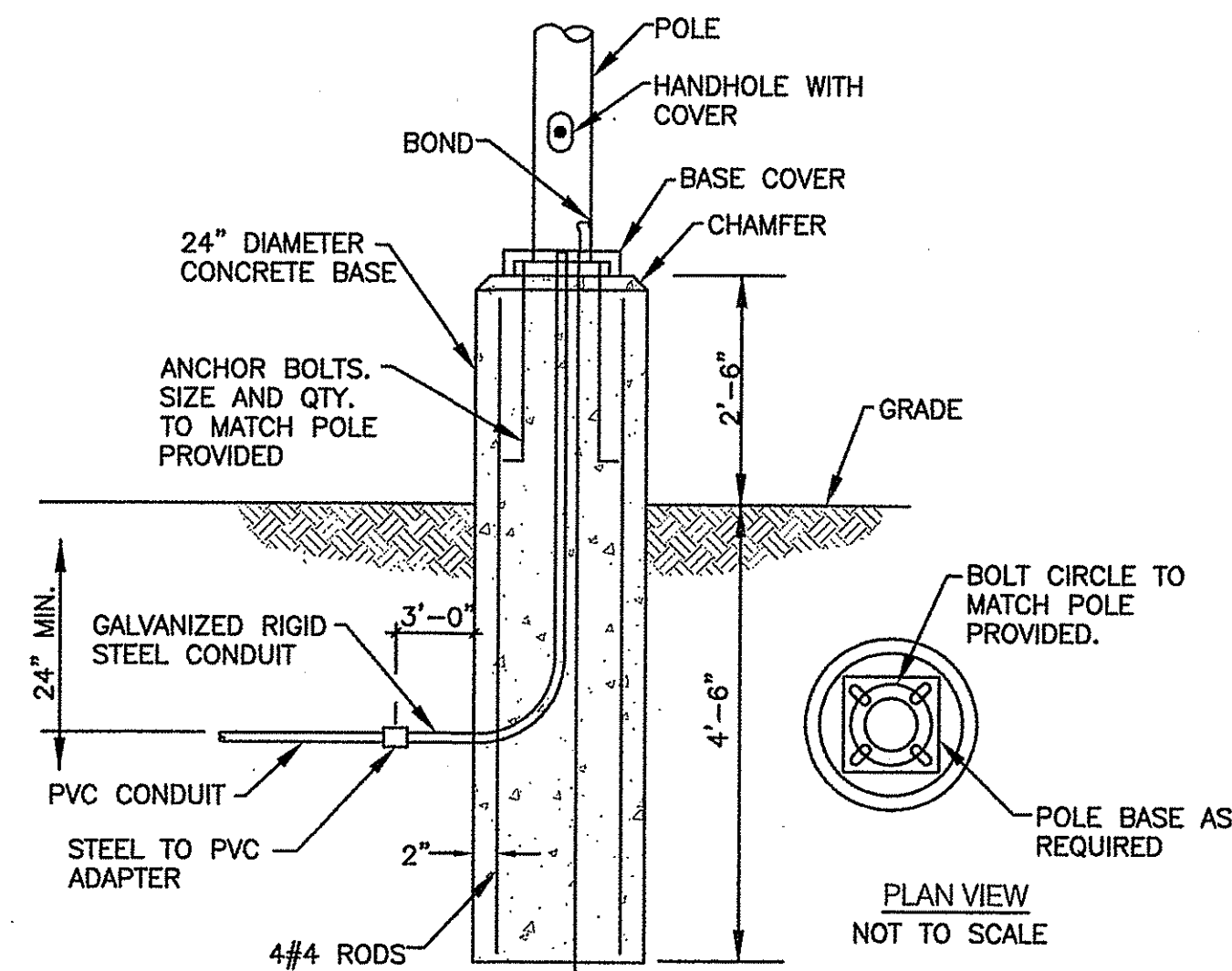
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
RESUBMITTED WITH APPROVAL
APPROVED WITH COMMENTS
AS SPECIFIED IN THE LETTER OF
DATE: FEB 18 2015 FILE # 14-0069
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED BY: [Signature]

DRAWING NUMBER
C8.2
SHEET: 14 OF 24



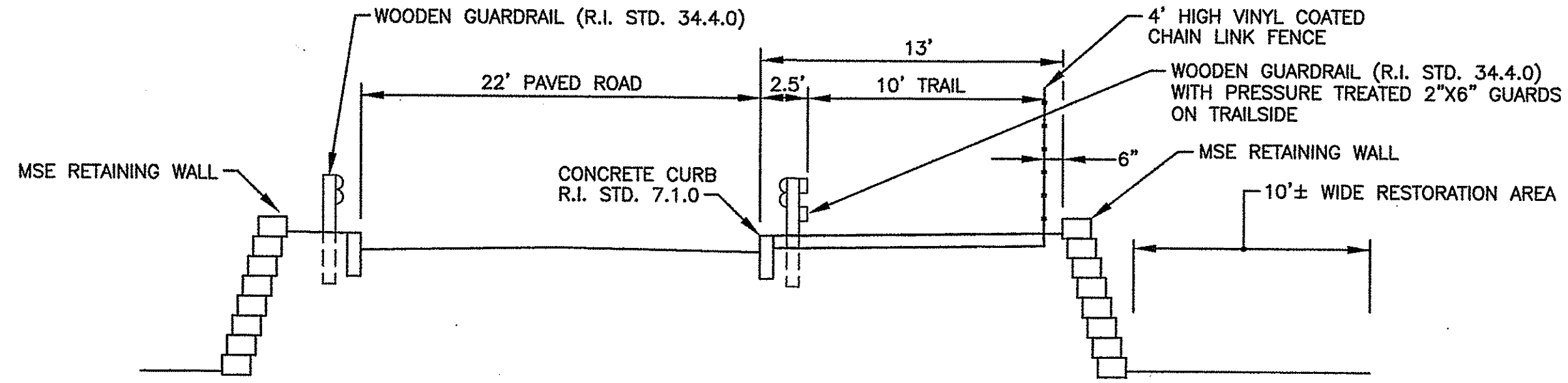
PRECAST CONCRETE CULVERT (3-SIDED)
NOT TO SCALE

- NOTES:**
- CONTRACTOR IS RESPONSIBLE TO RETAIN A PRECAST CONCRETE SUPPLIER WITH A PROFESSIONAL ENGINEER TO DESIGN AND CERTIFY THE PRECAST CULVERT, FOOTING AND HEADWALL SYSTEM.
 - THE CULVERT FOOTINGS AND HEADWALL SHALL BE ABLE TO WITHSTAND H-20 LOADING. CONTRACTOR IS REQUIRED TO PROVIDE DOCUMENTATION AND/OR CERTIFICATIONS FROM PRECAST MANUFACTURER.
 - THE GUARDRAIL POSTS SHALL BE PROPERLY SECURED TO THE CULVERT OR INSTALLED PER RI STD. 34.1.2.
 - SUBMITTALS OF SHOP DRAWINGS ARE REQUIRED FOR APPROVAL PRIOR TO CONSTRUCTION. CAST-IN-PLACE MAY BE USED IN LIEU OF PRECAST FOOTINGS UPON SUBMITTAL AND ACCEPTANCE BY THE TOWN AND ENGINEER. CAST-IN-PLACE FOOTINGS SHALL BE DESIGNED BY A RI PROFESSIONAL ENGINEER THAT IS RETAINED BY THE CONTRACTOR.



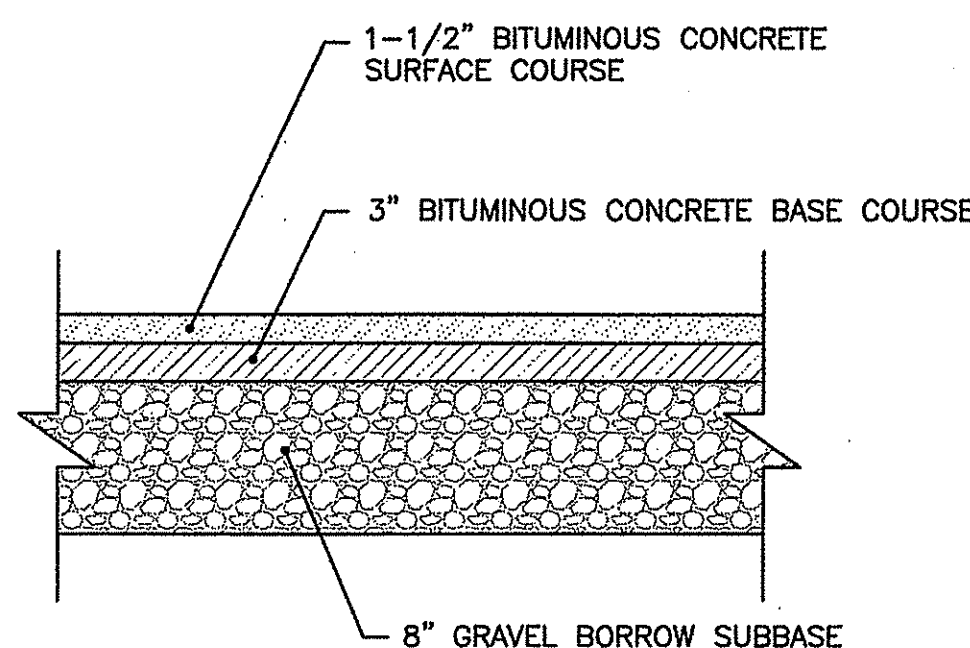
TYPICAL POLE BASE DETAIL (ALTERNATE BID ITEM 2)
NOT TO SCALE

NOTE:
CONTRACTOR SHALL PROVIDE PROTECTIVE COVER OVER BOLTS TO PREVENT DAMAGE AND FOR PEDESTRIAN SAFETY.

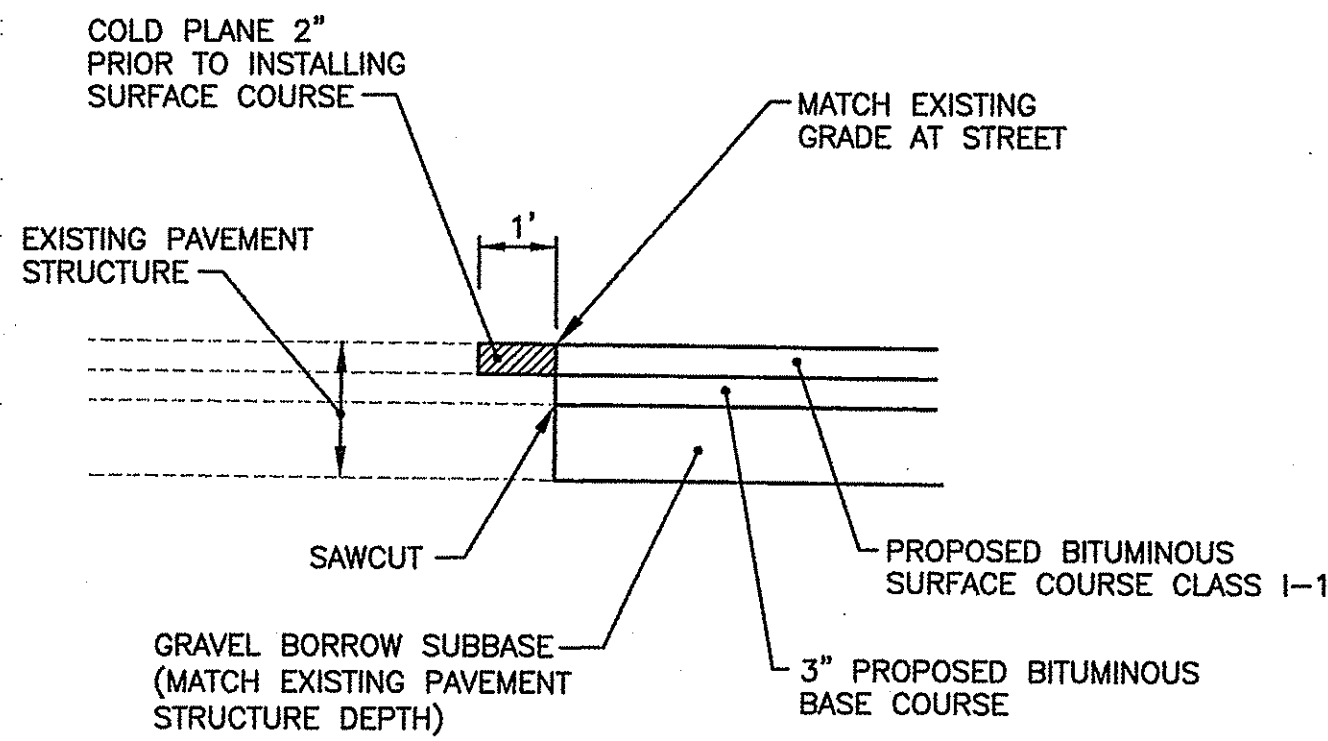


CROSS SECTION - ROAD STA. 14+00
NOT TO SCALE

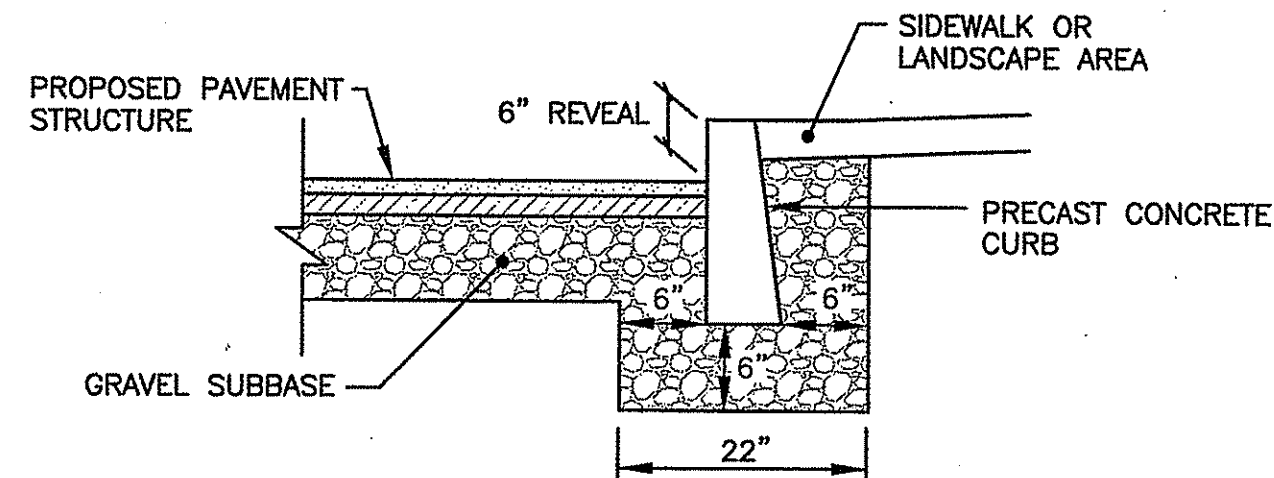
NOTE:
REFER TO SHEET C5 FOR GUARDRAIL TYPE AND CURB LOCATIONS.



TYPICAL BITUMINOUS PAVEMENT STRUCTURE DETAIL
NOT TO SCALE

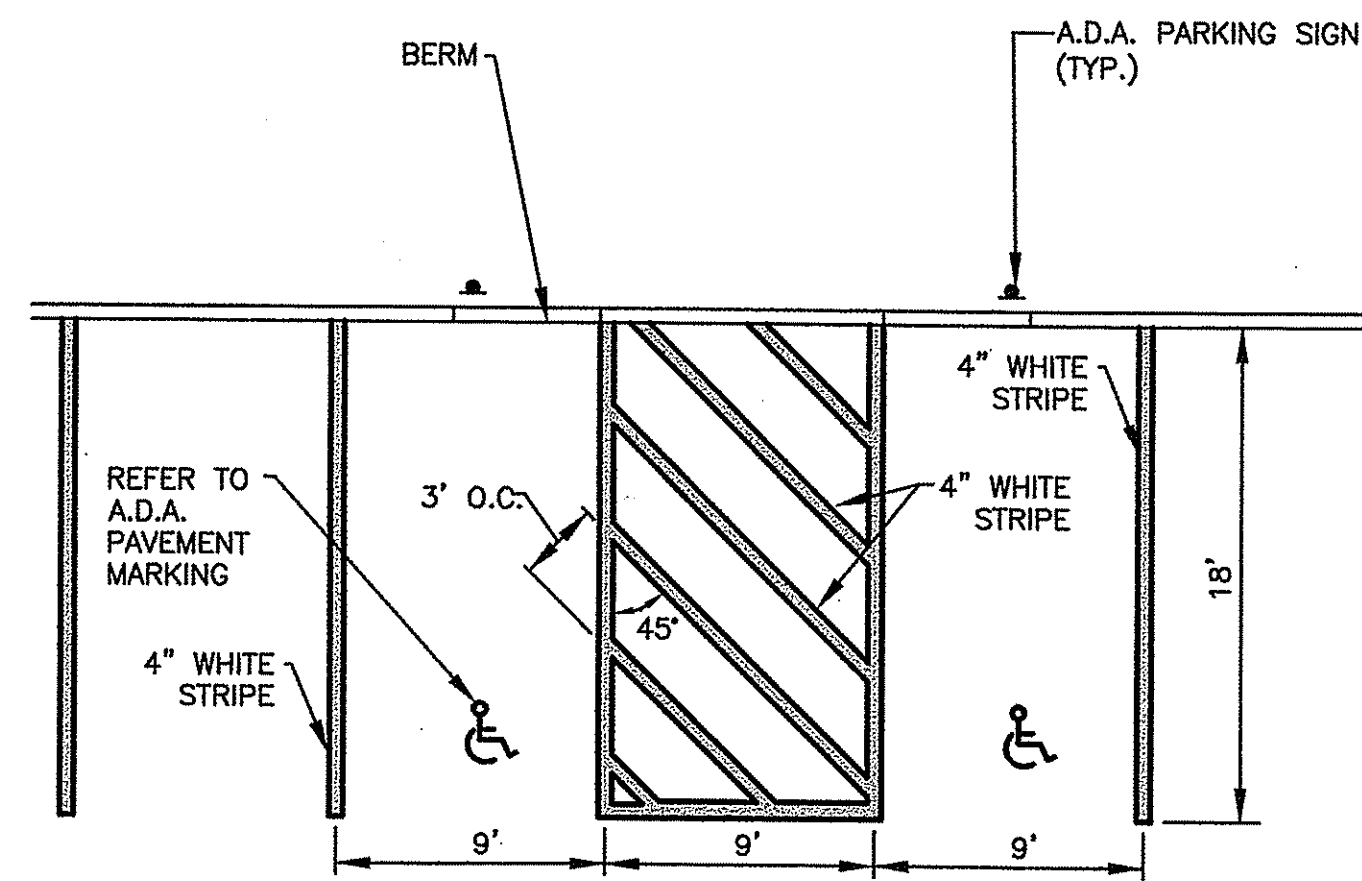


PROPOSED DRIVEWAY OPENING DETAIL
NOT TO SCALE



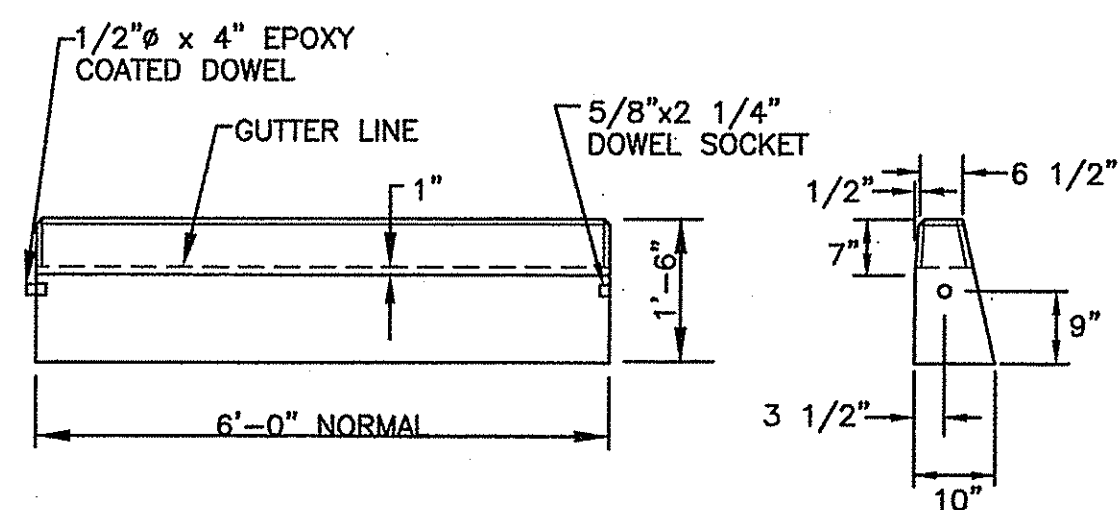
TYPICAL PRECAST CONCRETE CURB INSTALLATION WITHIN PARKING AREAS
NOT TO SCALE

NOTE:
CAST-IN-PLACE CONCRETE MAY BE UTILIZED. REFER TO TYPICAL CONCRETE WALK AT BUILDING DETAIL.

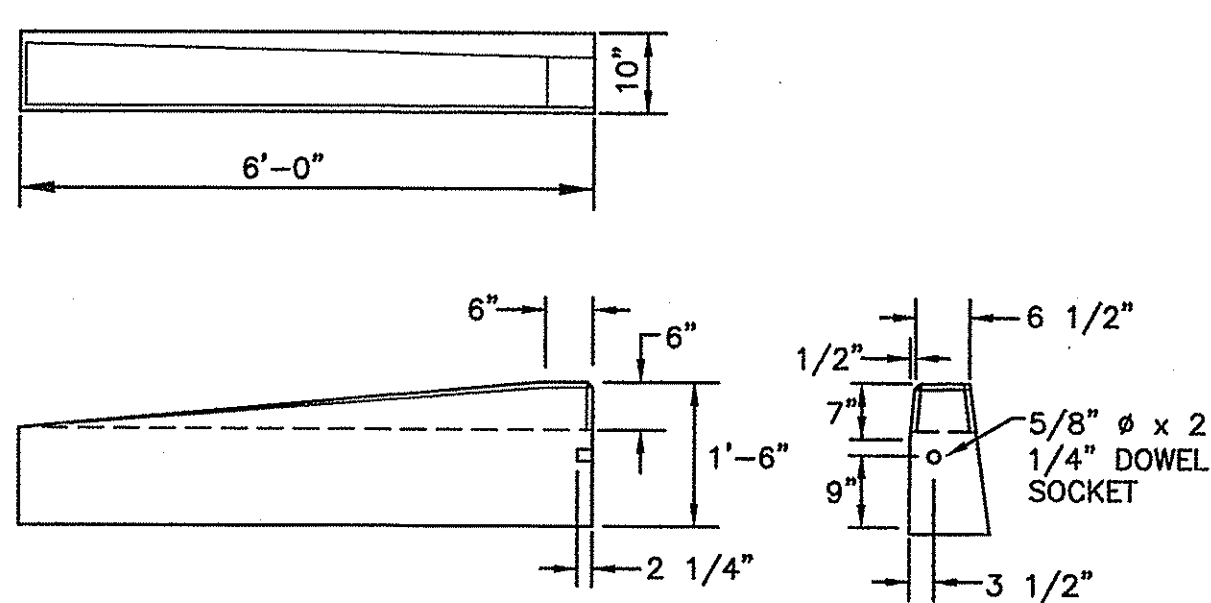


A.D.A. PARKING STALLS
NOT TO SCALE

NOTE:
ALL A.D.A. PARKING SPACES SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE AND A.D.A. REQUIREMENTS.



PRECAST CONCRETE CURB
NOT TO SCALE

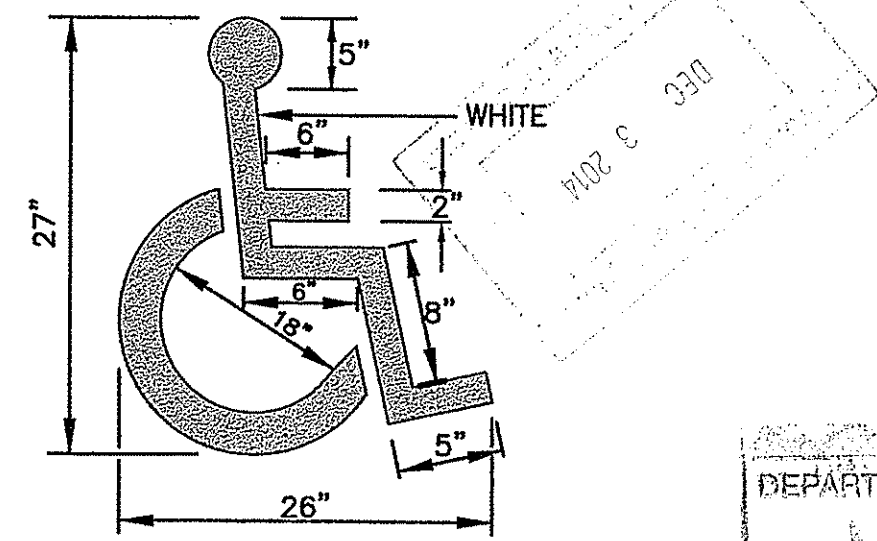


6'-0" PRECAST CONCRETE TRANSITION CURB
NOT TO SCALE

- NOTE:**
- ALL LETTERS ARE 1" SERIES "C" PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
 - SIGN SHALL BE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
 - CONTRACTOR SHALL VERIFY THE POSTED "FINE" AMOUNT WITH THE BUILDING OFFICIAL PRIOR TO INSTALLATION.
 - ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
 - INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE M.U.T.C.D.
 - SIGN MAY BE MOUNTED ON BUILDING/WALL, AT PROPER HEIGHT, ALIGNED WITHIN 12" OF CENTER OF THE PARKING SPACE.
 - ALL A.D.A. PARKING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE.

- SIGN NOTES:**
- SIGN POSTS SHALL BE GALVANIZED STEEL U-CHANNEL (3 1/2" WIDE-MIN.) AND INSTALLED IN CONFORMANCE WITH MUTCD AND LOCAL STANDARDS AND SPECIFICATIONS.
 - POSTS SHALL BE DRIVEN TO A DEPTH OF 4 FEET (MIN.)
 - THE EDGE OF THE SIGN SHALL BE 18" FROM THE FACE OF THE CURB.
 - WITHIN SIDEWALK LOCATIONS THE SIGN POST WILL BE INSTALLED WITHIN A 8"x8"x6" SQUARE BOX FORM.

PROPOSED A.D.A. PARKING SIGNS
NOT TO SCALE



A.D.A. PAVEMENT MARKING
NOT TO SCALE

NOTE:
ALL A.D.A. PARKING SPACES SHALL BE IN ACCORDANCE WITH THE LOCAL AND STATE BUILDING CODE AND A.D.A. REQUIREMENTS.

CROSSMAN ENGINEERING
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KEY PLAN

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET EAST GREENWICH, RI 02818

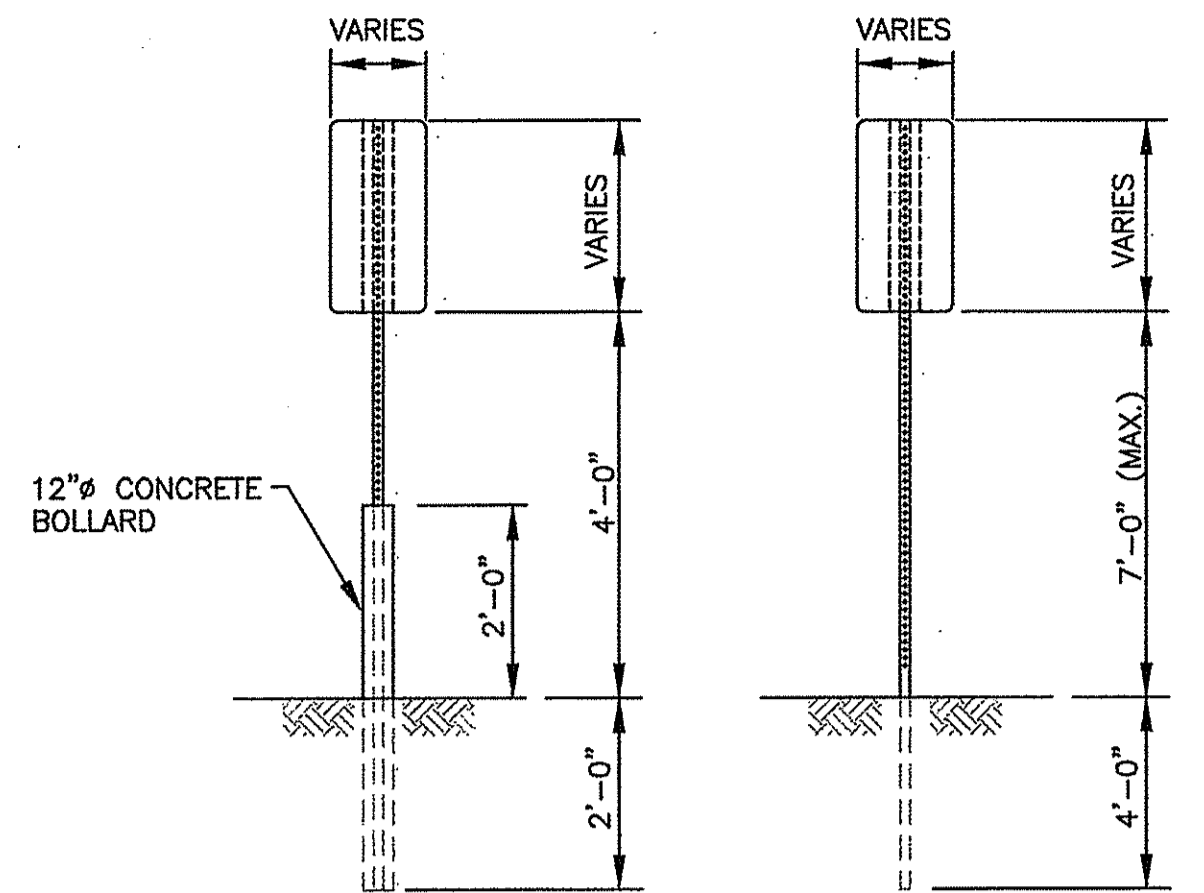
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MISCELLANEOUS DETAILS PLAN No. 1

DATE: MARCH 2014 **SCALE:** AS SHOWN
DWG. NAME: 1905-C9.1-DETAIL1-R1.dwg

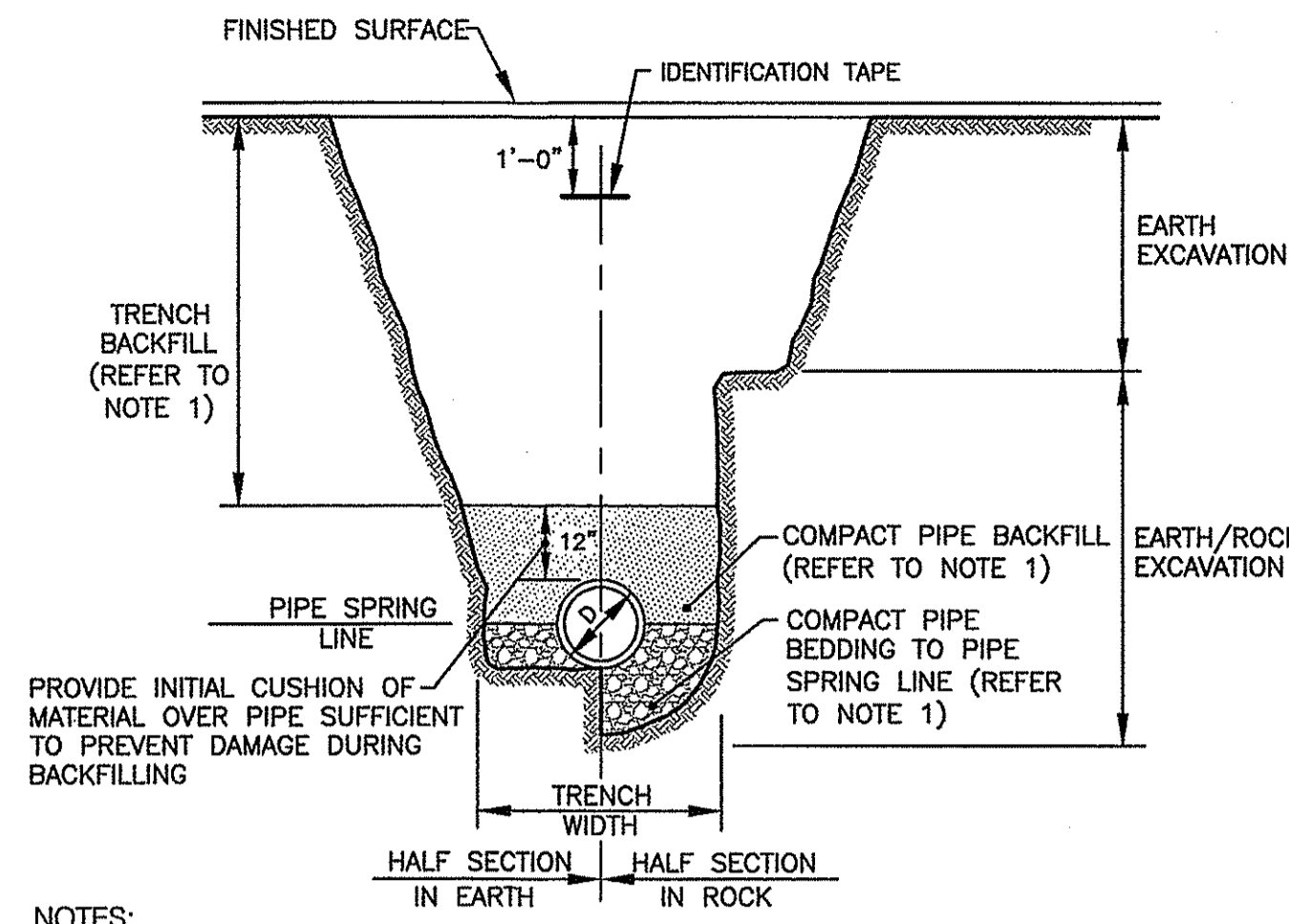
REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WETLANDS AND FRESHWATER RESOURCES
APPROVED FOR CONSTRUCTION
AS SPECIFIED IN THE PERMIT
DATED FEB 19 2015
NO CHANGES ALLOWED WITHOUT APPROVED PLANS
MUS...
Charles...

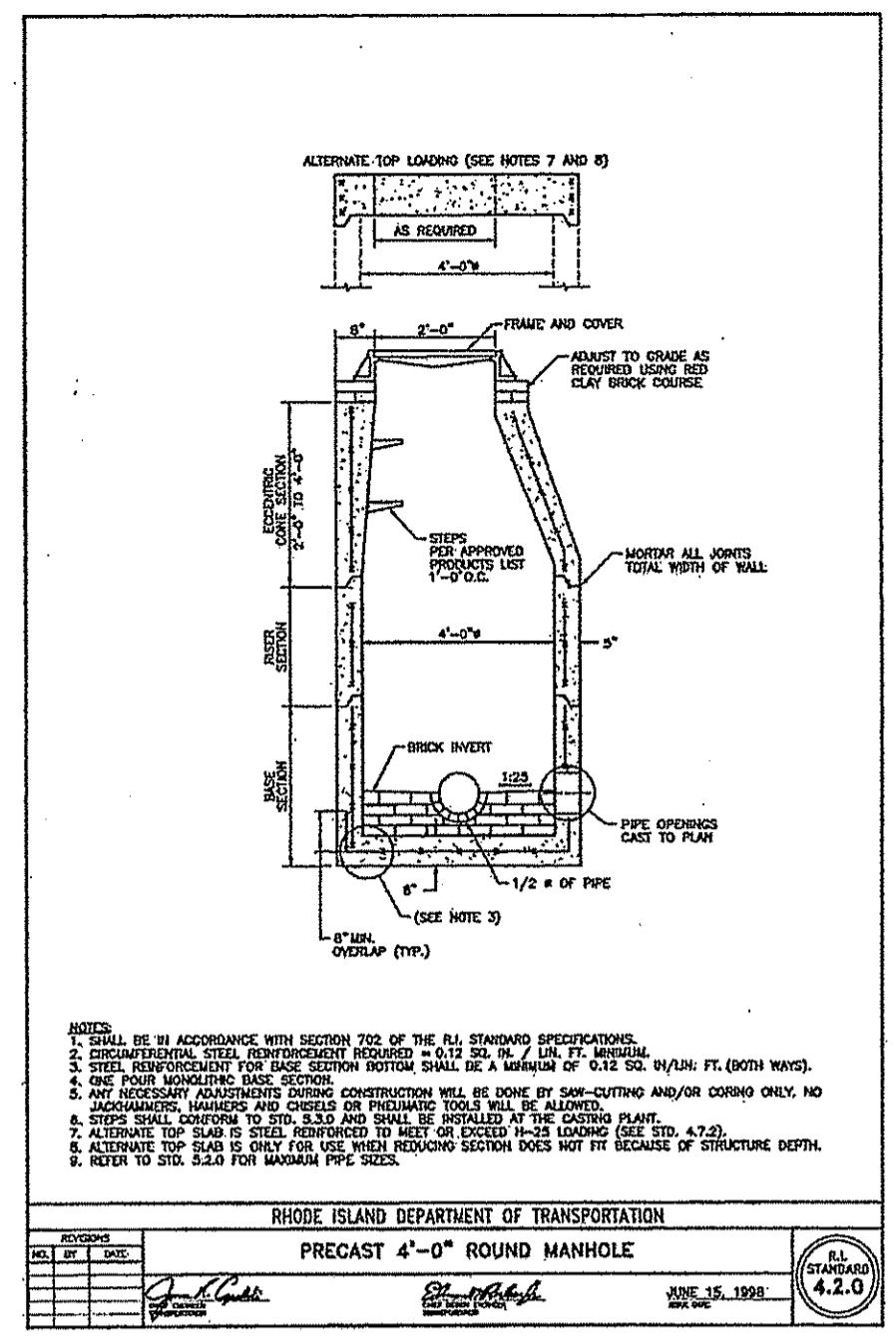
DRAWING NUMBER
C9.1
SHEET: 15 OF 24



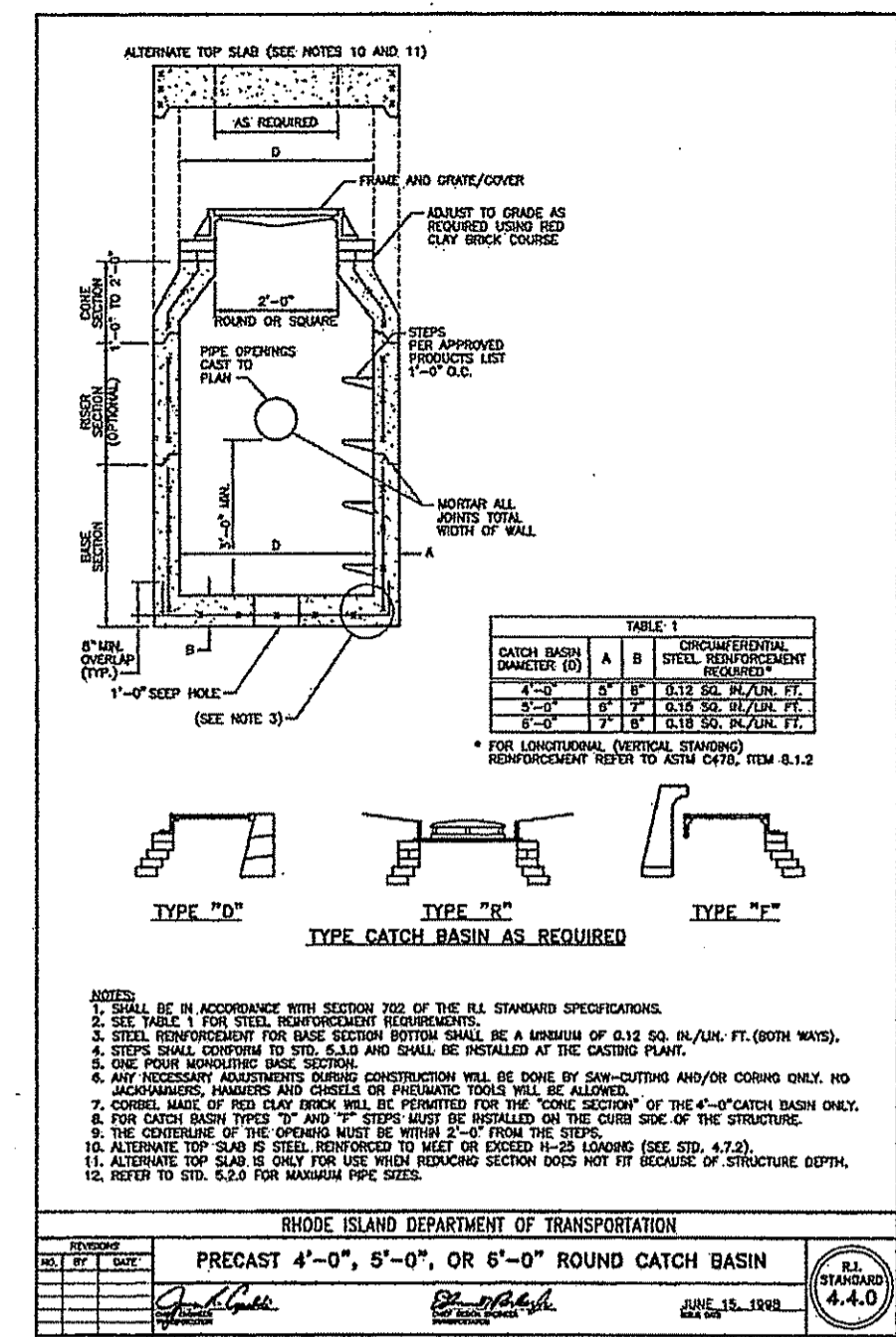
SIGN MOUNTING DETAIL
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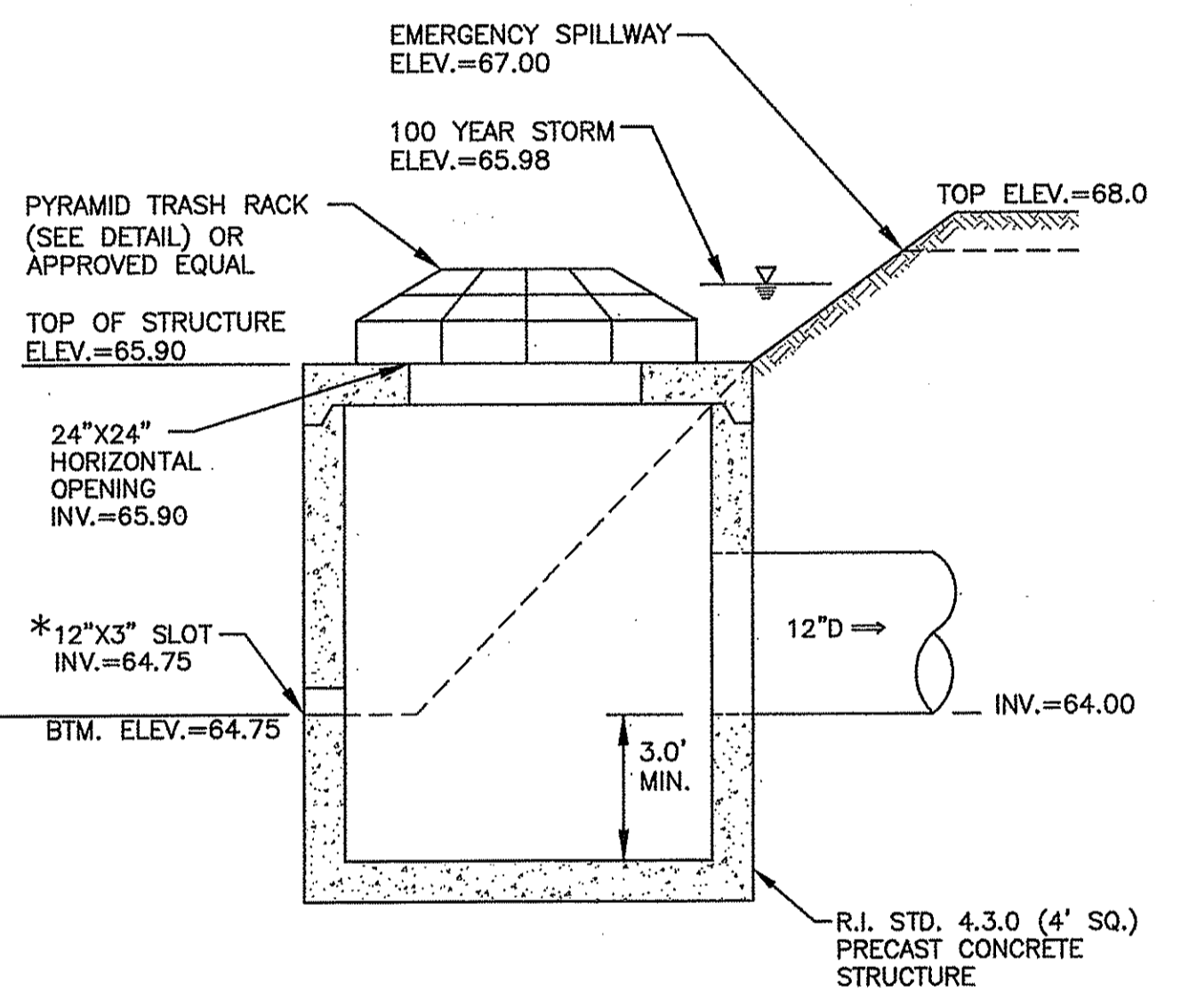
TRENCH DETAIL
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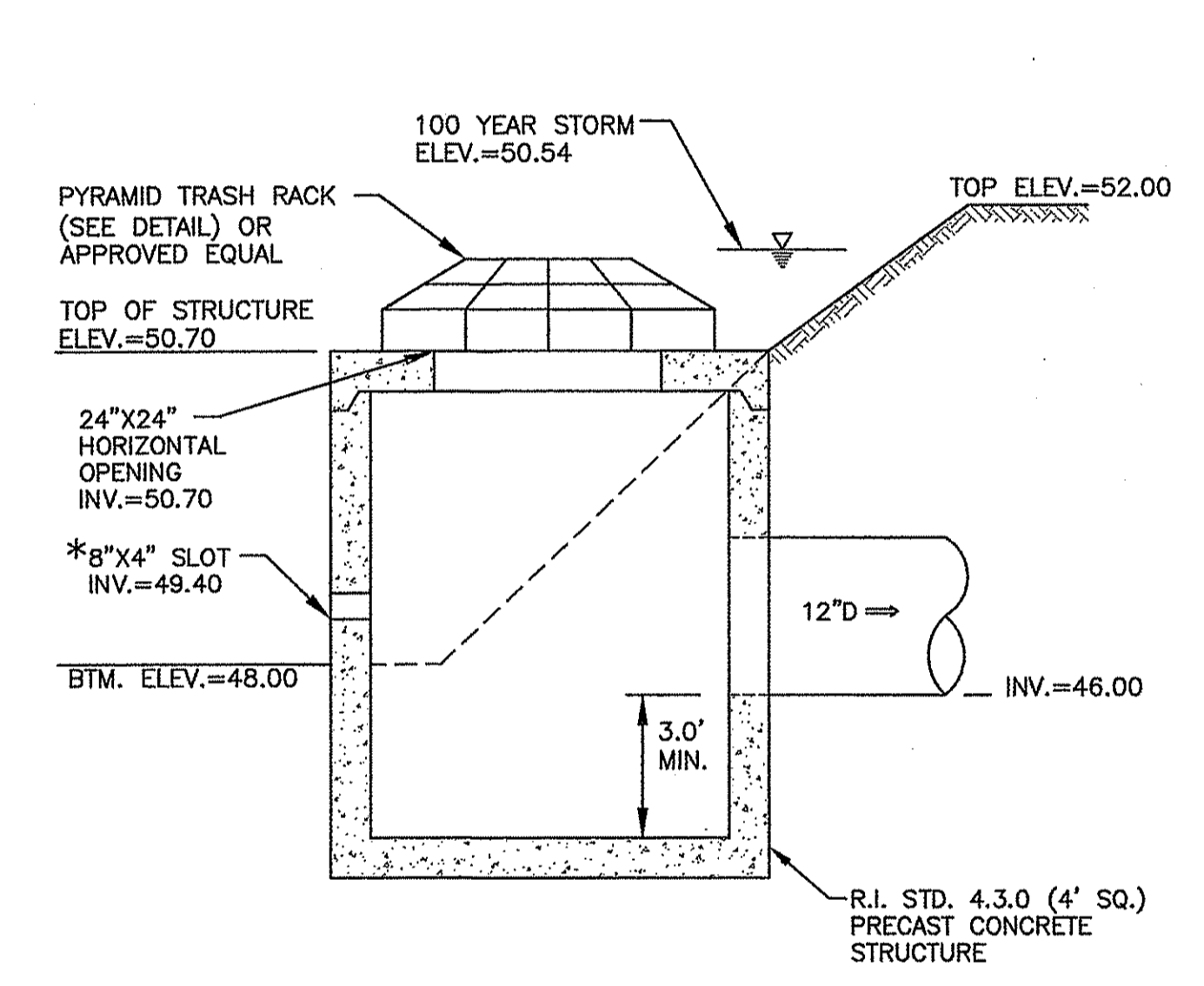
PRECAST 4'-0\"/>



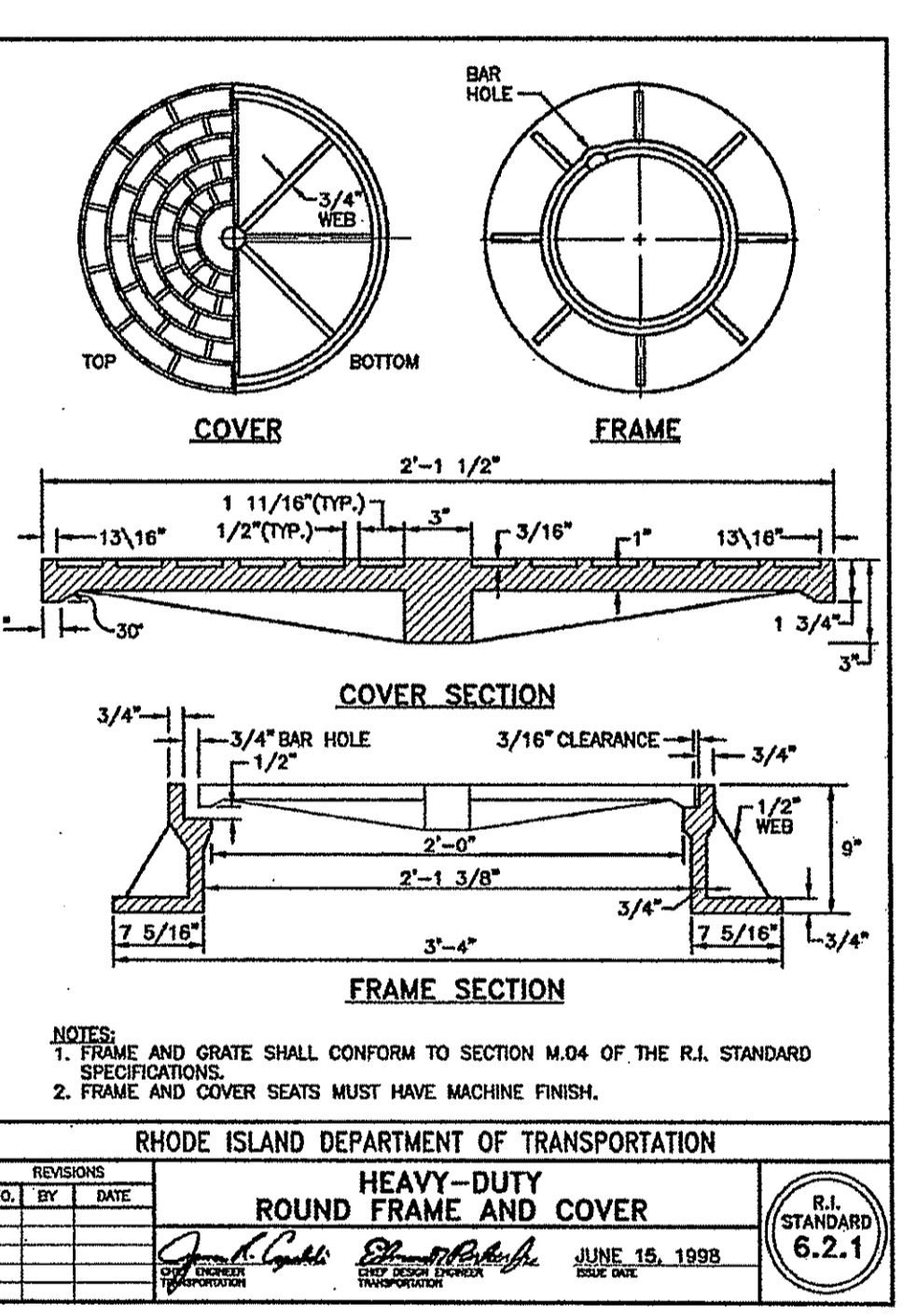
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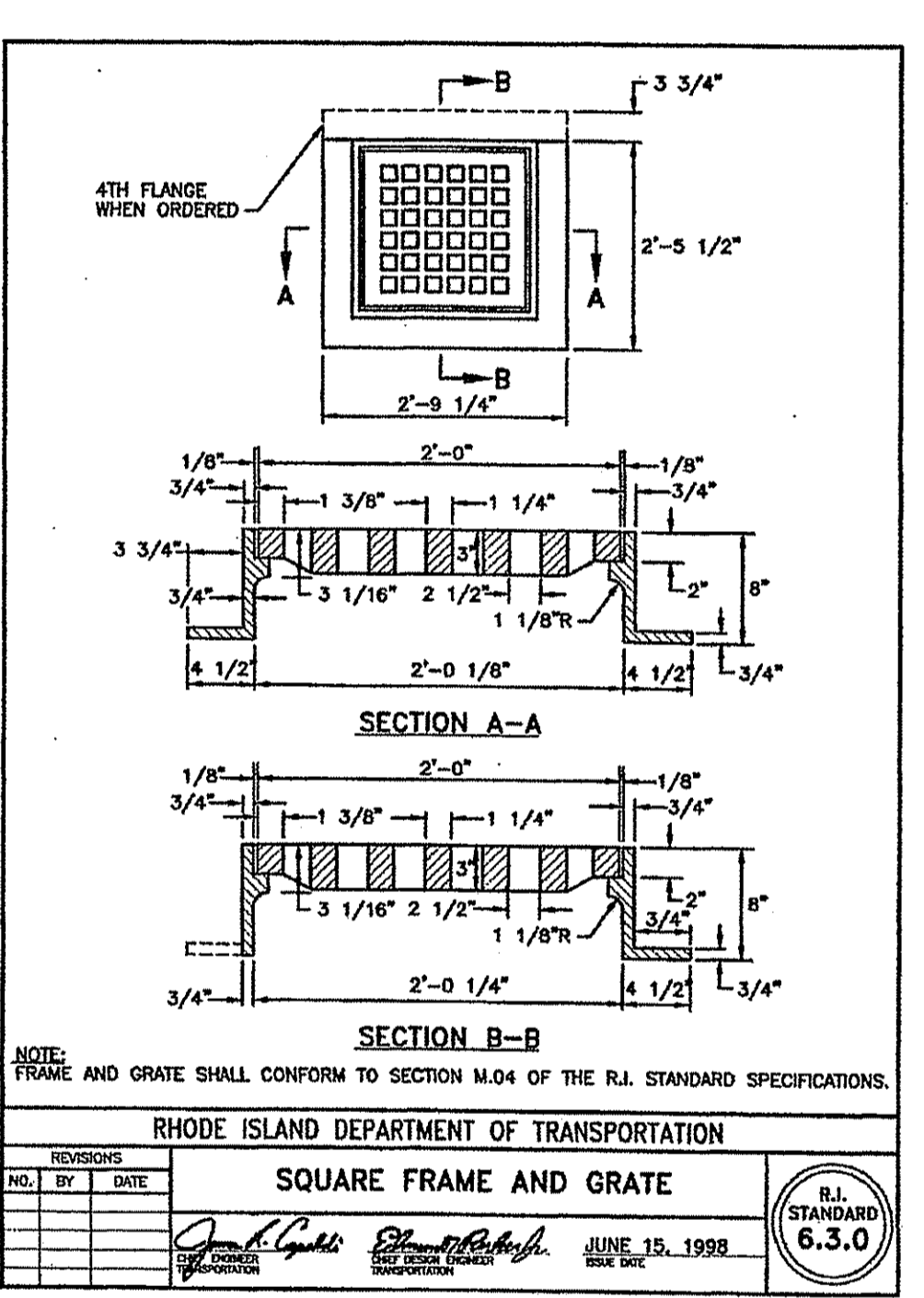
**BMP No. 3
OUTLET CONTROL STRUCTURE 1 DETAIL**
NOT TO SCALE



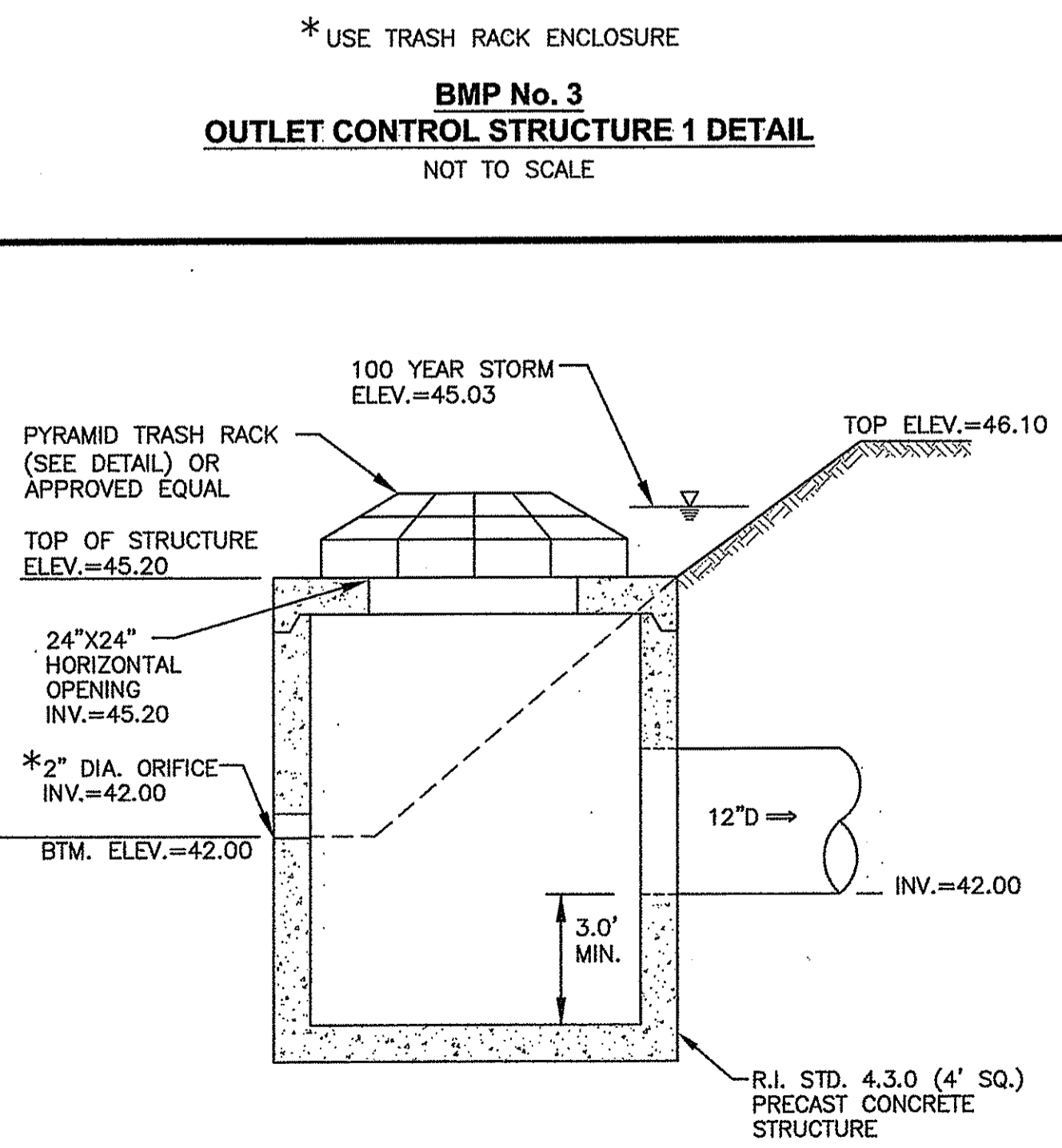
**BMP No. 5
OUTLET CONTROL STRUCTURE 2 DETAIL**
NOT TO SCALE



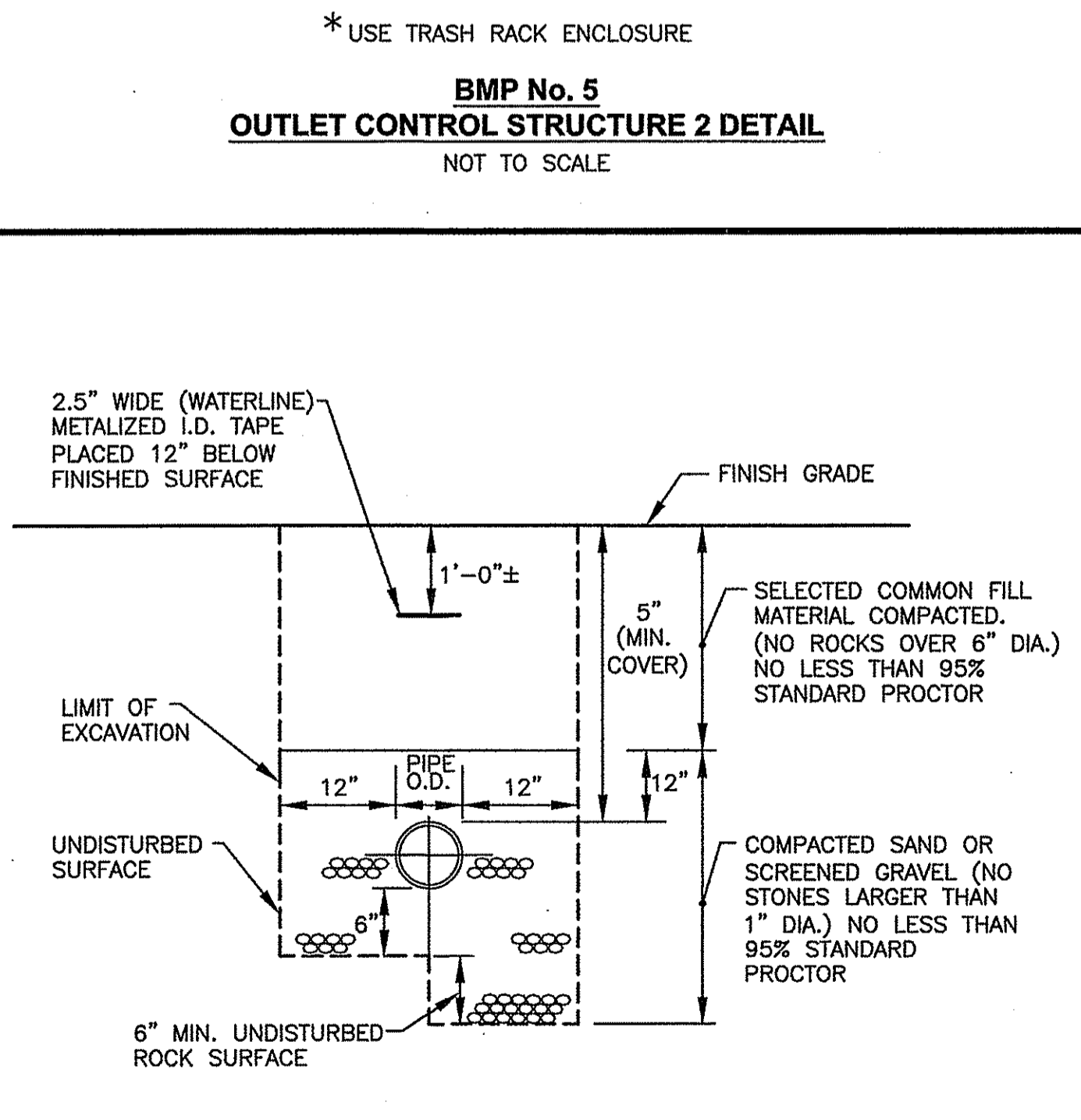
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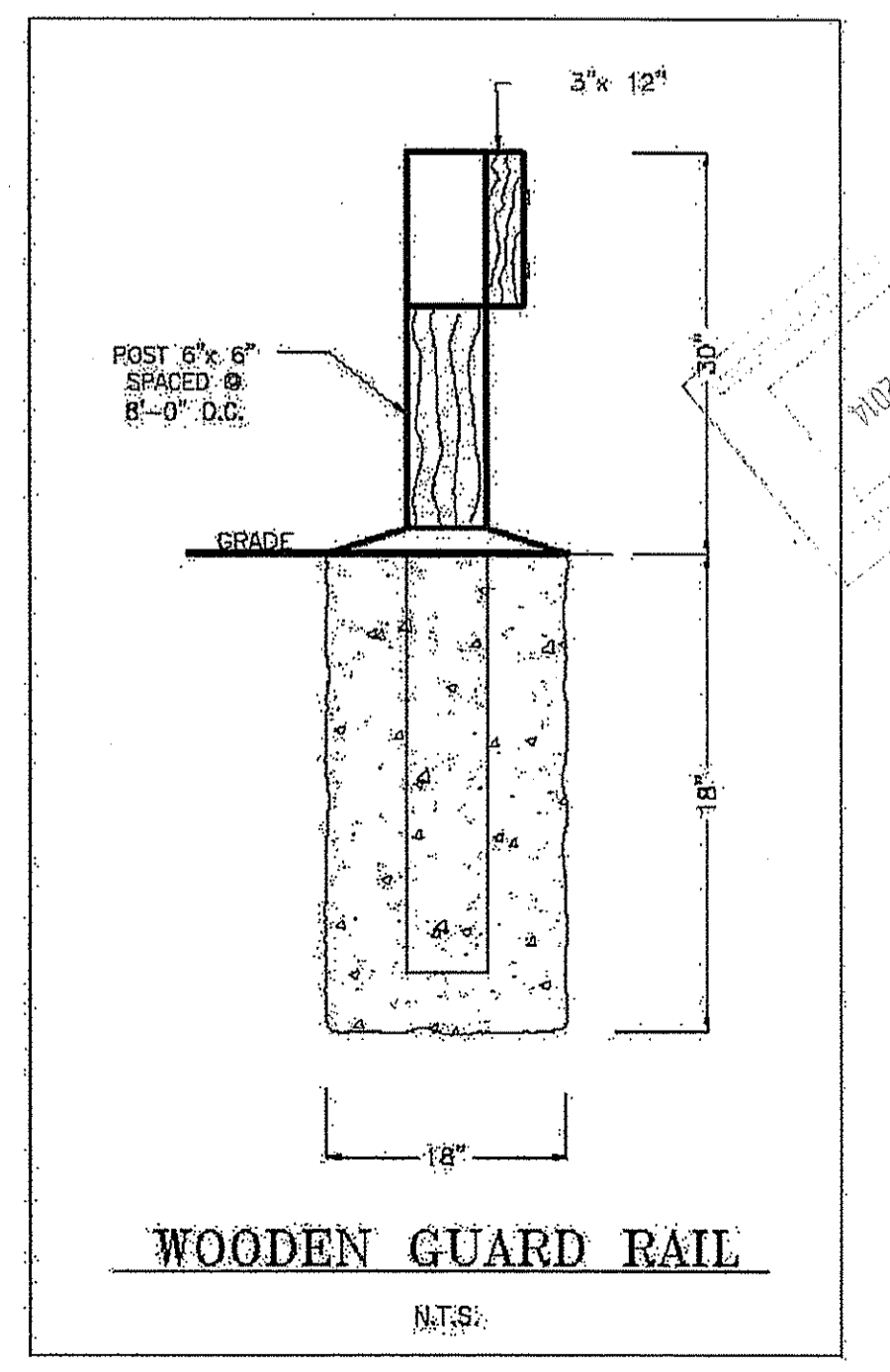


**BMP No. 6
OUTLET CONTROL STRUCTURE 3 DETAIL**
NOT TO SCALE



**TYPICAL WATER LINE TRENCH DETAIL
(ALTERNATE BID ITEM 1)**
NOT TO SCALE

- GENERAL WATER NOTES**
- ALL INSTALLATION, JOINTS, CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CURRENT RULES AND REGULATIONS OF THE KENT COUNTY WATER AUTHORITY (KCWA), AWWA STANDARDS AND GOVERNMENTAL REQUIREMENTS.
 - CONSTRUCTION SHALL INCLUDE ALL PIPE, JOINTS, BENDS, TEES, FITTINGS, THRUST BLOCKS, GATE VALVES, GATE BOXES, SERVICE CONNECTIONS, METERS, BACKFLOW ASSEMBLY AND ALL MISCELLANEOUS ITEMS REQUIRED TO CONSTRUCT THE PROPOSED SYSTEM.
 - PRESSURE AND LEAKAGE TESTS AND DISINFECTING PIPES SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE TO KCWA REQUIREMENTS, AMERICAN WATER WORKS ASSOCIATION (AWWA) RECOMMENDATIONS, AND GOVERNMENTAL AGENCIES HAVING JURISDICTION.
 - ALL GATE VALVES, FITTINGS, PIPE, JOINTS, ETC. SHALL BE DESIGNED FOR 1.5 TIMES WORKING PRESSURE BUT NOT LESS THAN 150 PSI.
 - WATER PIPE TYPICALLY SHALL BE LOCATED AT A DEPTH OF COVER EQUAL TO 5'-0". A MINIMUM OF 10'-FEET HORIZONTAL OR 18-INCH VERTICAL SEPARATION (ABOVE) SHALL BE MAINTAINED IN THE PLACEMENT OF WATER MAINS, SERVICES, OR APPURTENANCES WITHIN THE VICINITY OF SEWER FACILITIES, OR VICE VERSA. WHERE THE ABOVE SEPARATION DISTANCES CANNOT BE ACHIEVED, THE SANITARY SEWER/STORM DRAIN PIPE SHALL BE ENCASED WITHIN A DUCTILE IRON CARRIER PIPE FOR A DISTANCE EQUAL TO 10'-FEET ON EITHER SIDE OF THE AREA OF CONCERN. CONCRETE ENCASEMENT IS NOT ALLOWED. UTILITY SEPARATION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE KCWA.
 - ALL SYSTEM COMPONENTS AND CONSTRUCTION METHODS, SUCH AS GATE VALVE, PIPE, THRUST BLOCKS, FITTINGS, CASTINGS, ETC. SHALL BE SUBMITTED TO THE KCWA AND ENGINEER FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. THIS SUBMISSION SHALL INCLUDE MANUFACTURER'S LITERATURE, SHOP DRAWINGS, PROPOSED CONSTRUCTION METHODS, ETC.
 - WATER LINE TRENCH TO BE AWWA TYPE 5. COMPACTION MUST BE ACCOMPLISHED IN 6" LIFTS. A METALIZED DETECTABLE IDENTIFICATION TAPE 2" IN WIDTH, BLUE IN COLOR AND PRINTED WITH "CAUTION WATERLINE BURIED BELOW" SHALL BE UTILIZED OVER ALL MAINS. TAPE SHALL BE SET AT APPROXIMATELY 1'-0" BELOW FINISHED GRADE.
 - ALTHOUGH THE WATER LINE IS INSTALLED FOR FUTURE USE, KCWA IS REQUIRED TO REVIEW ALL MATERIAL SUBMITTALS AND TO INSPECT THE CONSTRUCTION INSTALLATION. CONTRACTOR SHALL COORDINATE THESE PROCEDURES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AS-BUILT PLANS IN ACCORDANCE WITH THE KCWA AS-BUILT GUIDELINES.



WOODEN GUARD RAIL
N.T.S.

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KEY PLAN

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
12-1-14

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
MISCELLANEOUS DETAILS
PLAN No. 2

DATE: MARCH 2014
SCALE: AS SHOWN

DWG. NAME: 1905-C9.2-DETAIL2-R1.dwg

REVISIONS:

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER:
C9.2
SHEET: 16 OF 24

NOTES

- CONTRACTOR SHALL INSTALL TEMPORARY MEASURES SUCH AS: FIBER MATTING, CRUSHED STONE, HAY OR STRAW IN AREAS WHERE SLOPES OR STABILIZATION HAS FAILED.
- CONTRACTOR SHALL INSTALL SILT SACK OR APPROVED EQUAL UNDER THE EXISTING CATCH BASIN GRATE ON THE EXISTING ROAD. REMOVE AFTER CONSTRUCTION.
- THE PROPOSED BMP SHALL NOT BE USED AS A SEDIMENT TRAP DURING CONSTRUCTION AND THE CONTRACTOR SHALL NOT DIRECT STORMWATER TO THE BMP UNTIL THE BASIN IS SEEDED AND VEGETATION IS ESTABLISHED.
- FILTER SOXX (OR SILT FENCE OR STAKED HAYBALES) SHALL BE INSTALLED AROUND THE PERIMETER OF THE AREA TO BE DISTURBED BY CONSTRUCTION. ADDITIONAL APPLICATIONS OF THESE CONTROLS MEASURES MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL INSPECT THE SITE AT A MINIMUM OF ONCE PER WEEK OR WITHIN 24 HOURS AFTER A STORM EVENT.
- IF EROSION OR EROSION TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY THE TOWN, STATE OR ENGINEER DURING CONSTRUCTION.
- IF SEDIMENT OR DEBRIS IS TRACKED ONTO THE EXISTING ROAD, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS.
- THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION SHOULD BE CONDUCTED TO PICK-UP TRASH. THE OPERATOR SHALL REQUIRE THE CONTRACTOR TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTING CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.
- THE CONTRACTOR SHALL SECURE THE SITE TO PROHIBIT PUBLIC ACCESS DURING NON-WORKING HOURS.

CONSTRUCTION NOTES

THE PROPOSED VEGETATIVE AND STRUCTURAL PRACTICES TO BE IMPLEMENTED DURING CONSTRUCTION ARE DESCRIBED AND ILLUSTRATED WITHIN THE ACCOMPANYING SITE PLANS. IN ADDITION, THE OPERATOR SHOULD INITIATE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS. IF BUILDING CONSTRUCTION CANNOT BEGIN WITHIN TWENTY-ONE (21) DAYS OF COMPLETING SITE PREPARATION ACTIVITIES ALL DISTURBED AREAS SHALL BE STABILIZED WITH LOAM AND SEEDING.

ADDITIONAL CONTROLS

- A CRUSHED STONE CONSTRUCTION ENTRANCE WILL BE LOCATED AT THE SITE'S PRIMARY ACCESS POINT. THE ENTRANCE WILL BE APPROXIMATELY 50 FEET LONG AND 20 FEET WIDE. ALL CONSTRUCTION VEHICLES WILL BE REQUIRED TO ENTER AND EXIT VIA THIS ENTRANCE.
- ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- THE CONTRACTOR IS REQUIRED TO NOTIFY LOCAL AUTHORITIES AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WASTE MANAGEMENT, OF ANY HAZARDOUS MATERIAL SPILL.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN THE SITE IN AN ORDERLY AND CLEAN STATE. ALL CONSTRUCTION WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS PRIOR TO REMOVAL AND CONTACT WITH PRECIPITATION SHALL BE KEPT TO A MINIMUM.
- GENERAL MAINTENANCE PROCEDURES ARE OUTLINED IN THE ACCOMPANYING SITE PLANS. IN ADDITION, THE OPERATOR AND CONTRACTOR ARE REQUIRED TO INSPECT ALL EROSION CONTROLS ON THE SITE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER A RAIN EVENT, WHICH GENERATES 0.25 INCHES OF RAIN IN A TWENTY-FOUR (24) HOUR PERIOD AND/OR AFTER A SIGNIFICANT AMOUNT OF RUNOFF.

SEQUENCE OF CONSTRUCTION

CONSTRUCTION ACTIVITIES WILL INCLUDE TREE CLEARING, EARTHWORK, LEDGE REMOVAL IF REQUIRED, ROAD AND TRAIL CONSTRUCTION, DRAINAGE/UTILITY INSTALLATION AND EROSION AND SEDIMENT CONTROL INSTALLATION AND MAINTENANCE. THE PROJECT SCHEDULE IS FROM DECEMBER 2014 TO MAY 2016. IN GENERAL, THE SEQUENCE OF CONSTRUCTION WILL BE AS FOLLOWS:

- INSTALLATION OF EROSION CONTROLS SUCH AS SILT FENCING AND THE CONSTRUCTION ENTRANCE.
- CONSTRUCT TEMPORARY WETLAND CROSSING
- DRAINAGE AND UTILITY INSTALLATION
- EARTHWORK ACTIVITIES CONSISTING OF PREPARING THE SITE FOR ROADWAY AND BMP CONSTRUCTION.
- TRAIL CONSTRUCTION.
- GROUND COVER TREATMENT/STABILIZATION,

STORMWATER MANAGEMENT SYSTEM CONSTRUCTION NOTES

- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ROPE OFF PROPOSED BMP LOCATIONS. CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED ON AREAS INTENDED FOR BMP INSTALLATIONS.
- THE BMP SHALL NOT BE USED AS TEMPORARY SEDIMENT TRAPS FOR CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL USE LIGHT EARTH MOVING EQUIPMENT TO EXCAVATE BMP AREAS.
- STORMWATER MAY BE DIRECTED TO THE BMP AFTER CONSTRUCTION IS COMPLETE AND THE BOTTOM AND SIDE SLOPES ARE STABILIZED.

PROJECT CLOSE-OUT NOTE

ONCE CONSTRUCTION IS COMPLETE AND PERMANENT GROUND COVER ESTABLISHED, THE CONTRACTOR SHALL CLEAN AND FLUSH ALL DRAIN LINES ON SITE.

GROUND COVER NOTE

GROUND COVER FOR SLOPES OF 2:1 TO 3:1 SHALL BE STABILIZED WITH FILTREXX VEGETATED COVER, AND OTHER AREAS SHALL BE STABILIZED WITH CRUSHED STONE OR LOAM AND SEED, AS APPROVED BY THE OWNER.

DUST CONTROL NOTES

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE TOWN OR OWNER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS (AS RECOMMENDED BY THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK") TO CONTROL DUST:

- THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
- USE OF CALCIUM CHLORIDE IS PROHIBITED.

THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

INSPECTION/MAINTENANCE NOTES

- PRIOR TO COMMENCING CLEARING AND GRUBBING OPERATIONS, FILTREXX FILTER SOXX SHALL BE PLACED SO AS TO PREVENT SEDIMENT FROM ENTERING EXISTING ROADWAY DRAINAGE SYSTEM AND WETLAND AREAS.
- EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE WETLAND OR ROADWAY DRAINAGE SYSTEM.
- ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS RIP-RAP, OR APPROVED EQUAL.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
- ADDITIONAL FILTREXX FILTER SOXX OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER. EROSION CONTROL MAINTENANCE AND REPLACEMENT SHALL BE INCLUDED IN THE BASE BID PRICE.
- THE MOST CURRENT EDITION OF THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE A STABLE PRODUCT.
- DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SOIL EROSION AND SEDIMENT CONTROL RECORDS. UPON PROJECT COMPLETION, IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN AND UPDATE THESE RECORDS. THESE RECORDS SHALL BE RETAINED FOR A MINIMUM OF 5 YEARS FROM THE START OF CONSTRUCTION.

GENERAL PROJECT WIDE NOTES

- FILTREXX FILTER SOXX OR APPROVED EQUAL SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, MAINTAINED ON A REGULAR BASIS, AND SHALL BE PLACED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTY AND WETLANDS.
- WHERE APPLICABLE THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO OR THE OWNER.
- ALL FILTREXX FILTER SOXX OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AREA IS STABILIZED WHICH INCLUDES ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. SLOPES OF 2:1 OR 3:1 SHALL BE STABILIZED WITH FILTREXX VEGETATED COVER, AND OTHER AREAS SHALL BE STABILIZED WITH CRUSHED STONE OR LOAM AND SEED, AS APPROVED BY THE OWNER.
- TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE; THE AREA BEYOND THE DRIPLINE SHALL BE FENCED OR ROPED OFF TO PROTECT TREES FROM CONSTRUCTION EQUIPMENT.
- AREAS DAMAGED DURING CONSTRUCTION SHALL BE STABILIZED, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
- UNLESS REFERENCED ON THE PLANS, STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED FILTER SOXX.
- STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING OR APPROVED EQUAL.
- SILT FENCE OR STAKED HAYBALES MAY BE USED IN LIEU OF THE FILTREXX FILTER SOXX, OR APPROVED EQUAL FILTER SOCK/WADDLE.

FILTREXX SOXX NOTE

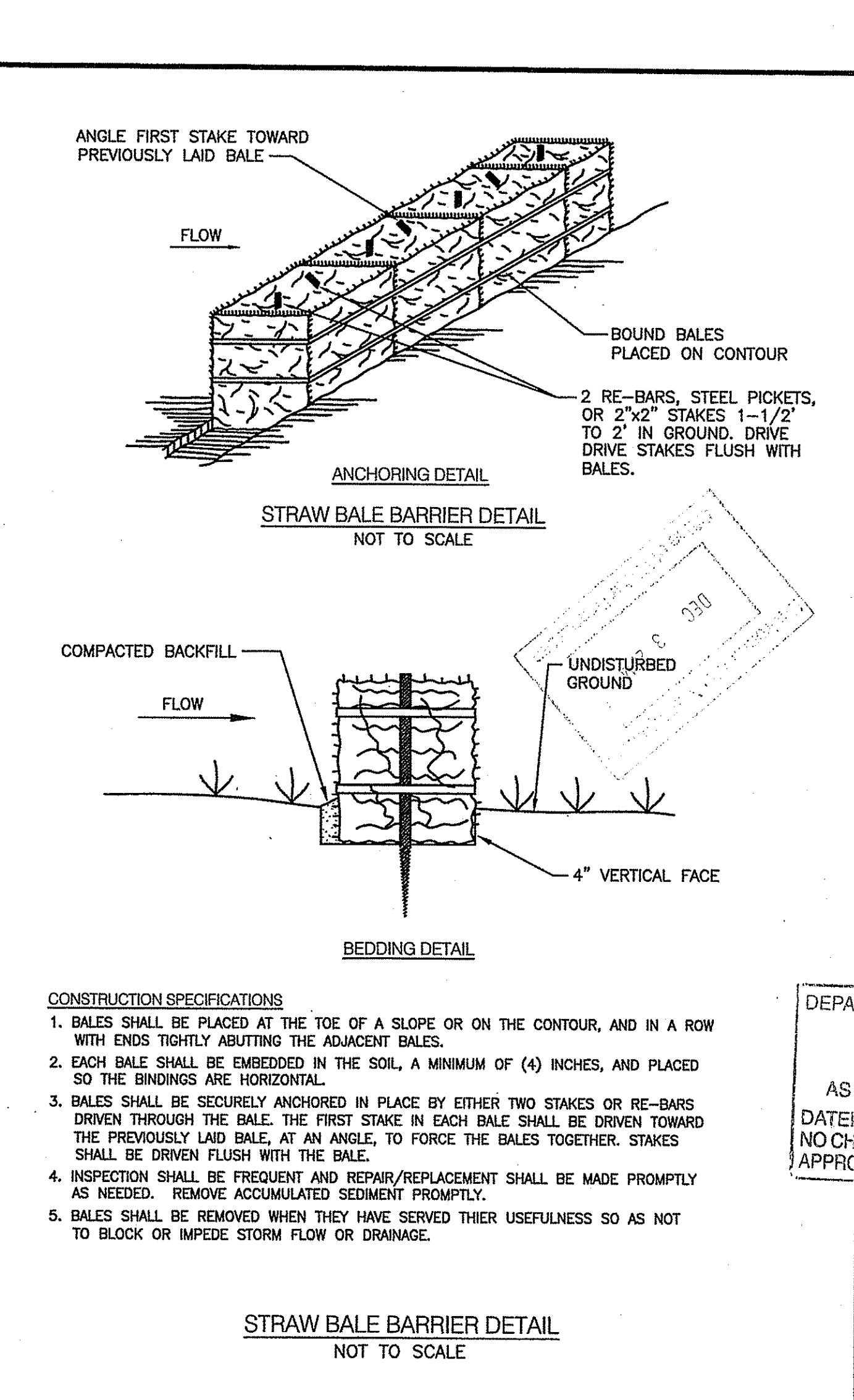
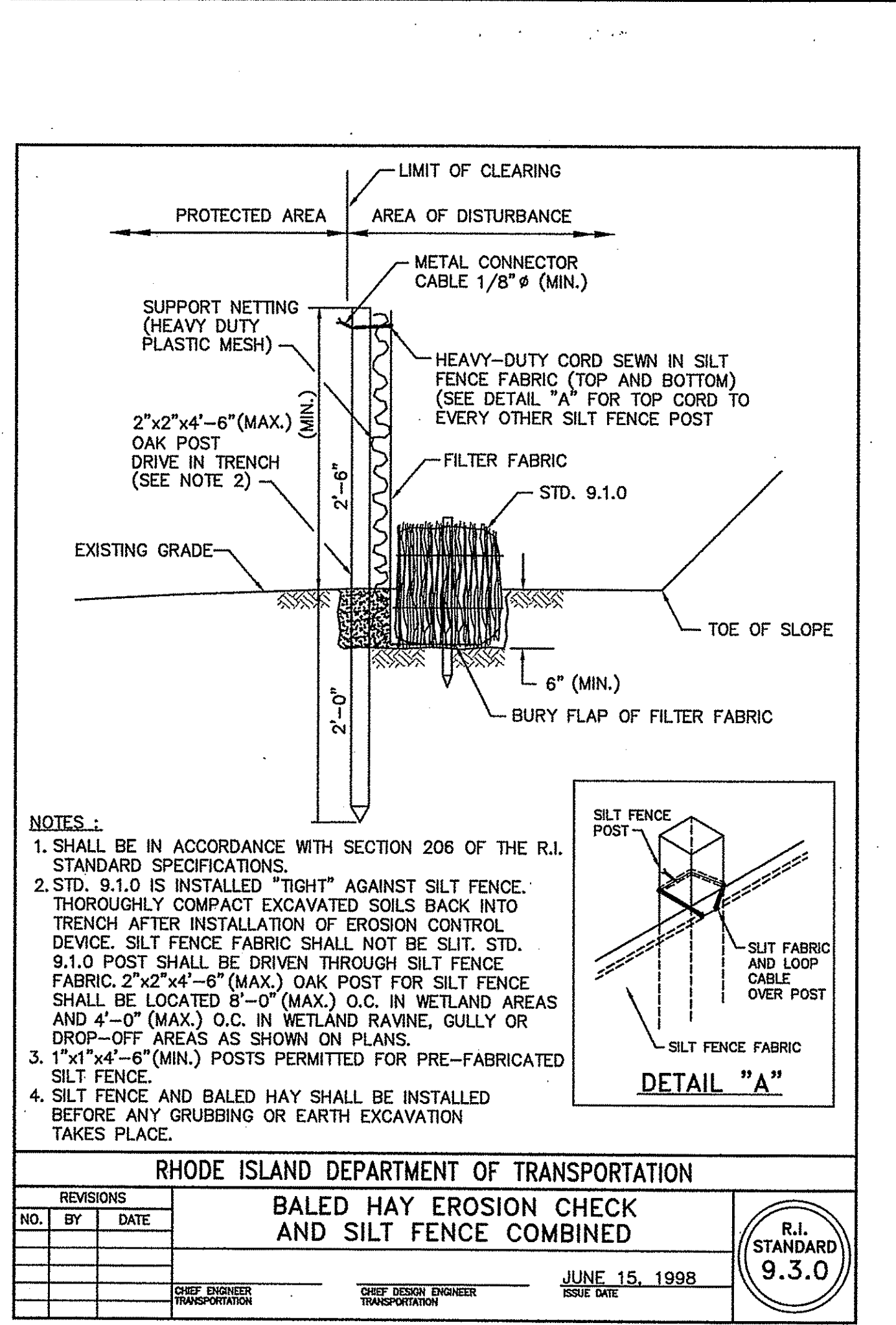
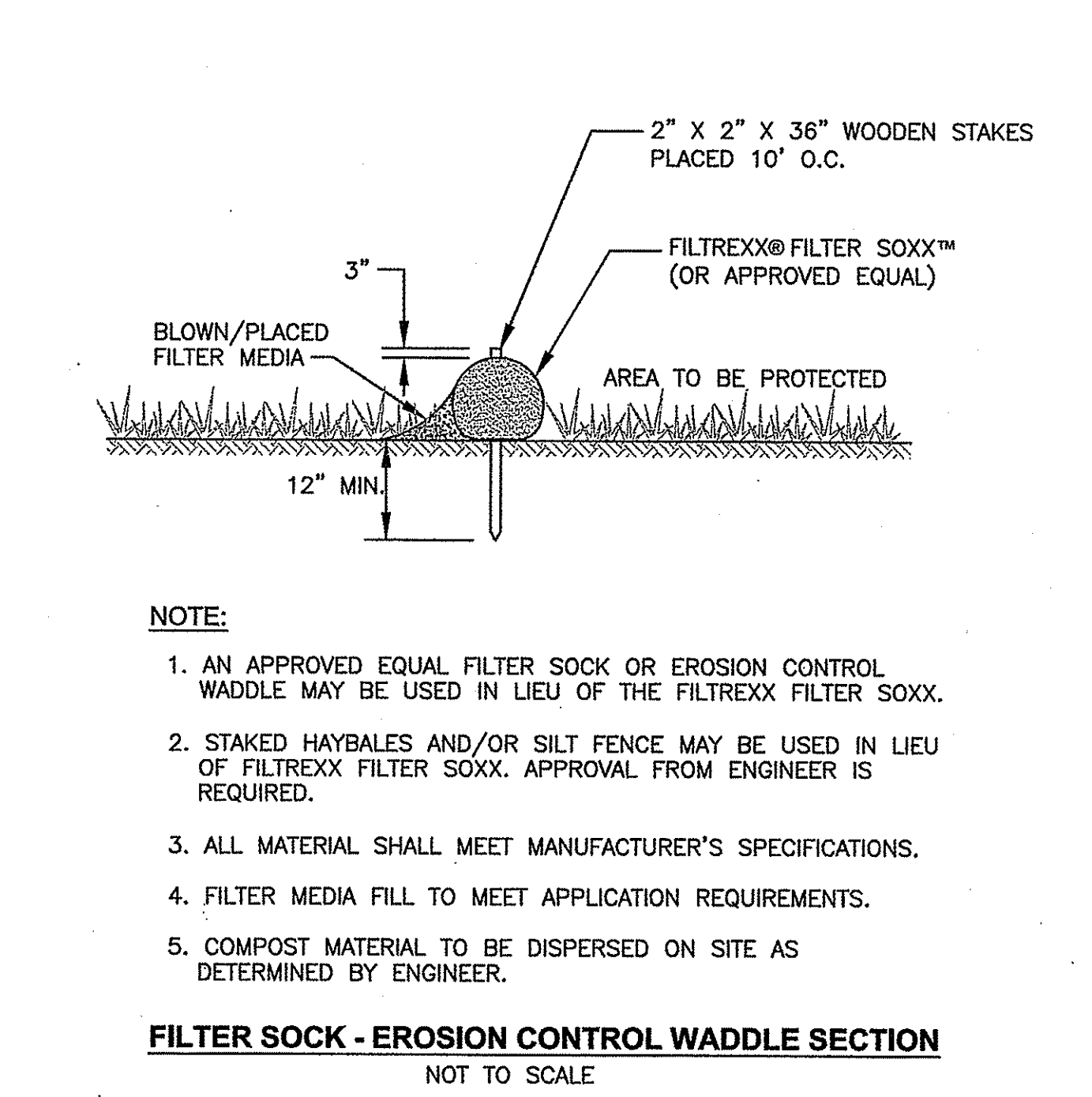
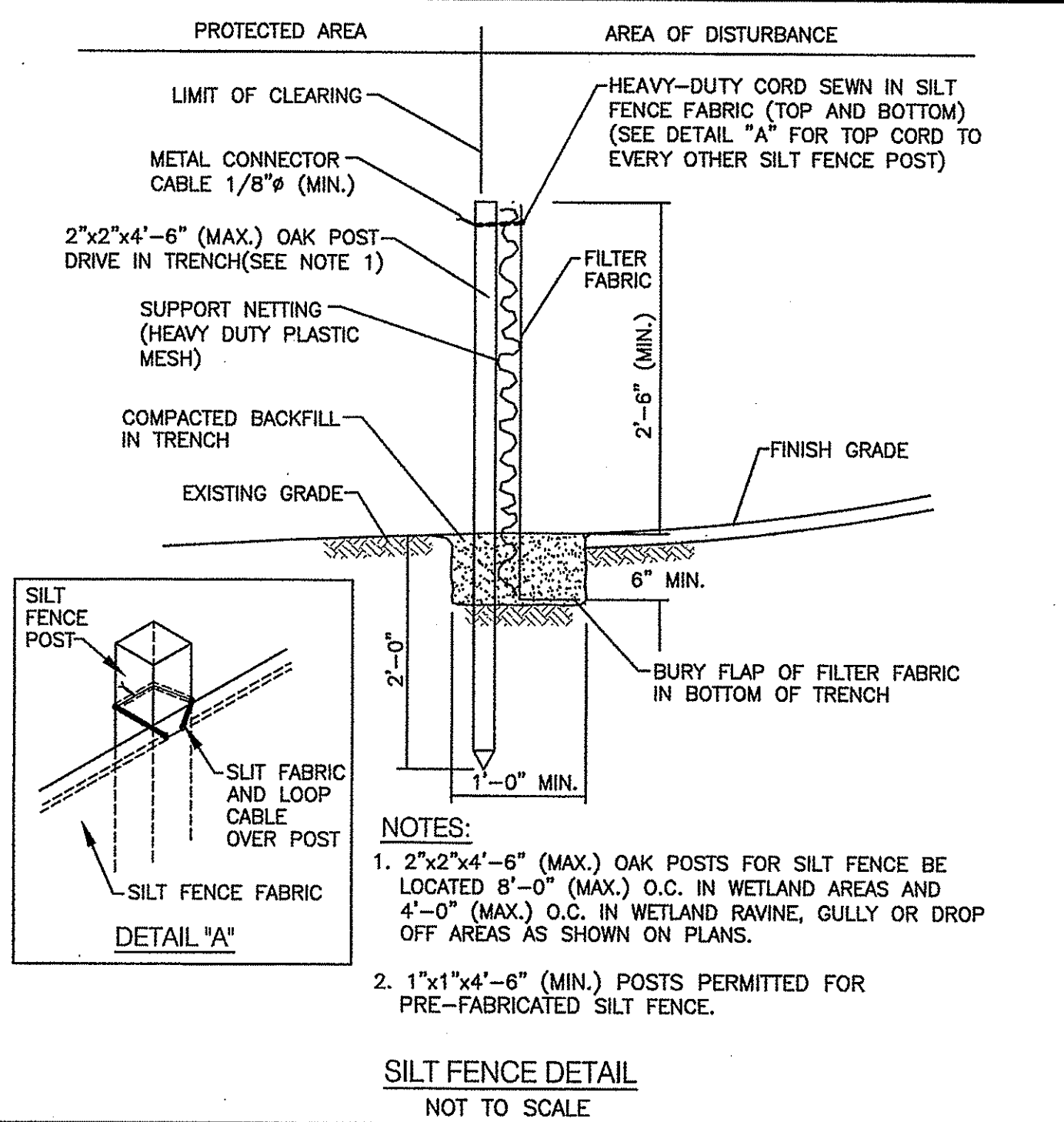
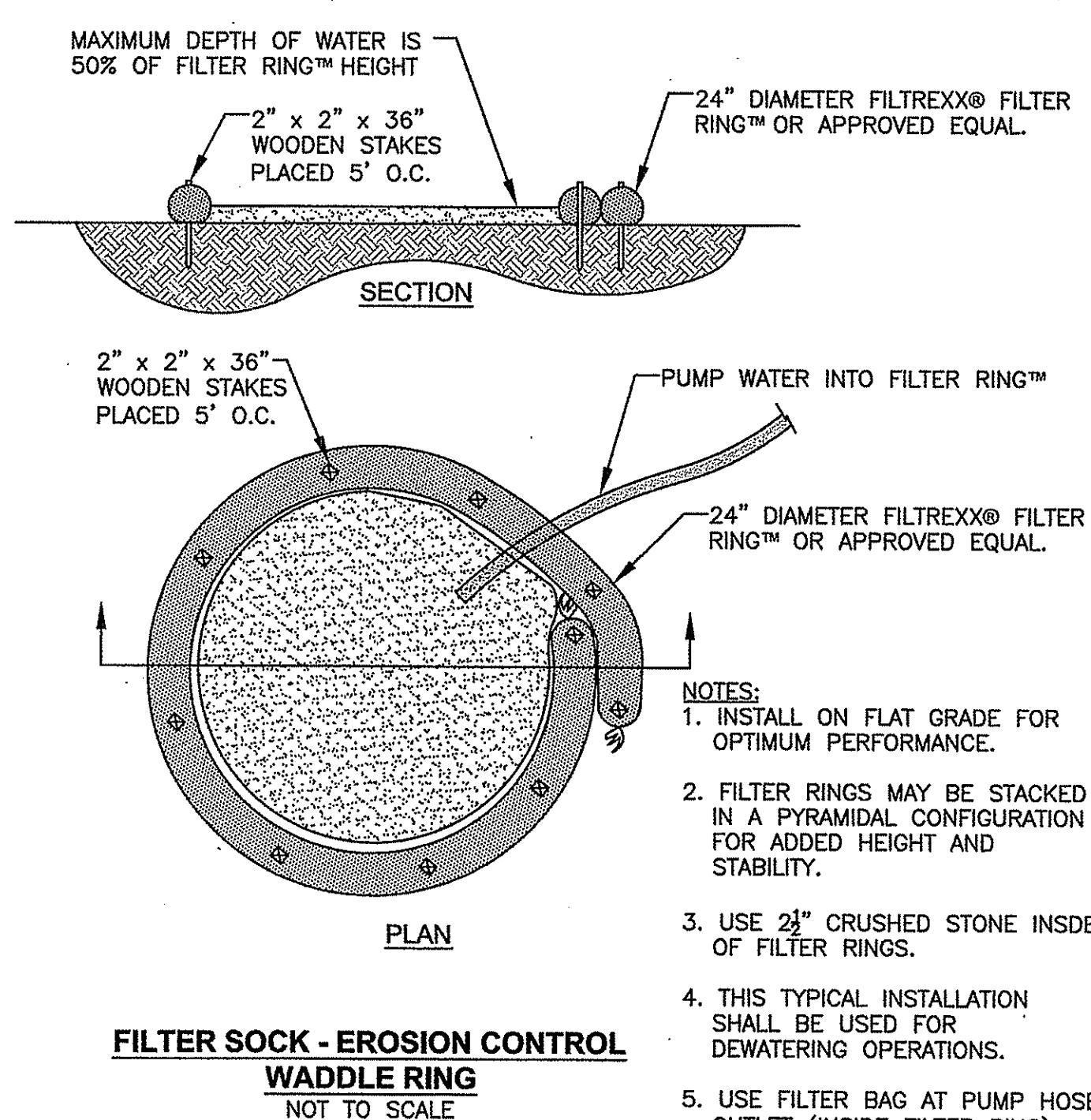
CONTRACTOR SHALL BE FILTREXX CERTIFIED AS DETERMINED BY FILTREXX INTERNATIONAL LLC, OR USE A FILTREXX CERTIFIED SUB-CONTRACTOR FOR THE INSTALLATION. CERTIFICATION SHALL BE SUBMITTED TO THE TOWN OF EAST GREENWICH PUBLIC WORKS DEPARTMENT PRIOR TO CONSTRUCTION. NOTE: ALTERNATE FILTER SOCK OR EROSION CONTROL.

EMBANKMENT NOTES

- THE DETENTION AND INFILTRATION BASIN EMBANKMENTS ARE TO BE CONSTRUCTED WITH APPROVED COMMON BORROW. NO SOIL/ROCK GRATER THAN 2" SHALL BE UTILIZED. COMMON BORROW SHALL MEET OR EXCEED AN IN-PLACE DENSITY OF 100 lb./cf. ALL MATERIAL SHALL BE PLACED IN 8 TO 12 INCH LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. FILL MATERIAL WILL NOT CONTAIN FROZEN MATERIALS OR BE PLACED ON FROZEN SURFACES. COMMON BORROW SHALL MEET SPECIFICATION SECTION 202.20 IN THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 OR LATEST EDITION.
- UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, THE EMBANKMENT AREAS ARE TO BE EXCAVATED. IF ANY ORGANIC OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR REVIEW OF EXCAVATION AREA. THE DEPTH OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER BASED UPON THE LOCAL CONDITIONS. NO FILL MATERIAL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION HAS BEEN COMPLETED. ALL WATER SHALL BE REMOVED FROM THE FOUNDATION PRIOR TO PLACING THE EMBANKMENT.
- THE FILL MATERIAL MUST BE SPREAD IN UNIFORM LAYERS AND FALL WITHIN THE SPECIFIED OPTIMUM WATER CONTENT RANGE IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EACH LAYER IS TO BE COMPACTED PRIOR TO LAYING AN ADDITIONAL LAYER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS SELECTED METHOD OF COMPACTION, COMPACTION EQUIPMENT AND THE SEQUENCE OF OPERATIONS NECESSARY TO OBTAIN THE REQUIRED DENSITY. THE WATER CONTENT AT COMPACTION SHOULD BE IN THE RANGE BETWEEN ONE PERCENTAGE POINT BELOW AND TWO PERCENTAGE POINTS ABOVE STANDARD AASHTO OPTIMUM WATER CONTENT. THE MATERIAL SHALL BE PROCESSED TO A UNIFORM WATER CONTENT BY ADDING WATER TO THE MATERIAL IN ADVANCE OF THE FILL PLACEMENT.
- BACKFILL MATERIAL AROUND STRUCTURES AND PIPE IS TO BE PLACED TO PREVENT THE MOVEMENT OF WATER. THE OPTIMUM WATER CONTENT MUST BE MAINTAINED IN THE SAME RANGE AS IN THE EMBANKMENT. THE BACKFILL MUST BE PLACED IN LAYERS LESS THAN 4 INCHES IN THICKNESS AND DISTRIBUTED UNIFORMLY AROUND THE STRUCTURE/PIPE. ALL COMPACTION WILL BE TO 95% MAXIMUM DENSITY AND MAY REQUIRE HAND TAMPERS OR SMALL POWER EQUIPMENT.
- EMBANKMENT DAMAGE COMMONLY RESULTS FROM IMPROPER CONSTRUCTION OF CONDUIT AND STRUCTURAL BACKFILL WITHIN THE EMBANKMENT BECAUSE SEEPAGE WILL OCCUR WITH IMPROPER BACKFILL AND COMPACTION. THEREFORE, STRUCTURES AND PIPES ARE TO BE CONSTRUCTED AS THE EMBANKMENT CONSTRUCTION RISES TO THE RESPECTIVE PIPE OR STRUCTURE. THIS WILL PREVENT THE DISTURBANCE OF CONSTRUCTED EMBANKMENT MATERIAL. PIPES FROM THE OUTLET STRUCTURE TO THE OUTFALL SHALL HAVE AN ANTI-SEEP COLLAR.

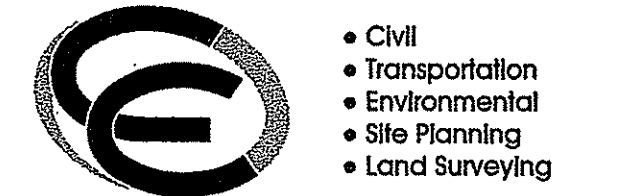
DEWATERING NOTES

- CONTRACTOR IS REQUIRED TO PROVIDE OWNER WITH PROPOSED DEWATERING METHODS. CONTRACTOR MAY CONSIDER INSTALLING A 12" PERFORATED PIPE, VERTICALLY WITH CRUSHED STONE BACKFILL. USE CONSTRUCTION PUMPS TO KEEP EXCAVATION AREA DRY DURING CONSTRUCTION. WHATEVER METHOD USED, THE CONTRACTOR IS RESPONSIBLE TO DEWATER AREA AS NECESSARY TO KEEP EXCAVATION IN THE DRY.
- USE DEWATERING FILTER RING WITH FILTER BAG AT PIPE OUTLET FOR DEWATERING OUTFLOW.
- CONTRACTOR IS RESPONSIBLE TO MAKE MODIFICATIONS TO DEWATERING METHODS AS NECESSARY TO COMPLETE THE WORK. DEWATERING AND MODIFICATIONS TO THE DEWATERING METHOD IS THE RESPONSIBILITY OF THE CONTRACTOR UNDER THE BASE BID PRICE.



CONSTRUCTION SPECIFICATIONS

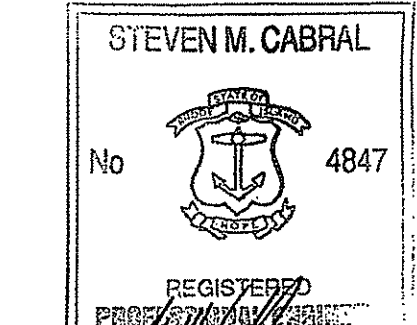
- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR, AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL, A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE, AT AN ANGLE, TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. REMOVE ACCUMULATED SEDIMENT PROMPTLY.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



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KEY PLAN



PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

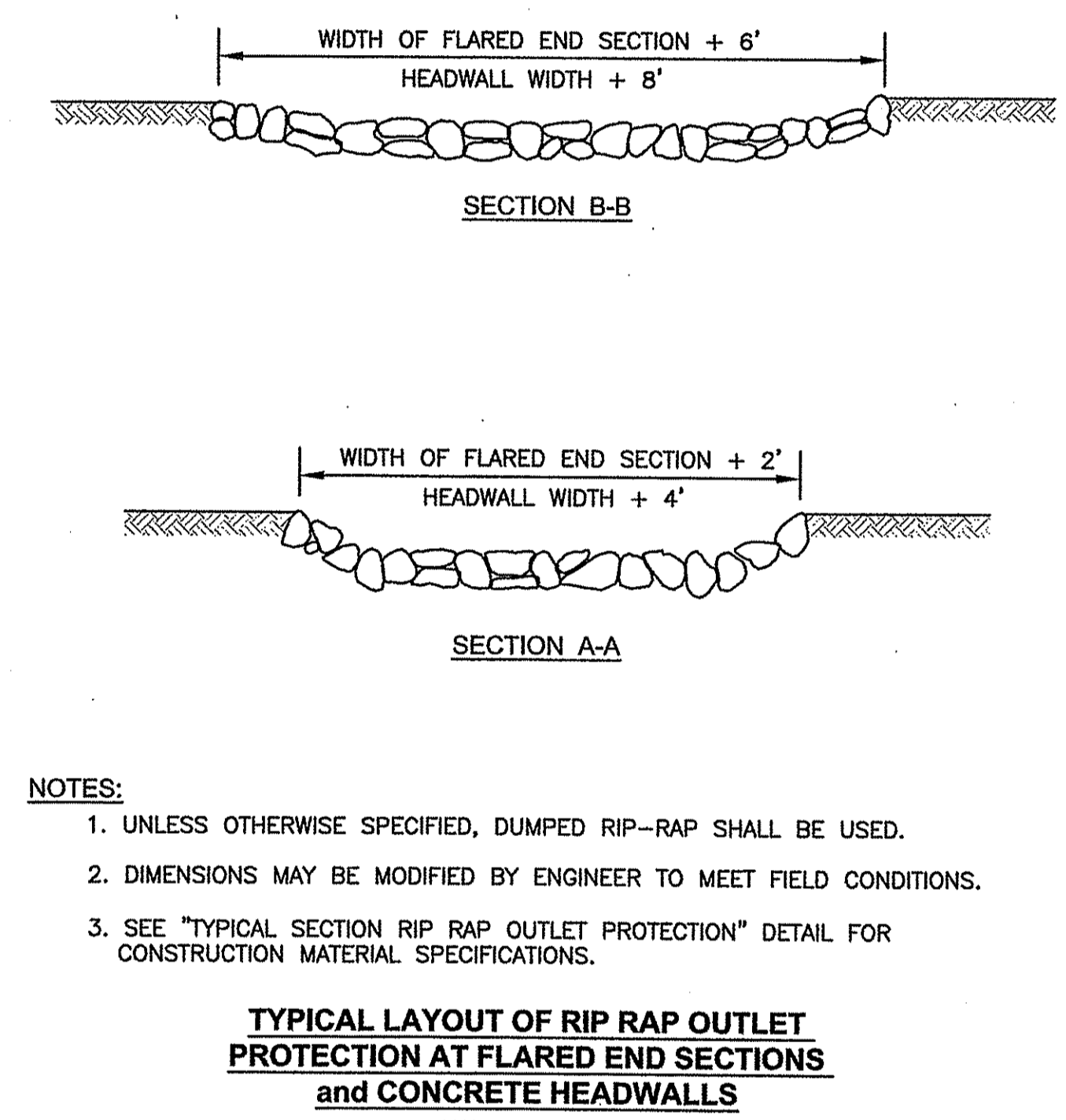
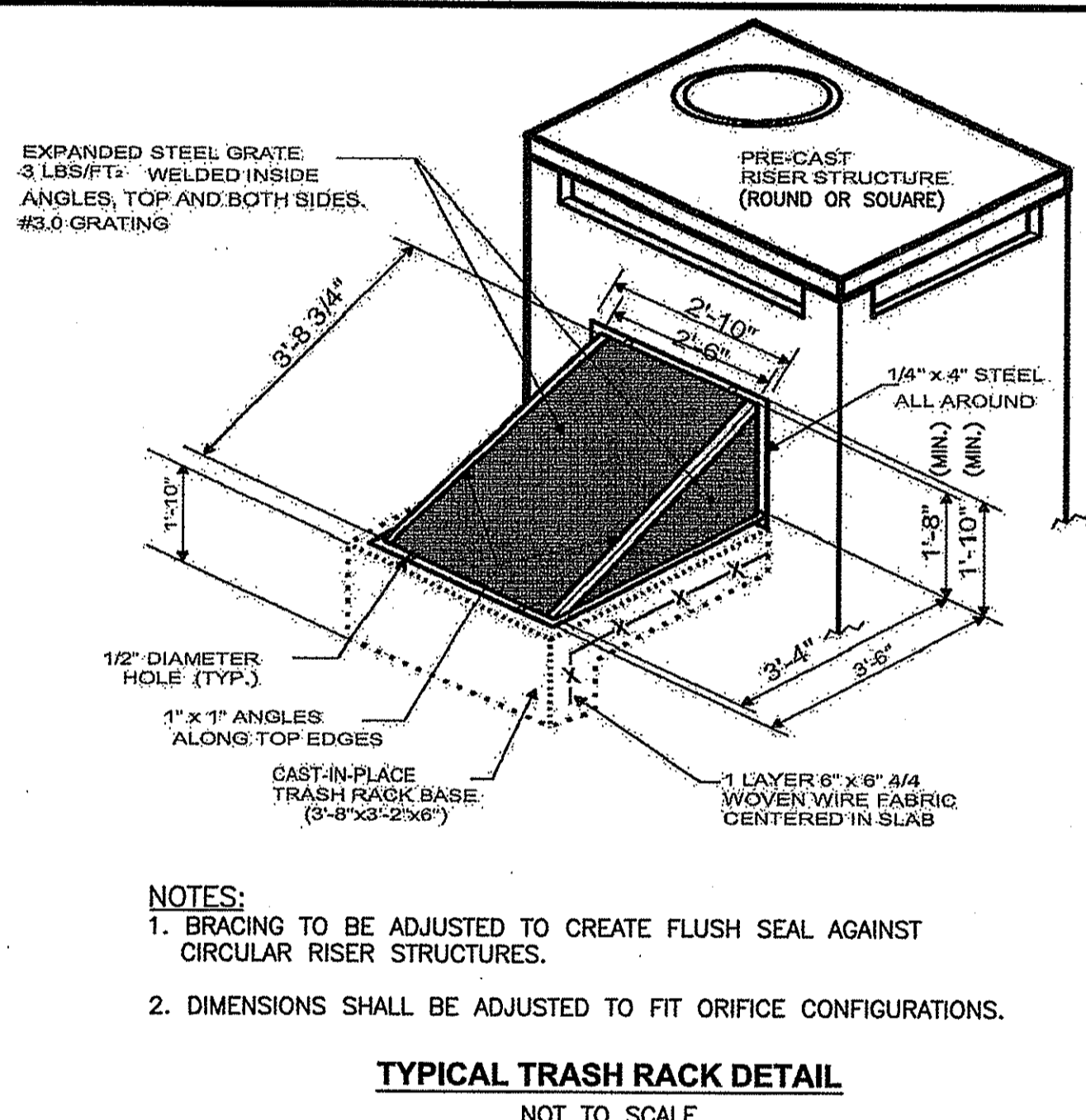
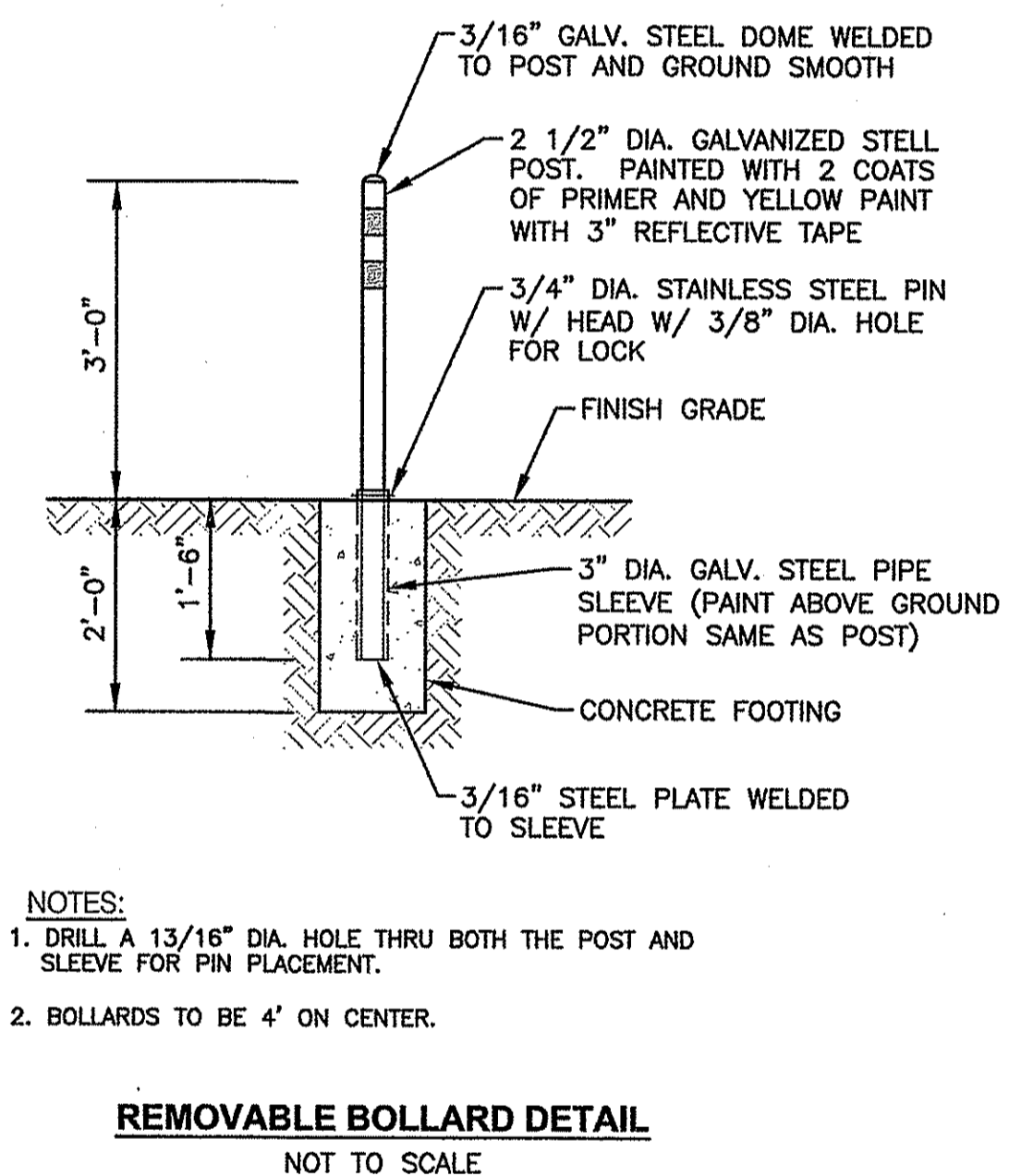
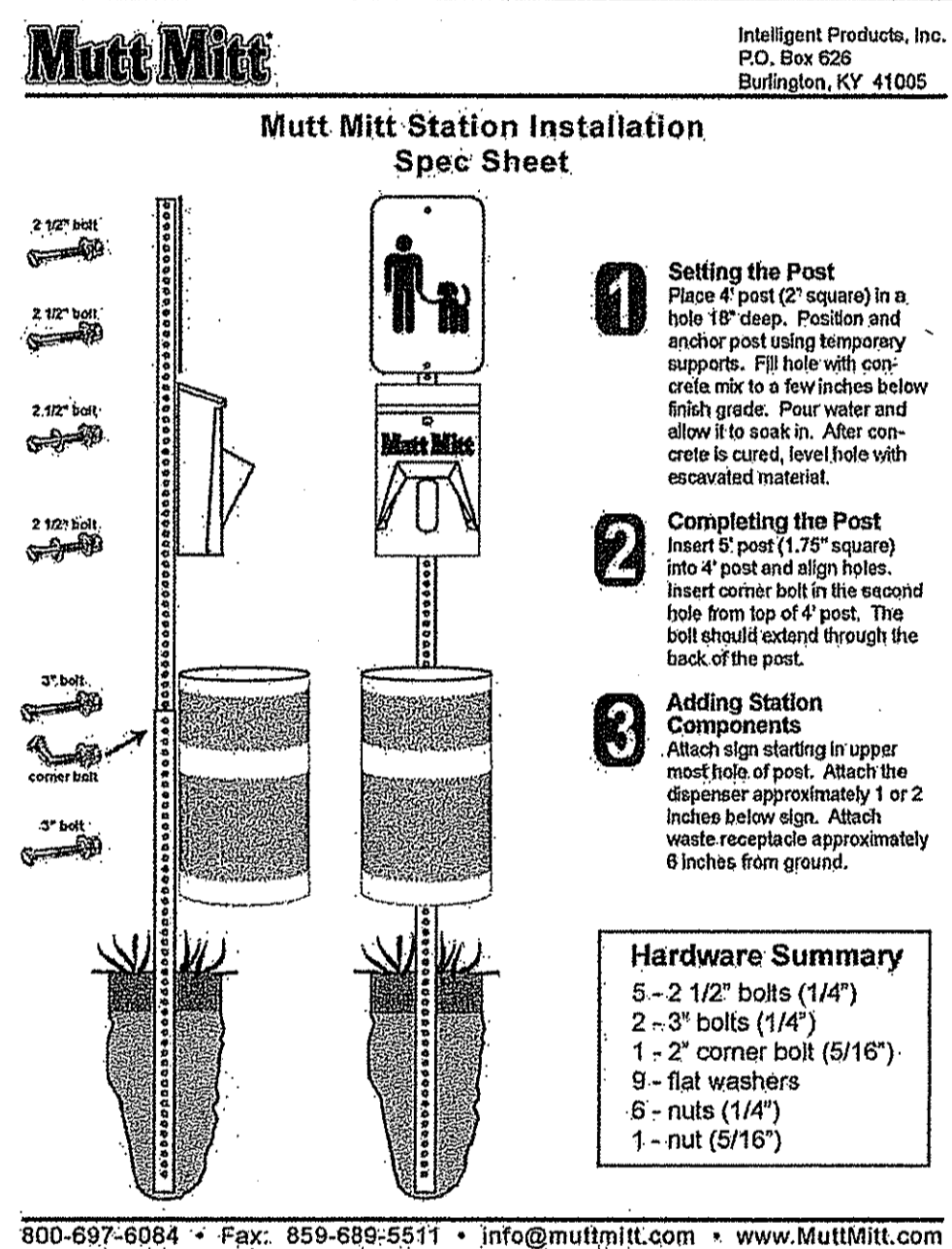
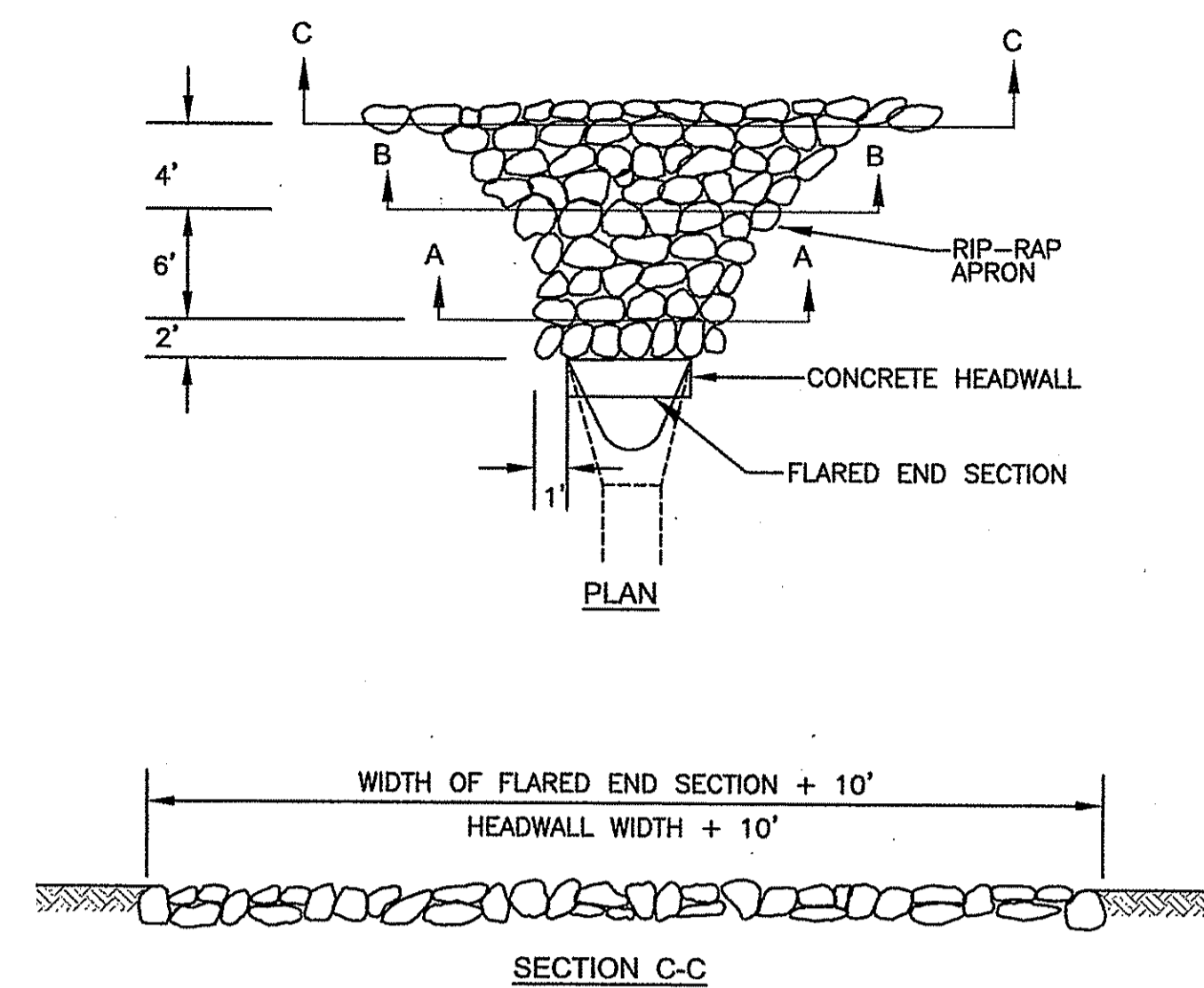
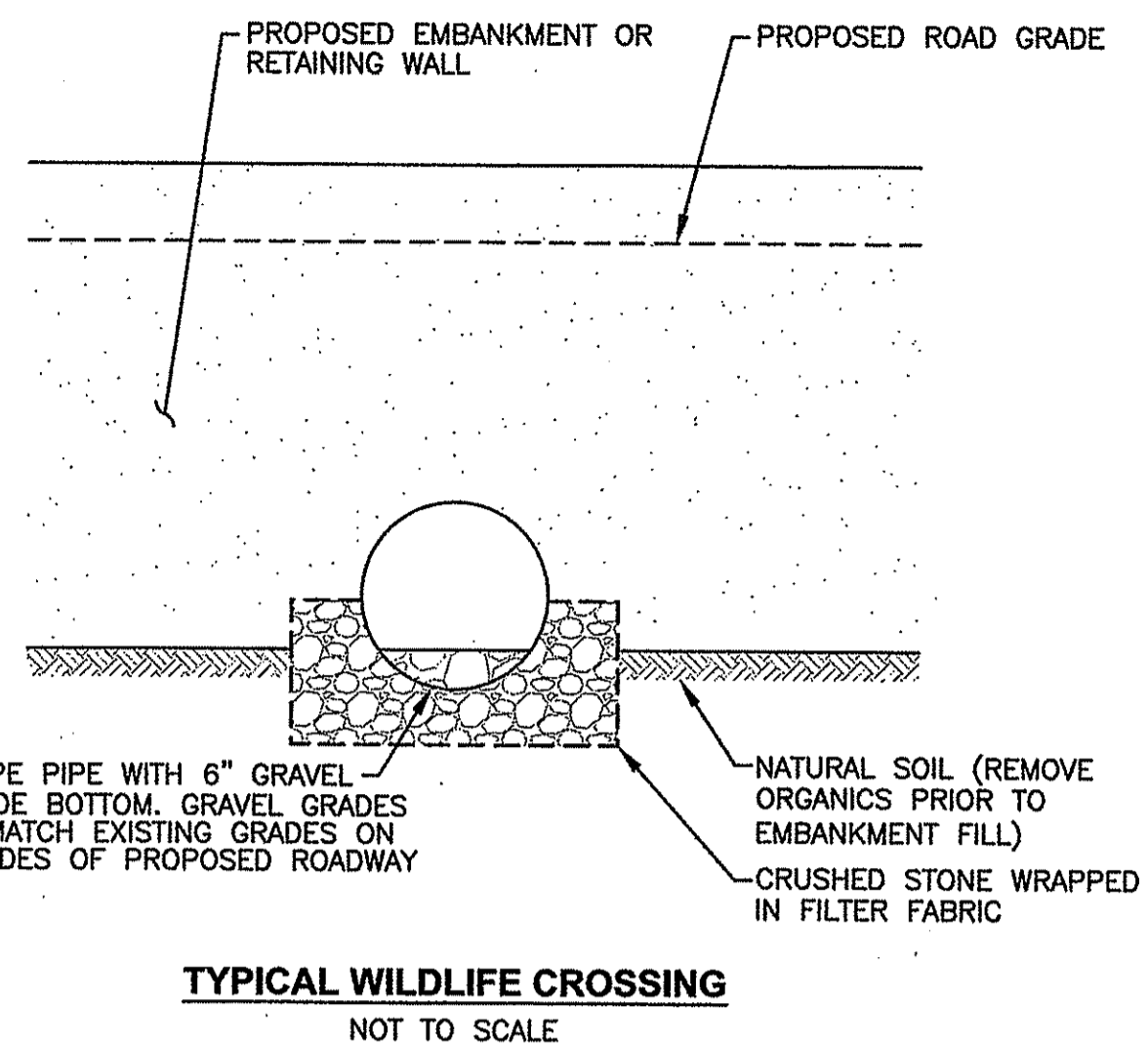
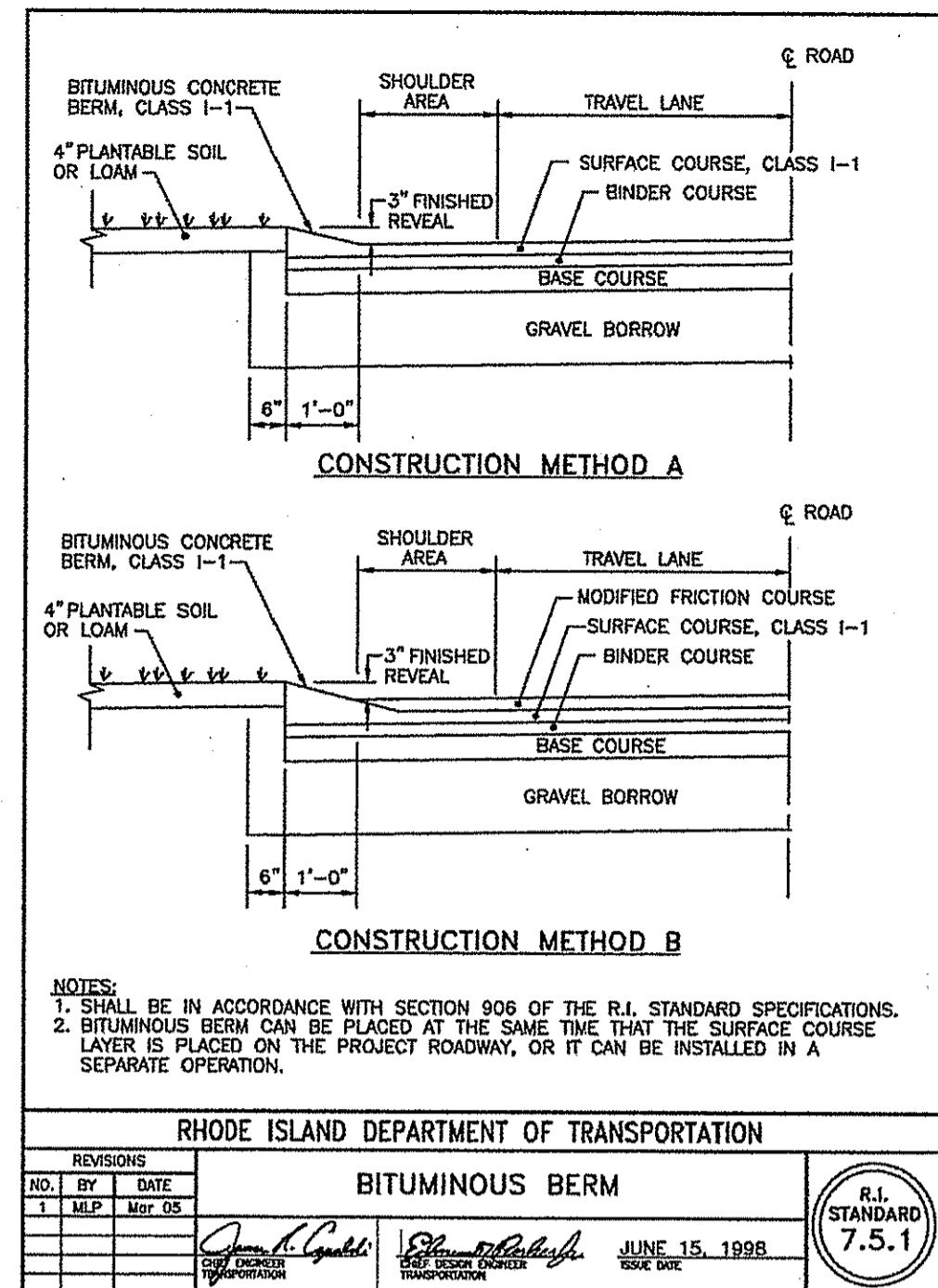
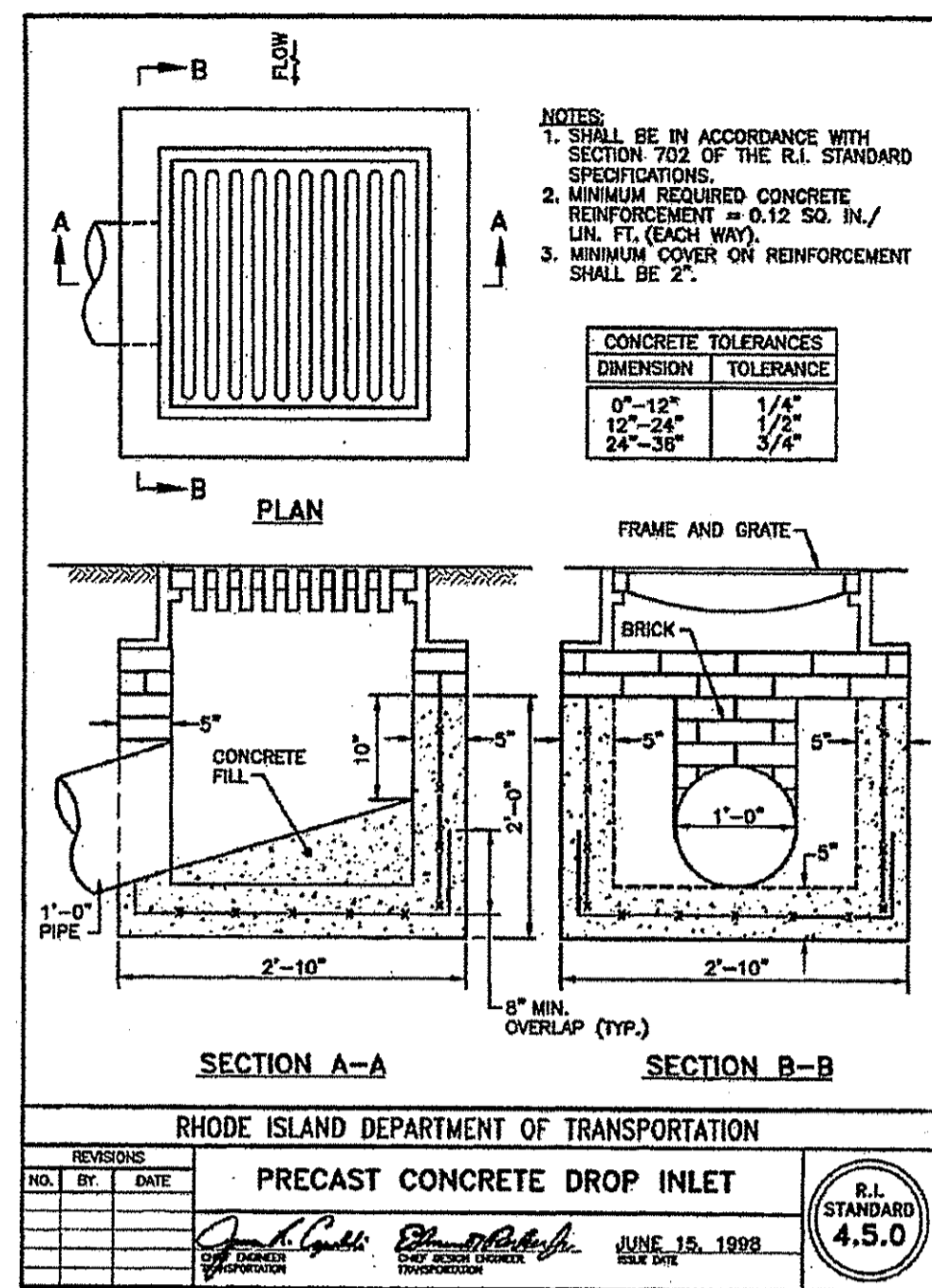
DRAWING TITLE:
MISCELLANEOUS DETAIL
PLAN No. 3

DATE: MARCH 2014
SCALE: AS SHOWN

DWG. NAME: 1905-C9.3-DETAIL3-R1.dwg

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER:
C9.3
SHEET: 17 OF 24



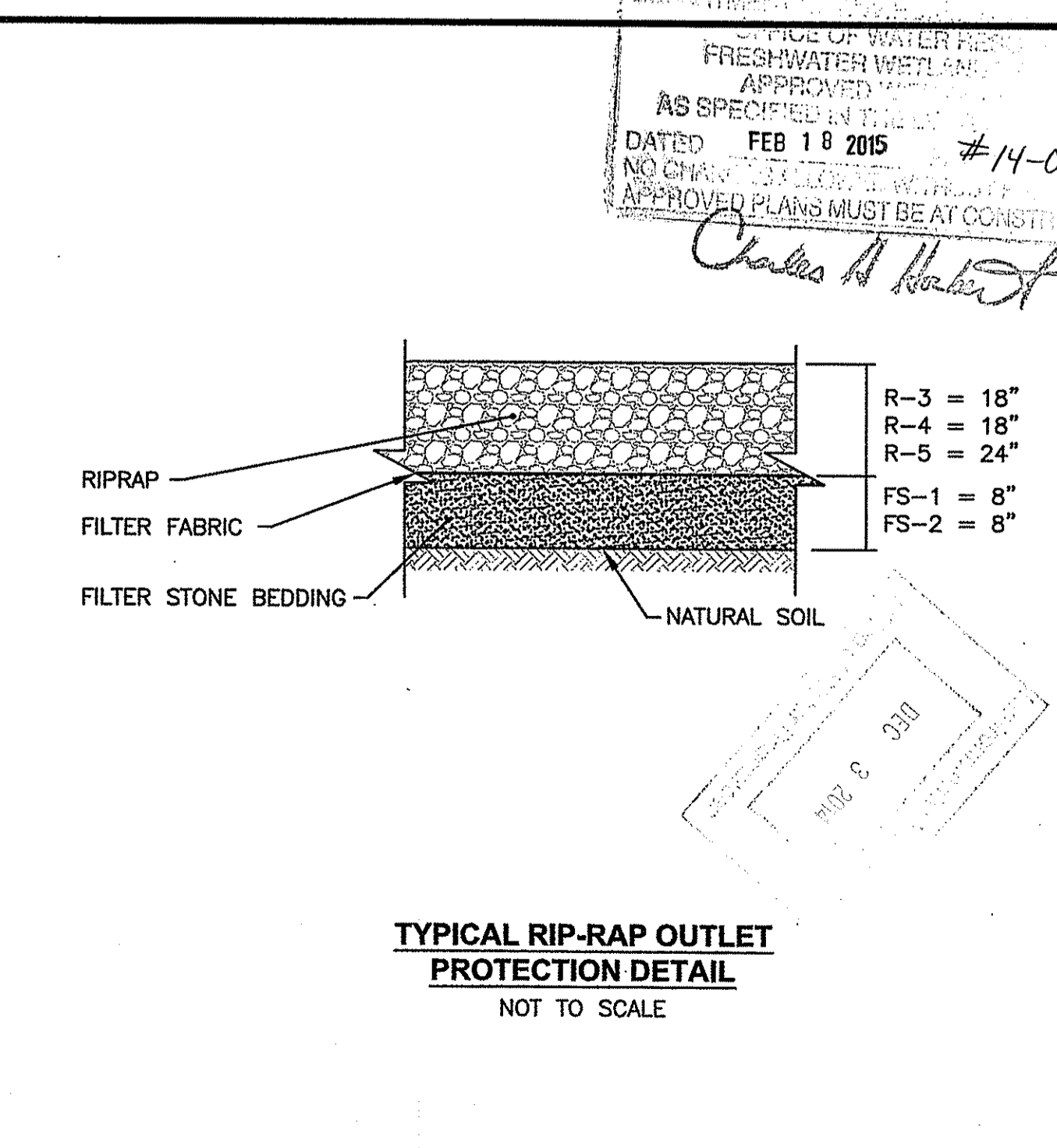
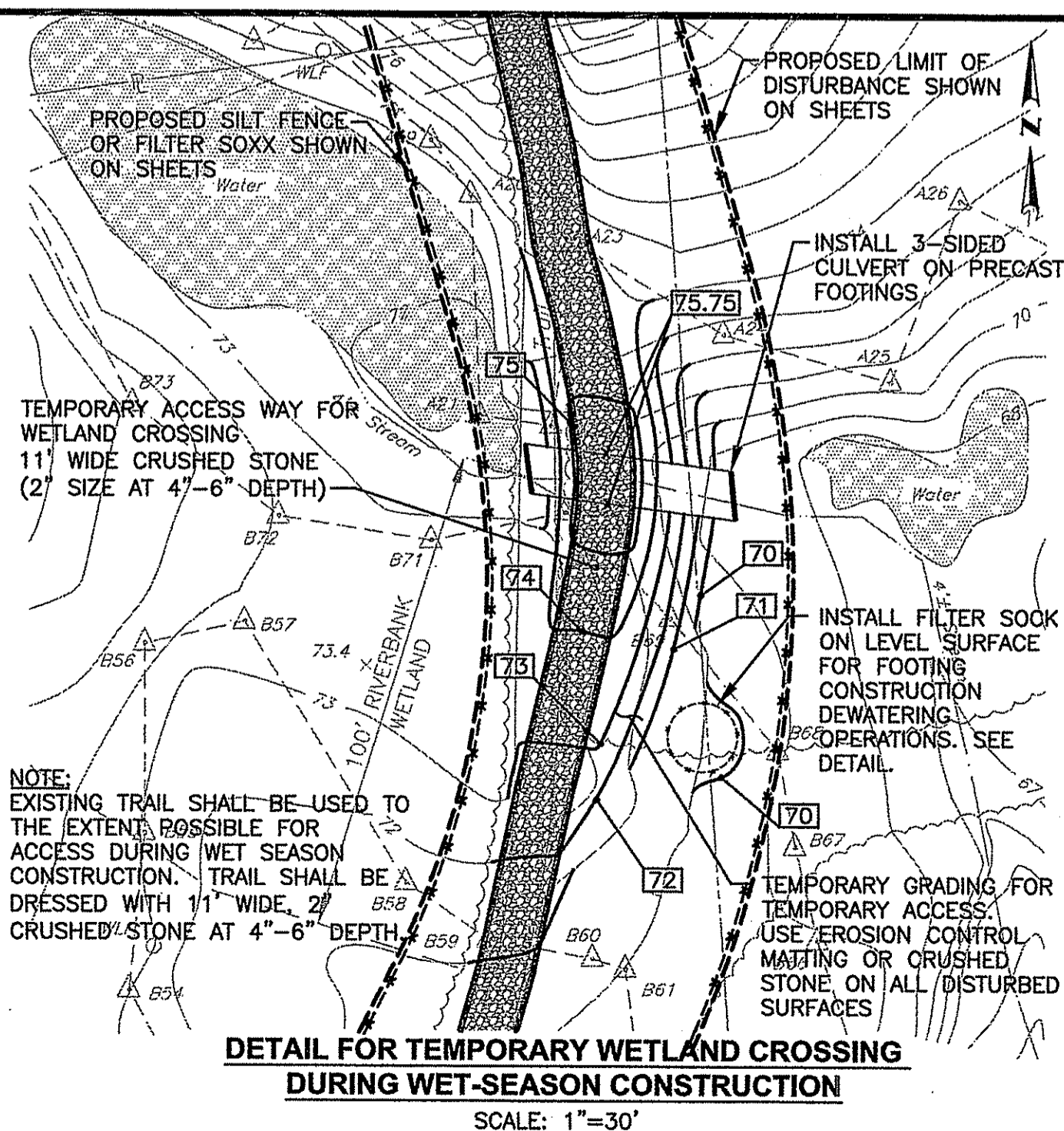
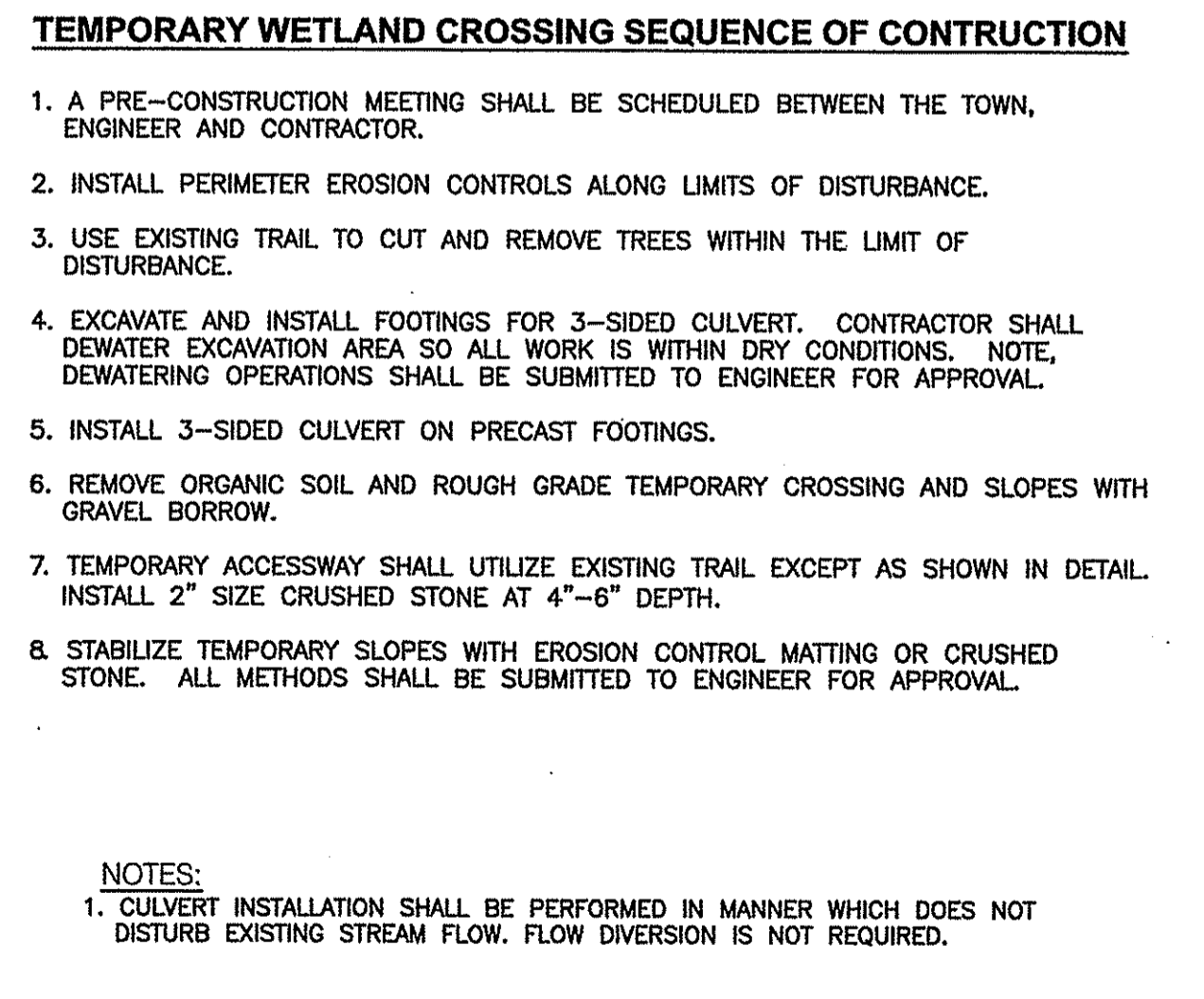
PYRAMID STRUCTURES (STANDARD SIZES)
 DIMENSIONS IN INCHES TO THE NEAREST 1/4"
 HAS DISTRIBUTION BY CONTECH CONSTRUCTION PRODUCTS NATIONALLY

HOST STRUCTURE INSIDE DIMENSIONS	
PART NUMBER	TYPE OF PIPE MOUNTING TO INSIDE DIAMETER OF PIPE
PRP-24	4"
PRP-30	6"
PRP-36	8"
PRP-42	10"
PRP-48	12"
PRP-54	14"
PRP-60	16"
PRP-66	18"
PRP-72	20"
PRP-78	22"
PRP-84	24"
PRP-90	26"
PRP-96	28"
PRP-102	30"
PRP-108	32"
PRP-114	34"
PRP-120	36"

NOTE: CONTRACTOR MUST COORDINATE WITH MANUFACTURER APPROPRIATE MODEL FOR OUTLET STRUCTURES

CONTECH CONSTRUCTION PRODUCTS

DATE: _____
DRAWN BY: _____
APPROVED BY: _____
DETAIL: _____



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KEY PLAN

STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL ENGINEER
 12-1-14

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

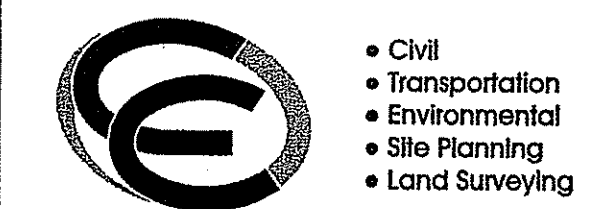
PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
MISCELLANEOUS DETAILS
PLAN No. 4

DATE: MARCH 2014
SCALE: AS SHOWN
DWG. NAME: 1905-C9.4-DETAIL4-R1.dwg

REVISIONS	NUMBER	REMARKS	DATE
1		RIDEM COMMENTS	10/03/14

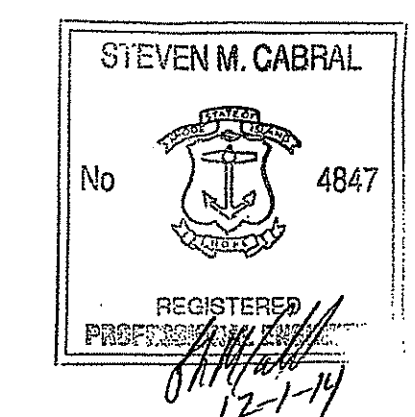
DRAWING NUMBER
C9.4
 SHEET 18 OF 24



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KEY PLAN



PROJECT TITLE:

MULTI-PURPOSE CROSS COUNTRY TRAILS
 TOWN of EAST GREENWICH
 PLAT 11, LOTS 11 & 393
 EAST GREENWICH, RI

PREPARED FOR:

TOWN of EAST GREENWICH
 DEPARTMENT of PUBLIC WORKS
 P.O. BOX 111 PIERCE STREET
 EAST GREENWICH, RI 02818

DRAWING TITLE:

**MISCELLANEOUS DETAILS
 PLAN No. 5**

DATE: MARCH 2014 SCALE: AS SHOWN

DWG. NAME: 1905-C9.5-DETAILS-R1.dwg

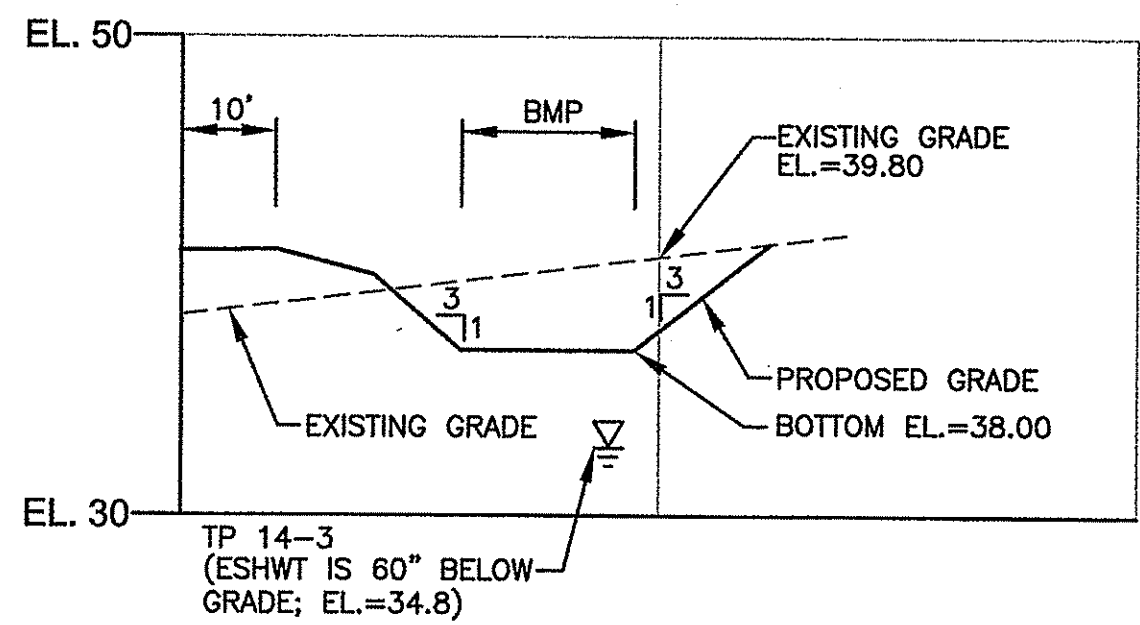
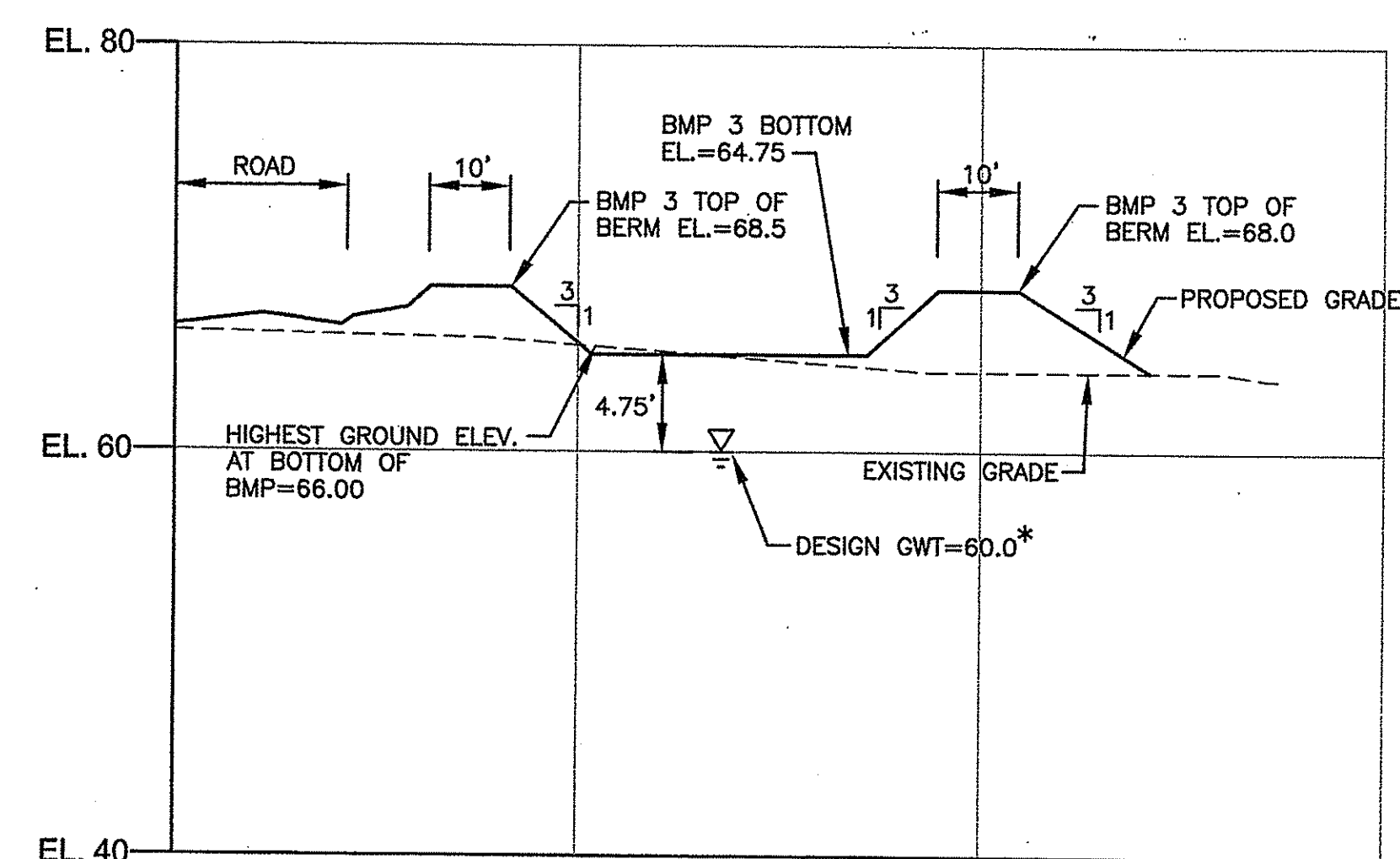
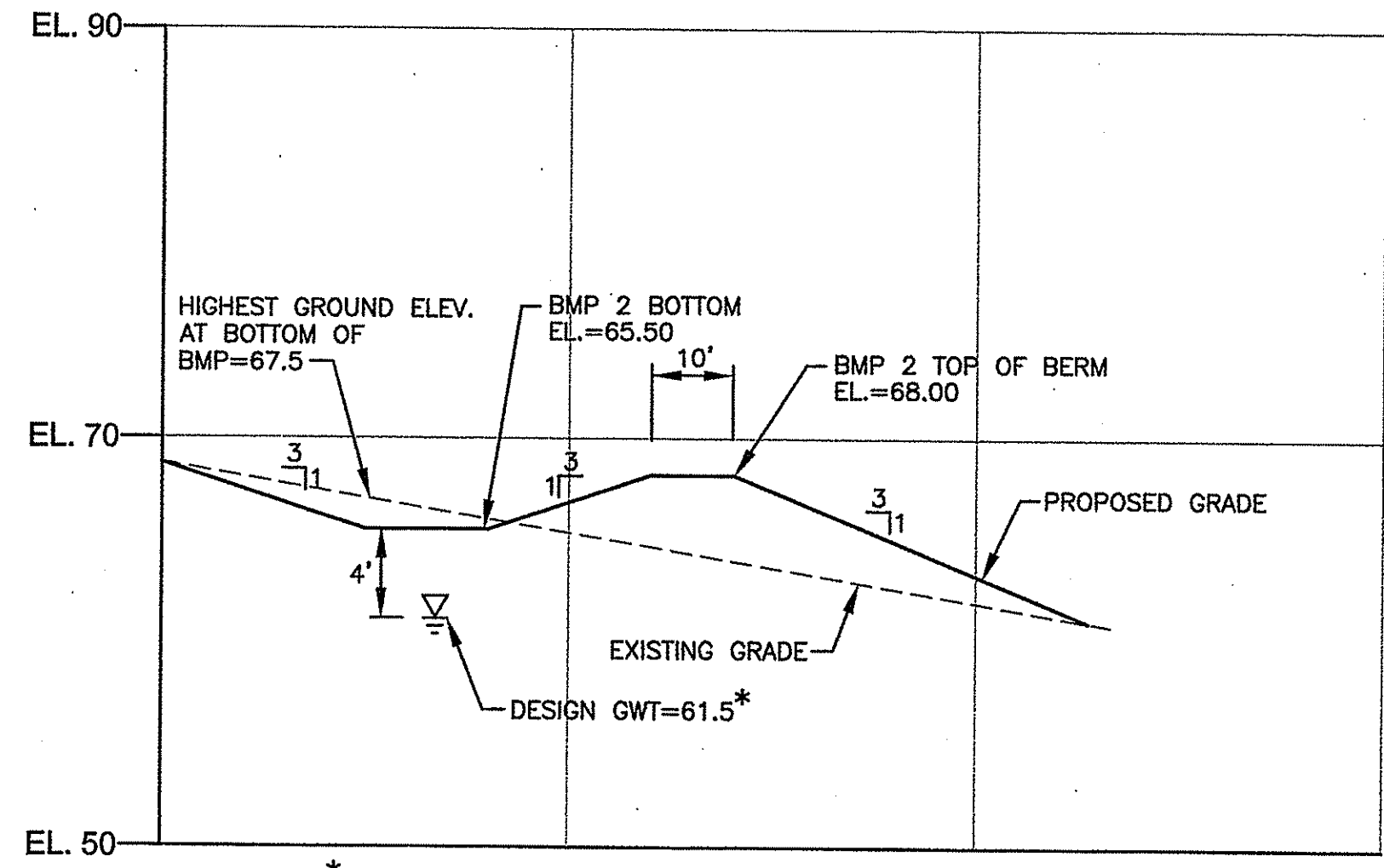
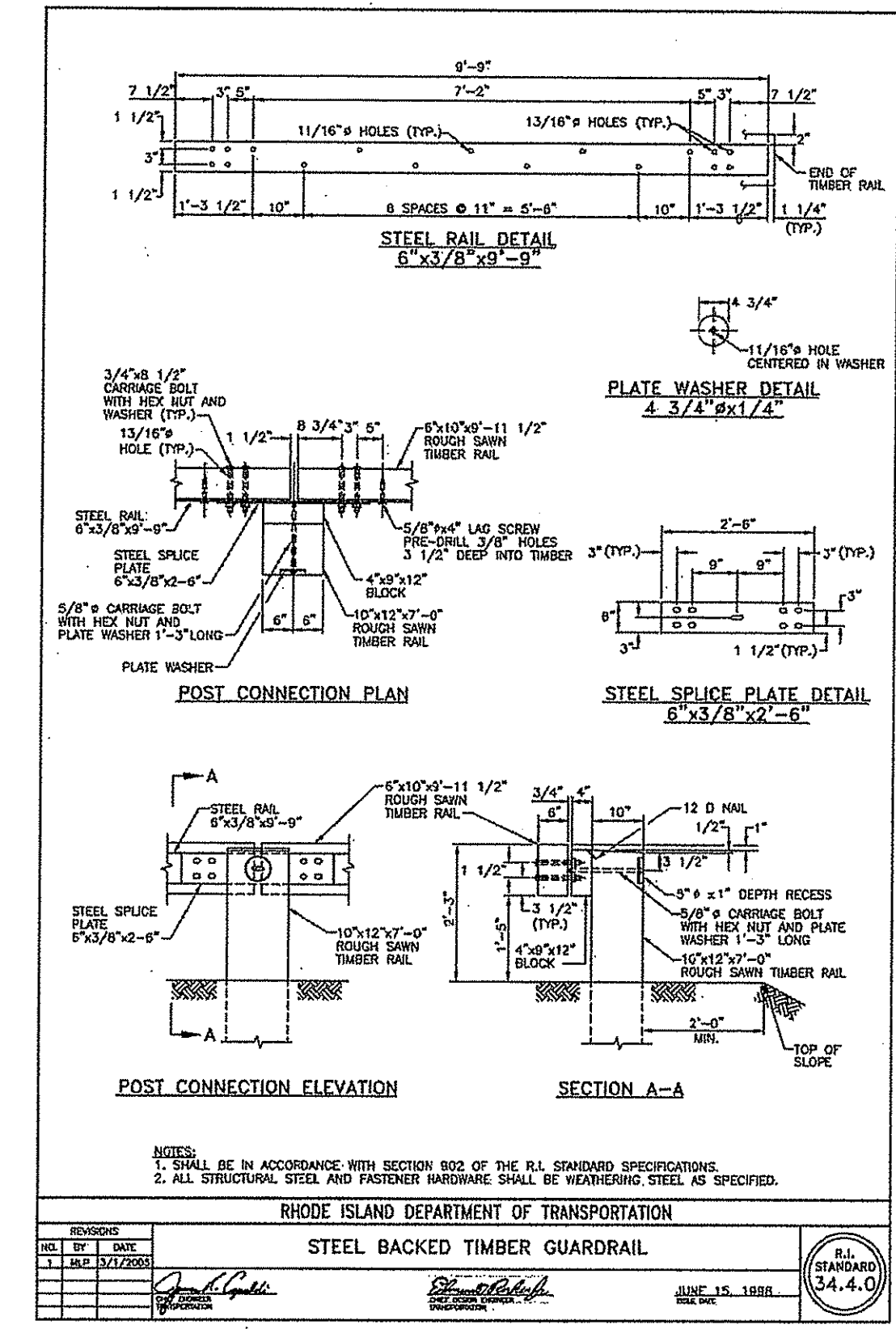
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER

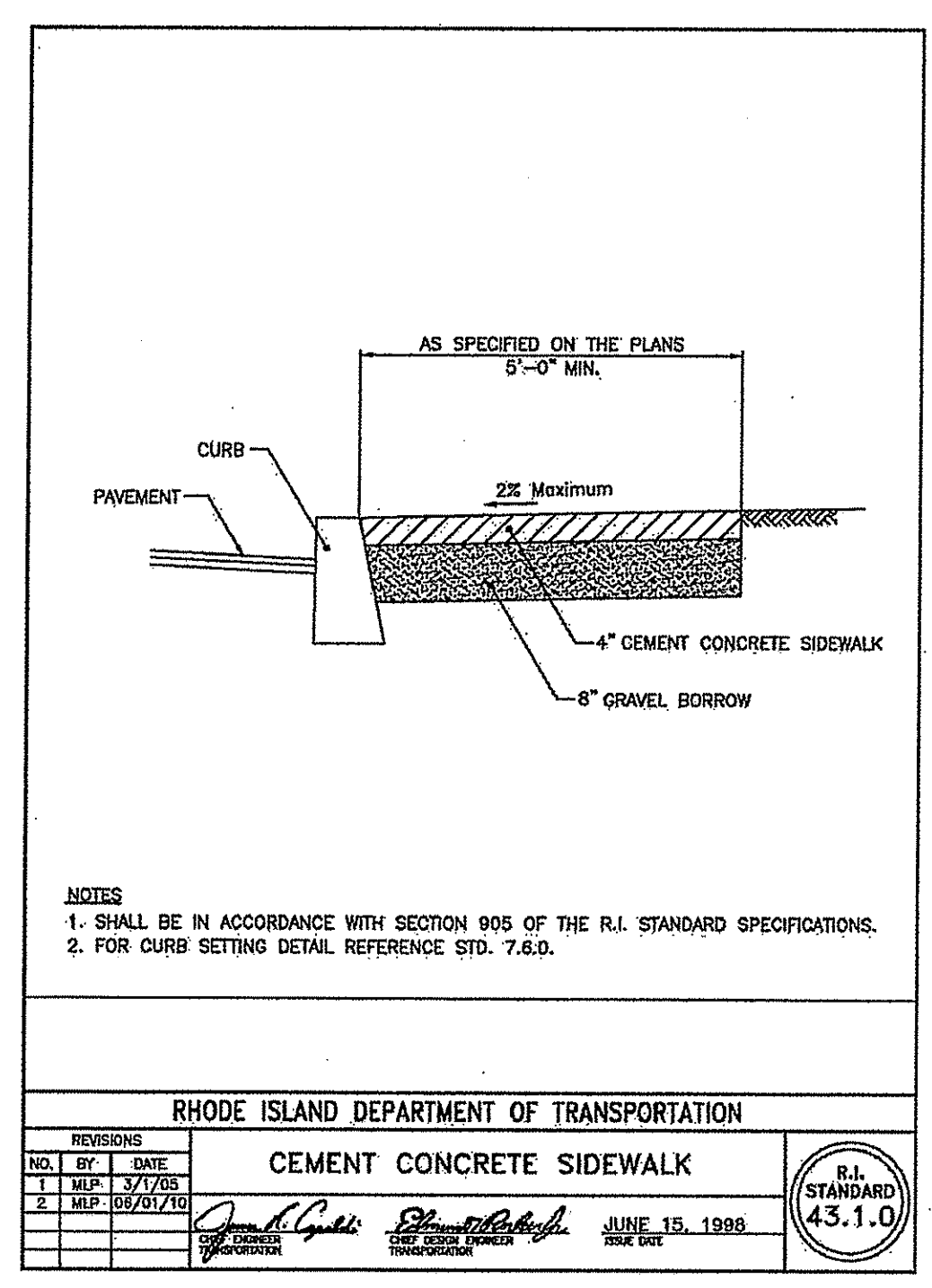
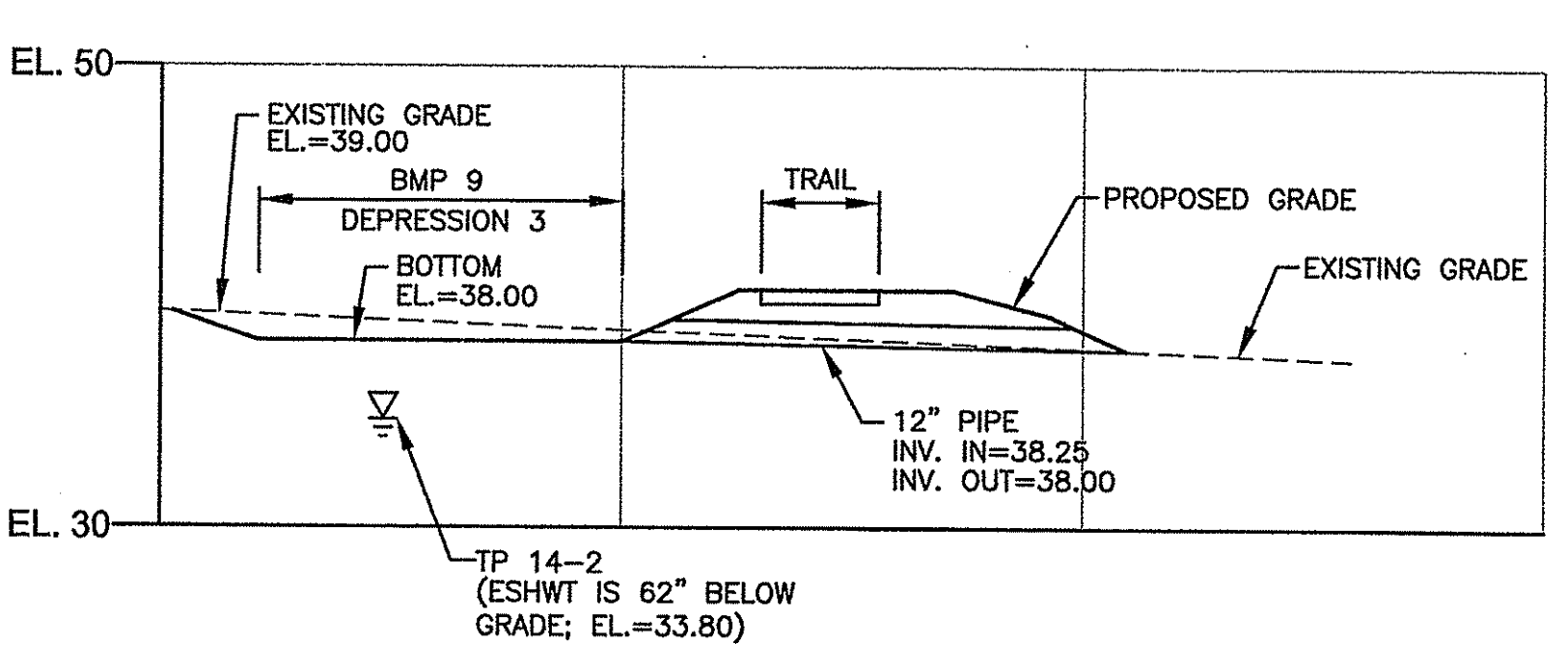
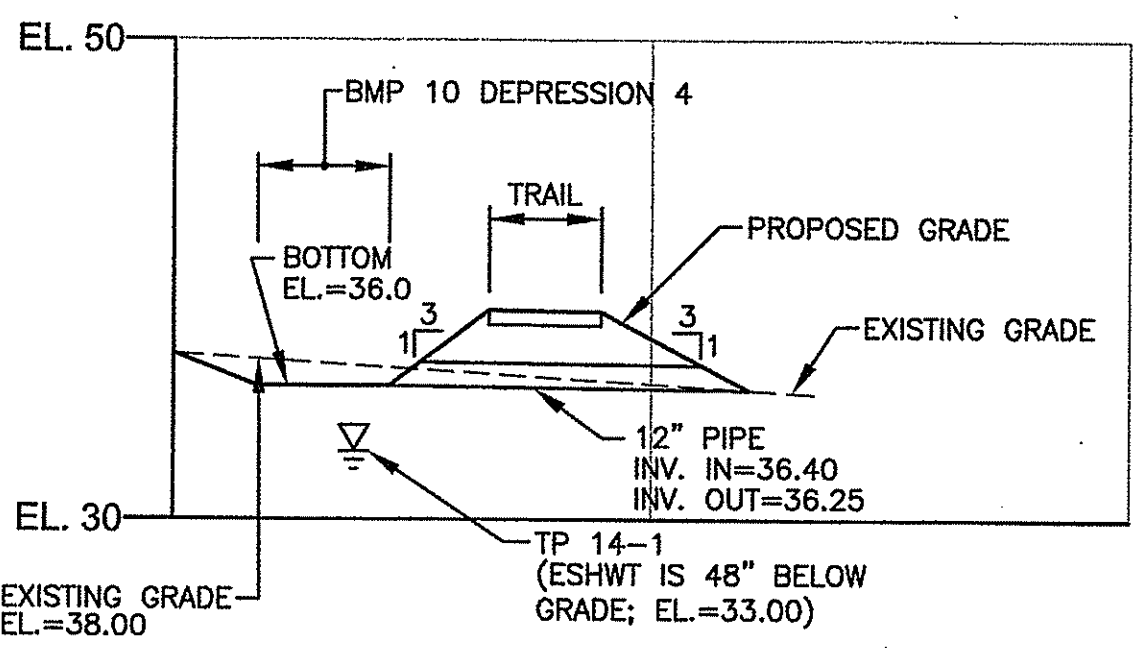
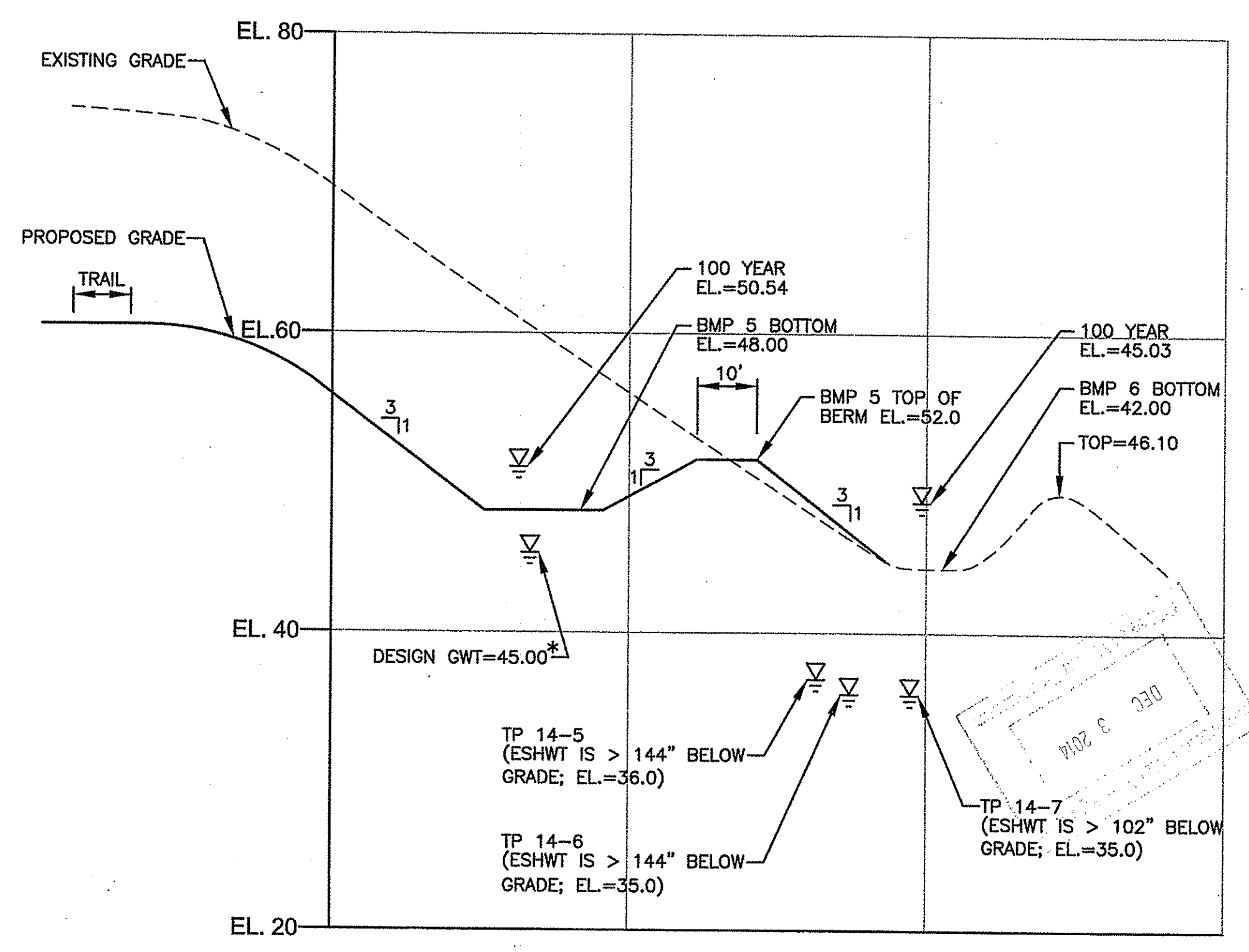
C9.5

SHEET: 19 OF 24



TEST PIT DESIGN DATA

LOCATION	DEPTH TO ESHWT	GROUND EL. AT TP	ESHWT AT TP	BMP NO.	SEPARATION TO DESIGN GWT
TP 14-5	>144"	48.0±	36.0	4, 5 AND 6	3'+
TP 14-6	>144"	47.0±	35.0	4, 5 AND 6	3'+
TP 14-7	>102"	43.5±	35.0	4, 5 AND 6	3'+



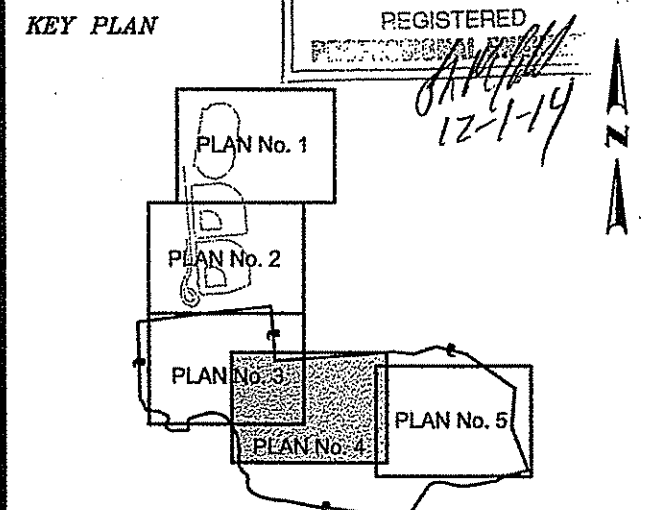


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 Estate Planning - Landscape Architecture

STEVEN M. CABRAL
 No. 4847
 REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
 12-1-14



PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN of EAST GREENWICH
DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
EAST GREENWICH, RI 02818

DRAWING TITLE:
LANDSCAPE PLAN No. 3

DATE: MARCH 2014 **SCALE:** 1"=40'

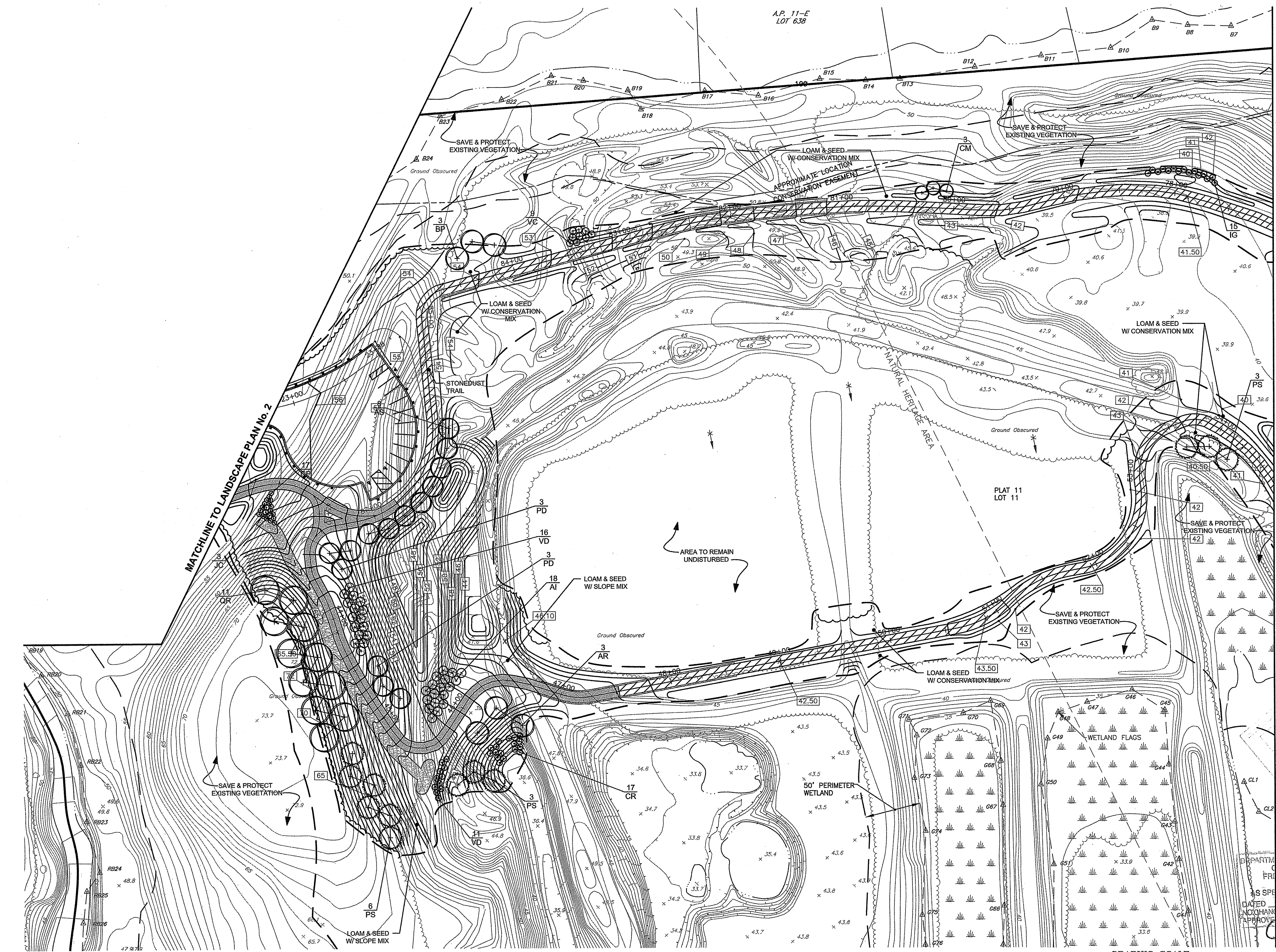
DWG. NAME: 1905-L1-LAND.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DEPARTMENT OF ENVIRONMENTAL AFFAIRS
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS
 APPROVED WITH PERMIT
 AS SPECIFIED IN THE PERMIT
 DATED FEB 18 2015
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AS SHOWN ON SITE

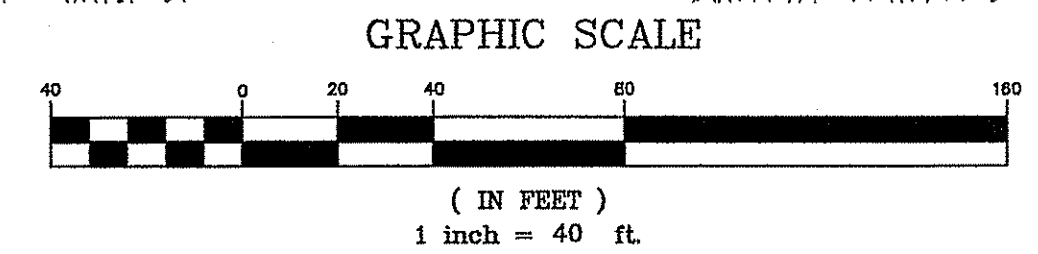
DRAWING NUMBER
L1.3
 SHEET: 22 OF 24

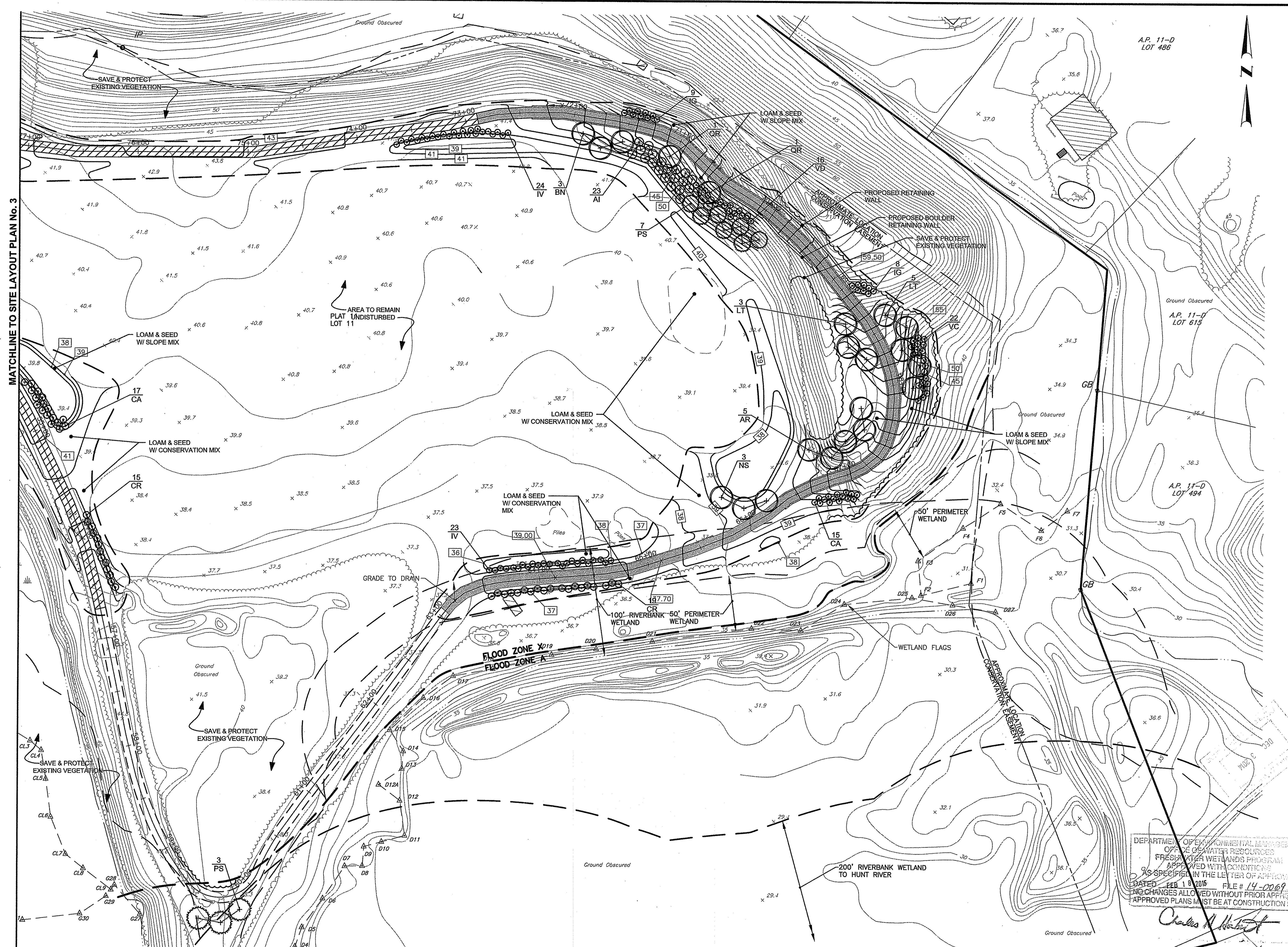


MATCHLINE TO LANDSCAPE PLAN No. 4

GENERAL NOTES:
 1. CALL 1-800-DIGSAFE BEFORE CONSTRUCTION, ALL UTILITIES TO BE VERIFIED BEFORE CONSTRUCTION
 2. PROTECT EXISTING VEGETATION AS NOTED WITH APPROVED TREE PROTECTION DEVICE
 3. STRIP AND STOCKPILE ALL TOPSOIL TO BE RE-USED ON SITE
 4. LOAM & SEED ALL DISTURBED AREAS WITH CONSERVATION MIX
 5. THE INFORMATION ON THIS PLAN WAS COMPILED FROM DRAWINGS BY CROSSMAN ENGINEERING. THIS IS NOT A REGISTERED SURVEY.
 TO THE BEST OF OUR KNOWLEDGE, THIS DRAWING IS A TRUE REPRESENTATION OF THE ACTUAL FIELD CONDITIONS

SPECIAL NOTES:
 1. CHIP/MULCH ALL TREES CLEARED FROM SITE AND STOCKPILE TO BE RE-USED IN NEW PLANTING BEDS.
 2. SEE SHEET L1.5 FOR PLANT SCHEDULE





MATCHLINE TO SITE LAYOUT PLAN No. 3

A.P. 11-D
LOT 486

A.P. 11-D
LOT 615

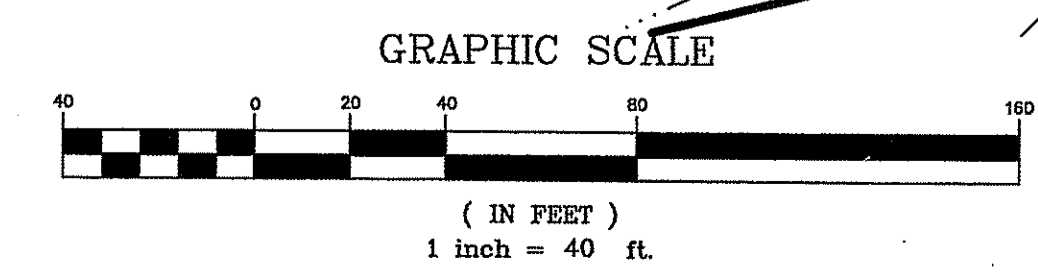
A.P. 11-D
LOT 494

GENERAL NOTES:
 1. CALL 1-800-DIGSAFE BEFORE CONSTRUCTION, ALL UTILITIES TO BE VERIFIED BEFORE CONSTRUCTION
 2. PROTECT EXISTING VEGETATION AS NOTED WITH APPROVED TREE PROTECTION DEVICE
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 4. LOAM & SEED ALL DISTURBED AREAS WITH CONSERVATION MIX
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SPECIAL NOTES:
 1. CHIPMULCH ALL TREES CLEARED FROM SITE AND STOCKPILE TO BE RE-USED IN NEW PLANTING BEDS.
 2. SEE SHEET L1.5 FOR PLANT SCHEDULE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED FEB 18 2015 FILE # 14-0069
 ANY CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Herbert

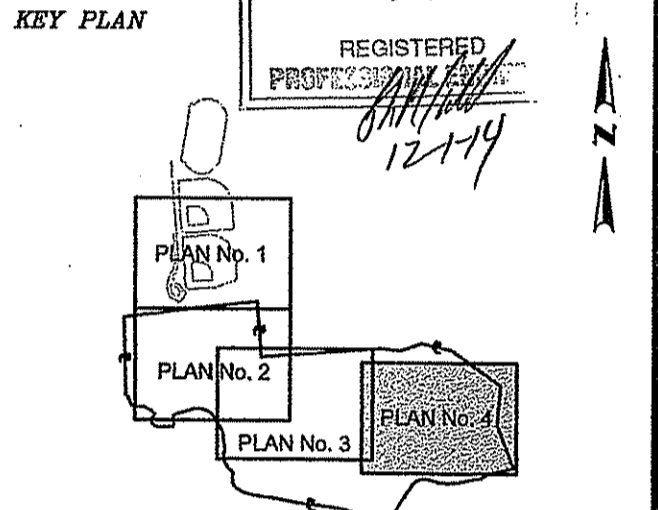


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 Estate Planning - Landscape Architecture

STEVEN M. CABRAL
 No. 4847



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TOWN of EAST GREENWICH
PLAT 11, LOTS 11 & 393
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PREPARED FOR:
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DEPARTMENT of PUBLIC WORKS
P.O. BOX 111 PIERCE STREET
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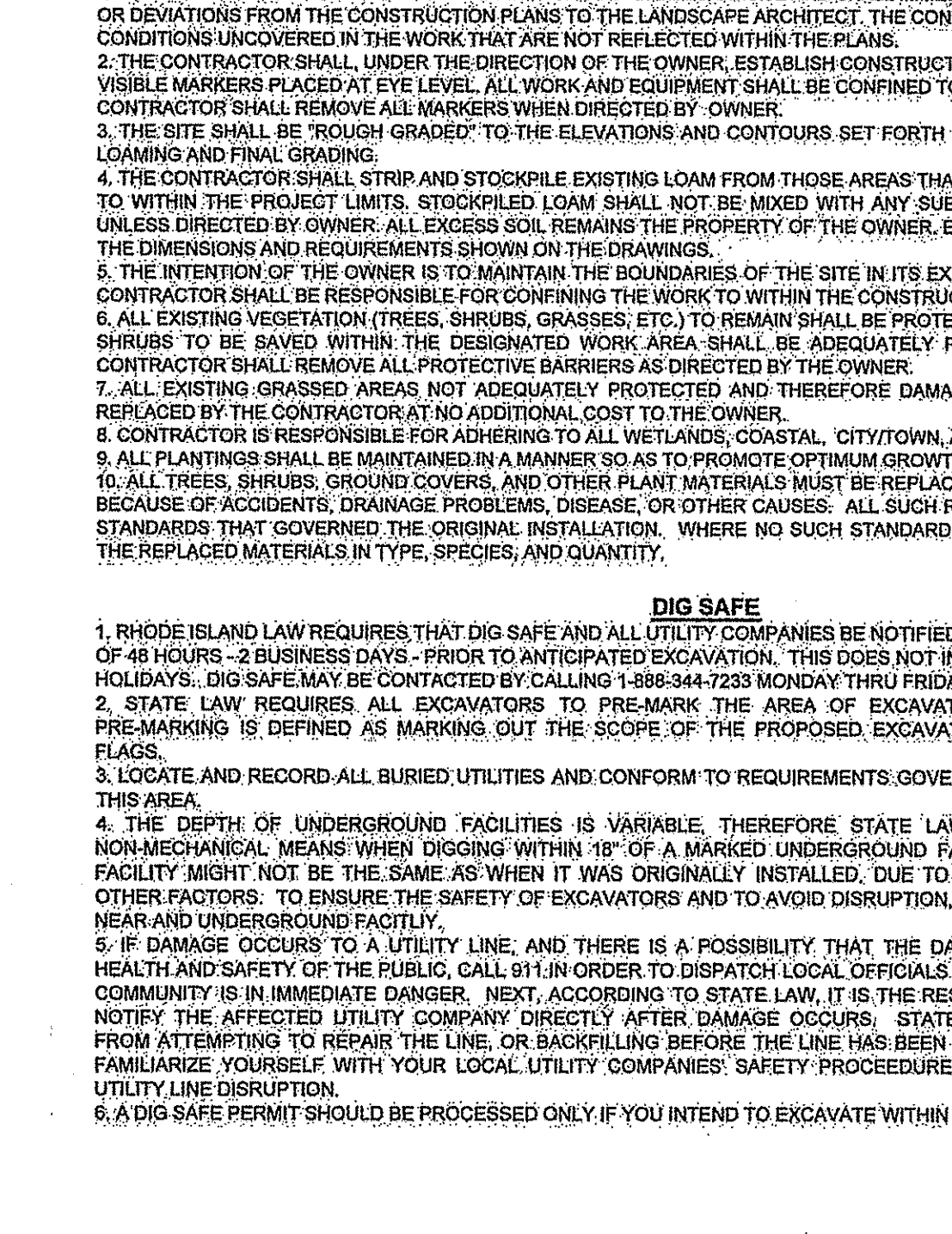
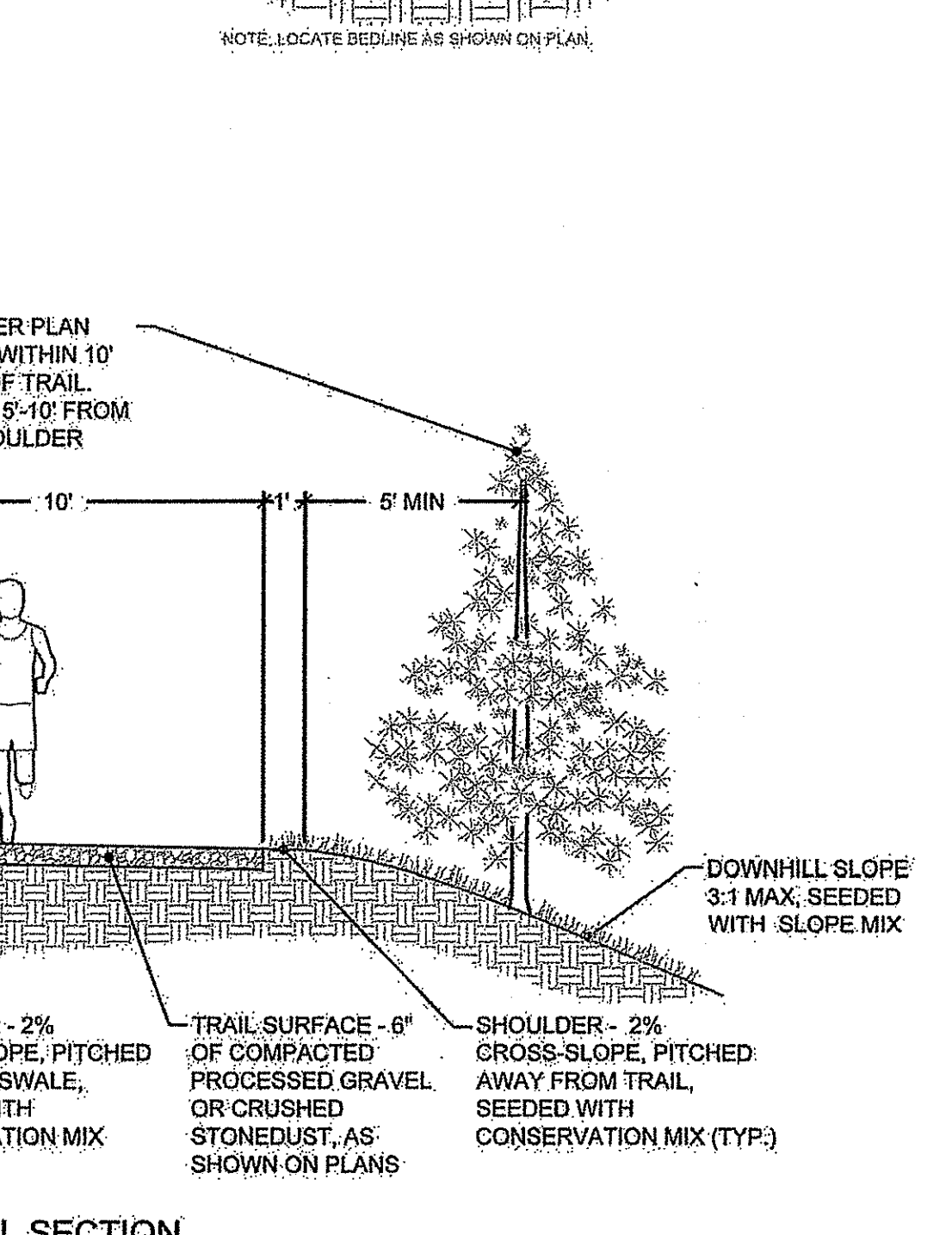
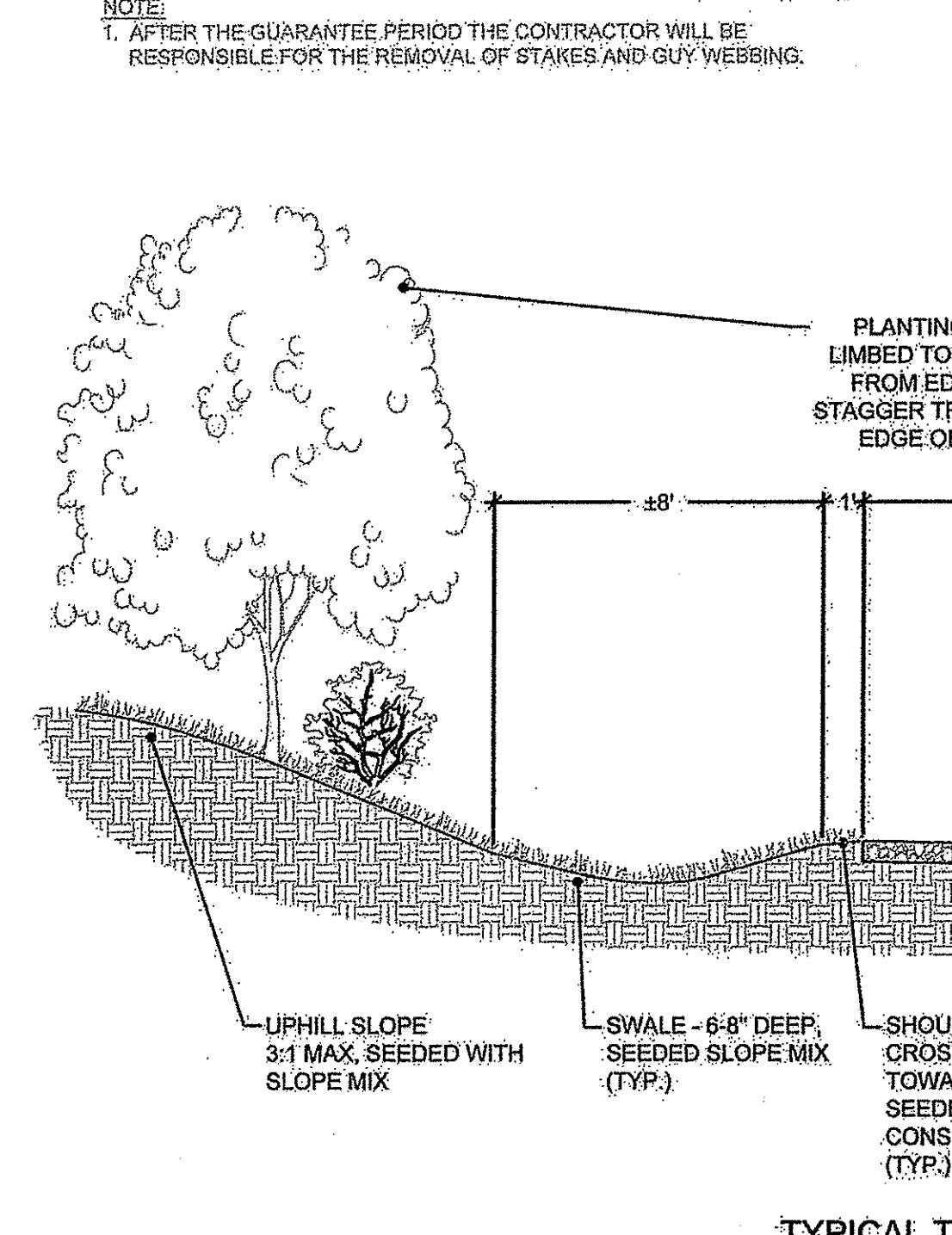
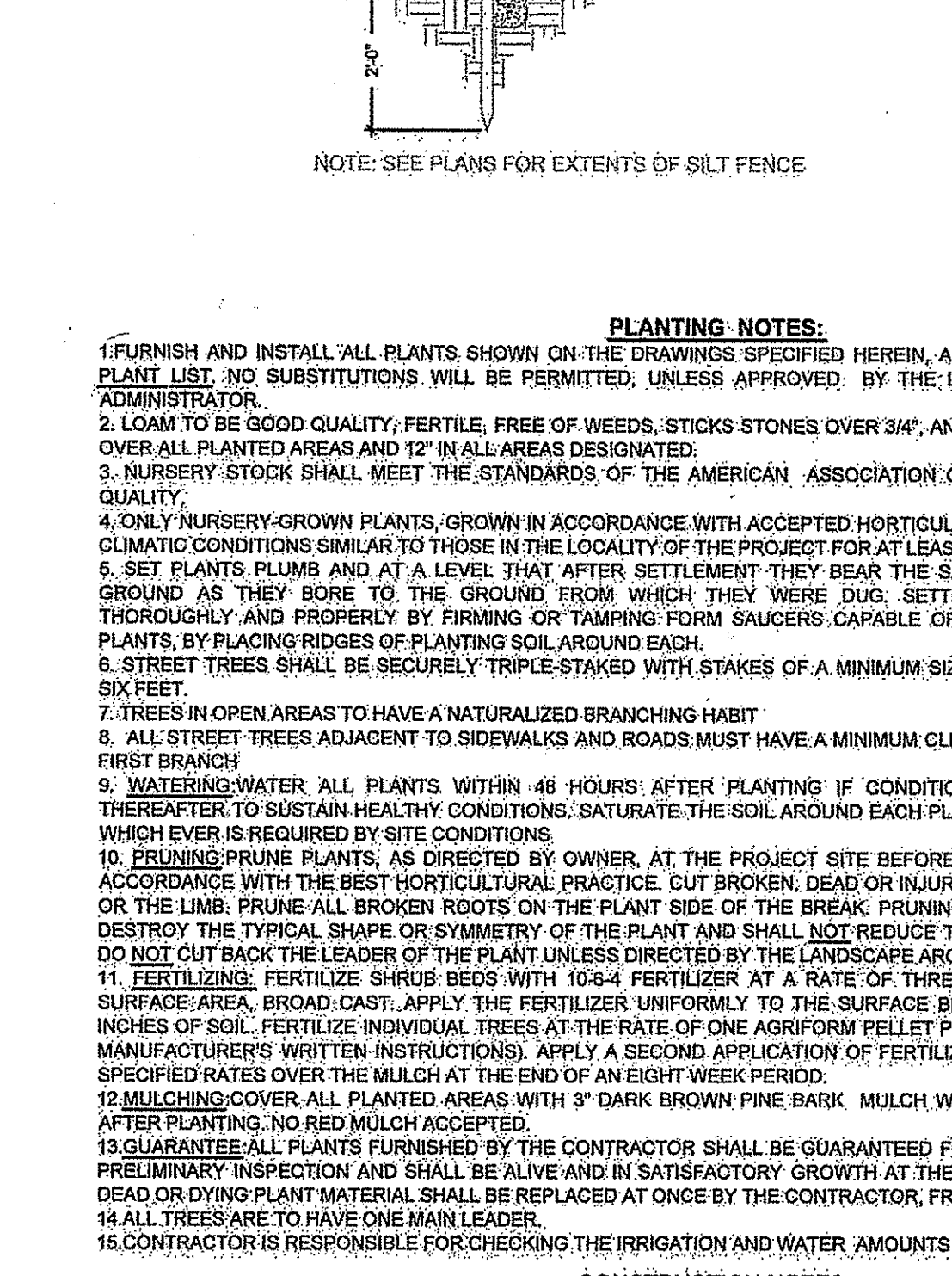
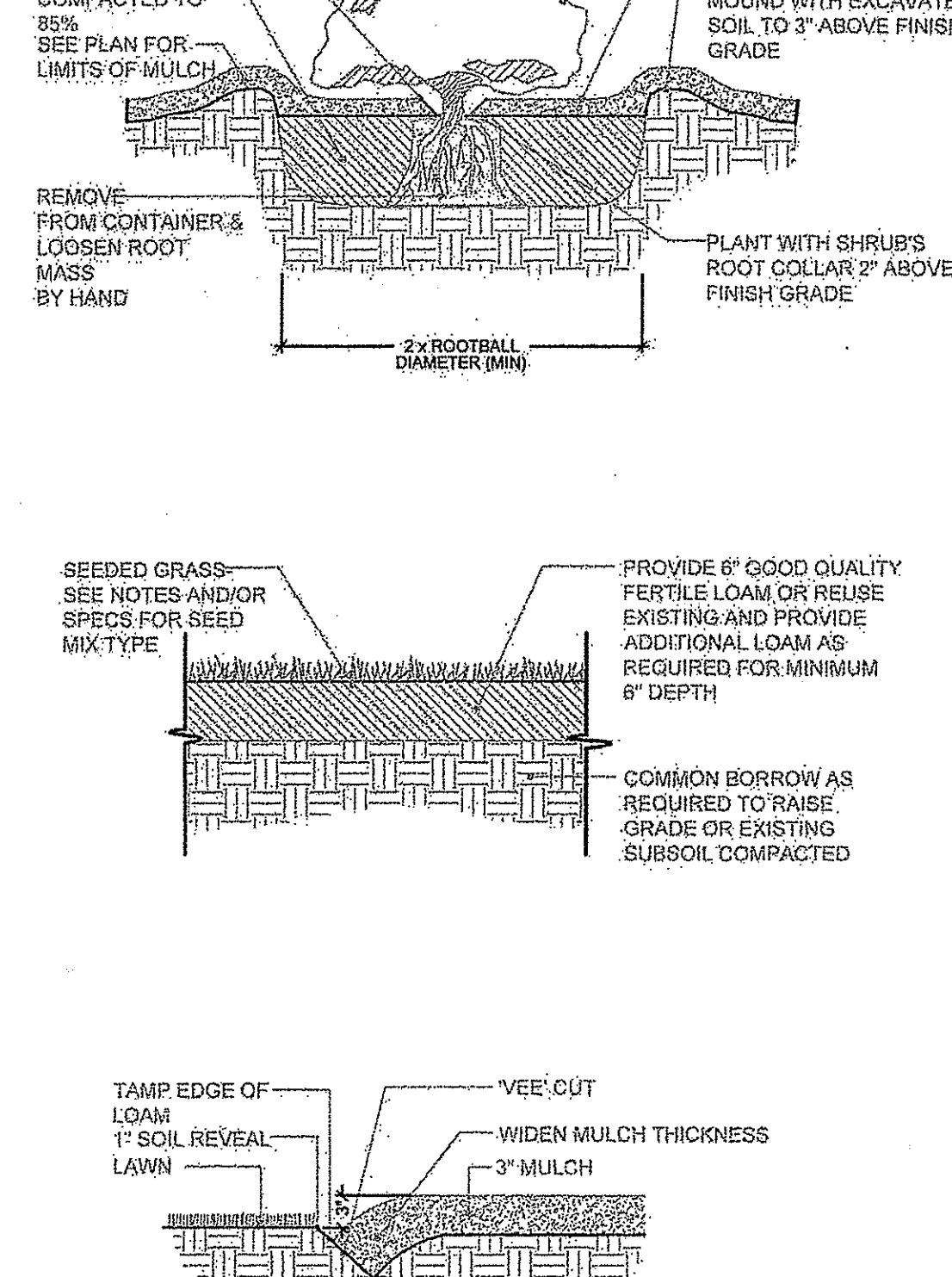
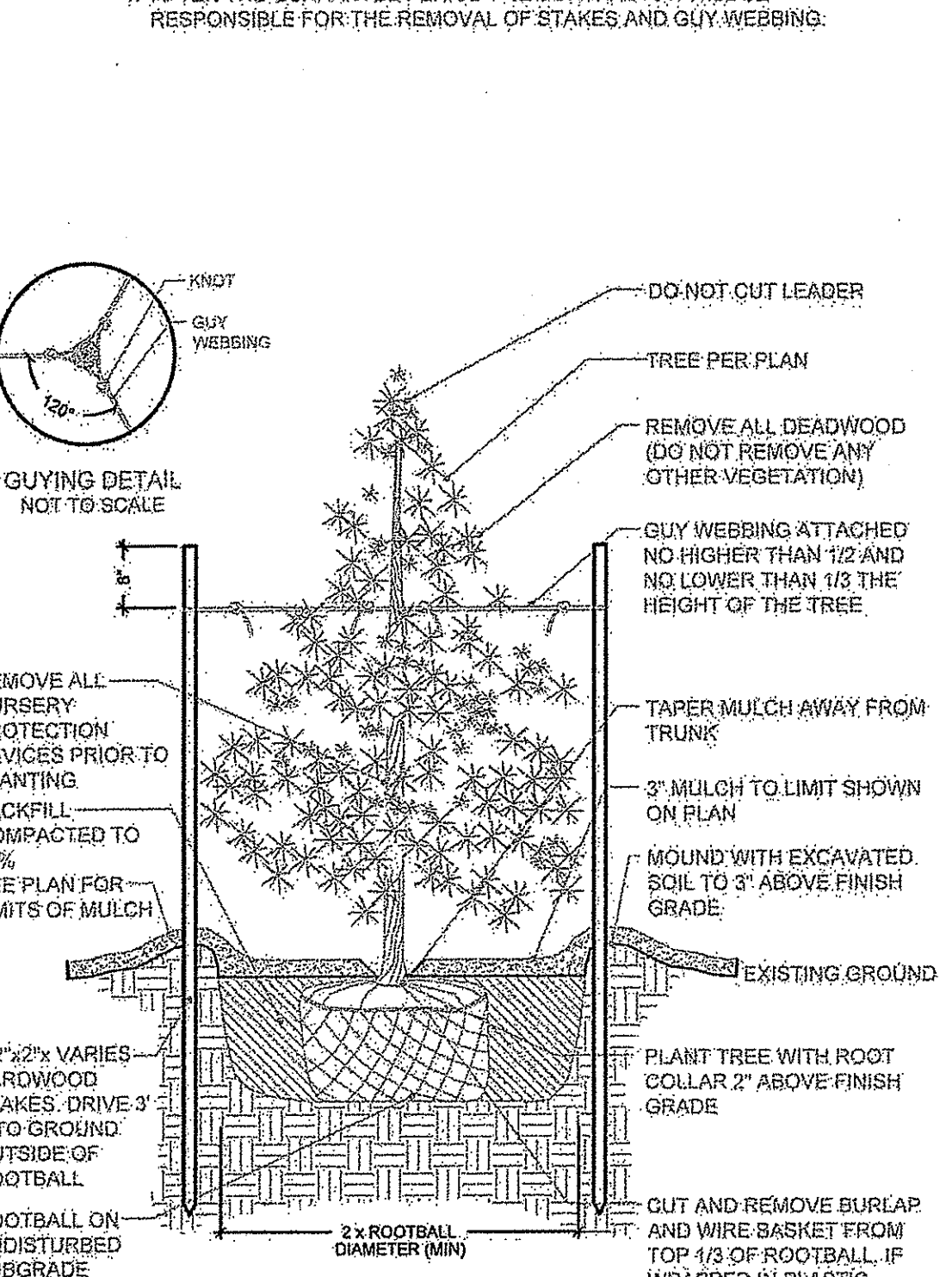
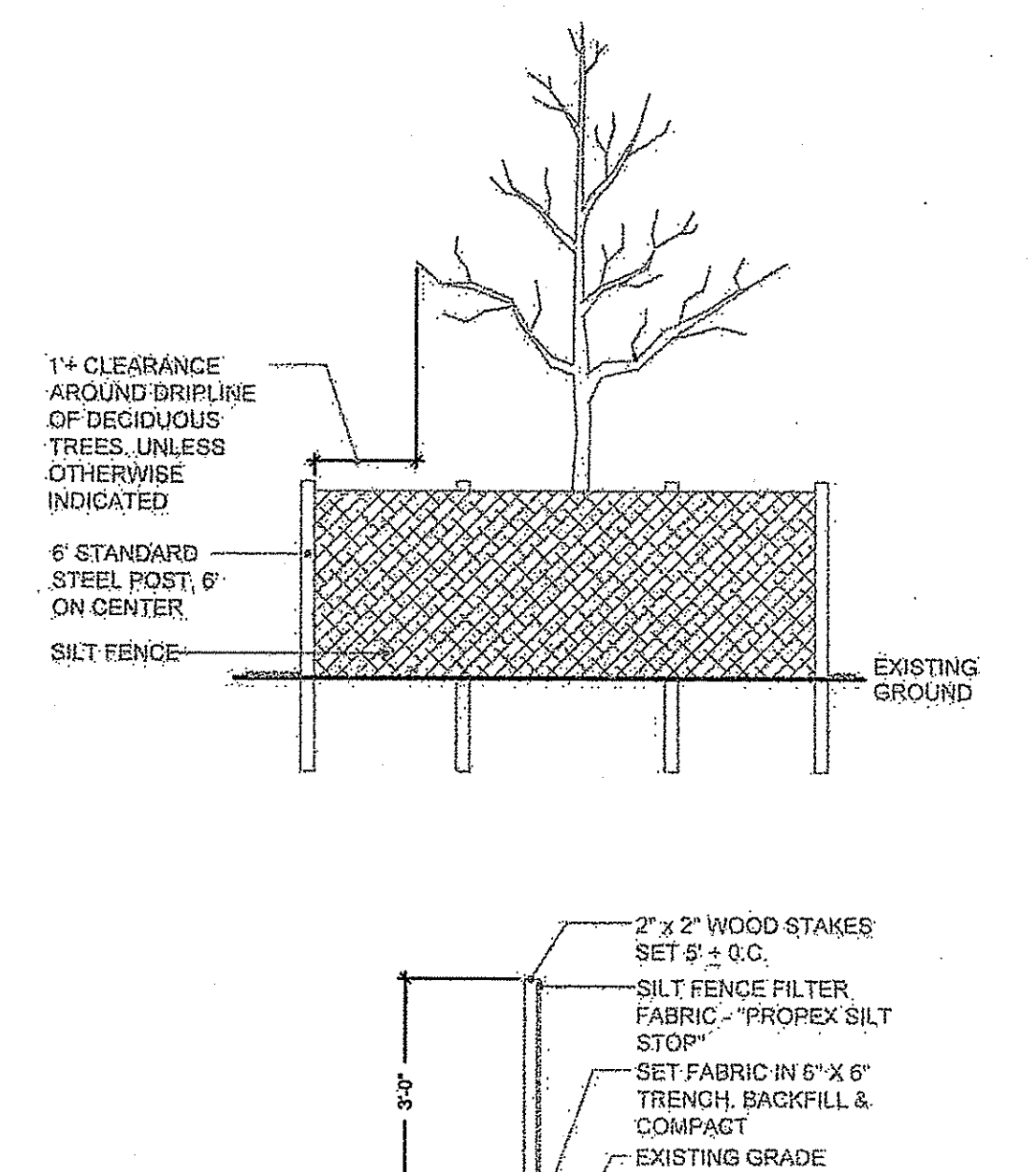
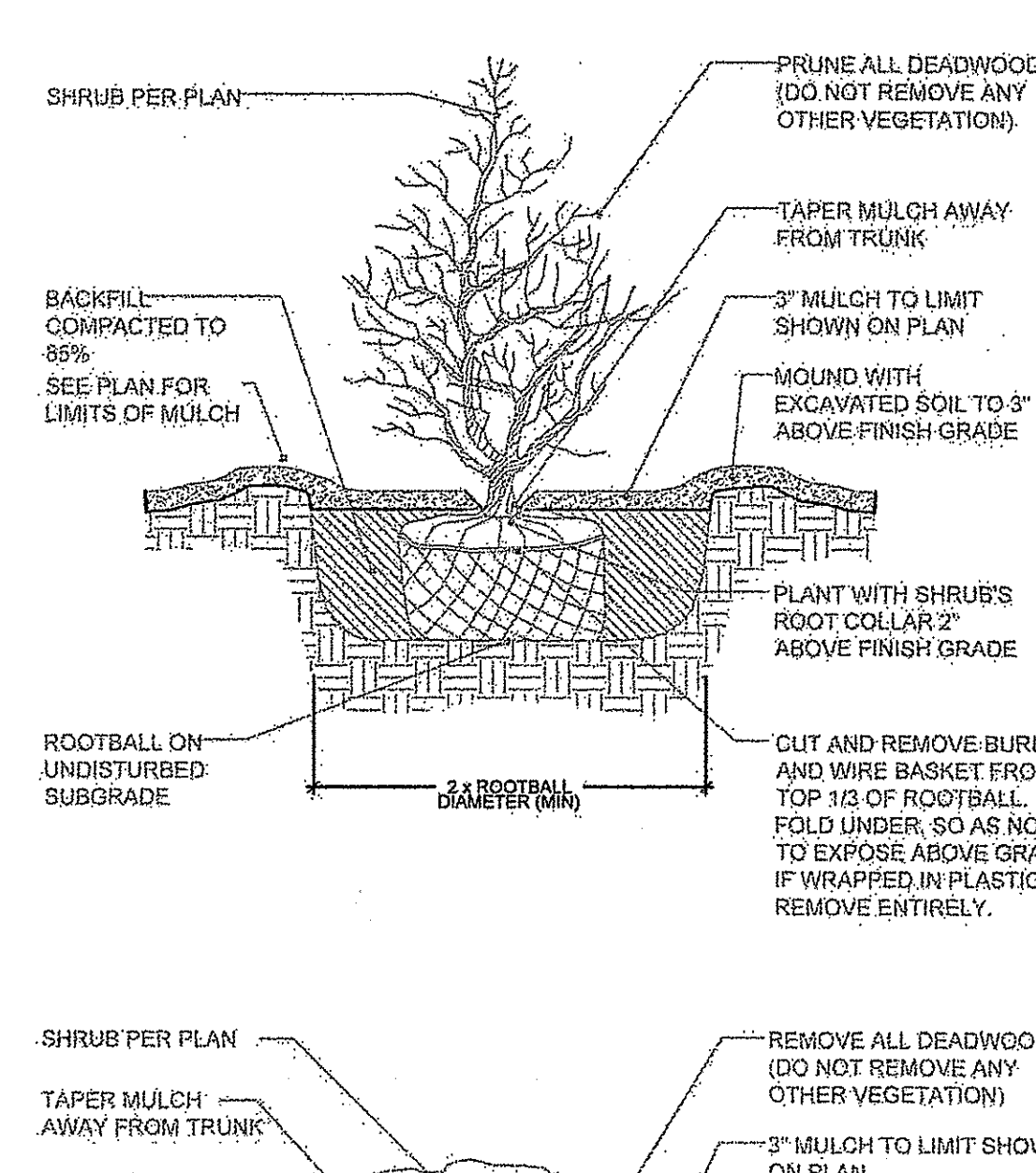
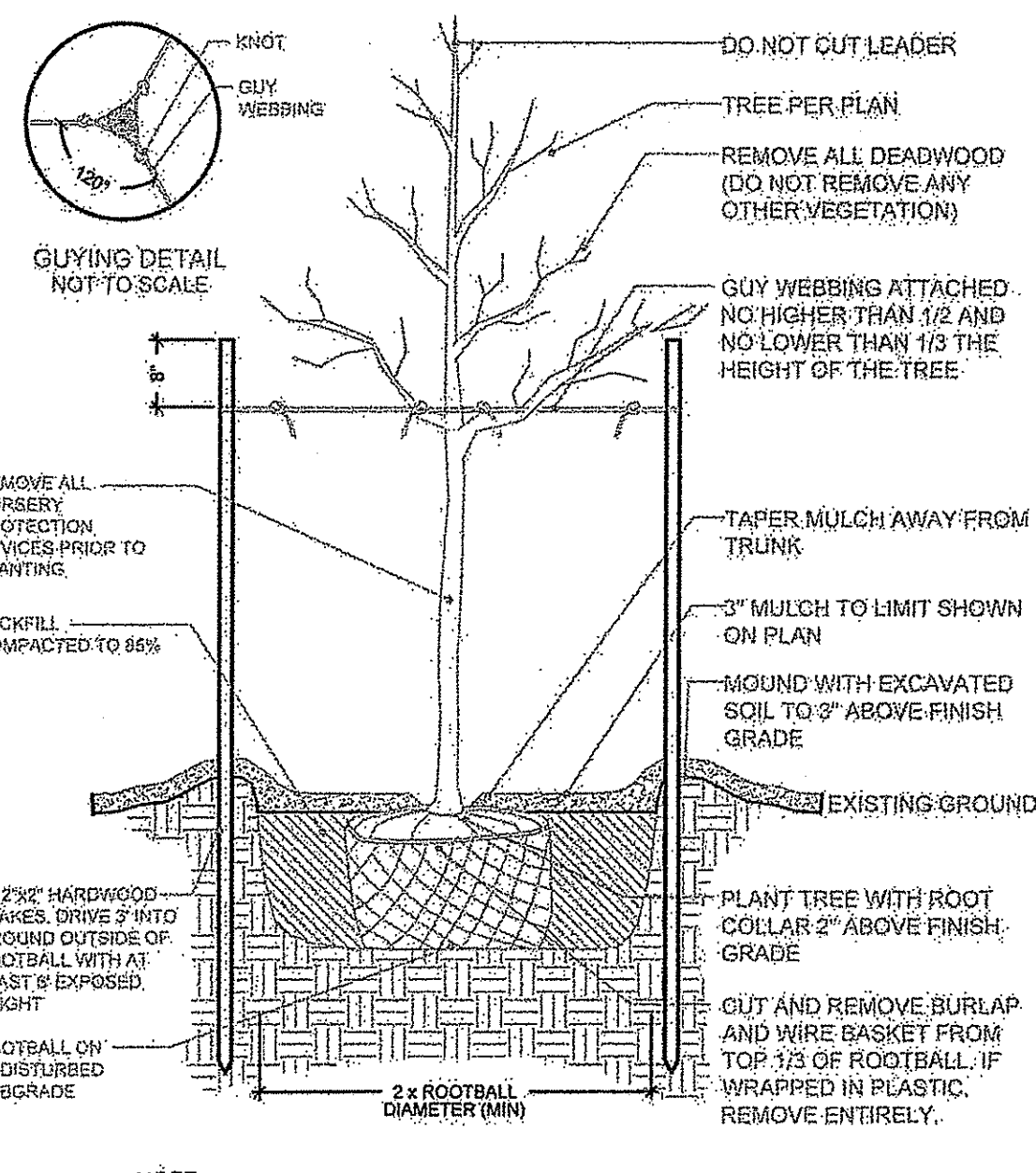
DRAWING TITLE:
LANDSCAPE PLAN No. 4

DATE: MARCH 2014 **SCALE:** 1"=40'
DWG. NAME: 1905-L1-LAND.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	10/03/14

DRAWING NUMBER
L1.4
 SHEET: 23 OF 24



PLANTING NOTES:

- FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT AND PROJECT ADMINISTRATOR.
- LOAM TO BE GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 4" OVER ALL PLANTED AREAS IN 12" IN ALL AREAS DESIGNATED.
- NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN AS TO GRADING AND QUALITY.
- ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST (2) YEARS, WILL BE ACCEPTED.
- SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING FORM SAUCERS, CAPABLE OF HOLDING WATER ABOVE INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
- STREET TREES SHALL BE SECURELY TRIPLE-STAKED WITH STAKES OF A MINIMUM SIZE OF TWO INCHES BY TWO INCHES BY SIX FEET.
- TREES IN OPEN AREAS TO HAVE A NATURALIZED BRANCHING HABIT.
- ALL STREET TREES ADJACENT TO SIDEWALKS AND ROADS MUST HAVE A MINIMUM CLEARANCE HEIGHT OF 7' (7 FEET) TO THE FIRST BRANCH.
- WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER, TO SUSTAIN HEALTHY CONDITIONS. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING, WHICH EVER IS REQUIRED BY SITE CONDITIONS.
- PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES FLUSH WITH THE TRUNK OR THE LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE-THIRD. DO NOT CUT BACK THE LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- FERTILIZING: FERTILIZE SHRUB BEDS WITH 10-34 FERTILIZER AT A RATE OF THREE ROUNDS PER 100 SQUARE FEET OF SURFACE AREA, BROAD CAST, APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT THE RATE OF ONE AGRIFORM PELLET PER INCH OF TRUNK DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
- MULCHING: COVER ALL PLANTED AREAS WITH 3" DARK BROWN PINE BARK MULCH WITHIN A SEVENTY-TWO HOUR PERIOD AFTER PLANTING. NO RED MULCH ACCEPTED.
- GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF TWO (2) YEARS AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, FREE OF CHARGE.
- ALL TREES ARE TO HAVE ONE MAIN LEADER.
- CONTRACTOR IS RESPONSIBLE FOR CHECKING THE IRRIGATION AND WATER AMOUNTS FOR THE FIRST YEAR.

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON SITE AND IMMEDIATELY REPORT ANY DISCREPANCIES OR DEVIATIONS FROM THE CONSTRUCTION PLANS TO THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ALSO REPORT ANY CONDITIONS UNCOVERED IN THE WORK THAT ARE NOT REFLECTED WITHIN THE PLANS.
- THE CONTRACTOR SHALL UNDER THE DIRECTION OF THE OWNER, ESTABLISH CONSTRUCTION LIMITS ON THE SITE BY ACCEPTABLE, VISIBLE MARKERS PLACED AT EYE LEVEL. ALL WORK AND EQUIPMENT SHALL BE CONFINED TO WITHIN THESE LIMITS. THE CONTRACTOR SHALL REMOVE ALL MARKERS WHEN DIRECTED BY OWNER.
- THE SITE SHALL BE "ROUGH GRADED" TO THE ELEVATIONS AND CONTOURS SET FORTH ON THE PLANS, ALLOWING FOR GRAVEL, LOAMING AND FINAL GRADING.
- THE CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING LOAM FROM THOSE AREAS THAT ARE TO BE EXCAVATED OR FILLED AND TO WITHIN THE PROJECT LIMITS. STOCKPILED LOAM SHALL NOT BE MIXED WITH ANY SUBSOIL OR OTHER UNSUITABLE MATERIAL UNLESS DIRECTED BY OWNER. ALL EXCESS SOIL REMAINS THE PROPERTY OF THE OWNER. EARTH EXCAVATION SHALL BE LIMITED TO THE DIMENSIONS AND REQUIREMENTS SHOWN ON THE DRAWINGS.
- THE INTENTION OF THE OWNER IS TO MAINTAIN THE BOUNDARIES OF THE SITE IN ITS EXISTING CONDITION AND THEREFORE THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFINING THE WORK TO WITHIN THE CONSTRUCTION LIMITS.
- ALL EXISTING VEGETATION (TREES, SHRUBS, GRASSES, ETC.) TO REMAIN SHALL BE PROTECTED BY INJURY. INDIVIDUAL TREES AND SHRUBS TO BE SAVED WITHIN THE DESIGNATED WORK AREA SHALL BE ADEQUATELY PROTECTED BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE ALL PROTECTIVE BARRIERS AS DIRECTED BY THE OWNER.
- ALL EXISTING GRASSED AREAS NOT ADEQUATELY PROTECTED AND THEREFORE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL WETLANDS, COASTAL, CITY/TOWN, AND STATE REGULATIONS.
- ALL PLANTINGS SHALL BE MAINTAINED IN A MANNER SO AS TO PROMOTE OPTIMUM GROWTH OF PLANT MATERIALS.
- ALL TREES, SHRUBS, GROUND COVERS, AND OTHER PLANT MATERIALS MUST BE REPLACED IF THEY DIE OR BECOME UNHEALTHY BECAUSE OF ACCIDENTS, DRAINAGE PROBLEMS, DISEASE, OR OTHER CAUSES. ALL SUCH REPLACEMENTS SHALL CONFORM TO ALL STANDARDS THAT GOVERNED THE ORIGINAL INSTALLATION, WHERE NO SUCH STANDARDS EXIST, NEW PLANTINGS SHALL MATCH THE REPLACED MATERIALS IN TYPE, SPECIES, AND QUANTITY.

DIG SAFE

- RHODE ISLAND LAW REQUIRES THAT DIG SAFE AND ALL UTILITY COMPANIES BE NOTIFIED BY THE CONTRACTOR A MINIMUM OF 48 HOURS - 3 BUSINESS DAYS BEFORE EXCAVATION. THIS DOES NOT INCLUDE WEEKENDS OR LEGAL HOLIDAYS. DIG SAFE MAY BE CONTACTED BY CALLING 1-888-344-7235 MONDAY THRU FRIDAY FROM 8 A.M. TO 6 P.M.
- STATE LAW REQUIRES ALL EXCAVATORS TO PRE-MARK THE AREA OF EXCAVATION BEFORE NOTIFYING DIG SAFE. PRE-MARKING IS DEFINED AS MARKING OUT THE SCOPE OF THE PROPOSED EXCAVATION AREA, USING STAKES, PAINT, OR FLAGS.
- LOCATE AND RECORD ALL BURIED UTILITIES AND CONFORM TO REQUIREMENTS GOVERNING EXCAVATION AND CHANGES IN THIS AREA.
- THE DEPTH OF UNDERGROUND FACILITIES IS VARIABLE, THEREFORE STATE LAW REQUIRES EXCAVATORS TO USE NON-MECHANICAL MEANS WHEN DIGGING WITHIN 18" OF A MARKED UNDERGROUND FACILITY. THE CURRENT DEPTH OF A FACILITY MIGHT NOT BE THE SAME AS WHEN IT WAS ORIGINALLY INSTALLED, DUE TO SOIL EROSION, GRADING AND MANY OTHER FACTORS. TO ENSURE THE SAFETY OF EXCAVATORS AND TO AVOID DISRUPTION, IT MAKES SENSE TO HAND DIG WHEN NEAR AND UNDERGROUND FACILITY.
- IF DAMAGE OCCURS TO A UTILITY LINE, AND THERE IS A POSSIBILITY THAT THE DAMAGE MAY POSE A THREAT TO THE HEALTH AND SAFETY OF THE PUBLIC, CALL 911 IN ORDER TO DISPATCH LOCAL OFFICIALS WHO WILL DETERMINE WHETHER THE COMMUNITY IS IN IMMEDIATE DANGER. NEXT, ACCORDING TO STATE LAW, IT IS THE RESPONSIBILITY OF THE EXCAVATOR TO NOTIFY THE AFFECTED UTILITY COMPANY DIRECTLY AFTER DAMAGE OCCURS. STATE LAW PROHIBITS THE CONTRACTOR FROM ATTEMPTING TO REPAIR THE LINE, OR BACKFILLING BEFORE THE LINE HAS BEEN REPAIRED BY THE UTILITY COMPANY. FAMILIARIZE YOURSELF WITH YOUR LOCAL UTILITY COMPANIES' SAFETY PROCEDURES AND PROTOCOL IN THE EVENT OF UTILITY LINE DISRUPTION.
- A DIG SAFE PERMIT SHOULD BE PROCESSED ONLY IF YOU INTEND TO EXCAVATE WITHIN 30 DAYS.

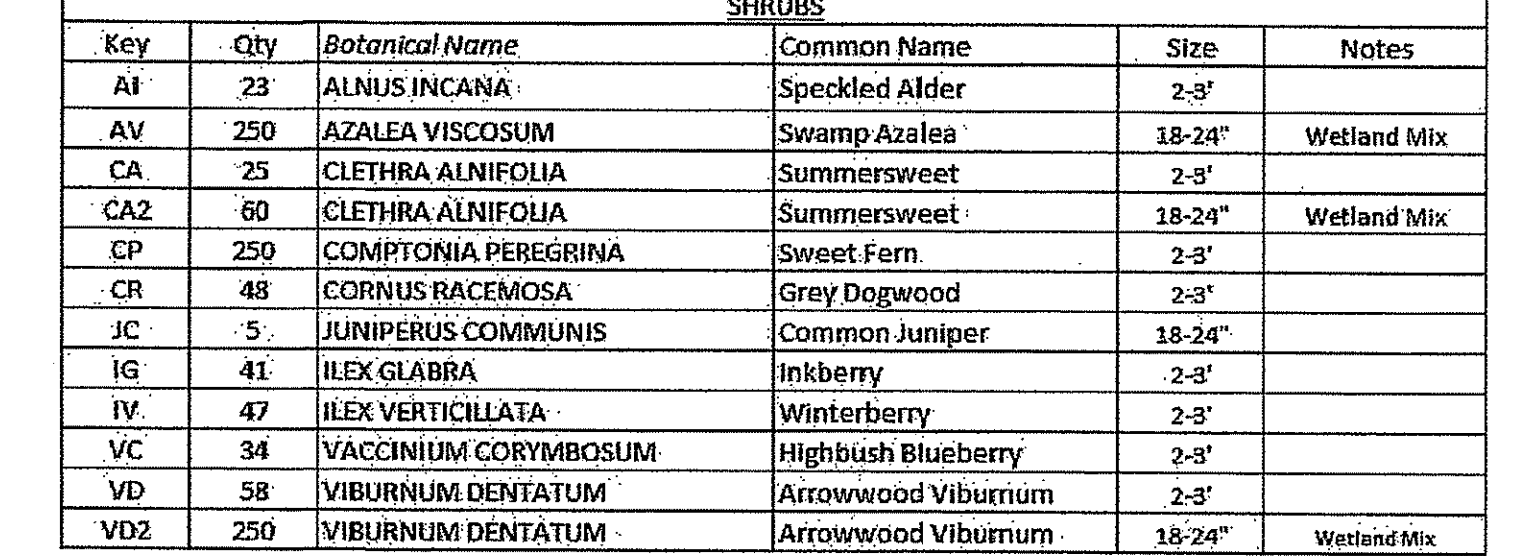
PLANT SCHEDULE (ALL SHEETS)

TREES

Key	Qty	Botanical Name	Common Name	Size	Notes
AR	8	ACER RUBRUM	Swamp Red Maple	4-6'	
AS	8	ACER SACCARHUM	Sugar Maple	4-6'	
BN	3	BETULA NIGRA	River Birch	4-6'	
BP	3	BETULA PAPIRIFERA	Paper Birch	4-6'	
CM	3	CORNUS MAS	Cornelian Cherry Dogwood	7 gallon	
CT	3	CHAMAECYPARIS THYNOIDES	Atlantic White Cedar	4-6'	
LT	9	LIRIODENDRON TULIPIFERA	Tulip Tree	4-6'	
NS	3	NYSSA SYLVATICA	Black Gum Tree	4-6'	
PD	13	POPULUS DELTOIDES	Cottonwood	4-6'	
PS	28	PINUS STROBUS	White Pine	4-6'	
QP	3	QUERCUS PRINUS	Chestnut Oak	4-6'	
QR	14	QUERCUS RUBRA	Red Oak	4-6'	
TO	24	THUJA OCCIDENTALIS	Northern White Cedar	4-6'	

SHRUBS

Key	Qty	Botanical Name	Common Name	Size	Notes
AI	23	ALNUS INCANA	Speckled Alder	2-3'	
AV	250	AZALEA VISCOSUM	Swamp Azalea	18-24"	Wetland Mix
CA	25	CLETHRA ALNIFOLIA	Summersweet	2-3'	
CAZ	60	CLETHRA ALNIFOLIA	Summersweet	18-24"	Wetland Mix
CP	250	COMPTONIA PEREGRINA	Sweet Fern	2-3'	
CR	48	CORNUS RACEMOSA	Grey Dogwood	2-3'	
JC	5	JUNIPERUS COMMUNIS	Common Juniper	18-24"	
IG	41	ILEX GLABRA	Inkberry	2-3'	
IV	47	ILEX VERTICILLATA	Winterberry	2-3'	
VC	34	VACCINIUM CORYMBOSUM	Highbush Blueberry	2-3'	
VD	58	VIBURNUM DENTATUM	Arrowwood Viburnum	2-3'	
VDZ	250	VIBURNUM DENTATUM	Arrowwood Viburnum	18-24"	Wetland Mix



- SEEDING NOTES:**
- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 6" OVER ALL AREA DESIGNATED ON PLANS.
 - SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
 - FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQ. FT. AT SEEDING.
 - LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DIGGING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DIGGING OR ROTOTILLING.
 - ANY LOAM EXPOSED FOR ONE WEEK SHALL BE PLANTED WITH ANNUAL RYE GRASS SEED & SEED MIX A. ALL LOAM STOCKPILES TO BE SEEDED IMMEDIATELY.
- SEEDING NOTES:**
- RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQ. FT. OR AS INDICATED ON PLANS.
 - SEEDING SHALL BE DONE IN ACCORDANCE WITH SECTION L.02.03 OF THE RI STANDARD SPECIFICATIONS AND ONLY DURING THE FOLLOWING DATES:
SPRING SEEDING: MARCH 15 TO MAY 31
FALL SEEDING: AUGUST 15 TO OCTOBER 15
 - THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8-WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL LEAVE THESE AREAS IN GOOD CONDITION, ALSO MAINTAIN THESE AREAS IN GOOD CONDITION UNTIL PROVISIONAL ACCEPTANCE.
 - DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE, THE EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS ADJUSTED AS REQUIRED BY PERIODIC WATERINGS IS REQUIRED.
 - OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
 - REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
 - SEED ALL AREAS WITH CONSERVATION AREAS MIX UNLESS OTHERWISE NOTED. SEE SEED MIX CHART BELOW FOR MIX TYPES.

CONSERVATION MIX

SEED TYPE	% BY WEIGHT
PERENNIAL RYE	25%
CREeping RED FESCUE	25%
ANNUAL RYE	25%
TALL FESCUE	17%
KENTUCKY BLUE	5%
COLONIAL BENTGRASS	1%
RED TOP	1%
WHITE CLOVER	1%

MOWED AREAS MIX

SEED TYPE	% BY WEIGHT
IMPROVED PERENNIAL RYE	30%
IMP KENTUCKY BLUE CBT	25%
IMP KENTUCKY BLUE CBT	25%
CHEWINGS FESCUE	20%

SLOPE MIX

SEED TYPE	% BY WEIGHT
CREeping RED FESCUE	60%
BIRDFOOT TREFOIL	15%
IMP PERENNIAL RYE	15%
LANC-LEAVED COREOPSIS	5%
OXYE DAISS	2%
WHITE YARROW	1%
BLACK-EYED SUSAN	1%

- BIO-RETENTION SOIL & SEEDING NOTES**
- YEAR 1: SITE PREPARATION AND SEEDING YEAR**
- PREPARE THE BIO RETENTION BED (NORTHMOST BASIN ONLY) WITH THE FOLLOWING SOIL MIX:
- 80% SAND
 - < 20% SILT
 - < 2% CLAY
 - WELL AGED GRADED COMPOST (25% OF SOIL MIX)
 - WELL AGED AERATED HARD WOOD MULCH (AGED 6 MONTHS IF POSSIBLE)
- PLANT IN FALL AS A FROST PLANTING (MID-OCT OR AFTER) OR SPRINGS (APRIL 1ST - MAY 31ST) AS A SECOND CHOICE. DO NOT PLANT IN THE SUMMER.
- YEAR 2: FIRST GROWING SEASON**
- KEEP THE AREA CUT TO 4" THIS YEAR. DONT PULL ANY WEEDS WITHIN THE BIO-RETENTION BED UNTIL THE END OF THE YEAR. REMOVE WEEDS TRYING TO ESTABLISH.
- YEAR 3: SECOND GROWING SEASON**
- MOW ONCE, IF NECESSARY.

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Estate Planning - Landscape Architecture

STEVEN M. CABRAL
No. 4847
REGISTERED PROFESSIONAL ENGINEER
12-14
PLAN No. 1
PLAN No. 2
PLAN No. 3
PLAN No. 4

PROJECT TITLE:
MULTI-PURPOSE CROSS COUNTRY TRAILS
TOWN OF EAST GREENWICH PLAT 11, LOTS 11 & 393
EAST GREENWICH, RI

PREPARED FOR:
TOWN OF EAST GREENWICH DEPARTMENT OF PUBLIC WORKS
P.O. BOX 111 PIERCE STREET EAST GREENWICH, RI 02818

DRAWING TITLE:
LANDSCAPE DETAILS

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REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	09/05/14

DRAWING NUMBER
L1.5
SHEET: 24 OF 24